

# COST OF SERVICES STUDY

October 11, 2011

# AGENDA

- Board direction
- Cost of Services (COS) Study recommendation
  - Review draft model - water
  - 50-50 variable vs. fixed cost recovery
  - 70-30 variable vs. fixed cost recovery
  - Review draft model - wastewater
- Single Family Residential (SFR) average bill comparisons
- Domestic Irrigation (DI) alternatives recommendation
- El Dorado County Office of Education proposal
- Next Steps

# BOARD DIRECTION

- The District shall conduct, complete and implement the results of a COS Study as soon as possible to confirm whether the charges and differences in charges among various rate classifications are appropriate
- Board reviewed first and second drafts of COS Study on June 13 and August 23, 2011

# BOARD DIRECTION

- Board reviewed the final draft COS Study on September 26 and directed staff to prepare a comparative summary of cost recovery allocation methodology alternatives

COST OF SERVICES STUDY

DRAFT MODEL

50-50 COST ALLOCATION - WATER

RECOMMENDED ALTERNATIVE

# EXHIBIT 8

## Table 9 - Allocation of 2011 Revenue Requirements by Customer Class

(Excludes all Directly Assigned costs)

Classification Components	Net Revenue Requirements <i>(Canadian 50/50 Split)</i>	Ag w/ Resid., SF/DI Costs Shifted to Potable/SFR	Adjusted Net Rev. Reqts. <i>(Includes Ag w/ Resid., SF/DI Accts.)</i>	Customer Classes							Basis of Classification
				Single Family Residential	Multi Family Residential	Comm. & Ind. (& potable landscape irrig.)	Agricultural Irrigation - w/ residence	Recreational Turf	Small Farm (& Domestic Irrig.)	Fire Hydrant/ Construction	
Commodity	\$10,694,658	\$12,972	\$ 10,707,629	\$ 8,196,477	\$ 802,400	\$ 913,978	\$ 32,896	\$ 528,768	\$ 233,110	\$ -	(COM)
Capacity	\$6,846,110	\$41,480	\$ 6,887,590	\$ 5,446,690	\$ 418,083	\$ 396,850	\$ 21,860	\$ 449,201	\$ 154,905	\$ -	(CAP)
Customer Related	\$3,163,592	\$60,229	\$ 3,223,820	\$ 2,868,431	\$ 64,488	\$ 140,015	\$ 17,097	\$ 9,379	\$ 124,411	\$ -	(CA)
Public Fire Protection	\$684,956	\$0	\$ 684,956	\$ 499,614	\$ 55,782	\$ 105,798	\$ 2,871	\$ -	\$ 20,891	\$ -	(FP)
<b>Net Revenue Requirement</b>	<b>\$ 21,389,315</b>	<b>\$ 114,680</b>	<b>\$ 21,503,995</b>	<b>\$ 17,011,212</b>	<b>\$ 1,340,754</b>	<b>\$ 1,556,641</b>	<b>\$ 74,724</b>	<b>\$ 987,348</b>	<b>\$ 533,318</b>	<b>\$ -</b>	

Customer Class	Cost of Service Allocated Costs - 2011				Total Revenue		
	(COM)	(CAP)	(CA)	(FP)	COS Req't	at Present Rates	Percent Difference
Single Family Residential	\$ 8,196,477	\$ 5,446,690	\$ 2,868,431	\$ 499,614	\$ 17,011,212	\$ 17,243,671	-1%
Multi Family Residential	\$ 802,400	\$ 418,083	\$ 64,488	\$ 55,782	\$ 1,340,754	\$ 1,190,543	13%
Comm. & Ind. (& potable landscape irrig.)	\$ 913,978	\$ 396,850	\$ 140,015	\$ 105,798	\$ 1,556,641	\$ 1,467,442	6%
Agricultural Irrigation - w/ residence	\$ 32,896	\$ 21,860	\$ 17,097	\$ 2,871	\$ 74,724	\$ 343,314	-78%
Recreational Turf	\$ 528,768	\$ 449,201	\$ 9,379	\$ -	\$ 987,348	\$ 483,259	104%
Small Farm (& Domestic Irrig.)	\$ 233,110	\$ 154,905	\$ 124,411	\$ 20,891	\$ 533,318	\$ 904,701	-41%
Fire Hydrant/ Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 84,103	-100%
<b>Total</b>	<b>\$ 10,707,629</b>	<b>\$ 6,887,590</b>	<b>\$ 3,223,820</b>	<b>\$ 684,956</b>	<b>\$ 21,503,995</b>	<b>\$ 21,717,032</b>	<b>-1%</b>

