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*Final Report*

# Agricultural Water Delivery User Charges Cost of Service Study

Prepared for  
**Byron Bethany Irrigation District**

March 2016

**CH2MHILL®**

2485 Natomas Park Drive, Suite 600  
Sacramento, California 95833



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# Agricultural Water Delivery User Charges Cost of Service Study

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## Background

Byron Bethany Irrigation District (BBID) charges for agricultural water delivery using a uniform rate per acre-foot. The current charge, \$20 per acre-foot, has been in place for several years. There have been two recent issues that have impacted the District's finances and compel the District to look at increasing the revenue generated from agricultural water deliveries. First, portions of the town of Discovery Bay detached from the BBID service area. This area had generated \$685,000 in tax revenue for the District. Second, the litigation with the California State Water Resources Control Board is expected to incur significant legal expenses. This study examines the cost of service for delivering agricultural water.

## Methodology

This cost of service study follows the principles of cost of service rate-making espoused in the American Water Works Association (AWWA) Principles of Water Rates, Fees, and Charges, sixth edition, 2012. This publication is the industry standard for rate making. The manual describes three categories of technical analysis that are required. These are described below.

- Revenue Requirements Analysis—compares the revenues of the utility to its operating and capital costs to determine the adequacy of the existing rates to recover the utility's cost. This study uses the cash needs approach to determine revenue requirements typically used by government owned utilities (as opposed to investor owned utilities).
- Cost-of-Service Analysis—allocates the revenue requirements to the customer classes of service in a fair and equitable manner. *This is also a key component of the Proposition 218 requirements.*
- Rate Design Analysis—considers the level and structure of the rate design to collect the revenue requirements. This can also consider public input, impacts on water conservation and efficient use, and revenue stability.

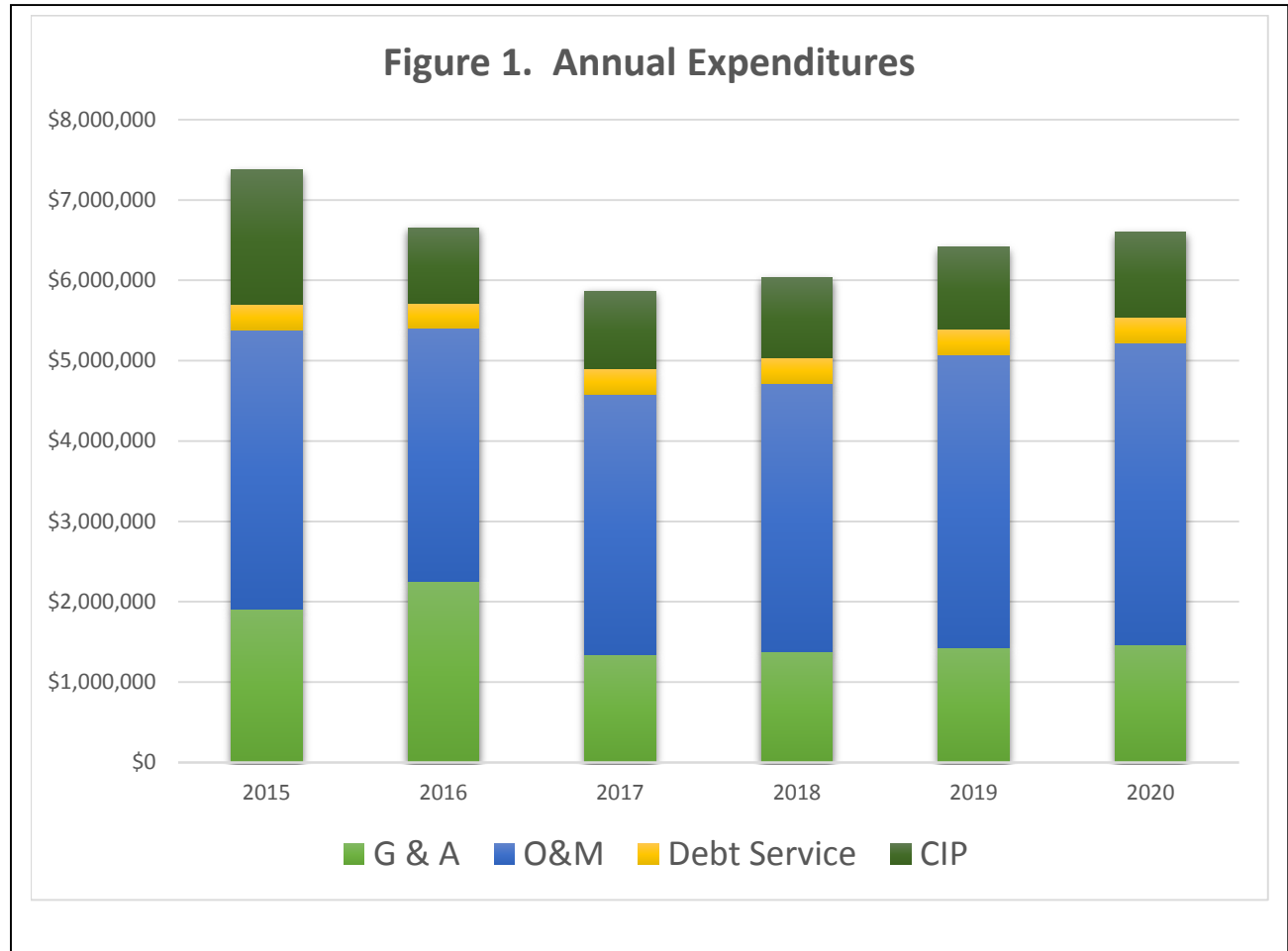
In California, once a new rate is proposed, it needs to follow the approval process outlined in Proposition 218, which was adopted in 1996 and provides the opportunity for the public to protest changes to any property related fees and rates. A proposed increase to the water rate may be put in place unless the District receives protests from a majority of the parcel owners who use the water (50 percent plus 1).

