

NORTH YUBA WATER DISTRICT

RATE STUDY - SEPTEMBER 2015

1 Background and Key Issues

1.1 NYWD Description

The North Yuba Water District (NYWD, or District) provides treated and irrigation water to rural customers primarily within Yuba County, with a small portion of its service area located within Butte County. NYWD provides treated drinking water service to a population of approximately 2,500 (approximately 870 connections, active and inactive, though the number changes regularly with people moving into and out of the District) in the communities of Forbestown, Brownsville, Challenge, and Rackerby. NYWD also delivers raw water, when available, to more than 100 agricultural connections.

The NYWD receives surface water diverted from the South Fork of the Feather River and conveyed via the Forbestown Ditch. The District depends on this water supply to provide treated potable supplies and irrigation water to all District customers.

The District's raw water conveyance systems include two major pieces of conveyance infrastructure: Forbestown Ditch, which is more than 150 years old, and Dobbins-Oregon House Canal. This open, unlined conveyance infrastructure results in excessive water leakage losses of up to 70%. The high water losses result in inadequate capacity to allow for delivery to irrigation customers, as well as correspondingly higher operating costs.

While the NYWD has targeted raw water conveyance improvements as a priority, and applied for several grants in support of this project, finances have not been secured to address this issue, to date. It is anticipated that such improvements will not only ensure delivery to existing irrigation customers, but will also allow for new customers to connect into the system. The cost of necessary improvements to the Forbestown Ditch were integral in the rate study process to address these immediate needs to "staunch the bleeding" of water loss for the District.

1.2 Fiscal Overview

While currently secure in its water supply, the NYWD's revenue over the past several years has been inconsistent. This is due in part to the long period between assessments of rates and fees, and in part to the relatively new agreement (2005) between the South Feather Water and Power Authority (SFWPA) and the NYWD regarding the cost of water available through the South Feather Power Project (SFPP), as well as the responsibility of the NYWD for all Forbestown Ditch losses and maintenance. The on-going drought has exacerbated these challenges.

Income from water users amounted to \$392,411 (domestic) and \$153,165 (irrigation) in the 2014-2015 budget year (actuals). This contributed approximately 22% and 9%, respectively, to the NYWD budget. The balance of the NYWD's annual receipts came from power revenue (from SFWPA), the Yuba City water sale, and other, smaller, contributions, such as interest/dividend income. In addition, the 2014-15 budget actuals included a budget gap (deficit) of \$84,560, which was filled by reserve shared power receipts.

Information contributing to annual expenses was provided by NYWD staff and supporting organizations. This information included NYWD financial documents (budgets), loan agreements, audits, water rights reports, records of total water produced and delivered, and other official documentation.

Current NYWD leadership has developed a formal, long-term vision to guide District decisions and prioritize District actions. As part of this process, the NYWD proposes that user fees increase to cover the actual cost of providing water to irrigation and domestic customers. California's Proposition 218 requires that water rates be no higher than the actual cost of providing service. For many years, however, NYWD customer rates have been substantially lower than this cost. The District is now requesting that customers play a role in the District's effort to be fiscally sound and responsible.

1.3 Proposition 218 Overview

In 1996, Proposition 218 amended the California Constitution (Articles XIII C and XIII D) to ensure a public process for contesting new or increased taxes, property-related fees, and assessments. The distinction between these three revenue-generating tools is important when determining the appropriate procedure for adopting or increasing a particular imposition:

1. Special districts may levy special taxes, which are for a specific purpose and require a 2/3 majority approval;
2. Property-related fees are any levies imposed by an agency upon a person as an incident of property ownership; and
3. An assessment raises funds for a public improvement or service that confers a special benefit on real property and is administered proportionally to the benefit conferred.

Water rates (whether calculated on the basis of consumption or imposed at a fixed rate) are generally understood to be property-related fees after a definitive court ruling in 2006 stating that all charges for water delivery are an incident of property ownership since “*water is indispensable to most uses of real property.*”

The 218 process includes development of a financial study for the District, backed by licensed engineer-stamped documentation, as necessary. That study then feeds into the development of rates for the Board and public’s consideration.

Public consideration usually will begin with a formal public notice of the consideration of new rates. The NYWD Board of Directors will vote on a preliminary resolution adopting this rate study report and proposing a set of rates. This resolution represents the beginning of a Proposition 218 process.

All of those customers and/or property owners who will be affected if the proposed rates changes are implemented will receive notice of the proposed rate adjustment with information about Proposition 218 protest procedures. Unlike a conventional election, the 218 process involves a protest, meaning that only formal “no” or “protest” votes are counted. The absence of a vote is essentially counted as a “yes” vote. If the NYWD receives 50% plus 1 vote against the rates, the Board cannot act to implement them. If the protests votes total less than 50% plus 1, the NYWD Board can vote to pass the newly proposed rates, or a lesser rate amount as they deem appropriate.

More detailed information on Proposition 218 is available through the following resources (most available online):

- *California Constitution Article XIII D and the Proposition 218 Omnibus Implementation Act (Government Code §§ 53750 et seq.*
- *Proposition 218 Guide for Special Districts. California Special Districts Association (2013)*
- *Proposition 218: Local Agency Guidelines for Compliance 2007 Update. Association of California Water Agencies*
- *Mandell, Mark E. Drafting Property-Related Fee Notices. League of California Cities (2013)*

1.4 2005 Agreement between NYWD and the SFWPA

The 2005 Agreement with the South Feather Water and Power Authority (SFWPA) provides the terms of NYWD water rights at the SF-14 turnout into the Forbestown Ditch. The agreement resulted in conveying the NYWD 100% ownership of water right permits #11516 and #11518, totaling 23,700 acre-feet annually (AFA). Only the first 3,700 AFA (Block 1) of those permits can be turned out at SF-14 without cost to the District. Even then, that water is subject to losses along Forbestown Ditch. Of the remaining 20,000 AFA (Block 2) available to the NYWD, 4,500 AFA are sold to Yuba City as part of an ongoing contract. The remainder, or 15,500 AFA, is available at SF-14, similar to Block 1 water, but requires reimbursement to the SFWPA at the cost of “lost power” revenues associated with Woodleaf, Forbestown, and Kelly Ridge powerhouses.

The cost of lost power is equivalent to the amount of power produced by one acre-foot of water if it were to go through the Woodleaf, Forbestown, and/or Kelly Ridge powerhouses and how much power revenue that acre-foot of water would produce. The cost of power changes by the second, but this cost has been recorded by the SFWPA on a monthly basis and those numbers are shown in Table 1, below.

Table 1: Average Monthly Power Revenues				
(power produced from one acre-foot of water, reported as of July 2015)				
	2011	2012	2013	2014
January	\$81.86	\$70.60	\$92.57	\$112.28
February	\$83.58	\$65.81	\$93.04	\$162.10
March	\$58.36	\$56.27	\$96.38	\$124.40
April	\$58.70	\$45.96	\$100.03	\$126.17
May	\$54.63	\$56.41	\$92.06	\$122.84
June	\$60.09	\$72.83	\$101.60	\$121.82
July	\$86.26	\$78.32	\$136.79	\$114.59
August	\$90.18	\$139.20	\$95.80	\$118.37
September	\$91.39	\$84.16	\$107.95	\$113.97
October	\$76.12	\$92.46	\$97.55	\$128.80
November	\$83.74	\$88.02	\$106.79	\$118.52
December	\$78.76	\$81.65	\$128.81	\$97.93
Average	\$75.31	\$77.64	\$104.11	\$121.82

This historical data indicates that the NYWD must pay nearly \$100/AF, on average, for water diverted into SF-14 in excess of 3,700 AFA, (for each acre-foot used up to their 23,700 permitted rights out of SF-14.).

1.5 Consequences of Rates Increase Rejection

If these rate increases are halted, the result would be fiscal insolvency with the following possible outcomes:

1. The District may no longer be able to provide dependable service to all areas within its present jurisdiction (such as irrigation),
2. District water rights may be in jeopardy, and/or
3. The District may not be able to operate as currently organized.

To points one and three: because the rates increase is largely driven by increasing the efficiency of Forbestown Ditch and covering the increased cost of water, without a rates increase it is possible that irrigation users would only have water with adequate winter precipitation (delivery via Dry Creek).

To point two: the State Water Resources Control Board is currently reviewing the District's two water permits for diversion at SF-14 (11516 and 11518). Preliminary findings suggest that they will be requiring increased conservation in order for the District to keep the permits now held. The regulatory requirements associated with this water permit review are likely to be final within a year.

If the rate increases are adopted successfully, the NYWD will be self-sufficient, and will be on its way to a consistently balanced budget. It is possible that rates could be lowered in the future, particularly as ditch losses are eliminated and if wet years are in the future of the District, vis-à-vis power production/revenues and irrigation delivery.

1.6 Rates Study Structure and Approach

This rate study is structured according to a strict interpretation of Proposition 218: water costs are calculated to be borne by the customer class benefitting directly by the services incurring said costs. As such, this effort is also consistent with industry standards such as those outlined in the *AWWA Manual M1: Principles of Water Rates, Fees, and Charges*. This work included the following steps:

1. Defining a goal: For previous budgets, the District has not recovered its basic operations and maintenance costs with user fees, nor did the District have a concrete mechanism for allocating those costs directly to benefitting users. This rate study is meant to provide District staff and Board with a greater understanding of actual costs and a financial picture of a fully funded District. The District can then make policy decisions commensurate with

received public input to prioritize subsidies to make the increase in rates reasonable for the population, while at the same time balancing the District's budget.

2. **Evaluating alternatives:** There are a variety of ways to approach a rate study: some cost very little and can be completed quickly, and some take more time and result in more substantial deliverables to the District. The NYWD opted to complete this rate study with a higher investment of time and resources. The NYWD's circumstances are involved and, to some degree, complicated. Allocating costs between domestic and irrigation customers, and for shared contractual obligations and water costs, is not something that has been done previously. The District was interested in getting the most information possible out of this analysis.
3. **Communicating outcomes:** While the NYWD Board initially was interested in completing outreach to each Board members' district, separately, that strategy evolved into two meetings: one each for domestic and irrigation customers. Upon further reflection, the District decided to complete outreach through a variety of mechanisms, with the only formal process being the Board meetings and the (required) Proposition 218 public hearing. Information was communicated via quantitative methods (spreadsheets and tables) as well as qualitatively (descriptive text, charts, and graphs). Added to the Proposition 218 notice that all property owners will receive, this variety of outreach has ensured that all District customers are aware of the District's financial situation and understand the way that District staff and Board propose handling it.

Just as there are a variety of ways to complete a rates study, there are a variety of rate structures appropriate for different circumstances. The NYWD does not qualify as an "urban water agency" under California Water Code,¹ and as such is not required to put any particular rate structure in place, beyond the requirements of Proposition 218.

The rate structure proposed by NYWD staff and Board is a mix of uniform (per customer class, for base/fixed rates, based on delivery capacity through the meter or irrigation canal turnout/diversion structure) and volumetric (for costs commensurate with the volume of water used), based on cost of services directly benefitting the customer class to which they are allocated). Marginal costs are included as part of the water cost calculation following the completion of the Forbestown Ditch repair (i.e.: the cost of the next unit of water to the District, and thus to customers). These are all calculated consistent with Proposition 218 requirements and AWWA M1 policy suggestions.

1.6.1 COST ALLOCATION

As noted above, rates and assignment of costs are derived based on the type of cost: uniform capacity (base, fixed, O&M, District contractual, etc.) and volumetric flows (amount of water used). These costs are described in greater detail below.

Uniform Capacity Charges

Uniform capacity charges are determined based on the capacity of water that can reasonably be delivered through a meter or an irrigation diversion service point.

Domestic Services

Domestic services are metered, with the smallest (and most common in NYWD) meter size being 5/8 inch. A generally accepted continuous flow capacity through a 5/8" meter is roughly 10 gallons per minute (gpm). Increasing the size of the meter will correspondingly increase the continuous flow capacity through larger meters since capacity is directly tied to the increased cross sectional area of the meter. Table 2, below, summarizes the capacity relationship of the various meter sizes.

¹ California Water Code section 10617: "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

Table 2: Domestic Meter Capacity and Equivalencies			
Meter Size (inches)	Cross-sectional Area (square inches)	5/8" Meter Equivalent Factor	Flow Capacity (gpm)
5/8	0.307	1	10
3/4	0.442	1.44	14
1	0.785	2.56	26
1 1/2	1.767	5.76	58
2	3.142	10.24	102
4	12.566	40.96	410

Irrigation Services

Irrigation services are not metered but divert water from the ditch using a canal turnout diversion structure. NYWD, like hundreds of other water irrigation purveyors throughout California and the west, measures irrigation water flows in terms of a miner's inch (MI). Historically, a miner's inch represented the rate of water flow in a miner's sluice through an orifice one-inch square through a two-inch thick plank with a constant head of six inches. Currently, in California, a miner's inch equates to 1.56 cubic feet of water per minute (11.2 gpm) passing through the one-inch orifice with six inches of head. Given the variable head pressure and other hydraulic considerations in a real world application, for the purpose of this rate study we have approximated the flow through a 1 MI irrigation service diversion to be 10 gallons per minute, making this measurement equal to a 5/8" meter. Table 3, below, summarizes the capacity relationship of the different irrigation diversion structure sizes.

Table 3: Irrigation Diversion Structure Capacity and Equivalencies			
Diversion Size (MI)	Orifice Area (square inches)	Unit Factor	Flow Capacity (gpm)
0.5	0.5	0.5	5
1	1	1	10
1.5	1.5	1.5	15
2	2	2	20
2.5	2.5	2.5	25
3	3	3	30
4	4	4	40
5	5	5	50
6	6	6	60

Volumetric Charges

Volumetric charges are those charges directly related to the amount of water used by the customer. For domestic users, the volume is measured by the meter. For irrigation users, Board policy assumes a flow through the customer's irrigation diversion service point on a continuous 24/7 basis throughout the entire 183-day irrigation season.

2 Existing Revenues and Policies

2.1 Current Budget

The close of the 2014-2015 fiscal year resulted in a budget gap of \$84,560. This is due, in part, to a decreased revenue due to conservation on the domestic side (see below) as well as lack of deliveries to agricultural users; it is also a function of previous years' overages (for 2012-13 and 2013-14) carried over. More information on this is included in the following section.