<b>Table 10b</b>				
<b>Proposed POTABLE Water Basic Charges (\$/Bi-Mo.) for 2011</b>				
<i>Meter Size</i>	<b>Current Basic Charges (\$/bi-mo.)</b>	<b>Proposed Basic Charges (\$/bi-mo.)<sup>a</sup></b>		
		<b>Single-Family<sup>b</sup></b>	<b>Multi-Family &amp; Commercial</b>	<b>Rec. Turf</b>
5/8"	\$25.89	\$43.72	\$46.04	\$41.40
3/4"	\$25.89	\$43.72	\$46.04	\$41.40
1"	\$30.06	\$64.61	\$68.56	\$60.66
1.5"	\$34.90	\$112.35	\$120.02	\$104.69
1.5" T	\$40.51	\$133.24	\$142.53	\$123.95
2"	\$47.04	\$172.03	\$184.34	\$159.72
2" T	\$54.60	\$172.03	\$184.34	\$159.72
3"	\$63.39	<i>N.A.</i>	\$358.01	\$308.30
3" T	\$73.60	\$363.00	\$390.17	\$335.82
4"	\$85.45	\$512.19	\$550.98	\$473.40
4" T	\$99.20	\$640.50	\$689.27	\$591.72
6"	\$115.16	<i>N.A.</i>	\$1,084.86	\$930.16
6" T	\$133.70	\$1,407.35	\$1,298.88	\$1,298.88
8" T	\$155.22	<i>N.A.</i>	\$2,586.80	\$2,215.16
12" T	\$209.20	<i>N.A.</i>	\$5,375.20	\$4,600.79

*a. Note: Charges include fire protection costs for all classes except Recreational Turf.*

*b. Applies to Ag.Irrigation w/ Residence, Small Farm/DI meters ≤ 3/4".*

Table 12 - Proposed Consumptive Uniform & SFR Tiered Rates for 2011							
Potable Water Customer Class	Number of Accounts	Water Consumption (ccf/yr) <sup>1</sup>	Commodity Rates (\$/ccf)	Target Rev. Req't	Rate Structure		
Single Family Residential	34,424	6,116,762	\$ 1.3400	\$ 8,196,477	Tiered		
Multi Family Residential	777	598,805	\$ 1.3400	\$ 802,400	Uniform		
Comm. & Ind. (& potable landscape irrig.)	1,687	682,072	\$ 1.3400	\$ 913,978	Uniform		
Agricultural Irrigation - w/ residence <sup>2</sup>	206	24,549	\$ 1.3400	\$ 32,896	Tiered		
Recreational Turf	109	394,603	\$ 1.3400	\$ 528,768	Uniform		
Small Farm (& Domestic Irrig.) <sup>2</sup>	1,499	<u>173,962</u>	\$ 1.3400	\$ 233,110	Tiered		
Total		7,990,753		\$ 10,707,629			
Proposed Residential Tiered Rates for 2011							
Potable Water Customer Class		Upper Tier Breakpoint <sup>3</sup>	Water Consumption (ccf/yr) <sup>4</sup>	Commodity Rates		Target Rev. Req't	
				(\$/ccf)	(\$/cf)		
Single Family Residential		Tier 1	1,800 cf/bi-mo.	2,496,990	\$1.1254	\$0.01125	\$2,810,196
		Tier 2	4,500 cf/bi-mo.	1,613,954	\$1.3584	\$0.01358	\$2,192,443
		Tier 3	-	<u>2,005,818</u>	\$1.5923	\$0.01592	<u>\$3,193,837</u>
Total				6,116,762			\$8,196,477
1. 2009 consumption less reductions to account for conservation in 2011. Recreational Turf is assumed to be 25% lower.							
2. Includes only consumption occurring in Tier 1. Consumption above Tier 1 are Ag rates.							
3. Same as current potable residential tiers.							
4. Based on 2009 consumption by Tier for single-family residential consumption data less the estimated 2011 conservation of 10%.							