## Revenue Requirements

Revenue requirements for a cost of service study are typically determined by adding operating expenditures, debt service, and any pay-as-you-go capital to be financed by rates, and then subtracting non-rate revenue. Non rate revenue includes water transfers, property taxes, and other miscellaneous revenues. The components of the revenue requirements are described below. The financial information shows last year's expenditures, the final 2016 budget, and projected expenditures through 2020.

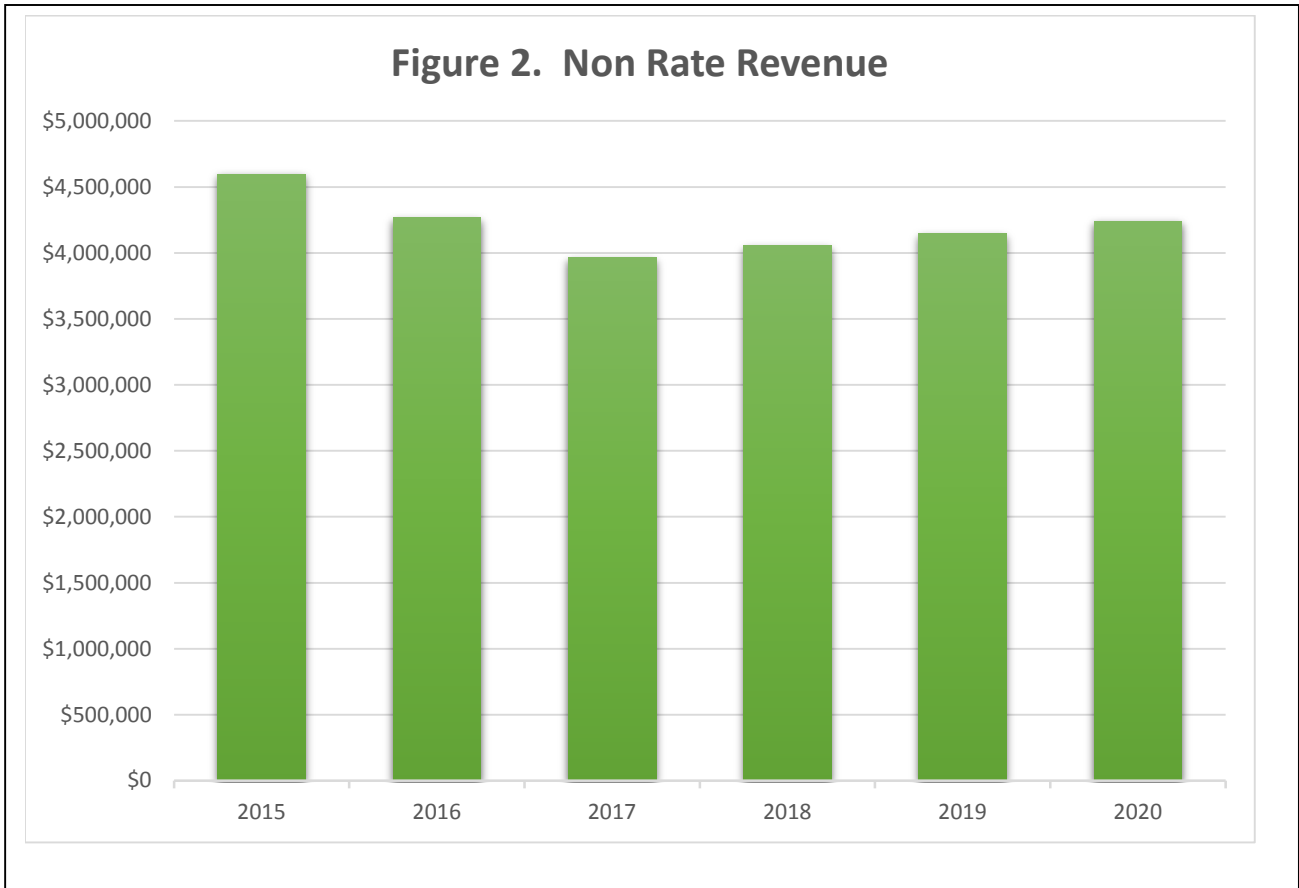
## Expenditures

BBID operating expenditures are summarized in Table 1 (tables are attached at the end of the report) and Figure 1. O&M is the main major annual expenditure. G&A expenses increase in 2016 because of the litigation costs, but are assumed to drop in 2017. The CIP is projecting lower expenditures going forward than the 2015 expenditures.



