

UNITED WATER CONSERVATION DISTRICT

Cost-of-Service Analysis FY 2018-19



Board Presentation

May 22, 2018



HF&H Consultants, LLC

Presentation Outline

- Background
- Cost-of-service analysis
 - Purpose and analytical steps
 - Cost categories and classifications
 - Cost of service allocations
- Summary of results
 - Ag and M&I costs of service
 - Ratio of M&I to Ag costs



Background

- District Act specifies a range for setting groundwater extraction charges
 - Act recognizes that the District provides service to two classes of pumpers: municipal and industrial (M&I) and agricultural (Ag)
 - Act requires that M&I extraction charge must exceed Ag charge by at least 3 times but no more than 5 times
- District Act does not specify how to determine the differential
- District has historically set M&I extraction charge at 3 times the Ag extraction charge (3 to 1 ratio)
- District developed a cost-of-service methodology for confirming the differential beginning with FY 2013-14
 - Results for FY 2018-19 are being presented today

Purpose of Cost-of-Service Analysis

- Purpose of cost-of-service (COS) analysis
 - Allocate costs associated with providing service to Ag and M&I pumpers in Zones A & B
- Allocations are proportionate to the services each class receives
- The COS analysis determines the quantitative *difference* between Ag and M&I costs
 - The difference determines the ratio
- The COS analysis does not determine extraction charges for Zones A and B
 - Extraction charges are determined by District based on minimum 3 to 1 ratio



Standard Steps in COS Analysis

1. Classify costs by services provided to pumpers
2. Determine unit costs for each service
 - Unit costs apply equally to Ag and M&I
3. Allocate the cost of service to each class based on each class' units of service

COS analysis relies on

- Appropriate rate-making standards
- Best available data
- Reasonable assumptions



Three Cost Categories

The cost categories correspond to the District’s core services

	Cost Categories		
	Replenishment	Reliability	Regulatory Compliance
Services	Zone A/B management and administration	Facilities constructed to improve groundwater reliability (Santa Felicia and Freeman Diversion Dams)	Regulatory compliance for facilities that improve groundwater reliability
Costs - O&M	Administration, management, and overhead	Operating personnel for storage and diversion facilities	Studies for ESA compliance, Dam Safety
- Capital	Equipment used for management and administration	Storage and diversion facilities	Facilities that are needed to comply with regulation of reliability facilities



District Budget Related to Zones A and B

- Total District budget of \$32.2 million*
 - 6.4% increase over FY 2017-18
 - \$15.3 million is related to other activities:
 - \$16.9 million is related to Zone A/B

	FY 2017-18	FY 2018-19	Variance	
Total District Budget	\$30,270,786	\$32,193,974	\$1,923,188	6.4%
Less:				
State Water Fund Expenses	(\$1,600,970)	(\$1,846,571)	(\$245,601)	15.3%
O/H Pipeline Fund Expenses	(\$4,760,289)	(\$8,360,056)	(\$3,599,767)	75.6%
PV Pipeline Fund Expenses	(\$442,845)	(\$340,678)	\$102,167	-23.1%
PT Pipeline Fund Expenses	(\$3,030,472)	(\$2,840,133)	\$190,339	-6.3%
Recreation-related Costs	(\$2,379,706)	(\$1,875,395)	\$504,310	-21.2%
Subtotal Non-Zone A/B Expenses	(\$12,214,282)	(\$15,262,834)	(\$3,048,552)	25.0%
Total Zone A/B Budget	\$18,056,504	\$16,931,140	(\$1,125,364)	-6.2%