COST OF SERVICES STUDY  
DRAFT MODEL  
70-30 COST ALLOCATION - WATER  
ALTERNATIVE



# EXHIBIT 8

## Table 9 - Allocation of 2011 Revenue Requirements by Customer Class

(Excludes all Directly Assigned costs)

Classification Components	Net Revenue Requirements (70/30 Split)	Ag w/ Resid., SF/DI Costs Shifted to Potable/SFR	Adjusted Net Rev. Reqts. (Includes Ag w/ Resid., SF/DI Accts.)	Customer Classes							Basis of Classification
				Single Family Residential	Multi Family Residential	Comm. & Ind. (& potable landscape irrig.)	Agricultural Irrigation - w/ residence	Recreational Turf	Small Farm (& Domestic Irrig.)	Fire Hydrant/ Construction	
Commodity	\$14,972,521	\$80,276	\$ 15,052,797	\$ 11,522,616	\$ 1,128,015	\$ 1,284,872	\$ 46,245	\$ 743,343	\$ 327,706	\$ -	(COM)
Capacity	\$4,107,666	\$34,228	\$ 4,141,894	\$ 3,275,400	\$ 251,417	\$ 238,648	\$ 13,145	\$ 270,130	\$ 93,153	\$ -	(CAP)
Customer Related	\$1,898,155	\$176	\$ 1,898,331	\$ 1,689,061	\$ 37,973	\$ 82,447	\$ 10,068	\$ 5,523	\$ 73,259	\$ -	(CA)
Public Fire Protection	\$410,973	\$0	\$ 410,973	\$ 299,768	\$ 33,469	\$ 63,479	\$ 1,723	\$ -	\$ 12,534	\$ -	(FP)
<b>Net Revenue Requirement</b>	<b>\$ 21,389,315</b>	<b>\$ 114,680</b>	<b>\$ 21,503,995</b>	<b>\$ 16,786,846</b>	<b>\$ 1,450,875</b>	<b>\$ 1,669,445</b>	<b>\$ 71,181</b>	<b>\$ 1,018,995</b>	<b>\$ 506,653</b>	<b>\$ -</b>	

Customer Class	Cost of Service Allocated Costs - 2011				Total Revenue		
	(COM)	(CAP)	(CA)	(FP)	COS Req't	at Present Rates	Percent Difference
Single Family Residential	\$ 11,522,616	\$ 3,275,400	\$ 1,689,061	\$ 299,768	\$ 16,786,846	\$ 17,243,671	-3%
Multi Family Residential	\$ 1,128,015	\$ 251,417	\$ 37,973	\$ 33,469	\$ 1,450,875	\$ 1,190,543	22%
Comm. & Ind. (& potable landscape irrig.)	\$ 1,284,872	\$ 238,648	\$ 82,447	\$ 63,479	\$ 1,669,445	\$ 1,467,442	14%
Agricultural Irrigation - w/ residence	\$ 46,245	\$ 13,145	\$ 10,068	\$ 1,723	\$ 71,181	\$ 343,314	-79%
Recreational Turf	\$ 743,343	\$ 270,130	\$ 5,523	\$ -	\$ 1,018,995	\$ 483,259	111%
Small Farm (& Domestic Irrig.)	\$ 327,706	\$ 93,153	\$ 73,259	\$ 12,534	\$ 506,653	\$ 904,701	-44%
Fire Hydrant/ Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 84,103	-100%
<b>Total</b>	<b>\$ 15,052,797</b>	<b>\$ 4,141,894</b>	<b>\$ 1,898,331</b>	<b>\$ 410,973</b>	<b>\$ 21,503,995</b>	<b>\$ 21,717,032</b>	<b>-1%</b>