2.1.1 DOMESTIC RECEIPTS

Domestic users are end users of a small percentage of overall NYWD raw water deliveries (with irrigation users utilizing the bulk of delivered resources, when delivery can occur). Based on 2014/2015 data, domestic users pay, on average, between 20% and 25% of overall NYWD receipts. These costs include those associated with domestic water service directly, including water treatment and regulatory requirements, pressurized pipe infrastructure, required water quality testing, and a higher number of customer service calls and visits due to the higher number of individual domestic connections.

With the dry 2013-2014 year followed by the extremely dry 2014-15 year, the NYWD has experienced decreased revenue due to customer conservation actions. While this is a desirable response to drought conditions, it nonetheless puts financial stress on the District.

In addition, while volumetric billing is encouraged from a conservation point of view, this type of rate does not lend itself to financial stability within the District. For example, while it costs the District the same in electrical costs to keep the central office open during a drought year as it does during a normal year, the current ratio of volumetric charges to fixed-rate charges is such that it doesn't account for these fixed – and steady – costs.

2.1.2 IRRIGATION RECEIPTS

Irrigation water is untreated (raw) and is delivered via the Costa Creek Turnout, off of the Forbestown Ditch. It flows through the creek, meeting up with Dry Creek (on which the NYWD has a water right for 21.4 cfs of instream flow (6,060 AFA), but must leave at least 4 cfs in the creek for aquatic biota), and then meets the turnout for the DOH Canal, from which it can then be delivered to the approximately 120 irrigation customers served by the NYWD. As part of the 2005 Agreement, the NYWD assumed full responsibility for Forbestown Ditch losses, including those losses related to the SFWPA 11 cfs delivery obligation. With losses of up to 70%, this means that SFWPA deliveries take up about 85 percent of the 22 cfs of available ditch capacity. Domestic use takes up the remaining capacity, resulting in *no remaining capacity* for irrigation deliveries via the Forbestown Ditch. Irrigation delivery, without addressing Forbestown Ditch capacity, is now only available via surface water flows on Costa and Dry Creeks – water that is highly limited or simply unavailable during the irrigation season, especially for as long as California continues to experience extreme drought.

In normal water years, water is delivered to irrigation customers during a 183-day season between April 15th and October 15th, barring extreme conditions that may shorten the season. There was no income from irrigation use during the summers of 2014 or 2015 due to drought conditions and the 2005 Agreement (see section 2.1.2 for an explanation of this contract). Property tax revenue came in from the county, though, and can be attributed to irrigation users. However, the gap remains. As long as Forbestown Ditch is not addressed, this lack of irrigation supply, and thus lack of irrigation income, will continue.

Irrigation connections are currently charged based on the size of their diversion structure. This is a flat payment, but irrigation customers with diversion structures of different sizes pay similar volumetric charges. For example, one irrigation customer with a diversion structure of 0.5 MI pays \$160/season, with an average volumetric cost of \$39.60/AF. Another customer with a diversion structure of 3 MI pays \$960 for the season, with an average volumetric cost of \$39.65/AF. Each diversion facility has a (relatively) permanent diversion size, maximizing the amount of water any single

diverter can possibly take over a single season. Table 4, below, lists these charges, as well as other information, based on connection size for the current NYWD customer list.

Table 4: Current Irrigation Connections and Cost					
Size	Acre-feet/ connection (1)	Annual Cost	Cost/AF	Connections this Size (2)	Total AFA
0.5	4.04	\$160	\$39.60	59	238.36
1	8.07	\$320	\$39.65	35	282.45
1.5	12.11	\$480	\$39.64	4	48.44
2	16.14	\$640	\$39.65	9	145.26
2.5	20.18	\$800	\$39.64	2	40.36
3	24.21	\$960	\$39.65	2	48.42
4	32.28	\$1,424	\$44.11	4	129.12
5	40.35	\$1,780	\$44.11	1	40.35
6	48.42	\$2,136	\$44.11	4	193.68
Totals:				120	1,166.44
NOTES:					
1) 1 MI flows at 10 gpm; 1 gpm = 1.61 AFA; 183-day delivery					
2) Some of these connections are not active, hence the total active connections number of 119.					

2.1.3 POWER REVENUE SHARING HISTORY AND PROJECTIONS

The 2005 Agreement between the NYWD and the SFWPA is based on the principle of shared revenue from water and power sales. The shared power revenue was not to begin until the reserve account for the SFWPA was built up to \$15 million. The reserve account is for purposes of power revenue related infrastructure maintenance and production stability, and the goal of \$15 million was met early on due to some good power production years. However, drought conditions have caused this reserve account to dwindle, creating a situation in that the SFWPA needs to rebuild that fund.

Since the buildup of the reserve account, the SFWPA has shared power revenues with the NYWD on several occasions. The 2013/14 payment amounted to \$2.1 million, and the NYWD has been using it to subsidize customer rates, covering budget deficits with the money.

When power revenues are less than what is required for the reserve fund in a given year, the agreement has a provision for a contribution in the amount of \$709,000 annually to each entity. However, that contractual obligation was only for the first several years, and has since expired. Nonetheless, to date, the NYWD continues to receive these funds by mutual agreement and has been incorporating this into its annual budget; essentially subsidizing domestic and irrigation customers with power revenue, a payment that is not contractual and not required. The table below shows the history of those payments.

Table 5: Historic Shared Power Payments from SFWPA	
Year	Amount Received by NYWD (applicable to immediate past-year receipts of the SFWPA)
2010/11	\$709,000.00
2011/12	\$803,000.00
2012/13	\$1,012,916.00

2013/14	\$2,848,677.00
2014/15	\$709,000.00

Notwithstanding the uncertainty regarding receiving this \$709,000 payment in the future, the Board of Directors has made a policy decision to assume it will continue to be received. While the NYWD management and Board of Directors desires that these funds – the base payment and any additional shared water or power revenue from the SFWPA – when conferred, be placed into reserve accounts for the NYWD, in reality that would result in a rates increase that would be much higher than is palatable by the public in the near-term. The Board expects therefore to continue to subsidize customer rates – on a connection capacity basis – with the assumed \$709,000 SFWPA payment for the next five years. Note that there is some risk involved in this decision: when a budget is built around an uncertain revenue, the District could suffer greatly if that revenue does not come through. The power revenues beyond the basic \$709,000 will be placed into a reserve/CIP account at the Board’s discretion.

The 2005 Agreement also makes provisions for a 50-50 sharing of revenue from water sales, with payment *only when profit is generated by the power facility*. This rule is similar to the power production revenue sharing. To date, water sales have not made a significant contribution to the shared payments.

3 REVENUE REQUIREMENT

The NYWD Board approved a 2014-15 budget including \$1,503,800.70 inclusive of all District operations serving ratepayers, and \$243,851.77 in annual debt payments going toward loans approved by the Board over the past two decades. The resulting budget amounts to \$1,747,652.47, which is reflected in Appendix A. Into the future, the Board has opted to carry the 2014-15 budget forward without any projected increases in operations costs. The sole addition projected by the NYWD Board of Directors is the addition of a loan to address the losses experienced on Forbestown Ditch. More information on this loan is available in section 4.5.2. The annual cost is projected to be approximately \$290,713, shared between domestic and irrigation customers proportionally, on the basis of capacity used. The addition of this loan to future budgets increases the District’s revenue requirement to \$2,038,365.47. These costs must be covered on an annual basis by a combination of District ratepayers and other income. How these costs are proportionally allocated is addressed in the following sections. See Appendix A for further detail on the District’s revenue requirement.

4 COST OF SERVICE ANALYSIS

While the NYWD functions as a single water purveyor, the domestic / irrigation customer split necessarily requires a corresponding split the District’s costs structure. In fact, Proposition 218 requires that every user group pay the costs associated with their own service, and no more. No single customer group may subsidize the cost of another. The cost of water delivery to domestic customers includes diversion and conveyance, treatment, infrastructure upkeep and maintenance, and delivery to individual connections. Irrigation water similarly requires diversion and conveyance, but no treatment or pressurized system for canal turnouts off of the DOH Canal. The NYWD has incorporated this in its accounting system through the use of job codes for all staff, activities, and expenses, allowing the tracking of these expenses for the express purpose of this rate study.

It should be noted that Proposition 218 does not apply to certain fees, such as the installation of a new meter, or meter turn-on or –off that is triggered by voluntary decisions of property owners, and are not considered property related fees (i.e. people can make ongoing use of their properties without paying such fees). These miscellaneous fees are, however, subject to Proposition 26, which limits them, generally, to the cost of the service provided. These fees may be set at any time by the Board of Directors with a resolution and proof that the fees identified do not exceed actual costs.

Miscellaneous fees are not addressed in this rate study. Penalties, such as late fees, fines for stealing water, or other penalties for violating District rules, are not subject to Proposition 26.

Importantly, rates are not set based on connection, but based on the capacity of the delivery mechanism that serves a particular connection. Please see section 1.6.1, above, for more information regarding how these capacity equivalencies are calculated. The conversions from connection to capacity unit are shown in Tables 6 and 7, below.

Table 6: Total Capacity Units in the NYWD Service Area – Domestic (2014)				
Meter Size	Cross-section Area	Quantity this size	Capacity Factor	Total Capacity Units
5/8	0.307	843	1.00	843
3/4	0.442	11	1.44	16
1	0.785	6	2.56	15
1 1/2	1.767	3	5.76	17
2	3.142	6	10.24	61
4	12.566	1	40.96	41
Totals:	<i>n/a</i>	870	<i>n/a</i>	994

Table 7: Total Capacity Units in the NYWD Service Area – Irrigation (2014)			
Diversion Size	Quantity this size	Unit Factor	Total Capacity Units
1/2	59	0.5	30
1	35	1.0	35
1 1/2	4	1.5	6
2	9	2.0	18
2 1/2	2	2.5	5
3	2	3.0	6
4	4	4.0	16
5	1	5.0	5
6	4	6.0	24
Totals:	120	<i>n/a</i>	145

From this data, getting the total units of delivery is the result of adding total domestic units to total irrigation units: the result is a total of 1,139 capacity units in 2014. Growth assumptions are estimated at a single domestic capacity unit added annually, to total 1,140 in 2015, 1,141 in 2016, and so on.

4.1 Key Assumptions

4.1.1 BUDGET ASSUMPTIONS

In compiling this rate study, the foundational assumption is that the budget will not change or grow at all from 2014-15 actuals (including no inflation). This policy decision is within the Board’s discretion. Additional costs, when they arise, will be met through reserve accounts funded by the power sharing revenues (above the annual \$709,000, which is integrated into the operating budget, already).

4.1.2 CAPITAL EXPENDITURE ASSUMPTIONS

This study incorporates capital costs associated with the District’s intention to address losses in the Forbestown Ditch.

The increases in rates are driven by the estimate of a loan taken on by the NYWD in the amount of \$8,000,000, over a term of 40 years, at an estimated interest rate of 2%. These assumptions are defensible based on engineering studies completed by the NYWD District Engineer, as well as by research into going interest rates for public infrastructure banks and other public loan sources in California. This means that irrigation deliveries cannot be guaranteed until the 2017/18 fiscal year, when the pipe is completed, giving the District two years (2015/16 and 2016/17) for construction.

4.1.3 WATER USE AND COST ASSUMPTIONS

Projected water use for 2015/16 and 2016/17, before irrigation service can be guaranteed by piping Forbestown Ditch, is estimated at the diversion amount for 2014, when irrigation wasn't served and domestic used a very low amount. Projected irrigation and domestic water demands, following the completion of Forbestown Ditch improvements (2017/18 and forward), is assumed to remain stable at the average of water use for 2012, the last year that irrigation was delivered along with domestic use, less the approximate savings from piping Forbestown Ditch. Water diversion information is available from the State Water Resources Control Board.² The diversions of record can be found in the table below.

Permit Number (notes)	2010	2011	2012	2013	2014
11516 (1)	2,572	4,021	4,277	3,700	3,616
11518 (2)	2,597	4,500	4,780	4,392	4,499
012984 (3)	1,456	1,792	1,482	948	-
S022701 (4)	N/A	N/A	N/A	N/A	250

NOTES:

- 1) *This permit is an unperfected water right, and is diverted for NYWD use at SF-14. One hundred percent of this water is used by NYWD customers.*
- 2) *This permit is an unperfected water right. It represents, primarily, water delivered to Yuba City in the amount of 4,500 AF annually. Any amount above this is additional water diverted for NYWD customer use.*
- 3) *This is a perfected water right from Dry Creek, and represents water delivered solely to irrigation customers. It is only available when the creek is adequately high to divert, and therefore is not counted toward projected water use.*
- 4) *This represents a pre-1914 claim for water diverted at Oroleve Creek, and is available to both irrigation and domestic users. It is only available when the creek is adequately high to divert, and therefore is not counted toward projected water use.*

Once Forbestown Ditch is piped, losses will be significantly decreased. This can be estimated by removing 70% of the 2014 diversions for permit #11516 (domestic-only delivery and SFWPA deliveries, avoiding use and losses in other parts of the system).³ This method estimates losses at 2,531 AF. Irrigation delivery will begin again in 2017/18, by which time the ditch will be piped. Thus, removing the ditch losses estimated from projected use (based on a historic measure of use during a time when both domestic and irrigation uses were served: 2012 diversion reports, for 4,277 AF from permit #11516 and 280 AF from permit #11518 – see note # 2 in Table 8, above) suggests that diversions for NYWD service of both irrigation and domestic uses beginning in 2017/18 will be approximately 2,026 AF. The savings resulting from piping Forbestown Ditch will result in future use that can be met 100% by Block 1 water (first 3,700 AF diverted for District use), at no cost to the District or customers (see section 1.4 for more information on Block 1 and Block 2 water).

² Water diversion data and information is available at:

https://ciwqs.waterboards.ca.gov/ciwqs/ewrims/EWServlet?Redirect_Page=EWWaterRightPublicSearch.jsp&Purpose=getEWAppSearchPage

³ The importance of using diversions in a year with domestic-only deliveries to calculate the savings from piping Forbestown Ditch is based on how the NYWD is plumbed. In years where irrigation water is delivered, losses are compounded through the use of the Dobbins Oregon-House Canal, infrastructure *specific to irrigation users*. If we are looking for the savings from piping Forbestown Ditch, it is important to use a base year in which *only* Forbestown Ditch was used.

