United Water Conservation District
Cost-of-Service Analysis FY 2019-20

Board Presentation

May 23, 2019

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 2019-20 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 $40.9 million
  - $23.6 million is related to Zone A/B
  - $17.3 million is related to other activities
  - 26.3% increase over FY 2018-19
    - Primarily due to increase in capital project costs

	FY 2018-19	FY 2019-20	Variance	
Total District Budget	**$32,442,150**	**$40,960,647**	**$8,518,497**	**26.3%**
Less:				
State Water Fund Expenses	($1,846,571)	($1,529,555)	$317,016	-17.2%
O/H Pipeline Fund Expenses	($8,353,457)	($8,958,029)	($604,572)	7.2%
PV Pipeline Fund Expenses	($339,089)	($441,228)	($102,139)	30.1%
PT Pipeline Fund Expenses	($2,837,585)	($4,561,319)	($1,723,735)	60.7%
Recreation-related Costs	($1,904,557)	($1,811,883)	$92,674	-4.9%
Subtotal Non-Zone A/B Expenses	**($15,281,258)**	**($17,302,014)**	**($2,020,756)**	**13.2%**
Total Zone A/B Budget	**$17,160,892**	**$23,658,634**	**$6,497,741**	**37.9%**

Costs By Category

Zone A/B Budget	FY 2018-19	FY 2019-20	Variance	
Replenishment Costs				
Personnel Costs	$1,247,079	$1,950,029	$702,950	56.4%
Program Costs	$1,425,890	$1,952,324	$526,434	36.9%
Overhead Allocation	$588,659	$1,404,258	$815,600	138.6%
Capital Equipment Costs	$7,848	$11,763	$3,915	49.9%
Debt Service	$0	$0	$0	
Transfer to Capital Reserves	$109,656	$973,738	$864,082	788.0%
Subtotal - Replenishment	**$3,379,133**	**$6,292,113**	$2,912,980	86.2%
Reliability Costs				
Personnel Costs	$1,357,979	$684,216	($673,763)	-49.6%
Program Costs	$715,682	$943,551	$227,869	31.8%
Overhead Allocation	$641,007	$492,719	($148,288)	-23.1%
Capital Equipment Costs	$3,939	$5,685	$1,746	44.3%
Debt Service	$1,365,200	$1,629,427	$264,227	19.4%
Transfer to Capital Reserves	$985,680	$1,927,999	$942,319	95.6%
Subtotal - Reliability	**$5,069,487**	**$5,683,598**	$614,111	12.1%
Regulatory Compliance Costs				
Personnel Costs	$2,257,002	$1,981,975	($275,027)	-12.2%
Program Costs	$2,411,300	$3,244,900	$833,600	34.6%
Overhead Allocation	$1,065,372	$1,427,263	$361,891	34.0%
Capital Equipment Costs	$13,272	$19,551	$6,279	47.3%
Debt Service	$0	$0	$0	
Transfer to Capital Reserves	$2,965,779	$5,009,234	$2,043,455	68.9%
Subtotal - Regulatory Compliance	**$8,712,726**	**$11,682,924**	$2,970,198	34.1%
Total	**$17,161,346**	**$23,658,634**	$6,497,289	37.9%

- Replenishment costs
  - 27% of total
  - 86% increase
  - Increased personnel costs and program costs
- Reliability costs
  - 24% of total
  - 12% increase
  - Decreased personnel costs while capital equipment costs increased
- Regulatory Compliance costs
  - 49% of total
  - 34% increase
  - Increased capital costs