* Excluding non-cash depreciation expense



Costs By Category

Zone A/B Budget	FY 2017-18	FY 2018-19	Variance	
Replenishment Costs				
Personnel Costs	\$582,572	\$1,085,107	\$502,535	86.3%
Program Costs	\$1,014,262	\$1,425,890	\$411,628	40.6%
Overhead Allocation	\$310,762	\$558,599	\$247,838	79.8%
Capital Equipment Costs	\$16,634	\$7,733	(\$8,901)	-53.5%
Debt Service	\$0	\$0	\$0	
Transfer to Capital Reserves	\$69,558	\$102,500	\$32,942	47.4%
Subtotal - Replenishment	\$1,993,788	\$3,179,830	\$1,186,042	59.5%
Reliability Costs				
Personnel Costs	\$1,374,885	\$1,369,550	(\$5,336)	-0.4%
Program Costs	\$845,161	\$715,682	(\$129,478)	-15.3%
Overhead Allocation	\$733,405	\$705,027	(\$28,379)	-3.9%
Capital Equipment Costs	\$13,861	\$3,881	(\$9,979)	-72.0%
Debt Service	\$1,363,543	\$1,365,200	\$1,657	0.1%
Transfer to Capital Reserves	\$2,368,514	\$995,387	(\$1,373,127)	-58.0%
Subtotal - Reliability	\$6,699,369	\$5,154,727	(\$1,544,641)	-23.1%
Regulatory Compliance Costs				
ESA & Dam Safety - Personnel Costs	\$1,956,859	\$1,647,046	(\$309,813)	-15.8%
ESA & Dam Safety - Program Costs	\$2,096,198	\$2,435,150	\$338,952	16.2%
Other Personnel Costs	\$471,863	\$426,573	(\$45,290)	-9.6%
Other Program Costs	\$200,500	\$44,000	(\$156,500)	-78.1%
Overhead Allocation	\$1,295,553	\$1,067,473	(\$228,081)	-17.6%
Capital Equipment Costs	\$37,666	\$13,445	(\$24,220)	-64.3%
Debt Service	\$0	\$0	\$0	
Transfer to Capital Reserves	\$3,304,708	\$2,962,895	(\$341,813)	-10.3%
Subtotal - Regulatory Compliance	\$9,363,348	\$8,596,583	(\$766,765)	-8.2%
Total	\$18,056,504	\$16,931,140	(\$1,125,364)	-6.2%

- Replenishment costs
 - 19% of total
 - 59% increase
 - Increased personnel costs and program costs

- Reliability costs
 - 30% of total
 - 23% decrease
 - Decreased capital spending