4.2 Classification of Costs

Costs are classified into four key areas:

1. Operational expenditures (including administration);
2. Debt service;
3. Capital needs; and
4. Reserves.

This rate study will not examine those costs related to capital needs and reserves; these categories are identified for purposes of future assessment and planning.

4.3 Raw Water Supply Costs and Allocation

The NYWD Board of Directors has opted to consider the volumetric cost of providing raw water to be the same for every acre-foot or ccf of water delivered. This includes both domestic *and* irrigation customers. The rationale behind this decision is that all water resources belong to the NYWD, in trust for all NYWD customers, both domestic and irrigation. Agriculture is of significant benefit to the region in terms of economic contribution, and these customers use significantly greater volumes of water when compared with domestic users. Domestic service is essential for inhabitation of the region. It would be difficult to prioritize uses and assign differing costs based on that value. It would also be questionable to do so based on Proposition 218 requirements. That being the case, the decision of the NYWD Board of Directors to assign all water the same value to all users is viewed as both equitable and reasonable.

It is likely that water supply costs for the NYWD will go up commensurate with inflation (see assumptions section 3.1). Water supply costs will also likely track power cost due to the 2005 Agreement to pay for “lost power revenues” associated with raw water consumption in excess of 3,700 acre-feet annually diverted at SF-14. As shown in Table 1, the cost of power – and, indirectly, the cost of water – seems to be a function of supply scarcity. In times of deep scarcity, such as the summer of 2014, the cost of foregone power is much higher. It is also foreseeable that factors related to climate change, such as catastrophic fire in the watershed, will cause water to become scarcer, continuing to increase the cost of power. It is impossible to estimate this increase with a defensible multiplier, and in any case the Board has opted to adopt an assumption of costs remaining stable – the same as 2014-15 budget actuals – for the next five years.

The single place where this is not applied is in water cost. When domestic use *only* is delivered via Forbestown Ditch (as is the case due to constrained capacity, and without upgrades in ditch capacity or operations), the NYWD does not use water beyond Block 1, and thus does not incur the water cost associated with Block 2 use. When Forbestown Ditch is piped in 2017/18, the NYWD will again have the capacity to deliver water to all irrigation customers. With the savings associated with piping Forbestown Ditch, water use is expected to remain below Block 1, or less than 3,700 AFA (see section 4.1.3, above).

4.4 Operation and Maintenance (O&M) Costs - Irrigation and Domestic

4.4.1 SHARED O&M COSTS

Shared O&M costs are those that common to both irrigation and domestic water users:

A. Fixed O&M Shared Costs:

The NYWD Board of Directors has decided to equitably allocate fixed operation and maintenance (O&M) expenses on a “connection capacity basis.” This follows the philosophy of fixed costs being the same no matter what use, no matter what year-type (wet or dry). Accordingly, the following O&M costs are included in shared fixed costs:

- Administration and “other” unattributed salaries, wages, and benefits;
- Costs associated with the Board of Directors;
- Utilities and fuel specific to District administration;
- Office administration and supplies;
- Legal services;

- Equipment maintenance, tools, and compliance with OSHA;
- Insurance;
- Interest and bank fees;
- Most regulatory expenses (generally related to water rights); and
- Organizational dues and subscriptions.

B. Volumetric O&M Shared Costs:

Some O&M costs are directly related to volumetric-based costs, as they are interpreted as being directly dependent upon the amount of water used (for example, if the infrastructure is being used more often, the District may need to lease a backhoe more often to clean out ditches). As such, these costs are equitably allocated on the basis of volume of raw water used: the same for domestic and irrigation both. Costs identified as shared, but on a volumetric basis are as follows:

- Costs associated with the SFWPA agreement (“lost power revenue” water costs);
- The cost of water;
- Outside services; and
- Leases and equipment rental.

More detail on these costs may be seen in the financial spreadsheets in Appendix C of this document.

4.4.2 DOMESTIC O&M COSTS

Domestic O&M costs are those that are exclusive to domestic water production and delivery:

C. Fixed O&M Domestic Costs:

There are costs specific to domestic service that are allocated on a fixed basis, because they remain the same no matter how much water is utilized by the domestic sector. These costs are split evenly between all EDUs. They are allocated and billed at a constant monthly rate (i.e. every month in a year holds the same fixed costs for each individual domestic EDU. These costs go toward the following:

- Salaries for water treatment plant staff;
- Some regulatory costs; and
- Salaries for domestic staff work as allocated on their time cards.

D. Volumetric O&M Domestic Costs:

As with the shared O&M costs, there are costs specific to domestic use that are most appropriately billed on a volumetric basis. These include:

- Water treatment plant O&M;
- Water treatment plant utilities; and
- Domestic service O&M (including infrastructure upkeep and maintenance addressed in section 4).

More detail on these costs may be seen in the financial spreadsheets in Appendix C of this document.

4.4.3 IRRIGATION O&M COSTS

Irrigation O&M costs are those that are exclusive to irrigation water projection and delivery.

E. Fixed O&M Irrigation Costs:

There are costs specific to irrigation service that are allocated on a fixed basis. These costs are summed and then split between all users. They are allocated and billed at a constant monthly rate (i.e. every month in a year holds the same fixed costs for each individual irrigation unit of delivery). These costs go toward the following:

- Staff salaries specific to irrigation as allocated on their time cards.

F. Volumetric O&M Irrigation Costs:

Similar to domestic costs, there are costs specific to irrigation use that are most appropriately billed on a volumetric basis. These include:

- Irrigation service O&M.

More detail on these costs may be seen in the financial spreadsheets in Appendix C of this document.

4.4.4 PROJECTED O&M COSTS

All O&M costs are projected based on the 2014-15 budget actuals, and any increases (inflation, regulatory, etcetera) are not considered to be part of future budgets. While the District is aware that inflation will occur (predicted to be at least 5% by the finance director’s examination of other agencies serving the surrounding area), not including inflation as part of projected rates is within the Board’s discretion. Budgetary increases will be covered by reserves, as available via power payments.

4.5 Debt Service Payments

4.5.1 EXISTING LOANS

The table below indicates the remaining amounts for each debt commitment of the NYWD, as well as its share allocation to the appropriate user group. Appendix D includes an explanation of how shared debts are allocated, as well as tables showing the detail and the percent attribution to each user group.

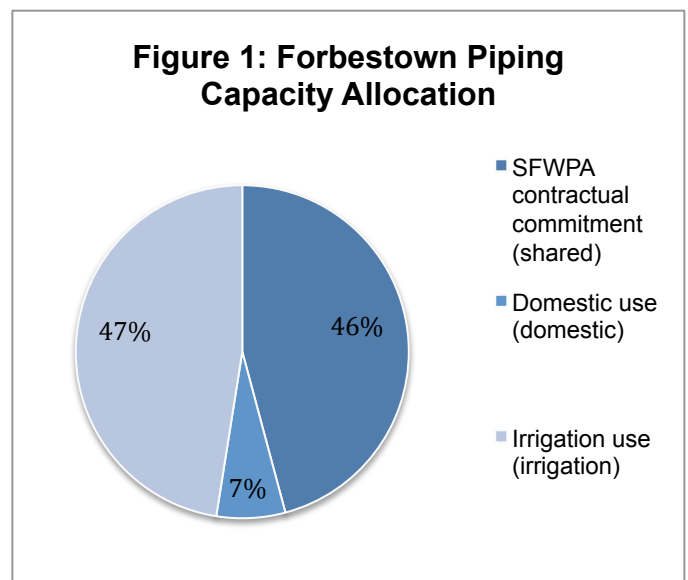
Table 9: NYWD Debt Service: loan balances as of September 2015				
Debt	Shared	Domestic	Irrigation	Area-Specific
YCWA: Forbestown Ditch and DOHC (to be retired May 1, 2022)	\$30,807.66	\$4,484.43	\$329,295.59	N/A
DWR: Safe Drinking Water; WTP (to be retired in October 2018)	N/A	\$152,038.04	N/A	N/A
CitiNational Bank: Forbestown Tank and Woodleaf Siphon (to be retired 6/10/2026)	\$449,423.69	\$317,032.36	\$188,748.40	N/A
Berkadia: Rackerby Improvement Loan (to be retired June 2018)	N/A	N/A	N/A	\$23,154.28

Note that the Rackerby loan is specific to the area served by the specific improvement (Improvement District Number 6). It will be added as a separate line item to the bills specific to the Rackerby service area.

4.5.2 PROJECTED LOANS

In addition to the debts already incurred, the NYWD Board of Directors has identified the Forbestown Ditch improvements as the District’s major priority. The cost of these improvements has been included in this rate study reflecting a new debt of approximately \$8 million. In projecting the cost of this debt, the following assumptions were made: 40-year term; 2.0% interest (low-interest public infrastructure loan); incurred during the 2015-16 fiscal year. These assumptions result in an annual loan payment of approximately \$290,713, shared between all users. The Board recommended that the cost be split as follows:

1. The cost for the base contractual obligation (conveyance of SFWPA 11 cfs irrigation water, out of



current capacity of 24 cfs) will be shared equitably between all users based on connection capacity calculated via meter or diversion size. This amount is 45.83% of the annual payment (\$133,234), and results in an additional cost of \$9.74 (in 2015-16, and up from there) per basic EDU/irrigation capacity unit per month.

2. The remaining \$157,479 cost is allocated to fixed rates for both domestic and irrigation users, allocated based on the relative amount of capacity the user group will employ (as based on meter/diversion size):
 - a. For domestic users, who as a whole use 6.67% of capacity (1.6 cfs out of a total of 24 cfs), this results in an overall annual payment share of \$19,390.56, which results in a projected cost \$1.62/EDU/month.
 - b. For irrigation users, who as a whole will use 47.5% of capacity (the remainder, or about 11.4 cfs of capacity), this results in an overall annual payment share of \$138,088.68, which results in a projected cost \$79.36/irrigation unit/month.

This information is available in tabular format in Table 10, below.

User Group	Capacity Used (cfs)	Percent of Total	Payment Responsibility
Both (shared – SFWPA contractual obligation)	11	45.83	\$133,234
Domestic	1.6	6.67	\$19,391
Irrigation	11.4	47.5	\$138,089
Totals:	24	100	\$290,713

4.6 Summary of Cost of Service

A cost of service analysis was presented to the Board in April of 2015 that showed the overall cost of service, and how those costs should be allocated between all customers – by user group and individually. The costs for O&M were split as shown in sections 3.1 through 3.5, and can be seen in the spreadsheets available in Appendix C. These are the maximum allowable rates per Proposition 218 regulations.

With these same splits, the rates commensurate with cost of service, without subsidies from power or tax revenue, and without investment in reserves or CIP, are shown in the following tables. Note the following:

- Irrigation charges do not begin until the 2017-18 fiscal year. This is because current Forbestown Ditch capacity does not allow for irrigation deliveries (for more information, see section 2.1.2); deliveries to irrigation customers will begin again once Forbestown Ditch is lined, in 2017-18.
- The following charges do not include those charges related to the Rackerby pipeline improvement, which are specific to those served by that improvement. These charges were authorized by Board Resolution #78-340, followed by Resolution #79-346, which declared the formation of improvement district number six, formed to serve the Rackerby sub-service area. The loan bears interest at 5%, with annual payments of \$8,540, through January 1, 2018. Customers within the Rackerby sub-service area will continue to pay what has been assessed; this is a preexisting assessment, remaining wholly separate, and will not be affected by Proposition 218 or 26.

	2015-16	2016-17	2017-18	2018-19	2019-20
FIXED COSTS:					
<i>SHARED OPERATING FIXED:</i>	\$45.26	\$45.22	\$45.18	\$45.14	\$45.10
<i>DOMESTIC OPERATING FIXED:</i>	\$22.31	\$22.29	\$22.26	\$22.24	\$22.22
Total Domestic Operating Costs:	\$67.57	\$67.51	\$67.44	\$67.38	\$67.32
<i>SHARED DEBT (EXISTING):</i>	\$4.30	\$4.30	\$4.29	\$4.29	\$4.29
<i>DOMESTIC DEBT (without Rackerby):</i>	\$7.77	\$7.76	\$7.75	\$5.47	\$3.20
<i>NEW FORBESTOWN DEBT -</i>	\$9.74	\$9.73	\$9.72	\$9.71	\$9.71

Table 11: Monthly charges for a single-unit domestic customer (5/8" meter) – for cost of service					
	2015-16	2016-17	2017-18	2018-19	2019-20
<i>SHARED PORTION:</i>					
<i>NEW FORBESTOWN DEBT - DOMESTIC PORTION:</i>	\$1.62	\$1.62	\$1.62	\$1.62	\$1.62
Total Domestic Debt Service:	\$23.43	\$23.41	\$23.39	\$21.09	\$18.81
total fixed charges:	\$91.00	\$90.92	\$90.83	\$88.48	\$86.13
VOLUMETRIC COSTS:					
SHARED (based on ccf billed, not produced):	\$0.95	\$0.95	\$0.21	\$0.21	\$0.21
DOMESTIC (based on ccf billed, not produced):	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54
total volumetric charge/ccf:	\$1.49	\$1.49	\$0.75	\$0.75	\$0.75

Table 12: Monthly charges for a single-unit irrigation customer (1 MI) – for cost of service					
	2015-16	2016-17	2017-18	2018-19	2019-20
FIXED COSTS:					
<i>SHARED OPERATING FIXED:</i>	\$-	\$-	\$45.18	\$45.14	\$45.10
<i>IRRIGATION OPERATING FIXED:</i>	\$-	\$-	\$31.69	\$31.69	\$31.69
Total Irrigation Operating Costs:	\$-	\$-	\$76.87	\$76.83	\$76.79
<i>SHARED DEBT (EXISTING):</i>	\$-	\$-	\$4.29	\$4.29	\$4.29
<i>IRRIGATION DEBT:</i>	\$-	\$-	\$48.12	\$48.12	\$48.12
<i>NEW FORBESTOWN DEBT - SHARED PORTION:</i>	\$-	\$-	\$9.72	\$9.71	\$9.71
<i>NEW FORBESTOWN DEBT - IRRIGATION PORTION:</i>	\$-	\$-	\$79.36	\$79.36	\$79.36
Total Irrigation Debt Service:	\$-	\$-	\$141.50	\$141.48	\$141.47
total fixed charge per unit (1 MI):	\$-	\$-	\$218.37	\$218.32	\$218.27
VOLUMETRIC COSTS:					
SHARED (based on AF billed, not produced):	\$-	\$-	\$93.04	\$93.02	\$93.00
IRRIGATION (based on AF billed, not produced):	\$-	\$-	\$17.68	\$17.68	\$17.68
total volumetric charge/AF:	\$-	\$-	\$110.72	\$110.70	\$110.68

5 Proposed Rates

While the Board is aware that tax revenue and the SFWPA annual payment may be considered discretionary funds, they made the decision in early 2015 to reallocate this income back to customers. Board decisions regarding allocation of non-ratepayer revenues includes the following:

1. Allocate the \$709,000 equally between the capacity-based units of delivery;
2. Allocate tax revenue as follows:
 - a. General tax revenue (\$216,320.44 in 2014-15, with \$5,242.22 from Butte County and \$211,078.22 from Yuba County) is allocated based on the payment data given to the NYWD *directly* from the contributing counties (Yuba and Butte) and is allocated equally between capacity units;
 - b. Domestic-specific revenue (\$53,778.70 in 2014-15, with \$8,270.70 coming from Butte County and 45,508 from Yuba County) is allocated based on the payment data given to the NYWD *directly* from the contributing counties (Yuba and Butte) and is allocated equally between domestic capacity units; and
 - c. Irrigation-specific revenue (\$87,518.89 in 2014-15, all from Yuba County) is allocated based on the

payment data given to the NYWD *directly* from the contributing county (Yuba) and is allocated equally between irrigation capacity units.