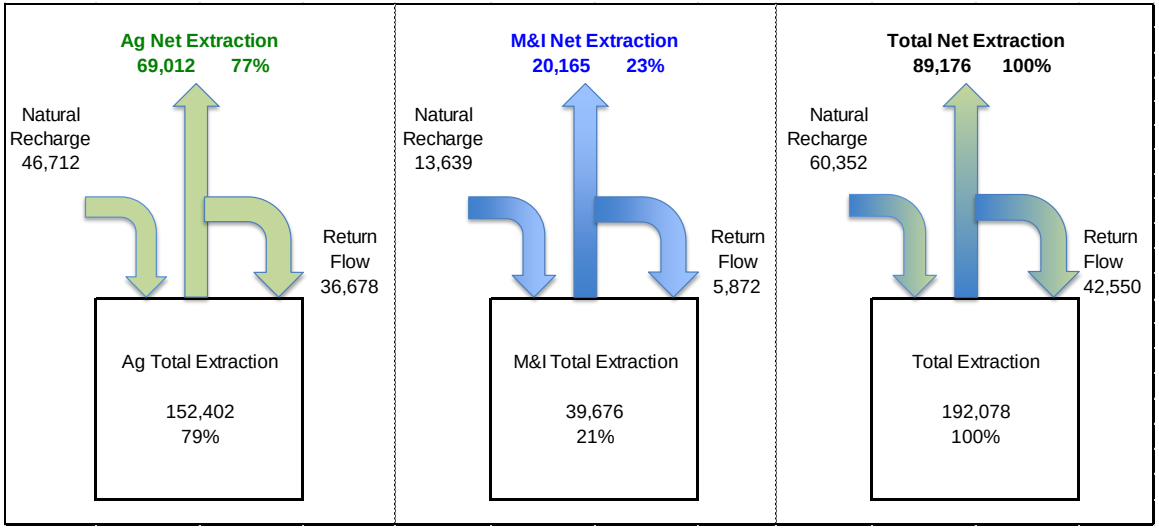
Capital Projects – FY 2019-20 Budget

		Zone A/Zone B Capital Projects	Replenishment	Reliability	Regulatory Compliance	Total
8001	421	Freeman Diversion Rehab		$246,862	$1,810,324	$2,057,186
8002	051	SFD Outlet Works Rehab		$56,143	$692,429	$748,572
8003	051	SFD PMF Containment			$1,095,802	$1,095,802
8005	051	SFD Sediment Management		$0		$0
8006	052	Lower River Invasive Species Control Project			$933	$933
8008	051	Quagga Decontamination Station			$2,924	$2,924
8014	052	Solar Project - Piru		$0		$0
8018	051	Ferro-Rose Recharge		$0		$0
8019	051	Brackish Water Treatment Plant			$7,170	$7,170
8020	052	Recycled Water		$0		$0
8024	052	New Headquarters (alloc based on personnel costs)	$545,358	$191,352	$554,292	$1,291,001
8025	051	State Water State Interconnection Project		$11,677		$11,677
8028	052	Replace El Rio Trailer		$6,650		$6,650
8030	051	Alternative Supply Alliance Pipeline		$52,825		$52,825
8032	051	Grand Canal		$525,916		$525,916
8033	421	Floc Building Emergency Generator		$75,000		$75,000
8034	051	Lake Piru Campground Electrical Update		$65,800		$65,800
8035	451	OH Booster Pump Overhaul				$0
8036	451	OH System Emergency Generator				$0
8037	051	Piru WTP Emergency Generator		$96,800		$96,800
8038	471	PTP System Emergency Generator				$0
8039	051	Santa Paula Tower Emergency Generator	$60,800			$60,800
8040	052	Santa Paula Microwave Communications Tower	$179,078			$179,078
8041	052	Asset Management/CMMS System	$22,836			$22,836
		Total	$808,071	$1,329,026	$4,163,875	$6,300,971

- FY 2018-19 budget comparison
  - Replenishment $89,861
  - Reliability $724,284
  - Regulatory Compliance $2,621,637
  - Total $3,435,782