<b>Table 10b</b>				
<b>Proposed POTABLE Water Basic Charges (\$/Bi-Mo.) for 2011</b>				
<i>Meter Size</i>	<b>Current Basic Charges (\$/bi-mo.)</b>	<b>Proposed Basic Charges (\$/bi-mo.)<sup>a</sup></b>		
		<b>Single-Family<sup>b</sup></b>	<b>Multi-Family &amp; Commercial</b>	<b>Rec. Turf</b>
5/8"	\$25.89	\$26.72	\$28.12	\$25.33
3/4"	\$25.89	\$26.72	\$28.12	\$25.33
1"	\$30.06	\$39.71	\$42.07	\$37.34
1.5"	\$34.90	\$69.38	\$73.98	\$64.78
1.5" T	\$40.51	\$82.36	\$87.94	\$76.79
2"	\$47.04	\$106.47	\$113.86	\$99.09
2" T	\$54.60	\$106.47	\$113.86	\$99.09
3"	\$63.39	<i>N.A.</i>	\$221.54	\$191.72
3" T	\$73.60	\$225.18	\$241.48	\$208.87
4"	\$85.45	\$317.91	\$341.19	\$294.64
4" T	\$99.20	\$397.67	\$426.93	\$368.40
6"	\$115.16	<i>N.A.</i>	\$672.20	\$579.39
6" T	\$133.70	\$874.33	\$809.24	\$809.24
8" T	\$155.22	<i>N.A.</i>	\$1,603.44	\$1,380.46
12" T	\$209.20	<i>N.A.</i>	\$3,332.31	\$2,867.66

*a. Note: Charges include fire protection costs for all classes except Recreational Turf.*

*b. Applies to Ag.Irrigation w/ Residence, Small Farm/DI meters ≤ 3/4".*

<b>Potable Water Customer Class</b>	<b>Number of Accounts</b>	<b>Water Consumption (ccf/yr)<sup>1</sup></b>	<b>Commodity Rates (\$/ccf)</b>	<b>Target Rev. Req't</b>	<b>Rate Structure</b>
Single Family Residential	34,424	6,116,762	\$ 1.8838	\$ 11,522,616	Tiered
Multi Family Residential	777	598,805	\$ 1.8838	\$ 1,128,015	Uniform
Comm. & Ind. (& potable landscape irrig.)	1,687	682,072	\$ 1.8838	\$ 1,284,872	Uniform
Agricultural Irrigation - w/ residence <sup>2</sup>	206	24,549	\$ 1.8838	\$ 46,245	Tiered
Recreational Turf	109	394,603	\$ 1.8838	\$ 743,343	Uniform
Small Farm (& Domestic Irrig.) <sup>2</sup>	1,499	<u>173,962</u>	\$ 1.8838	\$ 327,706	Tiered
<b>Total</b>		<b>7,990,753</b>		<b>\$ 15,052,797</b>	

<b>Potable Water Customer Class</b>		<b>Upper Tier Breakpoint<sup>3</sup></b>	<b>Water Consumption (ccf/yr)<sup>4</sup></b>	<b>Commodity Rates</b>		<b>Target Rev. Req't</b>
				<i>(\$/ccf)</i>	<i>(\$/cf)</i>	
Single Family Residential	<i>Tier 1</i>	<i>1,800 cf/bi-mo.</i>	<i>2,496,990</i>	<i>\$1.5821</i>	<i>\$0.01582</i>	<i>\$3,950,577</i>
	<i>Tier 2</i>	<i>4,500 cf/bi-mo.</i>	<i>1,613,954</i>	<i>\$1.9097</i>	<i>\$0.01910</i>	<i>\$3,082,139</i>
	<i>Tier 3</i>	<i>-</i>	<u><i>2,005,818</i></u>	<i>\$2.2384</i>	<i>\$0.02238</i>	<u><i>\$4,489,900</i></u>
<i>Total</i>			<i>6,116,762</i>			<i>\$11,522,616</i>

1. 2009 consumption less reductions to account for conservation in 2011. Recreational Turf is assumed to be 25% lower.
2. Includes only consumption occurring in Tier 1. Consumption above Tier 1 are Ag rates.
3. Same as current potable residential tiers.
4. Based on 2009 consumption by Tier for single-family residential consumption data less the estimated 2011 conservation of 10%.