The Board decided against funding reserves or CIP through anything other than the power revenue already in the District reserves. These decisions lower the effective rates customers might pay, should this rates proposal be adopted, on a monthly basis. The subsidies are detailed in Tables 13 and 14, below, but basically are as follows:

- DOMESTIC subsidies from the \$709,000 annual payment from SFWPA, general tax revenue, and domestic tax revenue amounts to \$72.14/month for a single unit of delivery (5/8" meter) in 2015/16, and slightly less in following years due to projected growth in the number of connections, distributing these resources between more connections.
- IRRIGATION subsidies for the standard delivery capacity size (1 MI) from the \$709,000 annual payment from SFWPA, general tax revenue, and irrigation tax revenue amounts to \$117.83/month in 2017/18, and slightly less in following years due to projected growth in the number of connections, distributing these resources between more connections.

This section details what those proposed rates are, based on the assumptions detailed above. The rates below are based NOT on connection, but on a basic unit of service (see section 1.6.1, above).

Table 13: Monthly charges for an single-unit domestic customer (5/8" meter) – for proposed rates with subsidies					
	2015-16	2016-17	2017-18	2018-19	2019-20
FIXED COSTS:					
<i>SHARED OPERATING FIXED:</i>	\$45.26	\$45.22	\$45.18	\$45.14	\$45.10
<i>DOMESTIC OPERATING FIXED:</i>	\$22.31	\$22.29	\$22.26	\$22.24	\$22.22
Total Domestic Operating Costs:	\$67.57	\$67.51	\$67.44	\$67.38	\$67.32
<i>SHARED DEBT (EXISTING):</i>	\$4.30	\$4.30	\$4.29	\$4.29	\$4.29
<i>DOMESTIC DEBT (without Rackerby):</i>	\$7.77	\$7.76	\$7.75	\$5.47	\$3.20
<i>NEW FORBESTOWN DEBT - SHARED PORTION:</i>	\$9.74	\$9.73	\$9.72	\$9.71	\$9.71
<i>NEW FORBESTOWN DEBT - DOMESTIC PORTION:</i>	\$1.62	\$1.62	\$1.62	\$1.62	\$1.62
Total Domestic Debt Service:	\$23.43	\$23.41	\$23.39	\$21.09	\$18.81
FIXED - SHARED RESERVES:	\$-	\$-	\$-	\$-	\$-
<i>SFWPA ANNUAL PAYMENT CONTRIBUTION:</i>	\$(51.83)	\$(51.78)	\$(51.74)	\$(51.69)	\$(51.65)
<i>COUNTY TAX ROLL CONTRIBUTION - GENERAL:</i>	\$(15.81)	\$(15.80)	\$(15.79)	\$(15.77)	\$(15.76)
<i>COUNTY TAX ROLL CONTRIBUTION - DOMESTIC ONLY:</i>	\$(4.50)	\$(4.50)	\$(4.50)	\$(4.49)	\$(4.49)
Total Subsidies (taxes and SFWPA annual payment):	\$(72.14)	\$(72.08)	\$(72.02)	\$(71.95)	\$(71.89)
total fixed charges:	\$18.86	\$18.84	\$18.82	\$16.52	\$14.24
VOLUMETRIC COSTS:					
<i>SHARED (based on ccf billed, not produced):</i>	\$0.95	\$0.95	\$0.21	\$0.21	\$0.21
<i>DOMESTIC (based on ccf billed, not produced):</i>	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54
total volumetric charge/ccf:	\$1.49	\$1.49	\$0.75	\$0.75	\$0.75

Table 14: Monthly charges for an single-unit irrigation customer (1 MI) – for proposed rates with subsidies

	2015-16	2016-17	2017-18	2018-19	2019-20
FIXED COSTS:					
SHARED OPERATING FIXED:	\$-	\$-	\$45.18	\$45.14	\$45.10
IRRIGATION OPERATING FIXED:	\$-	\$-	\$31.69	\$31.69	\$31.69
Total Irrigation Operating Costs:	\$-	\$-	\$76.87	\$76.83	\$76.79
SHARED DEBT (EXISTING):	\$-	\$-	\$4.29	\$4.29	\$4.29
IRRIGATION DEBT:	\$-	\$-	\$48.12	\$48.12	\$48.12
NEW FORBESTOWN DEBT - SHARED PORTION:	\$-	\$-	\$9.72	\$9.71	\$9.71
NEW FORBESTOWN DEBT - IRRIGATION PORTION:	\$-	\$-	\$79.36	\$79.36	\$79.36
Total Irrigation Debt Service:	\$-	\$-	\$141.50	\$141.48	\$141.47
FIXED - SHARED RESERVES:	\$-	\$-	\$-	\$-	\$-
SFWPA ANNUAL PAYMENT CONTRIBUTION:	\$-	\$-	\$(51.74)	\$(51.69)	\$(51.65)
COUNTY TAX ROLL CONTRIBUTION - GENERAL:	\$-	\$-	\$(15.79)	\$(15.77)	\$(15.76)
COUNTY TAX ROLL CONTRIBUTION - IRRIGATION ONLY:	\$-	\$-	\$(50.30)	\$(50.30)	\$(50.30)
Total Subsidies (taxes and SFWPA annual payment):	\$-	\$-	\$(117.82)	\$(117.76)	\$(117.70)
total fixed charge per unit (1 MI):	\$-	\$-	\$100.55	\$100.56	\$100.56
VOLUMETRIC COSTS:					
SHARED (based on AF billed, not produced):	\$-	\$-	\$93.04	\$93.02	\$93.00
IRRIGATION (based on AF billed, not produced):	\$-	\$-	\$17.68	\$17.68	\$17.68
total volumetric charge/AF:	\$-	\$-	\$110.72	\$110.70	\$110.68

5.1 Projecting Monthly Bills

The rates described in Tables 13 and 14, above, project monthly costs for both domestic and irrigation customers. These costs are represented in example bills, below.

The “existing bill” section shows a bill based on average use (for volumetric use). For those capacity unit sizes different from the base (5/8” meter for domestic and 1 MI box for irrigation), use, along with fixed charges, are multiplied on a capacity basis, as shown in Tables 6 and 7, above.

The “proposed rates bill” shows what that same customer would pay for that exact usage under the proposed rates.

Note that Rackerby customers will continue to pay the assessment related to the Rackerby Water Line Extension loan. This amount remains unchanged by this rate study. More detail on the Rackerby charge is available in section 4.6

Note the label for customer type, meter/diversion unit capacity, and timing (*monthly* versus *bimonthly* versus *annual* estimate).

5.1.1 DOMESTIC BILL COMPARISON

Existing Bill - 5/8" Meter			
	Units (ccf)	Amount	
Base Rate		\$25.00	
Usage	24.69	\$18.52	
Plant Assessment 1 Unit	1	\$13.00	
Bimonthly Bill - Existing:			\$56.52
Proposed Rates Bill - 5/8" Meter - 2015/16			
Fixed Costs			
SHARED OPERATING FIXED:	\$45.26		
DOMESTIC OPERATING FIXED:	\$22.31		
SHARED DEBT (EXISTING):	\$4.30		
DOMESTIC DEBT (without Rackerby):	\$7.77		
FORBESTOWN DEBT - SHARED PORTION:	\$9.74		
FORBESTOWN DEBT - DOMESTIC PORTION:	\$1.62		
FIXED - SHARED RESERVES:	\$-		
SFWPA ANNUAL PAYMENT CONTRIBUTION:	\$(51.83)		
COUNTY TAX ROLL CONTRIBUTION - GENERAL:	\$(15.81)		
COUNTY TAX ROLL CONTRIBUTION - DOMESTIC ONLY:	\$(4.50)		
Subtotal Fixed Charge (one month):			\$18.86
Volumetric Costs (one month)			
	Charge/ccf	Use (ccf)	Total
Shared:	\$0.95	12.34	\$11.73
Domestic:	\$0.54	12.34	\$6.65
Subtotal Volumetric Charges (for one month):			\$18.37
Total Monthly Bill (fixed plus volumetric charges)			\$37.23
Bimonthly Bill - Proposed Rates:			\$74.46

Existing Bill - 1" Meter			
	Units (ccf)	Amount	
Base Rate		\$34.00	
Usage	63.20	\$47.40	
Plant Assessment 1 Unit	1	\$13.00	
Bimonthly Bill - Existing:			\$94.40
Proposed Rates Bill - 1" Meter - 2015/16			
Fixed Costs			
SHARED OPERATING FIXED:	\$115.87		
DOMESTIC OPERATING FIXED:	\$57.11		
SHARED DEBT (EXISTING):	\$11.01		
DOMESTIC DEBT (without Rackerby):	\$19.88		
FORBESTOWN DEBT - SHARED PORTION:	\$24.93		
FORBESTOWN DEBT - DOMESTIC PORTION:	\$4.16		
FIXED - SHARED RESERVES:	\$-		
SFWPA ANNUAL PAYMENT CONTRIBUTION:	\$(132.68)		
COUNTY TAX ROLL CONTRIBUTION - GENERAL:	\$(40.48)		

COUNTY TAX ROLL CONTRIBUTION - DOMESTIC ONLY:	\$ (11.53)		
Subtotal Fixed Charge (one month):	\$48.27		
Volumetric Costs (one month)	Charge/ccf	Use (ccf)	Total
Shared:	\$0.95	31.60	\$30.02
Domestic:	\$0.54	31.60	\$17.01
Subtotal Volumetric Charges (for one month):			\$47.03
<i>Total Monthly Bill (fixed plus volumetric charges)</i>	\$95.31		
Bimonthly Bill - Proposed Rates:	\$190.61		

Existing Bill - 2" Meter			
	Units (ccf)	Amount	
Base Rate		\$52.00	
Usage	252.79	\$189.59	
Plant Assessment 1 Unit	1	\$13.00	
Bimonthly Bill - Existing:		\$254.59	
Proposed Rates Bill - 2" Meter - 2015/16			
Fixed Costs			
SHARED OPERATING FIXED:	\$463.47		
DOMESTIC OPERATING FIXED:	\$228.43		
SHARED DEBT (EXISTING):	\$44.06		
DOMESTIC DEBT (without Rackerby):	\$79.53		
FORBESTOWN DEBT - SHARED PORTION:	\$99.73		
FORBESTOWN DEBT - DOMESTIC PORTION:	\$16.63		
FIXED - SHARED RESERVES:	\$-		
SFWPA ANNUAL PAYMENT CONTRIBUTION:	\$(530.71)		
COUNTY TAX ROLL CONTRIBUTION - GENERAL:	\$(161.92)		
COUNTY TAX ROLL CONTRIBUTION - DOMESTIC ONLY:	\$(46.12)		
Subtotal Fixed Charge (one month):	\$193.09		
Volumetric Costs (one month)	Charge/ccf	Use (ccf)	Total
Shared:	\$0.95	126.40	\$120.09
Domestic:	\$0.54	126.40	\$68.05
Subtotal Volumetric Charges (for one month):			\$188.14
<i>Total Monthly Bill (fixed plus volumetric charges)</i>	\$381.23		
Bimonthly Bill - Proposed Rates:	\$762.45		

5.1.2 IRRIGATION BILL COMPARISON

Existing Bill - 0.5 MI	
Annual payment	\$160.00
Proposed Rates Bill - 0.5 MI - 2017/18	
Fixed Charges	
SHARED OPERATING FIXED:	\$22.59
IRRIGATION OPERATING FIXED:	\$15.85
SHARED DEBT (EXISTING):	\$2.15
IRRIGATION DEBT:	\$24.06
FORBESTOWN DEBT - SHARED PORTION:	\$4.86
FORBESTOWN DEBT - IRRIGATION PORTION:	\$39.68
FIXED - SHARED RESERVES:	\$-
SFWPA ANNUAL PAYMENT CONTRIBUTION:	\$(25.87)
COUNTY TAX ROLL CONTRIBUTION - GENERAL:	\$(7.89)
COUNTY TAX ROLL CONTRIBUTION - IRRIGATION ONLY:	\$(25.15)
Subtotal Fixed Charge (0.5 MI, monthly for 12-month year):	\$50.27
Volumetric Charges	
Average annual flow (0.5 MI connection; averaged over a 12-month year)	\$37.10
Total Monthly Charges	\$87.37
Bimonthly Bill - Proposed Rates	\$174.74
Annual Payment - Proposed Rates	\$1,048.46