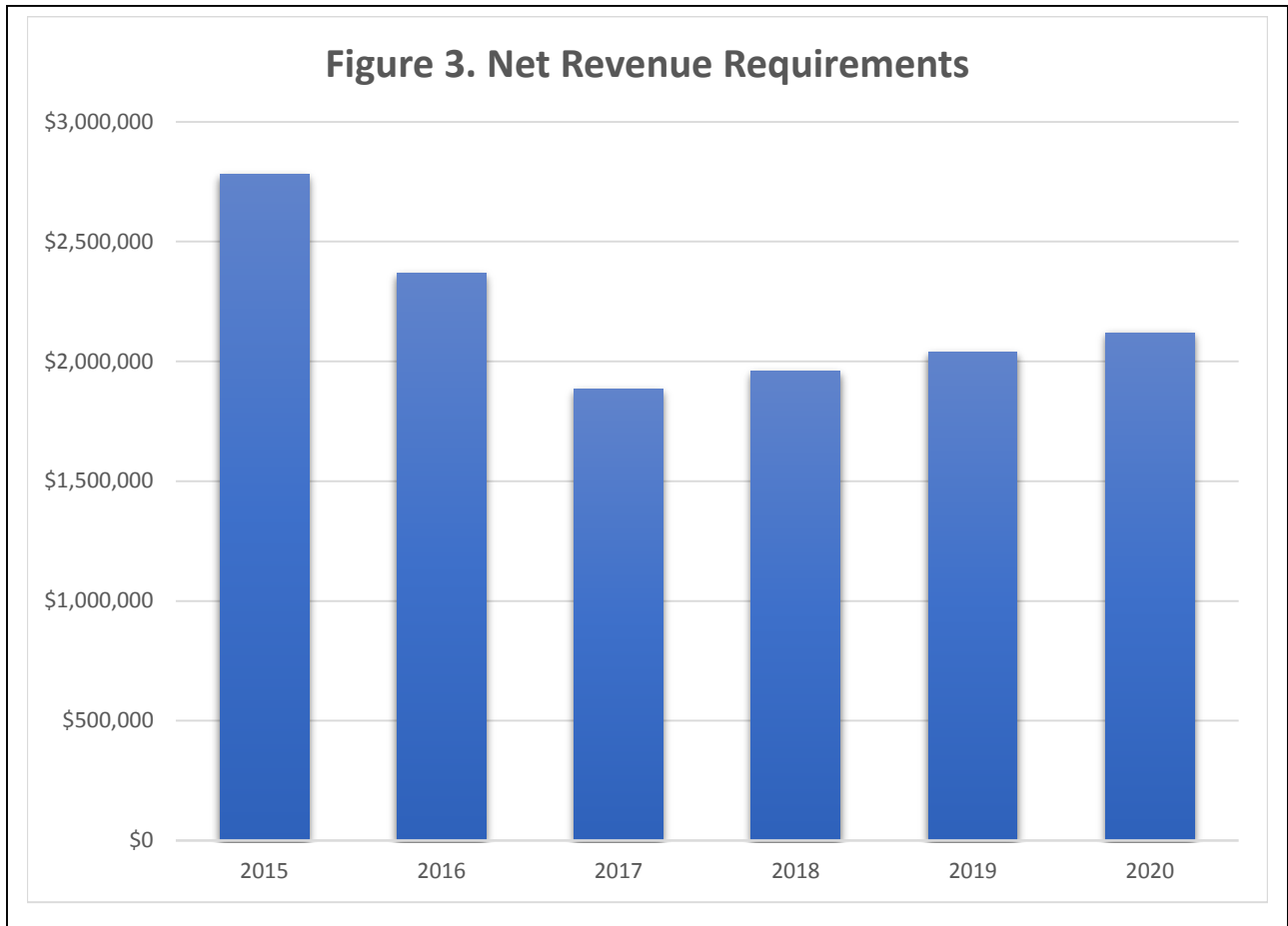
## Other Revenues

Table 2 and Figure 2 show the expected revenue from non-rate sources for the District. The majority (over 80%) of the non-rate revenue is from property taxes. Due to the detachment of portions of the Town of Discovery Bay, the tax revenue from Contra Costa County was reduced. It is expected that the District will lose half the revenue in 2016, and the full revenue by 2017. Therefore the Contra Costa tax revenue was reduced by \$340,000 in 2016, and \$685,000 in 2017.



### Net Revenue Requirements

The net revenue requirements are summarized in Table 3. Figure 3 compares the total expenditures to the total non-rate revenues. The net revenue requirements were very high in 2015 with higher than planned CIP and having to purchase water. Net revenue requirements will still be high in 2016 because of the litigation costs and loss of Contra Costa tax revenues.



## Expected Water Deliveries

Table 4 shows the expected water deliveries in 2016. While deliveries were down substantially in 2015 because of the drought, it is anticipated that deliveries will be 23,500 acre-feet in 2016.

## Cost of Service and Rate Design

The current rate structure for the District is a uniform rate. This rate structure is compliant with the Water Conservation Act of 2009, SBX 7-7. Excerpts from the Act are shown below.

*10608.48 (b) Agricultural water suppliers shall implement all of the following critical efficient management practices,*

- (1) Measure the volume of water delivered to customers...*
- (2) Adopt a pricing structure for water customers based at least in part on quantity delivered.*

The District’s non-rate revenue typically more than covers its fixed costs such as the CIP, debt service, and general and administrative costs. Therefore the remaining revenue is recovered with a volumetric charge on a per acre-foot basis.

## Recommended Rates

The proposed 2016 rate is \$102 per acre-foot. Table 5 shows the rates for 2016 through 2020.

Table 1  
 Final G&A and O&M Budget  
 Byron Bethany Irrigation District

	Actual to 12/31/15	2015 Approved	2016 Final	2016 Charges Used in COS	Escalation Rate	2017	2018	2019	2020
<b>GENERAL &amp; ADMINISTRATIVE Salaries/Benefits</b>									
General Manager	204,143	204,143	204,143	204,143	3%	210,267	216,575	223,073	229,765
Admin Support Staff	58,867	105,000	95,000	95,000	3%	97,850	100,786	103,809	106,923
Director of Business Admin	102,741	99,749	105,823	105,823	3%	108,998	112,268	115,636	119,105
Admin Other Compensation	36,364	50,000	50,000	50,000	3%	51,500	53,045	54,636	56,275
Admin Pension Fund - 401A	11,700	10,800	18,600	18,600	3%	19,158	19,733	20,325	20,934
Admin Health Insurance	25,383	25,000	37,313	37,313	3%	38,433	39,586	40,773	41,996
Admin Dental Insurance	1,295	1,500	2,400	2,400	3%	2,472	2,546	2,623	2,701
Admin Vision Insurance	668	840	891	891	3%	918	945	973	1,003
Admin Retirement (PERS)	15,364	25,000	28,000	28,000	3%	28,840	29,705	30,596	31,514
Admin Worker's Comp	3,082	3,000	3,100	3,100	3%	3,193	3,289	3,387	3,489
Admin Social Security	19,618	24,341	26,000	26,000	3%	26,780	27,583	28,411	29,263
Admin Medicare	6,121	5,693	6,000	6,000	3%	6,180	6,365	6,556	6,753
Admin Life Insurance	882	1,297	900	900	3%	927	955	983	1,013
Admin Longevity	2,100	1,500	2,100	2,100	3%	2,163	2,228	2,295	2,364
Admin Pesticide	1,200	1,200	1,200	1,200	3%	1,236	1,273	1,311	1,351
Admin Employee Relations	185	400	400	400	3%	412	424	437	450
State Unemployment Insurance	3,727	5,000	5,000	5,000	3%	5,150	5,305	5,464	5,628
State Employee. Training Tax	93	300	300	300	3%	309	318	328	338
Admin-Employee Assist Program	91	95	100	100	3%	103	106	109	113
<b>Subtotal G&amp;A Salaries &amp; Benefits</b>	<b>493,625</b>	<b>564,857</b>	<b>587,271</b>	<b>587,271</b>		<b>604,889</b>	<b>623,036</b>	<b>641,727</b>	<b>660,978</b>