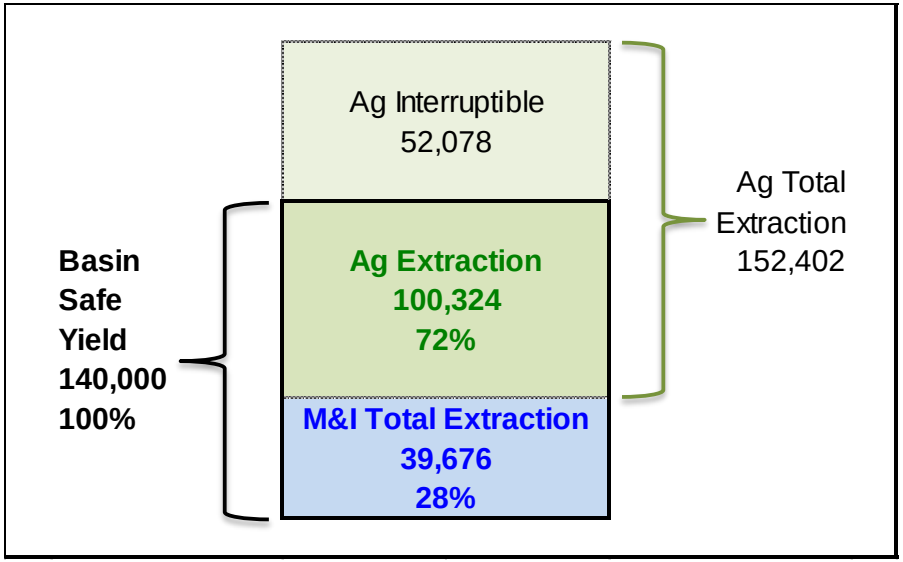
Replenishment Cost Allocations

- 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 by Ag and M&I



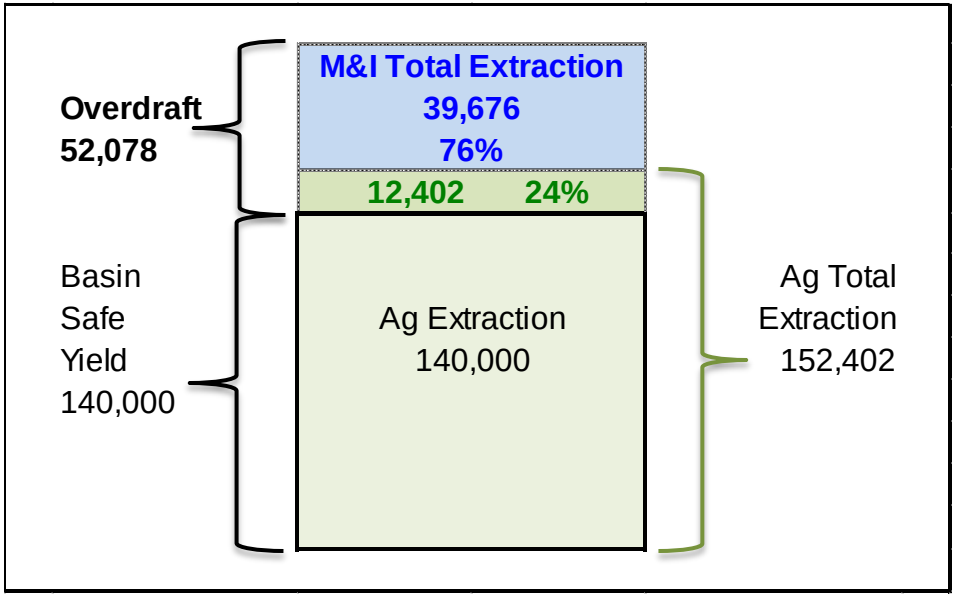
Reliability Cost Allocations

- 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

	Cost Categories		
	Replenishment	**Reliability**	**Regulatory Compliance**
	(from Figure 7)	*(from Figure 9)*	*(from Figure 11)*
Allocation Factors			
- Ag	77%	72%	24%
- M&I	23%	28%	76%
	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	$6,292,113
Adjusted consumptive use (AF)	89,176
Unit cost of service ($/AF)	$70.56

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)	$70.56	$70.56	$70.56
Adjusted consumptive use (AF)	69,012	20,165	89,176
Cost-of-service allocation	$4,869,317	$1,422,795	$6,292,113

Reliability Cost of Service

II. Reliability Unit Costs	
Reliability Costs	$5,683,598
Pumpage within basin safe yield	140,000
Unit cost of service ($/AF)	$40.60

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)	$40.60	$40.60	$40.60
Pumpage within basin safe yield	100,324	39,676	140,000
Cost-of-service allocation	$4,072,853	$1,610,745	$5,683,598

Regulatory Compliance Cost of Service

III. Regulatory Compliance Unit Costs	
Regulatory Compliance costs	$11,682,924
Overdraft contribution (AF)	52,078
Unit cost of service ($/AF)	$224.33

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)	$224.33	$224.33	$224.33
Overdraft contribution (AF)	12,402	39,676	52,078
Cost-of-service allocation	$2,782,136	$8,900,787	$11,682,924

Summary of COS Allocations and Composite Ratio

	Ag	M&I	Total
IV. Total Cost of Service			
Replenishment	$4,869,317	$1,422,795	$6,292,113
Reliability	$4,072,853	$1,610,745	$5,683,598
Regulatory Compliance	$2,782,136	$8,900,787	$11,682,924
	$11,724,307	$11,934,327	$23,658,634
Total pumpage (AF)	152,402	39,676	192,078
Composite unit cost ($/AF)	$76.93	$300.79	$123.17
Ratio of M&I to Ag unit costs	**1.00**	**3.91**	

- 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 2019-20 cost-of-service analysis confirms 3-to-1 ratio

Composite Unit Costs ($/AF)	Ag	M&I	Ratio M&I:Ag
FY2013-14	$56.51	$178.43	**3.16**
FY2014-15	$50.94	$165.32	**3.25**
FY2015-16	$54.44	$171.74	**3.15**
FY2016-17	$49.64	$169.80	**3.42**
FY2017-18	$55.38	$227.80	**4.11**
FY2018-19	$54.38	$215.47	**3.96**
FY2019-20	$76.93	$300.79	**3.91**
Average	$56.89	$204.19	**3.59**

Questions?