Existing Bill - 4 MI	
Annual payment	\$1,424.00
Proposed Rates Bill - 4 MI - 2017/18	
Fixed Charges	
SHARED OPERATING FIXED:	\$180.73
IRRIGATION OPERATING FIXED:	\$126.76
SHARED DEBT (EXISTING):	\$17.18
IRRIGATION DEBT:	\$192.47
FORBESTOWN DEBT - SHARED PORTION:	\$38.89
FORBESTOWN DEBT - IRRIGATION PORTION:	\$317.45
FIXED - SHARED RESERVES:	\$-
SFWPA ANNUAL PAYMENT CONTRIBUTION:	\$(206.95)
COUNTY TAX ROLL CONTRIBUTION - GENERAL:	\$(63.14)
COUNTY TAX ROLL CONTRIBUTION - IRRIGATION ONLY:	\$(201.19)
Subtotal Fixed Charge (4 MI, monthly for 12-month year):	\$402.19
Volumetric Charges	
Average annual flow (4 MI connection; averaged over a 12-month year)	\$296.78
Total Monthly Charges	\$698.97

Bimonthly Bill - Proposed Rates
Annual Payment - Proposed Rates

\$1,397.95
\$8,387.68

6 Common Conversions:

1 acre foot (af) = 435.6 hundred cubic feet (ccf)

1 af = 325,851 gallons (gal)

1 gal = 0.13 cubic feet (cf)

1 miner's inch (MI) = 10 gallons per minute (gpm)

1 gpm = 1.6 af/year

10 gpm = 0.022 cf/second

7 Appendices

- A. NYWD 2014-15 Budget
- B. NYWD Debt Obligations
- C. Financial Assessment and Rate Calculations Tables
- D. Loan Split Data for Existing Loans

Appendix A:		
NYWD 2014-15 Budget Actuals; Projected 2015-16		
EXPENSES		YEAR TOTAL
REGULATORY		
Yuba Co Community Development		\$268.73
CA Board of Eq. SWRCB	Water Rights Tax	\$45,411.52
SWRCB/AFRS	WTP Annual Permit	\$1,996.00
Yuba Co Environmental Health		\$0.00
DWR - US Postal Dept.		\$330.00
Dept Public Health-Drinking Water Program		\$4,704.00
Feather River Air Quality Control		\$363.90
Yuba County Sheriff Dept		\$0.00
Fire Extinguisher Inspection & Certification		\$367.74
Yuba Co Hazardous Waste Disposal		\$472.50
Consultants/Engineers/Aluminum Study/Tests		\$6,182.21
Osha/Certifications/Seminars		\$3,687.88
Flow Measurements		\$0.00
Regulator Salaries & Benefits		\$30,408.03
SFWP/NYWD AGREEMENT		
Water Loss		\$0.00
SFPP		\$323,145.00
Forbestown Canal Maint		\$4,878.28
FT Canal Salaries & Benefits		\$96,362.03
LOAN PMTS		
YCWA-(Dobbins-Oregon H.)		\$55,760.00
YCWA-(Forbestown Pipe E)		\$12,240.00
DWR (WTP)		\$54,419.92
ID-6		\$8,540.00
City Bank (FT)		\$112,891.85
GENERAL/ADMINISTRATIVE COSTS		
Administrative Salaries & Benefits		\$312,360.69
Supplies (office & admin)		\$10,794.33
Utilities - Admin		\$17,755.58
Equip Maint-Office		\$1,281.53
Bank & Credit Card Fees		\$2,374.74
Outside Services - Admin		\$28,964.11
Leases/Equip Rental-Admin		\$1,743.98
Liability & Property Ins/JPIA		\$25,134.00
Organization Dues/Subscrip		\$12,415.08
Postage/Shipping		\$2,784.00
	Salaries & Benefits	\$8,145.98
	Meals/Workshop Supplies	\$480.46
Board of Directors	Recording Secretary	\$3,600.00
	Seminars	\$0.00
	General	\$25,912.75
	Other	\$2,420.50
Legal	Water Rights	\$6,817.40
	Personnel	\$2,299.50
OPERATIONS AND MAINTENANCE		
	Outside Services	\$6,760.88
	Chemicals	\$12,477.29

Appendix A:		
NYWD 2014-15 Budget Actuals; Projected 2015-16		
Water Treatment Plant	Salaries & Benefits	\$121,272.70
	Supplies/Maintenance Equip	\$7,320.41
	Utilities	\$32,943.53
	Testing	\$1,692.99
Irrigation	Equipment Lease/Rental	\$17,373.62
	Maint & Repair	\$0.00
	Outside Services	\$0.00
	Supplies- Other	\$1,707.28
	Salaries & Benefits	\$55,142.74
	Fuel	\$0.00
	Utilities	\$1,535.77
Domestic	Equipment Lease/Rental	\$0.00
	Maint & Repair	\$922.48
	Outside Services	\$4,135.00
	Supplies- Other	\$12,172.73
	Salaries & Benefits	\$132,199.90
	Utilities	\$922.85
Other	Shop/Tools	\$1,941.79
	Fuel	\$20,909.29
	Equip Maintenance/Supplies - General	\$5,261.46
	Outside Service - General	\$2,813.62
	Salaries & Benefits	\$73,081.14
	Protective Clothing and OSHA approved safety equip.	\$3,651.53
	2 Computers/1 Printer	\$3,699.25
TOTAL EXPENSES		\$1,747,652.47

NORTH YUBA WATER DISTRICT

Notes to Financial Statements

June 30, 2014 and 2013

5. Long Term – Debt:

The following is a summary of the long-term debt transactions for the years ended June 30, 2014 and 2013:

	Balance June 30, 2013	Debit Retired	Balance June 30, 2014	Current Portion
Safe Drinking Water Contract	\$ 243,489	\$ 44,788	\$ 198,701	\$ 46,164
Energy Drought Relief Repayment Contract of 1977 (Rackerby Improvement Loan)	36,153	6,330	29,823	7,049
Yuba County Water Agency Consolidation	478,870	49,633	429,237	51,558
Water Tank Loan	1,083,162	62,525	1,020,637	65,432
	<u>\$ 1,841,674</u>	<u>\$ 163,276</u>	<u>\$ 1,678,398</u>	<u>\$ 170,203</u>

Long-term debt maturities for the succeeding five fiscal years are as follows:

Year Ended June 30	<u>Principal</u>
2015	170,203
2016	179,906
2017	187,434
2018-2022	731,492
2023-2026	409,363
	<u>\$ 1,678,398</u>

Long-term debt payable at June 30, 2014 is comprised of the following:

Safe Drinking Water Contract

Pursuant to the California Safe Drinking Water Bond Law of 1984, the District entered into a contract with the State of California Department of Water Resources on June 4, 1987. This construction loan was used to finance improvements in the District's domestic water system in order to meet minimum safe drinking water standards. The loan bears interest at 4.1439% and has semi-annual principal and interest payments due on April 1 and October 1 through 2018.

NORTH YUBA WATER DISTRICT

Notes to Financial Statements

June 30, 2014 and 2013

5. Long-Term Debt (continued):

Rackerby Improvement Loan

Resolution No. 78-340 authorized a loan in the amount of \$145,300. The proceeds of the loan were used to finance the construction of a water system and facility to supply water to the Rackerby Water Line Extension Project.

Resolution No. 79-346 declared the formation of improvement District No. 6 which was formed to serve the Rackerby sub-service area.

The loan bears interest at 5% with annual principal and interest payments of \$8,540 due on January 1 through 2018.

Loans from Yuba County Water Agency

Gunite Loan

The District borrowed \$239,539 to Gunite portions of the Dobbins-Oregon House Canal, which will conserve water which was being lost to seepage, deep percolation and evaporation. The project was completed in March, 1993.

On February 14, 2012 the principal balance owing of \$239,539 plus accumulated interest of \$199,834 was consolidated into one loan with Yuba County Water Agency.

Forbestown Ditch Loan

The District had incurred \$96,994 of costs at June 30, 2011 to pay for engineering and environmental studies for rehabilitation feasibility studies of the Forbestown Pipeline Project.

On February 14, 2012 the balance of this Forbestown Ditch loan in the amount of \$99,349, including interest, was consolidated into one loan with Yuba County Water Agency.

Consolidated Loan

The District consolidated the Gunite loan (including interest) and the Forbestown into a new loan of \$538,722 payable through November, 2021. The loan requires quarterly payments of \$17,000 (in February, May, August and November each year) including interest. This loan bears interest at the average rate paid by County Treasurer for preceding 12 months adjusted every April 1 (not less than 4%). This note is secured by a rate covenant.

NORTH YUBA WATER DISTRICT

Notes to Financial Statements

June 30, 2014 and 2013

5. Long-Term Debt (continued):

Loan -Forbestown Water Storage Tank Replacements Project

On March 1, 2011 the District borrowed \$1,200,000 from Municipal Finance Corporation under an installment sales agreement in order to construct certain improvements to the water supply facilities.

This \$1,200,000 is to be paid in annual installments of \$112,892 including 4.65% interest, beginning June 10, 2012 through June 10, 2026.

The District has pledged "net revenues" (as defined by the agreement) as collateral.

6. Restricted County Cash

Cash held in reserve with the County of Yuba at June 30, pursuant to the requirements of the District's loan and bond indebtedness agreements is:

	<u>June 30, 2014</u>	<u>June 30, 2013</u>
Safe Drinking Water Contract	\$ 2,522	\$ 2,501
Rackerby Improvement Loan	<u>10,492</u>	<u>10,402</u>
	<u>13,014</u>	<u>12,903</u>
 Balance at June 30, 2014 in reserve accounts which were established by the Board of Directors for facility fees associated with the upgrade and expansion of the domestic and irrigation systems	 6,785	 6,728
 Restricted balances that were created by annexation fees	 93	 92
 Board of Directors designated reserve for heavy equipment and vehicle replacement	 2,763	 2,740
 Board of Directors designated reserve for office equipment replacement	 <u>5,046</u>	 <u>5,004</u>
	<u>\$ 27,701</u>	<u>\$ 27,467</u>

North Yuba Water District - FINANCIAL TRACKING AND RATES ESTIMATES/PROJECTIONS

SUMMARY

5-year Projections	2015-2016 Projected	2016-2017 Projected	2017-2018 Projected	2018-2019 Projected	2019-2020 Projected
Beginning Cash on Hand	\$ (214,336.97)	\$ (184,419.35)	\$ (185,000.16)	\$ 10,558.41	\$ 21,116.82
Add: Cash Receipts (6T)	\$ 1,853,946.14	\$ 1,853,365.33	\$ 2,048,923.90	\$ 2,013,173.94	\$ 1,985,963.98
Deposit from Reserves	\$ 214,336.97	\$ 184,419.35	\$ 185,000.16	\$ -	\$ -
Less: Operating Expenditures (7T)	\$ 1,503,800.70	\$ 1,503,800.70	\$ 1,503,800.70	\$ 1,503,800.70	\$ 1,503,800.70
Debt Service (8T)	\$ 534,564.79	\$ 534,564.79	\$ 534,564.79	\$ 498,814.83	\$ 471,604.87
Capital Improvements (9T)	\$ -	\$ -	\$ -	\$ -	\$ -
Deposit to Reserves (10T)	\$ -	\$ -	\$ -	\$ -	\$ -
Ending Cash on Hand	\$ (184,419.35)	\$ (185,000.16)	\$ 10,558.41	\$ 21,116.82	\$ 31,675.23

2015-16 and 2016-17 deficit: largely due to the absence of irrigation receipts; these losses are covered by reserves in those fiscal years. The loss would be higher if the "other" fees weren't considered (late fees, interest, and "other" charges from "receipts"; about \$10,500 - not guaranteed income, and so are not considered as dependable revenue coming in, here); these fees represent the slight positive "ending cash on hand" for 2017-18 and beyond.

NYWD RECEIPTS

5-year Projections	2015-2016 Projected	2016-2017 Projected	2017-2018 Projected	2018-2019 Projected	2019-2020 Projected
1. Cash Receipts from Water Revenues:					
a. Unmetered Water Revenue	\$ -	\$ -	\$ -	\$ -	\$ -
b. Domestic Water Revenue: base	\$ 255,709.56	\$ 225,132.25	\$ 225,119.56	\$ 197,896.93	\$ 170,674.32
c. Domestic Water Revenue: volumetric	\$ 189,375.14	\$ 219,371.64	\$ 110,889.41	\$ 110,913.85	\$ 110,938.29
d. Domestic Water Revenue (Rackerby Assessment)	\$ 8,540.00	\$ 8,540.00	\$ 8,540.00	\$ -	\$ -
e. Treatment Plant Assessment	\$ -	\$ -	\$ -	\$ -	\$ -
f. Agricultural Water Revenue: base	\$ -	\$ -	\$ 174,954.59	\$ 174,967.26	\$ 174,979.91
g. Agricultural Water Revenue: volumetric	\$ -	\$ -	\$ 129,098.90	\$ 129,074.46	\$ 129,050.02
1.T Total Water Revenues (1a thru 1g)	\$ 453,624.70	\$ 453,043.89	\$ 648,602.46	\$ 612,852.50	\$ 585,642.54
<i>NOTE: domestic water revenue for 2015-16 (base and volumetric) is different because rates are projected to be implemented beginning December 1, 2015. This means that the fiscal year will have 5 months of the current rates (July-November 2015) and 7 months of the proposed rates (if passed; December 2015-June 2016). Subsequent years' receipts are estimated based on proposed rates alone.</i>					
2. Cash Receipts From other Income					
a. Off/on, Late Fees, Connection Fees, and Other	\$ 4,242.13	\$ 4,242.13	\$ 4,242.13	\$ 4,242.13	\$ 4,242.13
b. Interest and Dividend Income	\$ 4,640.00	\$ 4,640.00	\$ 4,640.00	\$ 4,640.00	\$ 4,640.00
c. Tax Revenue (domestic; Butte and Yuba Counties)	\$ 53,778.70	\$ 53,778.70	\$ 53,778.70	\$ 53,778.70	\$ 53,778.70
d. Tax Revenue (irrigation; Yuba)	\$ 87,518.89	\$ 87,518.89	\$ 87,518.89	\$ 87,518.89	\$ 87,518.89
e. General Tax Revenue (Butte and Yuba Counties)	\$ 216,320.44	\$ 216,320.44	\$ 216,320.44	\$ 216,320.44	\$ 216,320.44
f. Other (Water Availability and "other")	\$ 1,676.28	\$ 1,676.28	\$ 1,676.28	\$ 1,676.28	\$ 1,676.28
2.T Total Other Income (2a thru 2c)	\$ 368,176.44	\$ 368,176.44	\$ 368,176.44	\$ 368,176.44	\$ 368,176.44
3.T Total Cash Revenues (1T + 2T)	\$ 821,801.14	\$ 821,220.33	\$ 1,016,778.90	\$ 981,028.94	\$ 953,818.98
4. Other Cash Receipts					
a. Loans, Grants, or other Cash Received	\$ -	\$ -	\$ -	\$ -	\$ -
b. Outside Water Sales (Yuba City)	\$ 323,145.00	\$ 323,145.00	\$ 323,145.00	\$ 323,145.00	\$ 323,145.00
4.T Total Other Cash Receipts	\$ 323,145.00	\$ 323,145.00	\$ 323,145.00	\$ 323,145.00	\$ 323,145.00
5. Power Revenue - to be used at Board's discretion					
a. SFWPA annual shared payment (contributes to operating expenses; reflected on the basis of per EDU, in flat-rate credits)	\$ 709,000.00	\$ 709,000.00	\$ 709,000.00	\$ 709,000.00	\$ 709,000.00
b. Power Profit (goes directly into general reserve)	\$ -	\$ -	\$ -	\$ -	\$ -
5.T Total Power Revenue	\$ 709,000.00	\$ 709,000.00	\$ 709,000.00	\$ 709,000.00	\$ 709,000.00
6.T Total Cash Receipts (3T + 4T)	\$ 1,853,946.14	\$ 1,853,365.33	\$ 2,048,923.90	\$ 2,013,173.94	\$ 1,985,963.98