# 50-50 COST RECOVERY ADVANTAGES

- Creates more reliable revenue which would not be heavily influenced by wet or dry years
- Enables the District to better meet debt service coverage requirements
- Improves financial forecasting
- Collects revenue to cover a majority of actual fixed costs without relying too heavily on FCCs
- Unanimously recommended by the COS committee

# 50-50 COST RECOVERY DISADVANTAGES

- Larger dollar increase to low water users versus high water users as it shifts more cost recovery to the fixed rate or “base charge”

# 70-30 COST RECOVERY ADVANTAGES

- Encourages water conservation
- Provides customers more control in reducing their bills
- Low water users would have a smaller increase in their bi-monthly bills

# 70-30 COST RECOVERY DISADVANTAGES

- Volatility of revenue
  - Heavily influenced by wet and dry years
- Larger increase to high water users
- In hot, dry years customers unexpectedly see a large increase in their bills due to increased watering

COST OF SERVICES STUDY  
DRAFT MODEL  
WASTEWATER AND RECYCLED WATER  
SUMMARY



Table 7 - Allocation of Revenue Requirements

Classification Components	Net Revenue Requirements	Customer Classes								
		Single Family Residential	Multi Family Residential	Commercial - Laundromat	Commercial - Repair Shops/Service Stations	Commercial - Light Industrial	Commercial - Market	Commercial - Restaurant	Commercial - Other	Schools
<b>Volume</b>	<b>\$ 7,753,860</b>	\$ 5,883,330	\$ 877,980	\$ 6,565	\$ 46,080	\$ 43,524	\$ 92,241	\$ 166,755	\$ 514,266	\$ 123,119
<b>Treatment</b>										
- BOD	\$ 3,876,930	\$ 2,570,517	\$ 383,603	\$ 2,868	\$ 20,133	\$ 55,637	\$ 105,594	\$ 286,340	\$ 417,002	\$ 35,235
- TSS	\$ 3,876,930	\$ 2,674,652	\$ 399,143	\$ 3,193	\$ 25,614	\$ 58,755	\$ 109,872	\$ 198,627	\$ 377,744	\$ 29,330
<b>Customer-Related</b>	<b>\$ 3,876,930</b>	\$ 3,668,596	\$ 62,917	\$ 740	\$ 11,843	\$ 10,363	\$ 2,961	\$ 17,765	\$ 101,037	\$ 709
<b>Direct Assignment</b>	<b>\$ 1,031,203</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Net Revenue Requirement</b>	<b>\$ 20,415,854</b>	<b>\$14,797,095</b>	<b>\$ 1,723,643</b>	<b>\$ 13,366</b>	<b>\$ 103,671</b>	<b>\$ 168,279</b>	<b>\$ 310,668</b>	<b>\$ 669,486</b>	<b>\$ 1,410,049</b>	<b>\$ 188,394</b>