- Regulatory Compliance costs
 - 51% of total
 - 8% decrease



Capital Projects – FY 2018-19 Budget

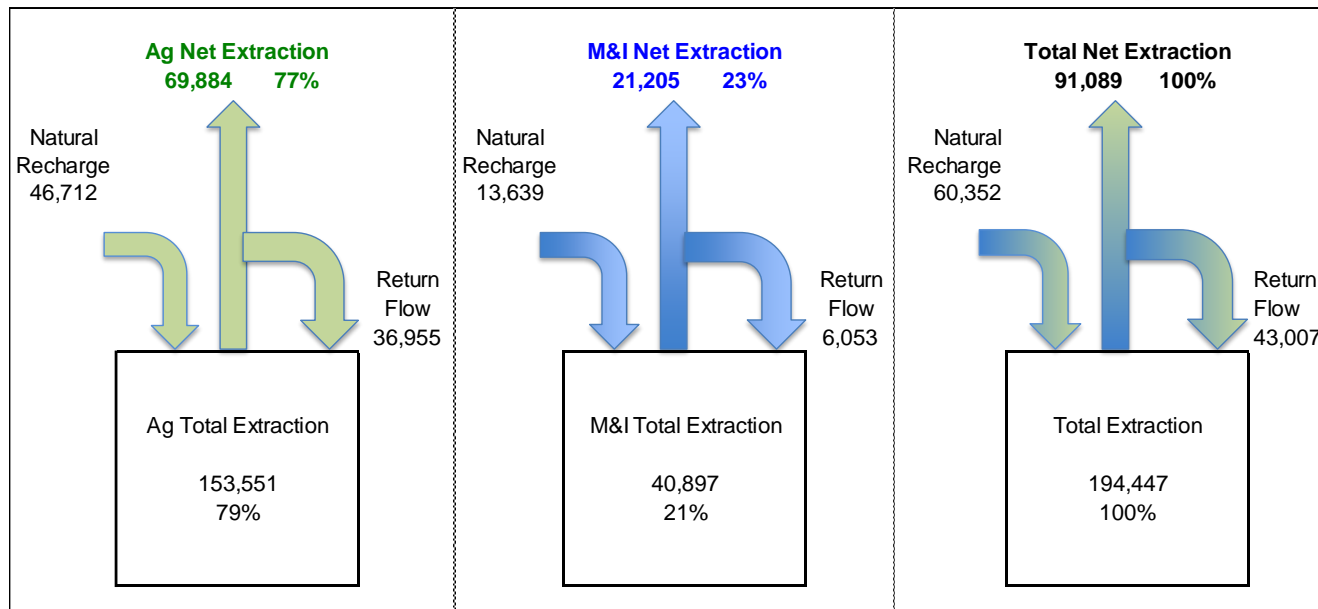
Zone A/Zone B Capital Projects			Replenishment	Reliability	Regulatory Compliance	Total
8001	421	Freeman Diversion Rehab		\$93,862	\$688,323	\$782,185
8002	051	SFD Outlet Works Rehab		\$35,586	\$438,898	\$474,484
8003	051	SFD PMF Containment			\$495,645	\$495,645
8005	051	SFD Sediment Management		\$0		\$0
8006	052	Lower River Invasive Species Control Project			\$51,526	\$51,526
8008	051	Quagga Decontamination Station			\$149,868	\$149,868
8014	052	Solar Project - Piru		\$756		\$756
8018	051	Ferro-Rose Recharge		\$159,606		\$159,606
8019	051	Brackish Water Treatment Plant			\$40,153	\$40,153
8020	052	Recycled Water		\$108,979		\$108,979
8025	051	State Water State Interconnection Project		\$212,078		\$212,078
8026	051	Lower Piru Creek Habitat			\$202,985	\$202,985
8029	052	El Rio Asphalt Repairs		\$0		\$0
8030	051	SFD Fish Passage			\$300,000	\$300,000
8031	052	Replace El Rio Trailer			\$82,516	\$82,516
8024		New Headquarters (allocated based on personnel costs)	89,861	\$113,416	\$171,723	\$375,000
Total			\$89,861	\$724,284	\$2,621,637	\$3,435,782

- FY 2017-18 budget
 - Replenishment \$49,087
 - Reliability \$1,510,155 (\$1.0 million for SFD outlet works)
 - Reg Comp \$2,538,819
 - Total \$4,098,781