NOTES:

none; NYWD is 100% metered
 Projections based on rates projections
 Projections based on rates projections
 Projections based on collecting total debt
 Built into fixed rate component
 Projections based on rates projections
 Projections based on rates projections

projected without change
 projected without change
 projected without change
 projected without change
 projected without change
 projected without change

NOTE: this is a simple "in and out": it is paid to NYWD by Yuba City, then goes out in the same amount to SFWPA

Held at \$709K per agreement
 Impossible to predict based on short history and volatile market; funds go into reserve exclusively

NYWD OPERATING EXPENDITURES

KEY: shared - fixed shared - volumetric
 domestic - fixed domestic - volumetric
 irrigation - fixed irrigation - volumetric

5-year Projections		2015-2016 Projected	2016-2017 Projected	2017-2018 Projected	2018-2019 Projected	2019-2020 Projected
7. Operating Expenses						
a	Salaries, Wages, and Benefits (<i>administration and "other" O&M</i>)	\$ 385,441.83	\$ 385,441.83	\$ 385,441.83	\$ 385,441.83	\$ 385,441.83
	<i>Administrative</i>	\$ 312,360.69	\$ 312,360.69	\$ 312,360.69	\$ 312,360.69	\$ 312,360.69
	<i>Other O&M</i>	\$ 73,081.14	\$ 73,081.14	\$ 73,081.14	\$ 73,081.14	\$ 73,081.14
	<i>Additional cost for proposed monthly billing</i>	\$ -	\$ -	\$ -	\$ -	\$ -
b	Board of Directors	\$ 12,226.44	\$ 12,226.44	\$ 12,226.44	\$ 12,226.44	\$ 12,226.44
	<i>Salaries and benefits</i>	\$ 8,145.98	\$ 8,145.98	\$ 8,145.98	\$ 8,145.98	\$ 8,145.98
	<i>Meals and Workshop Supplies</i>	\$ 480.46	\$ 480.46	\$ 480.46	\$ 480.46	\$ 480.46
	<i>Recording Secretary</i>	\$ 3,600.00	\$ 3,600.00	\$ 3,600.00	\$ 3,600.00	\$ 3,600.00
	<i>Seminars</i>	\$ -	\$ -	\$ -	\$ -	\$ -
c	Utilities (<i>administration</i>)	\$ 17,755.58	\$ 17,755.58	\$ 17,755.58	\$ 17,755.58	\$ 17,755.58
d	Fuel (other O&M)	\$ 20,909.29	\$ 20,909.29	\$ 20,909.29	\$ 20,909.29	\$ 20,909.29
e	Office/Administration Supplies (<i>incl.postage</i>)	\$ 17,277.58	\$ 17,277.58	\$ 17,277.58	\$ 17,277.58	\$ 17,277.58
	<i>Supplies (office and admin)</i>	\$ 10,794.33	\$ 10,794.33	\$ 10,794.33	\$ 10,794.33	\$ 10,794.33
	<i>2 computers/1 printer</i>	\$ 3,699.25	\$ 3,699.25	\$ 3,699.25	\$ 3,699.25	\$ 3,699.25
	<i>Postage/shipping</i>	\$ 2,784.00	\$ 2,784.00	\$ 2,784.00	\$ 2,784.00	\$ 2,784.00
	<i>Additional cost for proposed monthly billing</i>	\$ -	\$ -	\$ -	\$ -	\$ -
f	Legal services	\$ 37,450.15	\$ 37,450.15	\$ 37,450.15	\$ 37,450.15	\$ 37,450.15
	<i>General</i>	\$ 25,912.75	\$ 25,912.75	\$ 25,912.75	\$ 25,912.75	\$ 25,912.75
	<i>Other</i>	\$ 2,420.50	\$ 2,420.50	\$ 2,420.50	\$ 2,420.50	\$ 2,420.50
	<i>Water Rights</i>	\$ 6,817.40	\$ 6,817.40	\$ 6,817.40	\$ 6,817.40	\$ 6,817.40
	<i>Personnel</i>	\$ 2,299.50	\$ 2,299.50	\$ 2,299.50	\$ 2,299.50	\$ 2,299.50
g	Equipment Maintenance, Agreements, OSHA, and Shop Tools	\$ 6,874.85	\$ 6,874.85	\$ 6,874.85	\$ 6,874.85	\$ 6,874.85
	<i>Maintenance Agreements</i>	\$ -	\$ -	\$ -	\$ -	\$ -
	<i>Equipment Maintenance - Office</i>	\$ 1,281.53	\$ 1,281.53	\$ 1,281.53	\$ 1,281.53	\$ 1,281.53
	<i>Protective Clothing and OSHA-Approved Equipment</i>	\$ 3,651.53	\$ 3,651.53	\$ 3,651.53	\$ 3,651.53	\$ 3,651.53
	<i>Shop Tools</i>	\$ 1,941.79	\$ 1,941.79	\$ 1,941.79	\$ 1,941.79	\$ 1,941.79
h	Liability and Property Insurance/JPIA	\$ 25,134.00	\$ 25,134.00	\$ 25,134.00	\$ 25,134.00	\$ 25,134.00
i	Bank & Credit Card Fees	\$ 2,374.74	\$ 2,374.74	\$ 2,374.74	\$ 2,374.74	\$ 2,374.74
j	Regulatory Expenses - shared	\$ 81,310.30	\$ 81,310.30	\$ 81,310.30	\$ 81,310.30	\$ 81,310.30
	<i>Yuba Co Community Development</i>	\$ 268.73	\$ 268.73	\$ 268.73	\$ 268.73	\$ 268.73
	<i>CA Board of Eq. SWRCB</i>	\$ 45,411.52	\$ 45,411.52	\$ 45,411.52	\$ 45,411.52	\$ 45,411.52
	<i>DWR - US Postal Dept.</i>	\$ 330.00	\$ 330.00	\$ 330.00	\$ 330.00	\$ 330.00
	<i>Feather River Air Quality Control</i>	\$ 363.90	\$ 363.90	\$ 363.90	\$ 363.90	\$ 363.90
	<i>Yuba County Sheriff Dept</i>	\$ -	\$ -	\$ -	\$ -	\$ -
	<i>Yuba Co Environmental Health</i>	\$ -	\$ -	\$ -	\$ -	\$ -
	<i>Fire Extinguisher Inspection & Certification</i>	\$ 367.74	\$ 367.74	\$ 367.74	\$ 367.74	\$ 367.74
	<i>Yuba Co Hazardous Waste Disposal</i>	\$ 472.50	\$ 472.50	\$ 472.50	\$ 472.50	\$ 472.50
	<i>Flow Measurements</i>	\$ -	\$ -	\$ -	\$ -	\$ -
	<i>OSHA Certifications/Seminars</i>	\$ 3,687.88	\$ 3,687.88	\$ 3,687.88	\$ 3,687.88	\$ 3,687.88

NYWD OPERATING EXPENDITURES

KEY: shared - fixed shared - volumetric
 domestic - fixed domestic - volumetric
 irrigation - fixed irrigation - volumetric

5-year Projections		2015-2016 Projected	2016-2017 Projected	2017-2018 Projected	2018-2019 Projected	2019-2020 Projected
	<i>Regulatory Work Salaries and Benefits</i>	\$ 30,408.03	\$ 30,408.03	\$ 30,408.03	\$ 30,408.03	\$ 30,408.03
k	Organizational Dues and Subscriptions	\$ 12,415.08	\$ 12,415.08	\$ 12,415.08	\$ 12,415.08	\$ 12,415.08
	<i>SHARED/FIXED TOTALS:</i>	\$ 619,169.84	\$ 619,169.84	\$ 619,169.84	\$ 619,169.84	\$ 619,169.84
m	SFWPA 2005 Agreement	\$ 424,385.31	\$ 424,385.31	\$ 424,385.31	\$ 424,385.31	\$ 424,385.31
	<i>Water Cost - Forbestown Ditch losses</i>	\$ -	\$ -	\$ -	\$ -	\$ -
	<i>Yuba City Water Sale - payment to SFWPA (this is NOT covered by customers, but is an "in and out" payment that comes from Yuba City and goes directly to SFWPA)</i>	\$ 323,145.00	\$ 323,145.00	\$ 323,145.00	\$ 323,145.00	\$ 323,145.00
	<i>Forbestown Canal Maintenance</i>	\$ 4,878.28	\$ 4,878.28	\$ 4,878.28	\$ 4,878.28	\$ 4,878.28
	<i>FT Canal Salaries & Benefits</i>	\$ 96,362.03	\$ 96,362.03	\$ 96,362.03	\$ 96,362.03	\$ 96,362.03
o	Outside Services (administration and "other" O&M)	\$ 37,039.19	\$ 37,039.19	\$ 37,039.19	\$ 37,039.19	\$ 37,039.19
	<i>Admin</i>	\$ 28,964.11	\$ 28,964.11	\$ 28,964.11	\$ 28,964.11	\$ 28,964.11
	<i>Other O&M: Equipment Maintenance/Supplies - General</i>	\$ 5,261.46	\$ 5,261.46	\$ 5,261.46	\$ 5,261.46	\$ 5,261.46
	<i>Other O&M: Outside Services</i>	\$ 2,813.62	\$ 2,813.62	\$ 2,813.62	\$ 2,813.62	\$ 2,813.62
p	Leases and Equipment Rental - admin	\$ 1,743.98	\$ 1,743.98	\$ 1,743.98	\$ 1,743.98	\$ 1,743.98
	<i>SHARED/VOLUMETRIC TOTALS:</i>	\$ 463,168.48	\$ 463,168.48	\$ 463,168.48	\$ 463,168.48	\$ 463,168.48
q	WTP Salaries	\$ 121,272.70	\$ 121,272.70	\$ 121,272.70	\$ 121,272.70	\$ 121,272.70
r	Regulatory Expenses - domestic	\$ 12,882.21	\$ 12,882.21	\$ 12,882.21	\$ 12,882.21	\$ 12,882.21
	<i>Dept Public Health-Drinking Water Program</i>	\$ 4,704.00	\$ 4,704.00	\$ 4,704.00	\$ 4,704.00	\$ 4,704.00
	<i>Consultants/Engineers/Aluminum Study/Tests</i>	\$ 6,182.21	\$ 6,182.21	\$ 6,182.21	\$ 6,182.21	\$ 6,182.21
	<i>SWRCB/AFRS - WTP annual permit</i>	\$ 1,996.00	\$ 1,996.00	\$ 1,996.00	\$ 1,996.00	\$ 1,996.00
s	Domestic Salaries	\$ 132,199.90	\$ 132,199.90	\$ 132,199.90	\$ 132,199.90	\$ 132,199.90
	<i>DOMESTIC/FIXED TOTALS:</i>	\$ 266,354.81	\$ 266,354.81	\$ 266,354.81	\$ 266,354.81	\$ 266,354.81
t	WTP O&M (incl. lab and utilities)	\$ 61,195.10	\$ 61,195.10	\$ 61,195.10	\$ 61,195.10	\$ 61,195.10
	<i>Outside Services</i>	\$ 6,760.88	\$ 6,760.88	\$ 6,760.88	\$ 6,760.88	\$ 6,760.88
	<i>Chemicals</i>	\$ 12,477.29	\$ 12,477.29	\$ 12,477.29	\$ 12,477.29	\$ 12,477.29
	<i>Supplies and Maintenance Equipment</i>	\$ 7,320.41	\$ 7,320.41	\$ 7,320.41	\$ 7,320.41	\$ 7,320.41
	<i>Utilities</i>	\$ 32,943.53	\$ 32,943.53	\$ 32,943.53	\$ 32,943.53	\$ 32,943.53
	<i>Testing</i>	\$ 1,692.99	\$ 1,692.99	\$ 1,692.99	\$ 1,692.99	\$ 1,692.99
u	Domestic O&M (incl. utilities)	\$ 18,153.06	\$ 18,153.06	\$ 18,153.06	\$ 18,153.06	\$ 18,153.06
	<i>Equipment Lease/Rental</i>	\$ -	\$ -	\$ -	\$ -	\$ -
	<i>Maintenance and Repair</i>	\$ 922.48	\$ 922.48	\$ 922.48	\$ 922.48	\$ 922.48
	<i>Outside Services</i>	\$ 4,135.00	\$ 4,135.00	\$ 4,135.00	\$ 4,135.00	\$ 4,135.00
	<i>Supplies - other</i>	\$ 12,172.73	\$ 12,172.73	\$ 12,172.73	\$ 12,172.73	\$ 12,172.73
	<i>Cost of additional labor for monthly billing</i>	\$ -	\$ -	\$ -	\$ -	\$ -
	<i>Cost of additional vehicle useage for monthly billing</i>	\$ -	\$ -	\$ -	\$ -	\$ -
	<i>Utilities</i>	\$ 922.85	\$ 922.85	\$ 922.85	\$ 922.85	\$ 922.85
	<i>DOMESTIC/VOLUMETRIC TOTALS:</i>	\$ 79,348.16	\$ 79,348.16	\$ 79,348.16	\$ 79,348.16	\$ 79,348.16
v	Irrigation Salaries	\$ 55,142.74	\$ 55,142.74	\$ 55,142.74	\$ 55,142.74	\$ 55,142.74
	<i>IRRIGATION/FIXED TOTALS:</i>	\$ 55,142.74	\$ 55,142.74	\$ 55,142.74	\$ 55,142.74	\$ 55,142.74