Table 7 (cont.) - Allocation of Revenue Requirements

Customer Class	Cost of Service Allocated Costs - 2011					Total Revenue		
	(CA)	(VOL)	(BOD)	(TSS)	(DA)	COS Req't	at Present Rates	Percent Difference
Single Family Residential	\$3,668,596	\$5,883,330	\$2,570,517	\$2,674,652	-	\$14,797,095	\$15,094,406	-2%
Multi Family Residential	\$62,917	\$877,980	\$383,603	\$399,143	-	\$1,723,643	\$1,773,810	-3%
Commercial - Laundromat	\$740	\$6,565	\$2,868	\$3,193	-	\$13,366	\$10,187	31%
Commercial - Repair Shops/Service Stations	\$11,843	\$46,080	\$20,133	\$25,614	-	\$103,671	\$153,005	-32%
Commercial - Light Industrial	\$10,363	\$43,524	\$55,637	\$58,755	-	\$168,279	\$204,961	-18%
Commercial - Market	\$2,961	\$92,241	\$105,594	\$109,872	-	\$310,668	\$248,208	25%
Commercial - Restaurant	\$17,765	\$166,755	\$286,340	\$198,627	-	\$669,486	\$764,235	-12%
Commercial - Other	\$101,037	\$514,266	\$417,002	\$377,744	-	\$1,410,049	\$1,280,041	10%
Schools	\$709	\$123,119	\$35,235	\$29,330	-	\$188,394	\$132,603	42%
<b>Total</b>	<b>\$3,876,930</b>	<b>\$7,753,860</b>	<b>\$3,876,930</b>	<b>\$3,876,930</b>	<b>-</b>	<b>\$19,384,651</b>	<b>\$19,661,456</b>	<b>-1%</b>

Table 8 - Annual COS Revenue Requirements by Customer Class

Customer Class	Customer Costs				Effluent Flow			BOD			TSS		
	No. of Accts	\$/Acct/yr	\$/Acct/bi-mo	Annual Rev. Req't	ccf/yr	\$/ccf	Annual Rev. Req't	Load (lb/yr)	\$/lb	Annual Rev. Req't	Load (lb/yr)	\$/lb	Annual Rev. Req't
Single Family Residential	19,825	\$185.05	\$30.84	\$3,668,596	2,206,697	\$2.67	\$5,883,330	3,118,697	\$0.82	\$2,570,517	3,956,195	\$0.68	\$2,674,652
Multi Family Residential	340	\$185.05	\$30.84	\$62,917	329,309	\$2.67	\$877,980	465,409	\$0.82	\$383,603	590,390	\$0.68	\$399,143
Commercial - Laundromat	4	\$185.05	\$30.84	\$740	2,462	\$2.67	\$6,565	3,480	\$0.82	\$2,868	4,723	\$0.68	\$3,193
Commercial - Repair Shops/Service Station	64	\$185.05	\$30.84	\$11,843	17,284	\$2.67	\$46,080	24,427	\$0.82	\$20,133	37,887	\$0.68	\$25,614
Commercial - Light Industrial	56	\$185.05	\$30.84	\$10,363	16,325	\$2.67	\$43,524	67,502	\$0.82	\$55,637	86,907	\$0.68	\$58,755
Commercial - Market	16	\$185.05	\$30.84	\$2,961	34,598	\$2.67	\$92,241	128,112	\$0.82	\$105,594	162,516	\$0.68	\$109,872
Commercial - Restaurant	96	\$185.05	\$30.84	\$17,765	62,546	\$2.67	\$166,755	347,404	\$0.82	\$286,340	293,798	\$0.68	\$198,627
Commercial - Other	546	\$185.05	\$30.84	\$101,037	192,889	\$2.67	\$514,266	505,931	\$0.82	\$417,002	558,738	\$0.68	\$377,744
Schools	23	\$30.84	\$5.14	\$709	46,179	\$2.67	\$123,119	42,750	\$0.82	\$35,235	43,384	\$0.68	\$29,330
<b>Total</b>	20,970	--	--	\$3,876,930	2,908,289	--	\$7,753,860	4,703,712	--	\$3,876,930	5,734,538	--	\$3,876,930