<b>GENERAL &amp; ADMINISTRATIVE Expenses</b>									
Office Supplies	3,326.20	3,500.00	3,500.00	3,500	3%	3,605	3,713	3,825	3,939
Payroll Services	4,135	4,500	4,200	4,200	3%	4,326	4,456	4,589	4,727
Postage	1,800	1,500	2,100	2,100	3%	2,163	2,228	2,295	2,364
Printing, Forms, Maps	996	1,100	1,500	1,500	3%	1,545	1,591	1,639	1,688
Notary Expense	-	750	-	-	3%	-	-	-	-
Printing (Legal)	429	650	1,000	1,000	3%	1,030	1,061	1,093	1,126
Landline Telephone	6,902	6,300	6,500	6,500	3%	6,695	6,896	7,103	7,316
Bank Fees	2,287	3,000	2,500	2,500	3%	2,575	2,652	2,732	2,814
Trustee Fees	2,045	3,000	2,045	2,045	3%	2,106	2,170	2,235	2,302
Employee Assist Program-Dir	211	213	215	215	3%	221	228	235	242
Admin Auto & Liability Program	20,397	18,000	22,000	22,000	3%	22,660	23,340	24,040	24,761
Property Insurance	18,766	20,000	25,000	25,000	3%	25,750	26,523	27,318	28,138
Business Systems/Services	9,143	11,000	11,000	11,000	3%	11,330	11,670	12,020	12,381
Retiree's Health Insurance	34,090	35,000	37,000	37,000	3%	38,110	39,253	40,431	41,644
Directors Fees/Expenses	14,901	8,500	15,000	15,000	3%	15,450	15,914	16,391	16,883
Directors Benefits	145,770	148,000	150,000	150,000	3%	154,500	159,135	163,909	168,826
District Official's Expense	32,453	22,000	35,000	35,000	3%	36,050	37,132	38,245	39,393
Legal Services	771,483	55,000	1,000,000	1,000,000	3%	50,000	51,500	53,045	54,636
Legal Services (CVPSA)	686	10,000	1,500	1,500	3%	1,545	1,591	1,639	1,688
Legal-Development Services	19,104		2,500	2,500	3%	2,575	2,652	2,732	2,814
Auditing	12,750	13,250	13,000	13,000	3%	13,390	13,792	14,205	14,632
Actuarial Services	-	1,200	1,200	1,200	3%	1,236	1,273	1,311	1,351
Election	120	-	2,500	2,500	3%	2,575	2,652	2,732	2,814
Record Retention Program	-	1,000	650	650	3%	670	690	710	732
Permits & Dues & Subscriptions	38,228	30,000	40,000	40,000	3%	41,200	42,436	43,709	45,020
Admin Cont. Education	426	3,000	1,500	1,500	3%	1,545	1,591	1,639	1,688
Recording Fees	300	500	1,250	1,250	3%	1,288	1,326	1,366	1,407



Table 1  
**Final G&A and O&M Budget**  
 Byron Bethany Irrigation District

	Actual to 12/31/15	2015 Approved	2016 Final	2016 Charges Used in COS	Escalation Rate	2017	2018	2019	2020
Interest Expense	138,574		150,000	150,000	3%	154,500	159,135	163,909	168,826
Hardware/Software	11,801	15,000	15,000	15,000	3%	15,450	15,914	16,391	16,883
Public Outreach/Prop 218	70,566	7,000	80,000	80,000	3%	82,400	84,872	87,418	90,041
Website	33,883	7,500	25,000	25,000	3%	25,750	26,523	27,318	28,138
Human Resources Consulting	11,824	15,000	15,000	15,000	3%	15,450	15,914	16,391	16,883
<b>Subtotal G&amp;A Expenses</b>	<b>1,407,398</b>	<b>445,463</b>	<b>1,667,660</b>	<b>1,667,660</b>		<b>737,690</b>	<b>759,820</b>	<b>782,615</b>	<b>806,094</b>
<b>Subtotal General &amp; Administrative</b>	<b>1,901,023</b>	<b>1,010,320</b>	<b>2,254,931</b>	<b>2,254,931</b>		<b>1,342,579</b>	<b>1,382,856</b>	<b>1,424,342</b>	<b>1,467,072</b>

	OPERATIONS & MAINTENANCE				Salaries/Benefits				
O&M Assistant General Manager	103,000	103,000	106,090	106,090	3%	109,273	112,551	115,927	119,405
O&M Employee Relations	-	1,000	1,000	1,000	3%	1,030	1,061	1,093	1,126
O&M WWTF Chief Operator	35,625	42,000	36,000	36,000	3%	37,080	38,192	39,338	40,518
O&M Labor Full Time	383,851	500,000	500,000	500,000	3%	515,000	530,450	546,364	562,754
O&M Labor, New Position			63,000	63,000	3%	64,890	66,837	68,842	70,907
O&M Labor, 3 New Positions					3%			206,525	212,721
O&M Part Time Labor	16,002	15,000	15,000	15,000	3%	15,450	15,914	16,391	16,883
O&M Other Compensation	74,488	70,000	75,000	75,000	3%	77,250	79,568	81,955	84,413
O&M Health Insurance	91,632	148,587	150,000	150,000	3%	154,500	159,135	163,909	168,826
O&M Dental Insurance	3,919	5,000	6,600	6,600	3%	6,798	7,002	7,212	7,428
O&M Vision Insurance	1,708	2,227	2,100	2,100	3%	2,163	2,228	2,295	2,364
O&M Retirement (PERS)	43,680	40,000	45,000	45,000	3%	46,350	47,741	49,173	50,648
O&M Worker's Comp.	33,987	32,000	35,000	35,000	3%	36,050	37,132	38,245	39,393
O&M Medicare	10,321	10,000	12,000	12,000	3%	12,360	12,731	13,113	13,506
O&M Social Security	44,013	42,000	45,000	45,000	3%	46,350	47,741	49,173	50,648
O&M Life Insurance	1,294	1,500	2,000	2,000	3%	2,060	2,122	2,185	2,251
O&M Longevity	2,654	4,000	4,000	4,000	3%	4,120	4,244	4,371	4,502
O&M Pesticide	600	600	600	600	3%	618	637	656	675
O&M Overtime	95,443	50,000	75,000	75,000	3%	77,250	79,568	81,955	84,413
O&M Employee Assistance Program	231	420	420	420	3%	433	446	459	473
<b>Subtotal O&amp;M Salaries and Benefits</b>	<b>942,448</b>	<b>1,067,334</b>	<b>1,173,810</b>	<b>1,173,810</b>		<b>1,209,024</b>	<b>1,245,295</b>	<b>1,489,179</b>	<b>1,533,855</b>