NYWD OPERATING EXPENDITURES

KEY: shared - fixed shared - volumetric
 domestic - fixed domestic - volumetric
 irrigation - fixed irrigation - volumetric

5-year Projections		2015-2016 Projected	2016-2017 Projected	2017-2018 Projected	2018-2019 Projected	2019-2020 Projected
w	Irrigation O&M (incl. utilities)	\$ 20,616.67	\$ 20,616.67	\$ 20,616.67	\$ 20,616.67	\$ 20,616.67
	<i>Equipment Lease/Rental</i>	\$ 17,373.62	\$ 17,373.62	\$ 17,373.62	\$ 17,373.62	\$ 17,373.62
	<i>Maintenance and Repair</i>	\$ -	\$ -	\$ -	\$ -	\$ -
	<i>Outside Services</i>	\$ -	\$ -	\$ -	\$ -	\$ -
	<i>Supplies - other</i>	\$ 1,707.28	\$ 1,707.28	\$ 1,707.28	\$ 1,707.28	\$ 1,707.28
	<i>Fuel</i>	\$ -	\$ -	\$ -	\$ -	\$ -
	<i>Utilities</i>	\$ 1,535.77	\$ 1,535.77	\$ 1,535.77	\$ 1,535.77	\$ 1,535.77
	IRRIGATION/VOLUMETRIC TOTALS:	\$ 20,616.67	\$ 20,616.67	\$ 20,616.67	\$ 20,616.67	\$ 20,616.67
x	Miscellaneous					
y	Other					
7.T	Total Cash Operating Expenses (6a thru 6w)	\$ 1,503,800.70	\$ 1,503,800.70	\$ 1,503,800.70	\$ 1,503,800.70	\$ 1,503,800.70

NYWD DEBT SERVICE

KEY: shared - fixed
 domestic - fixed
 irrigation - fixed

5-year Projections	2015-2016 Projected	2016-2017 Projected	2017-2018 Projected	2018-2019 Projected	2019-2020 Projected
8. Debt. Service					
a. Loan Payments					
- YCWA: Forbestown Ditch (to be retired May 1, 2022) - SHARED (see Appendix B and D for more detail)	\$ 5,747.22	\$ 5,747.22	\$ 5,747.22	\$ 5,747.22	\$ 5,747.22
- City National Bank: Woodleaf Siphon (borrowed 3/1/2011 from Municipal Finance Corp.; to be retired 6/10/2026) - SHARED (see Appendix B and D for more detail)	\$ 53,110.69	\$ 53,110.69	\$ 53,110.69	\$ 53,110.69	\$ 53,110.69
- NEW Forbestown Ditch Piping (36-inch pipe over 10 miles; borrowing for \$8,000,000 project at 2.0% over a 40-year term) - SHARED (see note 1, below)	\$ 133,233.77	\$ 133,233.77	\$ 133,233.77	\$ 133,233.77	\$ 133,233.77
<i>Shared Debt Total:</i>	<i>\$ 192,091.68</i>	<i>\$ 192,091.68</i>	<i>\$ 192,091.68</i>	<i>\$ 192,091.68</i>	<i>\$ 192,091.68</i>
- DWR: Safe Drinking Water; WTP (to be retired in October 2018) - DOM (see Appendix B for more detail)	\$ 54,419.92	\$ 54,419.92	\$ 54,419.92	\$ 27,209.96	\$ -
- YCWA: Forbestown Ditch (to be retired May 1, 2022) - DOM SHARE (see Appendix B and D for more detail)	\$ 836.44	\$ 836.44	\$ 836.44	\$ 836.44	\$ 836.44
- City National Bank: Forbestown Tank and Sharon Valley Bridge (borrowed 3/1/2011 from Municipal Finance Corp.; to be retired 6/10/2026) - DOM SHARE (see Appendix B and D for more detail)	\$ 37,473.36	\$ 37,473.36	\$ 37,473.36	\$ 37,473.36	\$ 37,473.36
- NEW Forbestown Ditch Piping (36-inch pipe over 10 miles; borrowing for \$8,000,000 project at 2.0% over a 40-year term) - DOM SHARE (see note 1, below)	\$ 19,390.56	\$ 19,390.56	\$ 19,390.56	\$ 19,390.56	\$ 19,390.56
<i>Domestic Debt Total:</i>	<i>\$ 112,120.28</i>	<i>\$ 112,120.28</i>	<i>\$ 112,120.28</i>	<i>\$ 84,910.32</i>	<i>\$ 57,700.36</i>
- YCWA: Forbestown Ditch and DOHC (to be retired May 1, 2022) - IRRIG SHARE (see Appendix B and D for more detail)	\$ 61,416.35	\$ 61,416.35	\$ 61,416.35	\$ 61,416.35	\$ 61,416.35
- City National Bank: Forbestown Tank and Sharon Valley Bridge (borrowed 3/1/2011 from Municipal Finance Corp.; to be retired 6/10/2026) - IRRIG SHARE (see Appendix B and D for more detail)	\$ 22,307.80	\$ 22,307.80	\$ 22,307.80	\$ 22,307.80	\$ 22,307.80
- NEW Forbestown Ditch Piping (36-inch pipe over 10 miles; borrowing for \$8,000,000 project at 2.0% over a 40-year term) - IRRIG SHARE (see note 1, below)	\$ 138,088.68	\$ 138,088.68	\$ 138,088.68	\$ 138,088.68	\$ 138,088.68
<i>Irrigation Debt Total:</i>	<i>\$ 221,812.83</i>	<i>\$ 221,812.83</i>	<i>\$ 221,812.83</i>	<i>\$ 221,812.83</i>	<i>\$ 221,812.83</i>
- ID-6: Rackerby Water Line Extension (Berkadia, to be retired June 2018) - AREA-SPECIFIC	\$ 8,540.00	\$ 8,540.00	\$ 8,540.00	\$ -	\$ -
8.T Total Debt Service / Transfers Out	\$ 534,564.79	\$ 534,564.79	\$ 534,564.79	\$ 498,814.83	\$ 471,604.87

NOTES:

1) Forbestown Ditch piping is a new debt expense for piping Forbestown Ditch, separate from all previous debt. The allocation of this debt between domestic and irrigation users is described further in the rate study, section 4.5.2. This loan is expected to be borrowed effective in the 2015-16 year. It is possible that a full annual payment will be expected in the first year, which is why the same amount/payment is allocated annually beginning in 2015/16.

NYWD Water Production Data					
	2015-16	2016-17	2017-18	2018-19	2019-2020
Acre-Foot Delivered (billed; net)					
Irrigation (billed)	0	0	1166	1166	1166
Domestic (billed)	338	339	339	339	340
Total	338	339	1505	1505	1506
Number of Capacity Units Served (from "summary" sheet)					
Irrigation	145	145	145	145	145
Domestic	995	996	997	998	999
Total	1140	1141	1142	1143	1144

Notes

No deliveries projected for 2015-16 or 2016-17; deliveries will resume in 2017-18 with Forbestown Ditch piping

Projections (other than 2014-15) based on 2013-14 deliveries with .1% growth; 14-15 is projected at 80% of 13-14 (implying 20% conservation)

NYWD SHARED FIXED COSTS					
	2015-16	2016-17	2017-18	2018-19	2019-2020
fixed costs - shared operating:	\$ 619,169.84	\$ 619,169.84	\$ 619,169.84	\$ 619,169.84	\$ 619,169.84
fixed costs - shared debt (w/o Forbestown):	\$ 58,857.91	\$ 58,857.91	\$ 58,857.91	\$ 58,857.91	\$ 58,857.91
fixed costs - shared debt service: Forbestown (SFWPA contract obligation - 45.83% of capacity):	\$ 133,233.77	\$ 133,233.77	\$ 133,233.77	\$ 133,233.77	\$ 133,233.77
fixed costs - capital projects (not specific to any service region):	\$ -	\$ -	\$ -	\$ -	\$ -
reserves (not specific to any service region):	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL FIXED COSTS:	\$ 811,261.52	\$ 811,261.52	\$ 811,261.52	\$ 811,261.52	\$ 811,261.52
total capacity units:	1140	1141	1142	1143	1144
COST/CAPACITY UNIT/YEAR:	\$ 711.63	\$ 711.01	\$ 710.39	\$ 709.77	\$ 709.14

SHARED VOLUMETRIC COSTS					
	2015-16	2016-17	2017-18	2018-19	2019-2020
vol costs - shared operating (note that Yuba City water sale cost is NOT included, as that cost is an in-and-out from Yuba City directly to the SFWPA):	\$ 140,023.48	\$ 140,023.48	\$ 140,023.48	\$ 140,023.48	\$ 140,023.48
vol costs - raw water cost	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL SHARED VOL COSTS:	\$ 140,023.48	\$ 140,023.48	\$ 140,023.48	\$ 140,023.48	\$ 140,023.48
total volume BILLED (AF):	338	339	1,505	1,505	1,506
total volume BILLED (ccf):	147,380	147,527	655,585	655,732	655,880
COST/AF:	\$ 413.86	\$ 413.44	\$ 93.04	\$ 93.02	\$ 93.00
COST/ccf:	\$ 0.95	\$ 0.95	\$ 0.21	\$ 0.21	\$ 0.21

NYWD DOMESTIC FIXED COSTS					
	2015-16	2016-17	2017-18	2018-19	2019-2020
fixed costs - domestic operating:	\$ 266,354.81	\$ 266,354.81	\$ 266,354.81	\$ 266,354.81	\$ 266,354.81
fixed costs - domestic debt service (minus ID-6 Rackerby Water Line Extension and Forbestown):	\$ 92,729.72	\$ 92,729.72	\$ 92,729.72	\$ 65,519.76	\$ 38,309.80
fixed costs - Forbestown (domestic obligation of Forbestown piping - 6.67% of capacity):	\$ 19,390.56	\$ 19,390.56	\$ 19,390.56	\$ 19,390.56	\$ 19,390.56
fixed costs - capital projects and/or reserves (specific to domestic service, but not specific to any service region):	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL FIXED COSTS:	\$ 378,475.09	\$ 378,475.09	\$ 378,475.09	\$ 351,265.13	\$ 324,055.17
total domestic capacity units (5/8" meter):	995	996	997	998	999
COST/EDU/YEAR:	\$ 380.38	\$ 380.00	\$ 379.61	\$ 351.97	\$ 324.38

DOMESTIC VOLUMETRIC COSTS					
	2015-16	2016-17	2017-18	2018-19	2019-2020
vol costs - domestic operating:	\$ 79,348.16	\$ 79,348.16	\$ 79,348.16	\$ 79,348.16	\$ 79,348.16
TOTAL DOM VOL COSTS:	\$ 79,348.16	\$ 79,348.16	\$ 79,348.16	\$ 79,348.16	\$ 79,348.16
total volume BILLED (AF):	338	339	339	339	340
total volume BILLED (ccf):	147,380	147,527	147,675	147,823	147,970
COST/ccf:	\$ 0.54	\$ 0.54	\$ 0.54	\$ 0.54	\$ 0.54

MONTHLY RATES PROJECTIONS
FOR AN AVERAGE DOMESTIC CUSTOMER (1 CAPACITY UNIT = 5/8" meter)

	2015-16	2016-17	2017-18	2018-19	2019-20
FIXED COSTS:					
SHARED OPERATING FIXED:	\$ 45.26	\$ 45.22	\$ 45.18	\$ 45.14	\$ 45.10
DOMESTIC OPERATING FIXED:	\$ 22.31	\$ 22.29	\$ 22.26	\$ 22.24	\$ 22.22
Total Domestic Operating Costs:	\$ 67.57	\$ 67.51	\$ 67.44	\$ 67.38	\$ 67.32
SHARED DEBT (EXISTING):	\$ 4.30	\$ 4.30	\$ 4.29	\$ 4.29	\$ 4.29
DOMESTIC DEBT (without Rackerby):	\$ 7.77	\$ 7.76	\$ 7.75	\$ 5.47	\$ 3.20
FORBESTOWN DEBT - SHARED PORTION:	\$ 9.74	\$ 9.73	\$ 9.72	\$ 9.71	\$ 9.71
FORBESTOWN DEBT - DOMESTIC PORTION:	\$ 1.62	\$ 1.62	\$ 1.62	\$ 1.62	\$ 1.62
Total Domestic Debt Service:	\$ 23.43	\$ 23.41	\$ 23.39	\$ 21.09	\$ 18.81
FIXED - SHARED RESERVES:	\$ -	\$ -	\$ -	\$ -	\$ -
SFWPA ANNUAL PAYMENT CONTRIBUTION:	\$ (51.83)	\$ (51.78)	\$ (51.74)	\$ (51.69)	\$ (51.65)
COUNTY TAX ROLL CONTRIBUTION - GENERAL:	\$ (15.81)	\$ (15.80)	\$ (15.79)	\$ (15.77)	\$ (15.76)
COUNTY TAX ROLL CONTRIBUTION - DOMESTIC ONLY:	\$ (4.50)	\$ (4.50)	\$ (4.50)	\$ (4.49)	\$ (4.49)
Total Subsidies (taxes and SFWPA annual payment):	\$ (72.14)	\$ (72.08)	\$ (72.02)	\$ (71.95)	\$ (71.89)
total fixed charges:	\$ 18.86	\$ 18.84	\$ 18.82	\$ 16.52	\$ 14.24
VOLUMETRIC COSTS:					
SHARED (based on ccf billed, not produced):	\$ 0.95	\$ 0.95	\$ 0.21	\$ 0.21	\$ 0.21
DOMESTIC (based on ccf billed, not produced):	\$ 0.54	\$ 0.54	\$ 0.54	\$ 0.54	\$ 0.54
total volumetric charge/ccf:	\$ 1.49	\$ 1.49	\$ 0.75	\$ 0.75	\$ 0.75