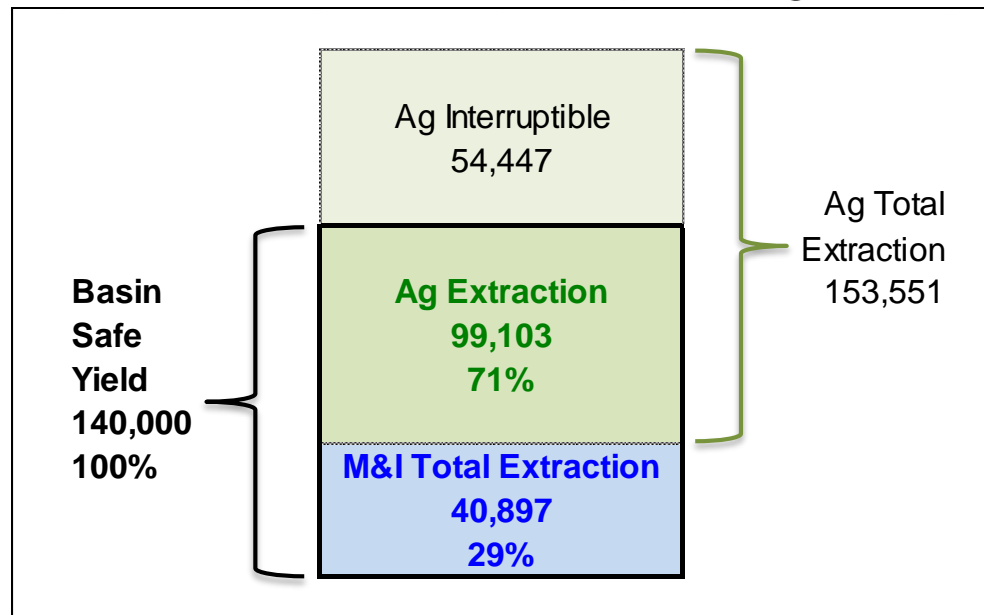
Replenishment Cost Allocations

- Service provided by District
 - Zone A/B management and administration
- Units of service: adjusted consumptive use (net extractions)
 - Total pumpage minus return flow and natural recharge
 - Represents net impact on basin and need for replenishment



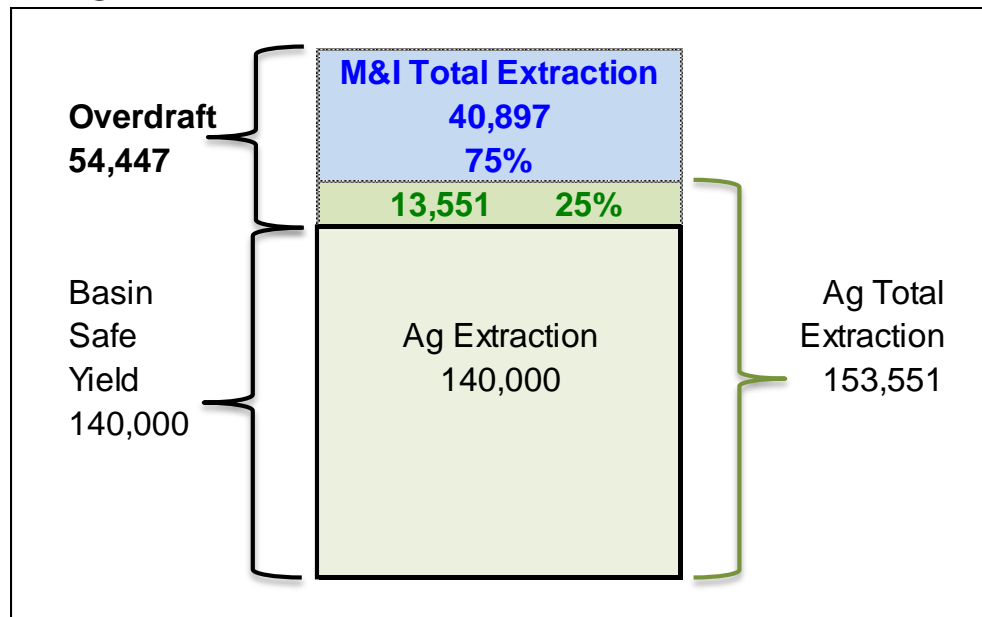
Reliability Cost Allocations

- Service provided by District
 - Facilities constructed to improve safe yield
- Units of service: pumpage within basin safe yield
 - Pumpage within safe yield is basis for allocation
 - *M&I receives higher priority for higher beneficial use*
 - Ag is reduced to provide for M&I pumpage



Regulatory Compliance Cost Allocations

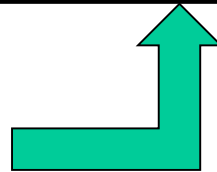
- Service provided by District
 - Regulatory compliance related to facilities that provide reliability
- Units of service: contribution to overdraft in the basin
 - Pumpage in excess of safe yield is basis for allocation
 - *Ag has historical priority over M&I*
 - Ag pumpage comes first



Allocation Factor Summary

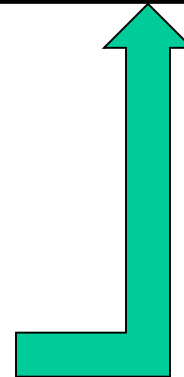
	Allocation Factors by Cost Category		
	Replenishment	Reliability	Reg Comp
- Ag	77%	71%	25%
- M&I	<u>23%</u>	<u>29%</u>	<u>75%</u>
	100%	100%	100%