	OPERATIONS & MAINTENANCE				Pumping/Supply/O&M, Engineering				
By-Beth Service Areas Supplemental Water	668,582	-	-	-	3%	-	-	-	-
CVPSA Reschedule Fees	4,284	-	5,000	5,000	3%	5,150	5,305	5,464	5,628
CVPSA BOR AG	45,230	-	-	-	3%	-	-	-	-
CVPSA M/I	27,913	-	-	-	3%	-	-	-	-
CVPSA Restoration (M&I)	16,319	-	-	-	3%	-	-	-	-
CVPSA Restoration (Ag)	5,826	-	-	-	3%	-	-	-	-
SLDMWA O&M	62,388	-	-	-	3%	-	-	-	-
USBR Trinity PUD Assess REIMB	689	-	-	-	3%	-	-	-	-
O&M Auto & General Liability	30,596	26,000	30,000	30,000	3%	30,900	31,827	32,782	33,765
Transformer Maintenance	2,650	5,000	5,000	5,000	3%	5,150	5,305	5,464	5,628
Maintenance Trans. Lines/Poles	-	15,000	5,000	5,000	3%	5,150	5,305	5,464	5,628
Pump Control Panels	260	8,000	3,500	3,500	3%	3,605	3,713	3,825	3,939
Sub-Station	-	10,000	2,500	2,500	3%	2,575	2,652	2,732	2,814

Table 1  
Final G&A and O&M Budget  
Byron Bethany Irrigation District

	Actual to 12/31/15	2015 Approved	2016 Final	2016 Charges Used in COS	Escalation Rate	2017	2018	2019	2020
SLDWMA Membership Assessment	89,216	103,000	110,000	110,000	3%	113,300	116,699	120,200	123,806
Electrical Engineering Services	2,517	7,500	5,000	5,000	3%	5,150	5,305	5,464	5,628
SWRCB User Fee (CVPSA)	16,158	16,000	18,000	18,000	3%	18,540	19,096	19,669	20,259
Supplemental Water (CVPSA)	434,396	-	500,000	500,000	3%	515,000	530,450	546,364	562,754
Pump/Motor Maintenance	8,910	7,000	9,000	9,000	3%	9,270	9,548	9,835	10,130
Pump/Motor Maintenance (CVPSA)	1,205	2,500	1,500	1,500	3%	1,545	1,591	1,639	1,688
Pump/Motor Maintenance (RWSA1)	-	6,000	2,500	2,500	3%	2,575	2,652	2,732	2,814
Pump/Motor Lube	39	750	3,000	3,000	3%	3,090	3,183	3,278	3,377
Pump/Motor Lube (CVPSA)	-	350	-	-	3%	-	-	-	-
SCADA/Telemetry-Auto Control	9,549	20,000	20,000	20,000	3%	20,600	21,218	21,855	22,510
Motor Control Maintenance	980	5,500	5,000	5,000	3%	5,150	5,305	5,464	5,628
Motor Control Maintenance (CVPSA)	-	2,500	2,500	2,500	3%	2,575	2,652	2,732	2,814
Motor Control Maintenance (RWSA1)	-	2,500	2,500	2,500	3%	2,575	2,652	2,732	2,814
PWRPA Lodi Energy Center	40,068	20,000	40,000	40,000	3%	41,200	42,436	43,709	45,020
PG&E Power	65,087	60,000	70,000	70,000	3%	72,100	74,263	76,491	78,786
PG&E Power (CVPSA)	38,758	10,000	40,000	40,000	3%	41,200	42,436	43,709	45,020
Emergency Generators	11,401	6,000	12,000	12,000	3%	12,360	12,731	13,113	13,506
WAPA Power	141,985	200,000	150,000	150,000	3%	154,500	159,135	163,909	168,826
WAPA Restoration	54,128	60,000	60,000	60,000	3%	61,800	63,654	65,564	67,531
Bond Continuing Disclosure	1,500	-	1,500	1,500	3%	1,545	1,591	1,639	1,688
Canal Maintenance	13,335	12,000	15,000	15,000	3%	15,450	15,914	16,391	16,883
Station Maintenance	3,322	20,000	10,000	10,000	3%	10,300	10,609	10,927	11,255
Laterals/Structures	8,807	25,000	10,000	10,000	3%	10,300	10,609	10,927	11,255
Laterals/Structures (CVPSA)	9,265	3,000	10,000	10,000	3%	10,300	10,609	10,927	11,255
Material/Hardware/Fasteners	7,491	6,500	7,500	7,500	3%	7,725	7,957	8,195	8,441
Sub laterals/Pipelines	6,568	20,000	20,000	20,000	3%	20,600	21,218	21,855	22,510
Canal Gate Maintenance	19,248	15,000	25,000	25,000	3%	25,750	26,523	27,318	28,138
Canal Gate Maintenance (CVPSA)	1,445	2,000	1,500	1,500	3%	1,545	1,591	1,639	1,688
Surface Drains	7,691	15,000	15,000	15,000	3%	15,450	15,914	16,391	16,883
Tile Drains	34,774	10,000	20,000	20,000	3%	20,600	21,218	21,855	22,510
Canal Crossings	778	10,000	3,500	3,500	3%	3,605	3,713	3,825	3,939
Communications	16,007	20,000	20,000	20,000	3%	20,600	21,218	21,855	22,510
Small Tools & Equipment	5,702	7,000	5,500	5,500	3%	5,665	5,835	6,010	6,190
Building Maintenance	3,008	8,500	5,000	5,000	3%	5,150	5,305	5,464	5,628
Grounds Maintenance	19,393	20,000	28,000	28,000	3%	28,840	29,705	30,596	31,514
Fire System	5,164	7,000	7,000	7,000	3%	7,210	7,426	7,649	7,879
Security System	7,195	5,000	7,500	7,500	3%	7,725	7,957	8,195	8,441
HVAC Service Supplies	3,176	5,000	5,000	5,000	3%	5,150	5,305	5,464	5,628
Janitorial Services/Supply	16,441	20,000	20,000	20,000	3%	20,600	21,218	21,855	22,510
Pest Management	770	940	1,000	1,000	3%	1,030	1,061	1,093	1,126
Uniforms/Clothing Allowance	8,524	9,000	9,000	9,000	3%	9,270	9,548	9,835	10,130
Shop Supplies	7,933	5,500	5,000	5,000	3%	5,150	5,305	5,464	5,628
Welding Shop & Supplies	4,995	8,000	6,500	6,500	3%	6,695	6,896	7,103	7,316
Meter Shop	78	1,000	1,000	1,000	3%	1,030	1,061	1,093	1,126
Vehicle Maintenance	26,046	20,000	25,000	25,000	3%	25,750	26,523	27,318	28,138
Vehicle Warranty	3,370	-	2,500	2,500	3%	2,575	2,652	2,732	2,814
Equipment Maint.	18,167	12,000	15,000	15,000	3%	15,450	15,914	16,391	16,883
Fuel/Lube/Oil/Tires	62,486	90,000	75,000	75,000	3%	77,250	79,568	81,955	84,413
Mileage Reimbursement	1,271	-	1,200	1,200	3%	1,236	1,273	1,311	1,351
Waste Oil Disposal	35	-	1,200	1,200	3%	1,236	1,273	1,311	1,351