IRRIGATION FIXED COSTS					
	2015-16	2016-17	2017-18	2018-19	2019-2020
fixed costs - irrigation operating:	\$ 55,142.74	\$ 55,142.74	\$ 55,142.74	\$ 55,142.74	\$ 55,142.74
fixed costs - irrigation debt service (minus Forbestown):	\$ 83,724.15	\$ 83,724.15	\$ 83,724.15	\$ 83,724.15	\$ 83,724.15
fixed costs - Forbestown (irrigation obligation - 47.5% of capacity):	\$ 138,088.68	\$ 138,088.68	\$ 138,088.68	\$ 138,088.68	\$ 138,088.68
fixed costs - capital projects and reserves (specific to irrigation service, but not specific to any service region):	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL FIXED COSTS:	\$ 276,955.57	\$ 276,955.57	\$ 276,955.57	\$ 276,955.57	\$ 276,955.57
total irrigation capacity units (1 MI):	145	145	145	145	145
COST/UNIT/YEAR:	\$ 1,910.04	\$ 1,910.04	\$ 1,910.04	\$ 1,910.04	\$ 1,910.04

IRRIGATION VOLUMETRIC COSTS					
	2015-16	2016-17	2017-18	2018-19	2019-2020
vol costs - irrigation operating:	\$ 20,616.67	\$ 20,616.67	\$ 20,616.67	\$ 20,616.67	\$ 20,616.67
TOTAL IRRIG VOL COSTS:	\$ 20,616.67	\$ 20,616.67	\$ 20,616.67	\$ 20,616.67	\$ 20,616.67
total volume BILLED (AF):	0	0	1166	1166	1166
COST/AF:	\$ -	\$ -	\$ 17.68	\$ 17.68	\$ 17.68

**MONTHLY RATES PROJECTIONS
FOR AN AVERAGE IRRIGATION CUSTOMER (1 CAPACITY UNIT = 1 MI)**

	2015-16	2016-17	2017-18	2018-19	2019-20
FIXED COSTS:					
SHARED OPERATING FIXED:	\$ -	\$ -	\$ 45.18	\$ 45.14	\$ 45.10
IRRIGATION OPERATING FIXED:	\$ -	\$ -	\$ 31.69	\$ 31.69	\$ 31.69
Total Irrigation Operating Costs:	\$ -	\$ -	\$ 76.87	\$ 76.83	\$ 76.79
SHARED DEBT (EXISTING):	\$ -	\$ -	\$ 4.29	\$ 4.29	\$ 4.29
IRRIGATION DEBT:	\$ -	\$ -	\$ 48.12	\$ 48.12	\$ 48.12
FORBESTOWN DEBT - SHARED PORTION:	\$ -	\$ -	\$ 9.72	\$ 9.71	\$ 9.71
FORBESTOWN DEBT - IRRIGATION PORTION:	\$ -	\$ -	\$ 79.36	\$ 79.36	\$ 79.36
Total Irrigation Debt Service:	\$ -	\$ -	\$ 141.50	\$ 141.48	\$ 141.47
FIXED - SHARED RESERVES:	\$ -	\$ -	\$ -	\$ -	\$ -
SFWPA ANNUAL PAYMENT CONTRIBUTION:	\$ -	\$ -	\$ (51.74)	\$ (51.69)	\$ (51.65)
COUNTY TAX ROLL CONTRIBUTION GENERAL:	\$ -	\$ -	\$ (15.79)	\$ (15.77)	\$ (15.76)
COUNTY TAX ROLL CONTRIBUTION - IRRIGATION ONLY:	\$ -	\$ -	\$ (50.30)	\$ (50.30)	\$ (50.30)
Total Subsidies (taxes and SFWPA annual payment):	\$ -	\$ -	\$ (117.82)	\$ (117.76)	\$ (117.70)
total fixed charge per unit (1 MI):	\$ -	\$ -	\$ 100.55	\$ 100.56	\$ 100.56
VOLUMETRIC COSTS:					
SHARED (based on AF billed, not produced):	\$ -	\$ -	\$ 93.04	\$ 93.02	\$ 93.00
IRRIGATION (based on AF billed, not produced):	\$ -	\$ -	\$ 17.68	\$ 17.68	\$ 17.68
total volumetric charge/AF:	\$ -	\$ -	\$ 110.72	\$ 110.70	\$ 110.68

MONTHLY RATES PROJECTIONS - COST OF SERVICE
FOR AN AVERAGE DOMESTIC CUSTOMER (1 CAPACITY UNIT = 5/8" meter)

	2015-16	2016-17	2017-18	2018-19	2019-20
FIXED COSTS:					
SHARED OPERATING FIXED:	\$ 45.26	\$ 45.22	\$ 45.18	\$ 45.14	\$ 45.10
DOMESTIC OPERATING FIXED:	\$ 22.31	\$ 22.29	\$ 22.26	\$ 22.24	\$ 22.22
Total Domestic Operating Costs:	\$ 67.57	\$ 67.51	\$ 67.44	\$ 67.38	\$ 67.32
SHARED DEBT (EXISTING):	\$ 4.30	\$ 4.30	\$ 4.29	\$ 4.29	\$ 4.29
DOMESTIC DEBT (without Rackerby):	\$ 7.77	\$ 7.76	\$ 7.75	\$ 5.47	\$ 3.20
FORBESTOWN DEBT - SHARED PORTION:	\$ 9.74	\$ 9.73	\$ 9.72	\$ 9.71	\$ 9.71
FORBESTOWN DEBT - DOMESTIC PORTION:	\$ 1.62	\$ 1.62	\$ 1.62	\$ 1.62	\$ 1.62
Total Domestic Debt Service:	\$ 23.43	\$ 23.41	\$ 23.39	\$ 21.09	\$ 18.81
FIXED - SHARED RESERVES:	\$ -	\$ -	\$ -	\$ -	\$ -
SFWPA ANNUAL PAYMENT CONTRIBUTION:	\$ -	\$ -	\$ -	\$ -	\$ -
COUNTY TAX ROLL CONTRIBUTION - GENERAL:	\$ -	\$ -	\$ -	\$ -	\$ -
COUNTY TAX ROLL CONTRIBUTION - DOMESTIC ONLY:	\$ -	\$ -	\$ -	\$ -	\$ -
Total Subsidies (taxes and SFWPA annual payment):	\$ -	\$ -	\$ -	\$ -	\$ -
total fixed charges:	\$ 91.00	\$ 90.92	\$ 90.83	\$ 88.48	\$ 86.13
VOLUMETRIC COSTS:					
SHARED (based on ccf billed, not produced):	\$ 0.95	\$ 0.95	\$ 0.21	\$ 0.21	\$ 0.21
DOMESTIC (based on ccf billed, not produced):	\$ 0.54	\$ 0.54	\$ 0.54	\$ 0.54	\$ 0.54
total volumetric charge/ccf:	\$ 1.49	\$ 1.49	\$ 0.75	\$ 0.75	\$ 0.75

**MONTHLY RATES PROJECTIONS - COST OF SERVICE
FOR AN AVERAGE IRRIGATION CUSTOMER (1 CAPACITY UNIT = 1 MI)**

	2015-16	2016-17	2017-18	2018-19	2019-20
FIXED COSTS:					
SHARED OPERATING FIXED:	\$ -	\$ -	\$ 45.18	\$ 45.14	\$ 45.10
IRRIGATION OPERATING FIXED:	\$ -	\$ -	\$ 31.69	\$ 31.69	\$ 31.69
Total Irrigation Operating Costs:	\$ -	\$ -	\$ 76.87	\$ 76.83	\$ 76.79
SHARED DEBT (EXISTING):	\$ -	\$ -	\$ 4.29	\$ 4.29	\$ 4.29
IRRIGATION DEBT:	\$ -	\$ -	\$ 48.12	\$ 48.12	\$ 48.12
FORBESTOWN DEBT - SHARED PORTION:	\$ -	\$ -	\$ 9.72	\$ 9.71	\$ 9.71
FORBESTOWN DEBT - IRRIGATION PORTION:	\$ -	\$ -	\$ 79.36	\$ 79.36	\$ 79.36
Total Irrigation Debt Service:	\$ -	\$ -	\$ 141.50	\$ 141.48	\$ 141.47
FIXED - SHARED RESERVES:	\$ -	\$ -	\$ -	\$ -	\$ -
SFWPA ANNUAL PAYMENT CONTRIBUTION:	\$ -	\$ -	\$ -	\$ -	\$ -
COUNTY TAX ROLL CONTRIBUTION GENERAL:	\$ -	\$ -	\$ -	\$ -	\$ -
COUNTY TAX ROLL CONTRIBUTION - IRRIGATION ONLY:	\$ -	\$ -	\$ -	\$ -	\$ -
Total Subsidies (taxes and SFWPA annual payment):	\$ -	\$ -	\$ -	\$ -	\$ -
total fixed charge per unit (1 MI):	\$ -	\$ -	\$ 218.37	\$ 218.32	\$ 218.27
VOLUMETRIC COSTS:					
SHARED (based on AF billed, not produced):	\$ -	\$ -	\$ 93.04	\$ 93.02	\$ 93.00
IRRIGATION (based on AF billed, not produced):	\$ -	\$ -	\$ 17.68	\$ 17.68	\$ 17.68
total volumetric charge/AF:	\$ -	\$ -	\$ 110.72	\$ 110.70	\$ 110.68

APPENDIX D: Loan Split Data for Existing Loans

The NYWD holds two loans, the benefit for which was split between domestic and irrigation customers. The table is below, showing this allocation, along with notes following each table indicating the reasoning behind assigning those costs. The summary percent of the responsible user group is then used to calculate the percent of annual payment attributed to the appropriate user group.

Forbestown Tank Loan (CitiNational Bank)				
	Spending Record for Allocation			Loan Balance (as of 9/2015)
Shared	<i>Deluxe checks:</i>	\$158.08	0.01%	
	<i>Audit fees:</i>	\$2,094.00	0.17%	
	<i>Remaining, unspent, funds (in money market):</i>	\$107,724.64	8.98%	
	<i>Woodleaf Siphon, shared portion (45.83% of \$499,208.34):</i>	\$228,787.18	19.07%	
	<i>Loan payments (2):</i>	\$225,783.70	18.82%	
	Shared subtotal:	\$564,547.60	47.05%	
Domestic	<i>Sharon Valley Bridge:</i>	\$143,339.78	11.94%	
	<i>Forbestown Tank engineering:</i>	\$214,166.46	17.85%	
	<i>Feasibility study addition:</i>	\$5,258.75	0.44%	
	<i>Unspecified engineering fees:</i>	\$2,266.25	0.19%	
	<i>Woodleaf Siphon, domestic portion (6.67% of \$499,208.34):</i>	\$33,297.20	2.77%	
	Domestic subtotal:	\$398,328.44	33.19%	
Irrigation	<i>Woodleaf Siphon, irrigation portion (47.5% of \$499,208.34):</i>	\$237,123.96	19.76%	\$188,748.40
	Total borrowed:	\$1,200,000.00	100.00%	\$955,204.45

Notes on the Forbestown Tank loan:

- Shared Charges:

- Deluxe checks are those checks drawn on the account to actually open the account, shared between all users.
- Audit fees apply to all users because the audit affects the total loan
- Unspent loan amount could be used for any purpose, and thus is shared
- The Woodleaf Siphon is part of Forbestown Ditch, and is used by all NYWD customers, and thus is shared based on the percentage of capacity used by all user groups. The shared portion, at 45.83%, represents the capacity used by the SFWPA conveyance contract. See section 4.5.2 of the study for more detail.
- Loan payments paid out of the loan itself apply to all users due to the shared nature of the loan.

- Domestic Charges:

- The Sharon Valley Bridge charges accrued due to the District re-doing a segment of potable water piping when the bridge was re-done by the County; potable water is the responsibility of domestic customers.
- The Forbestown Tank holds potable water, and thus is the responsibility of domestic users; this applies to the Forbestown Tank engineering, the feasibility study addition, and the engineering fees.
- Per the "shared charges" note on Woodleaf Siphon, above, capacity used by domestic water conveyance is 6.67% of the total, and thus domestic users are responsible for this same percentage of loan payments.

- Irrigation Charges: Per the "shared charges" note on Woodleaf Siphon, above, capacity used by irrigation water conveyance is 47.5% of the total, and thus irrigation users are responsible for this same percentage of loan payments.

Forbestown Ditch Loan (from Yuba County Water Agency, or YCWA)				
	Spending Record for Allocation			Loan Balance (as of 9/2015)
Shared	Shared Forbestown share (45.83% of \$99,349):	\$45,531.65	8.45%	\$30,807.66
Domestic	Domestic Forbestown share (6.67% of \$99,349):	\$6,626.58	1.23%	\$4,484.43
Irrigation	<i>Dobbins-Oregon House Canal (DOHC) - original:</i>	\$239,539.00	44.46%	
	<i>DOHC - interest:</i>	\$199,834.00	37.09%	
	<i>Irrigation Forbestown share (47.5% of \$99,349):</i>	\$47,190.78	8.76%	
	Irrigation subtotal:	\$486,563.78	90.32%	\$329,295.59
	Total borrowed:	\$538,722.00	100.00%	\$364,587.68

Notes on the Forbestown Ditch loan:

- Shared Charges: The Forbestown charges (original principal of \$96,994, plus interest charges of \$2,355) was spent on addressing losses, leakage, and functionality on Forbestown Ditch through reinforcing slumping canal banks; Forbestown Ditch is used by both domestic and irrigation customers, and thus these charges are shared. The methodology behind the allocation of costs between domestic and irrigation customers is the same as the approach taken for the proposed Forbestown Ditch loan (see section 4.5.2 of the study for more detail); thus, shared charges are equal to the percent of capacity used by the SFWPA contract, a shared responsibility.
- Domestic Charges: Based on the assessment immediately above of Forbestown costs, domestic capacity amounts to 6.67% of the total, and thus this user group is responsible for 6.67% of the costs associated with this loan.
- Irrigation Charges:
 - The DOHC original principal was spent on lining parts of the DOHC using gunnite, done to address functionality and losses; because irrigation customers are the only ones using the DOHC infrastructure, these charges accrue directly to them.
 - DOHC interest charges are directly related to the work done on the DOHC, and thus are the responsibility of irrigation customers.
 - The irrigation share of the Forbestown loan is based on the assumptions listed above (in "shared charges" note; thus, the irrigation share of the Forbestown Ditch portion of the YCWA loan amounts to 47.5% of the total.