Proportionate to net extractions from basin



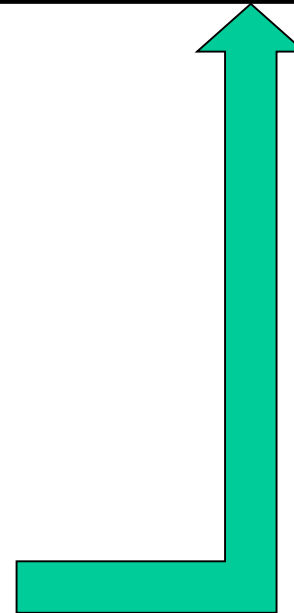
Proportionate to basin safe yield

- M&I requires greater reliability
- some Ag is interruptible



Proportionate to overdraft

- Ag development preceded M&I
- M&I development worsened overdraft



Replenishment Cost of Service (\$/AF)

I. Replenishment Unit Costs

Replenishment costs	\$3,179,830
Adjusted consumptive use (AF)	91,089
Unit cost of service (\$/AF)	\$34.91

The same unit costs apply equally to Ag and M&I

	Ag	M&I	Total
I. Replenishment Cost of Service			
Unit cost of service (\$/AF)	\$34.91	\$34.91	\$34.91
Adjusted consumptive use (AF)	69,884	21,205	91,089
Cost-of-service allocation	\$2,439,594	\$740,236	\$3,179,830



Reliability Cost of Service

II. Reliability Unit Costs	
Reliability Costs	\$5,154,727
Pumpage within basin safe yield	140,000
Unit cost of service (\$/AF)	\$36.82

The same unit costs apply equally to Ag and M&I

	Ag	M&I	Total
II. Reliability Cost of Service			
Unit cost of service (\$/AF)	\$36.82	\$36.82	\$36.82
Pumpage within basin safe yield	99,103	40,897	140,000
Cost-of-service allocation	\$3,648,935	\$1,505,792	\$5,154,727



Regulatory Compliance Cost of Service

III. Regulatory Compliance Unit Costs	
Regulatory Compliance costs	\$8,596,583
Overdraft contribution (AF)	54,447
Unit cost of service (\$/AF)	\$157.89

The same unit costs apply equally to Ag and M&I

	Ag	M&I	Total
III. Regulatory Compliance Cost of Service			
Unit cost of service (\$/AF)	\$157.89	\$157.89	\$157.89
Overdraft contribution (AF)	13,551	40,897	54,447
Cost-of-service allocation	\$2,139,485	\$6,457,097	\$8,596,583



Summary of COS Allocations and Composite Ratio

	Ag	M&I	Total
IV. Total Cost of Service			
Replenishment	\$2,439,594	\$740,236	\$3,179,830
Reliability	\$3,648,935	\$1,505,792	\$5,154,727
Regulatory Compliance	\$2,139,485	\$6,457,097	\$8,596,583
	<u>\$8,228,015</u>	<u>\$8,703,125</u>	<u>\$16,931,140</u>
Total pumpage (AF)	153,551	40,897	194,447
Composite unit cost (\$/AF)	\$53.59	\$212.81	\$87.07
Ratio of M&I to Ag unit costs	1.00	3.97	

- Ag is allocated majority of Replenishment and Reliability
 - Proportionate to its use of the basin safe yield
- M&I is allocated majority of Regulatory Compliance
 - Regulatory costs associated with M&I’s impact of exacerbating overdraft conditions



Summary

- Methodology consistent with past years
- FY 2018-19 cost-of-service analysis confirms 3-to-1 ratio

	Composite Unit Costs (\$/AF)		Ratio
	Ag	M&I	M&I to Ag
FY 2013-14	\$56.51	\$178.43	3.16
FY 2014-15	\$50.94	\$165.32	3.25
FY 2015-16	\$54.44	\$171.74	3.15
FY 2016-17	\$49.64	\$169.80	3.42
FY 2017-18	\$55.38	\$227.80	4.11
FY 2018-19	\$53.59	\$212.81	3.97
Average	\$53.42	\$187.65	3.51



Questions?