Table 1  
**Final G&A and O&M Budget**  
 Byron Bethany Irrigation District

	Actual to 12/31/15	2015 Approved	2016 Final	2016 Charges Used in COS	Escalation Rate	2017	2018	2019	2020
Canal Fences	-	4,000	5,000	5,000	3%	5,150	5,305	5,464	5,628
Rodent Control	-	4,500	-	-	3%	-	-	-	-
Right of Way Weed Control	47,796	30,000	50,000	50,000	3%	51,500	53,045	54,636	56,275
Right of Way Weed Control (CVPSA)	-	1,500	-	-	3%	-	-	-	-
Weed Burning	3,360	1,500	3,500	3,500	3%	3,605	3,713	3,825	3,939
Aquatic Weed Control	136,540	100,000	150,000	150,000	3%	154,500	159,135	163,909	168,826
Road Maint. & Right of Way	15,105	70,000	15,000	15,000	3%	15,450	15,914	16,391	16,883
Water Quality Testing	6,071	2,000	7,000	7,000	3%	7,210	7,426	7,649	7,879
Flow Meter Repairs	11,064	2,500	2,500	2,500	3%	2,575	2,652	2,732	2,814
Flow Meters & Repairs (CVPSA)	7,552	1,000	1,000	1,000	3%	1,030	1,061	1,093	1,126
Safety Supplies/Equipment	9,343	6,000	7,000	7,000	3%	7,210	7,426	7,649	7,879
Worker Safety Training	3,034	6,000	3,500	3,500	3%	3,605	3,713	3,825	3,939
Physical Exams	2,049	1,800	2,500	2,500	3%	2,575	2,652	2,732	2,814
Engineering	76,128	65,000	100,000	100,000	3%	103,000	106,090	109,273	112,551
Eng/Water Conservation (CVPSA)	166	15,000	15,000	15,000	3%	15,450	15,914	16,391	16,883
GSA Implementation	113,224	35,000	110,000	110,000	3%	113,300	116,699	120,200	123,806
O&M Continuing Education	1,847	4,000	4,000	4,000	3%	4,120	4,244	4,371	4,502
Permits/Licenses (CVPSA)	100	6,000	6,000	6,000	3%	6,180	6,365	6,556	6,753
Propane Facilities	2,531	4,500	4,500	4,500	3%	4,635	4,774	4,917	5,065
Refuse/Disposal	3,142	-	3,500	3,500	3%	3,605	3,713	3,825	3,939
Bottled Water Service	2,422	2,400	3,000	3,000	3%	3,090	3,183	3,278	3,377
<b>Subtotal O&amp;M Expenses</b>	<b>2,544,593</b>	<b>1,333,740</b>	<b>1,974,400</b>	<b>1,974,400</b>		<b>2,033,632</b>	<b>2,094,641</b>	<b>2,157,480</b>	<b>2,222,205</b>
<b>Subtotal O&amp;M</b>	<b>3,487,042</b>	<b>2,401,074</b>	<b>3,148,210</b>	<b>3,148,210</b>		<b>3,242,656</b>	<b>3,339,936</b>	<b>3,646,659</b>	<b>3,756,059</b>
<b>TOTAL G&amp;A and O&amp;M</b>	<b>5,388,065</b>	<b>3,411,394</b>	<b>5,403,141</b>	<b>5,403,141</b>		<b>4,585,235</b>	<b>4,722,792</b>	<b>5,071,001</b>	<b>5,223,131</b>

Shaded line items not included in user charges--these charges are pass throughs or otherwise reimbursed

**Allocated Costs**

Shared	5,182,641	4,358,120	4,488,864	4,623,530	4,762,235
Byron Ag	-	-	-	-	-
Byron M&I	-	-	-	-	-
Bethany Ag	-	-	-	-	-
Mountain Hse	5,000	5,150	5,305	5,464	5,628
Mariposa Energy	-	-	-	-	-
Tracy Hills	-	-	-	-	-
	<b>5,182,641</b>	<b>4,363,270</b>	<b>4,494,168</b>	<b>4,628,993</b>	<b>4,767,863</b>

Table 2  
**Capital Outlays**  
 Byron Bethany Irrigation District

	Actual to 12/31/15	2015 Approved	2016 <i>Final</i>	2016 Charges Used in COS	Escalation Rate	2017	2018	2019	2020																																																																																
2007 Lease Revenue Bonds	\$318,600	\$318,600	\$315,500	\$315,500		\$317,174	\$318,400	\$318,925	\$318,925																																																																																
Annual CIP Allowance	\$1,668,723	\$1,500,000	\$936,000	\$936,000	3%	\$964,080	\$993,002	\$1,022,792	\$1,053,476																																																																																
						<b>\$1,281,254</b>	<b>\$1,311,402</b>	<b>\$1,341,717</b>	<b>\$1,372,401</b>																																																																																
<table border="1"> <tbody> <tr> <td>Shared</td> <td>\$1,251,500</td> <td></td> <td></td> <td></td> <td></td> <td>\$1,281,254</td> <td>\$1,311,402</td> <td>\$1,341,717</td> <td>\$1,372,401</td> </tr> <tr> <td>Byron Ag</td> <td>\$0</td> <td></td> <td></td> <td></td> <td></td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> </tr> <tr> <td>Byron M&amp;I</td> <td>\$0</td> <td></td> <td></td> <td></td> <td></td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> </tr> <tr> <td>Bethany Ag</td> <td>\$0</td> <td></td> <td></td> <td></td> <td></td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> </tr> <tr> <td>Mountain Hse</td> <td>\$0</td> <td></td> <td></td> <td></td> <td></td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> </tr> <tr> <td>Mariposa Energy</td> <td>\$0</td> <td></td> <td></td> <td></td> <td></td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> </tr> <tr> <td>Tracy Hills</td> <td>\$0</td> <td></td> <td></td> <td></td> <td></td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> </tr> <tr> <td></td> <td><b>\$1,251,500</b></td> <td></td> <td></td> <td></td> <td></td> <td><b>\$1,281,254</b></td> <td><b>\$1,311,402</b></td> <td><b>\$1,341,717</b></td> <td><b>\$1,372,401</b></td> </tr> </tbody> </table>										Shared	\$1,251,500					\$1,281,254	\$1,311,402	\$1,341,717	\$1,372,401	Byron Ag	\$0					\$0	\$0	\$0	\$0	Byron M&I	\$0					\$0	\$0	\$0	\$0	Bethany Ag	\$0					\$0	\$0	\$0	\$0	Mountain Hse	\$0					\$0	\$0	\$0	\$0	Mariposa Energy	\$0					\$0	\$0	\$0	\$0	Tracy Hills	\$0					\$0	\$0	\$0	\$0		<b>\$1,251,500</b>					<b>\$1,281,254</b>	<b>\$1,311,402</b>	<b>\$1,341,717</b>	<b>\$1,372,401</b>
Shared	\$1,251,500					\$1,281,254	\$1,311,402	\$1,341,717	\$1,372,401																																																																																
Byron Ag	\$0					\$0	\$0	\$0	\$0																																																																																
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Table 3  
**Non Rate Revenue**  
 Byron Bethany Irrigation District

**ESTIMATED REVENUE**

	Actual to 12/31/15	2015 Approved	2016 Final	2016 Charges Used in COS	Escalation Rate	2017	2018	2019	2020
Stand By Revenue	79,774	120,000	120,000	120,000	3%	123,600	127,308	131,127	135,061
Sale of Fixed Assets	5,800	-	3,000	3,000	3%	3,090	3,183	3,278	3,377
Customer Finance Charges	31,485	20,000	20,000	-	3%	-	-	-	-
CVPSA Ag O&M Charge	52,890	19,922	50,000	50,000	3%	51,500	53,045	54,636	56,275
CVPSA M&I O&M Charge	195,847	93,259	195,000	195,000	3%	200,850	206,876	213,082	219,474
CVPSA M/I with Ag Alloc Charge	8,295	11,819	8,000	8,000	3%	8,240	8,487	8,742	9,004
Alameda Property Tax Revenue	514,872	455,156	500,000	500,000	3%	515,000	530,450	546,364	562,754
Contra Costa Property Tax Revenue	1,015,958	911,911	685,000	685,000	2%	298,700	304,674	310,767	316,983
San Joaquin 46701 Zn2 Property Tax	2,280,944	1,866,933	2,500,000	2,500,000	2%	2,550,000	2,601,000	2,653,020	2,706,080
Encroachment Permit Fee	500	-	500	500	2%	510	520	531	541
Administration/Permit Fees	6,028	-	500	500	3%	515	530	546	563
Interest on Bank Accounts	35,388	-	32,000	32,000	3%	32,960	33,949	34,967	36,016
Reimburse SLDMWA Assess	90,954	-	-	-	3%	-	-	-	-
PG&E Power (CVPSA) Reimbursed	31,482	-	15,000	15,000	3%	15,450	15,914	16,391	16,883
O&M Labor Cost Recovery	101,906	75,000	35,000	35,000	3%	36,050	37,132	38,245	39,393
Equipment Cost Recovery	4,725	10,000	3,000	3,000	3%	3,090	3,183	3,278	3,377
O&M Materials Recovery	31,527	10,000	1,500	1,500	3%	1,545	1,591	1,639	1,688
Engineering Recovery	7,889	7,500	5,000	5,000	3%	5,150	5,305	5,464	5,628
Admin Labor Recovery	14,850	15,000	12,000	12,000	3%	12,360	12,731	13,113	13,506
Reimburse Director's Benefit	42,064	-	91,000	91,000	3%	93,730	96,542	99,438	102,421
Legal Cost Recovery	42,170	-	10,000	10,000	3%	10,300	10,609	10,927	11,255
Other Income	658	2,500	500	500	3%	515	530	546	563
<b>TOTAL ESTIMATED REVENUE</b>	<b>4,596,006</b>	<b>3,619,000</b>	<b>4,287,000</b>	<b>4,267,000</b>		<b>3,963,155</b>	<b>4,053,558</b>	<b>4,146,102</b>	<b>4,240,842</b>

Shared	4,072,000	3,762,305	3,846,682	3,933,021	4,021,368
Byron Ag	-	-	-	-	-
Byron M&I	-	-	-	-	-
Bethany Ag	-	-	-	-	-
Mountain Hse	-	-	-	-	-
Mariposa Energy	-	-	-	-	-
Tracy Hills	-	-	-	-	-
	4,072,000	3,762,305	3,846,682	3,933,021	4,021,368

Table 4  
**Net Revenue Requirements**  
 Byron Bethany Irrigation District

Revenue Requirement	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>O&amp;M</b>											
Shared	\$5,182,641	\$4,358,120	\$4,488,864	\$4,623,530	\$4,762,235	\$4,905,102	\$5,052,256	\$5,203,823	\$5,359,938	\$5,520,736	\$5,686,358
Byron Ag	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bethany Ag	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$5,187,641</b>	<b>\$4,363,270</b>	<b>\$4,494,168</b>	<b>\$4,628,993</b>	<b>\$4,767,863</b>	<b>\$4,910,899</b>	<b>\$5,058,226</b>	<b>\$5,209,973</b>	<b>\$5,366,272</b>	<b>\$5,527,260</b>	<b>\$5,693,078</b>
<b>Capital</b>											
Shared	\$1,251,500	\$1,281,254	\$1,311,402	\$1,341,717	\$1,372,401	\$1,404,006	\$1,436,558	\$1,470,087	\$1,503,491	\$1,539,061	\$1,575,699
Byron Ag	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bethany Ag	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$1,251,500</b>	<b>\$1,281,254</b>	<b>\$1,311,402</b>	<b>\$1,341,717</b>	<b>\$1,372,401</b>	<b>\$1,404,006</b>	<b>\$1,436,558</b>	<b>\$1,470,087</b>	<b>\$1,503,491</b>	<b>\$1,539,061</b>	<b>\$1,575,699</b>
<b>Total Expenditures</b>	<b>\$6,439,141</b>	<b>\$5,644,524</b>	<b>\$5,805,571</b>	<b>\$5,970,711</b>	<b>\$6,140,264</b>	<b>\$6,314,904</b>	<b>\$6,494,784</b>	<b>\$6,680,060</b>	<b>\$6,869,762</b>	<b>\$7,066,321</b>	<b>\$7,268,777</b>
<b>Less Non Rate Revenue</b>											
Shared	\$4,072,000	\$3,762,305	\$3,846,682	\$3,933,021	\$4,021,368	\$4,111,773	\$4,204,285	\$4,298,956	\$4,395,838	\$4,494,985	\$4,596,452
Byron Ag	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bethany Ag	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$4,072,000</b>	<b>\$3,762,305</b>	<b>\$3,846,682</b>	<b>\$3,933,021</b>	<b>\$4,021,368</b>	<b>\$4,111,773</b>	<b>\$4,204,285</b>	<b>\$4,298,956</b>	<b>\$4,395,838</b>	<b>\$4,494,985</b>	<b>\$4,596,452</b>
<b>Use of unencumbered cash</b>											
Shared	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Byron Ag	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bethany Ag	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Net Revenue Requirements</b>											
Shared	\$2,362,141	\$1,877,069	\$1,953,584	\$2,032,226	\$2,113,269	\$2,197,335	\$2,284,528	\$2,374,954	\$2,467,590	\$2,564,812	\$2,665,606
Byron Ag	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bethany Ag	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$2,367,141</b>	<b>\$1,882,219</b>	<b>\$1,958,888</b>	<b>\$2,037,690</b>	<b>\$2,118,896</b>	<b>\$2,203,131</b>	<b>\$2,290,498</b>	<b>\$2,381,103</b>	<b>\$2,473,924</b>	<b>\$2,571,336</b>	<b>\$2,672,326</b>

Table 5  
**Projected Water Use**  
 Byron Bethany Irrigation District

	2016	Growth Rate (%)	2017	2018	2019	2020
Byron Ag	12,653	0%	12,653	12,653	12,653	12,653
Byron M&I	432	0%	432	432	432	432
Bethany Ag	7,374	0%	7,374	7,374	7,374	7,374
Mountain House	2,292	2%	2,338	2,385	2,433	2,481
Mariposa Energy	99	0%	99	99	99	99
Tracy Hills	500		500	1,000	1,500	2,000
<b>Total</b>	<b>23,350</b>		<b>23,396</b>	<b>23,943</b>	<b>24,491</b>	<b>25,039</b>

Table 6

## Unit Costs of Service, per acre-foot Byron Bethany Irrigation District

Description (a)	2016	2017	2018	2019	2020
<b>Shared</b>					
Revenue Requirement, \$	\$2,362,141	\$1,877,069	\$1,953,584	\$2,032,226	\$2,113,269
Water Use, af	23,350	23,396	23,943	24,491	25,039
Unit Cost of Service, \$/af	\$102	\$81	\$82	\$83	\$85
<b>Byron Ag</b>					
Revenue Requirement, \$	\$0	\$0	\$0	\$0	\$0
Water Use, af	12,653	12,653	12,653	12,653	12,653
Unit Cost of Service, \$/af	\$0	\$0	\$0	\$0	\$0
<b>Bethany Ag</b>					
Revenue Requirement, \$	\$0	\$0	\$0	\$0	\$0
Water Use, af	7,374	7,374	7,374	7,374	7,374
Unit Cost of Service, \$/af	\$0	\$0	\$0	\$0	\$0

- a. Irrigation water rate is the sum of shared and irrigation only unit costs of service.  
RWSA-1 rate is the sum of shared and RWSA-1 only unit costs of service.

Table 7

## Cost of Service Water Rates, per acre-foot Byron Bethany Irrigation District

	2016	2017	2018	2019	2020
Byron Ag	\$102	\$81	\$82	\$83	\$85
Bethany Ag	\$102	\$81	\$82	\$83	\$85