**Table 9 - Monthly Fixed and Variable Wastewater Rates**

Customer Class	Cust. Cost Rev. Req't	No. of Accounts	Bi-Mo. Customer Service (Flat Rate) per Acct.	Annual Volume-Based Revenue Requirement (\$/yr)					Annual Water Use/Delivery (Recycled), ccf	ADA Rate School (\$/ADA/yr)	Volume-Based Rate (\$/ccf)	
				Flow	BOD	TSS	DA	Total			Flow	Treatment (BOD & TSS)
				Single Family Residential	\$3,668,596	19,825	\$30.84	\$5,883,330				
Multi Family Residential	\$62,917	340	\$30.84	\$877,980	\$383,603	\$399,143	-	\$1,660,726	329,309	-	\$2.67	\$2.38
Commercial - Laundromat	\$740	4	\$30.84	\$6,565	\$2,868	\$3,193	-	\$12,626	2,462	-	\$2.67	\$2.46
Commercial - Repair Shops/Service Station	\$11,843	64	\$30.84	\$46,080	\$20,133	\$25,614	-	\$91,828	17,284	-	\$2.67	\$2.65
Commercial - Light Industrial	\$10,363	56	\$30.84	\$43,524	\$55,637	\$58,755	-	\$157,916	16,325	-	\$2.67	\$7.01
Commercial - Market	\$2,961	16	\$30.84	\$92,241	\$105,594	\$109,872	-	\$307,707	34,598	-	\$2.67	\$6.23
Commercial - Restaurant	\$17,765	96	\$30.84	\$166,755	\$286,340	\$198,627	-	\$651,722	62,546	-	\$2.67	\$7.75
Commercial - Other	\$101,037	546	\$30.84	\$514,266	\$417,002	\$377,744	-	\$1,309,012	192,889	-	\$2.67	\$4.12
Schools	\$709	23	\$5.14	\$123,119	\$35,235	\$29,330	-	\$187,685	46,179	\$10.16	\$2.67	\$1.40
<b>Total</b>	<b>\$3,876,930</b>	<b>20,970</b>	<b>--</b>	<b>\$7,753,860</b>	<b>\$3,876,930</b>	<b>\$3,876,930</b>	<b>-</b>	<b>\$15,507,721</b>	<b>2,908,289</b>	<b>--</b>	<b>--</b>	<b>--</b>

**Table 9 (cont.) - Summary of COS Bi-Monthly Sewer Charges**

Customer Class	Customer Service Flat Rate (bi. mo.)	Volume-Based Rate (\$/ccf)		
		Flow	Treatment	Total (\$/ccf)
Single Family Residential	\$30.84	\$2.67	\$2.38	\$5.04
Multi Family Residential	\$30.84	\$2.67	\$2.38	\$5.04
Commercial - Laundromat	\$30.84	\$2.67	\$2.46	\$5.13
Commercial - Repair Shops/Service Station	\$30.84	\$2.67	\$2.65	\$5.31
Commercial - Light Industrial	\$30.84	\$2.67	\$7.01	\$9.67
Commercial - Market	\$30.84	\$2.67	\$6.23	\$8.89
Commercial - Restaurant	\$30.84	\$2.67	\$7.75	\$10.42
Commercial - Other	\$30.84	\$2.67	\$4.12	\$6.79
Schools	\$5.14	\$2.67	\$1.40	\$4.06

**Table 10 - Adjustments to Fixed vs. Variable Sewer Charges**

Customer Class	Existing 2010 Rates		2011 C.O.S. Rates (50% of Resid. Revenue comes from Basic Charges)		
	Basic Charge	Variable (per cf)	Basic Charge	Variable (per cf)	Rate Rev. Generated
<i>% Allocation of Revenue</i>			<b>50%</b>	<b>50%</b>	<i>\$/yr.</i>
Single Family Residential	\$ 77.33	\$ 0.02898	\$ <b>62.20</b>	\$ <b>0.03353</b>	\$14,797,095
<i>% Allocation of Revenue</i>			<b>50%</b>	<b>50%</b>	
Multi Family Residential <sup>1</sup>	\$ 77.33	\$ 0.02898	\$ <b>30.42</b>	\$ <b>0.02617</b>	\$1,723,643
<i>% Allocation of Revenue</i>			<i>fixed</i>	<i>calculated</i>	
Commercial - Laundromat	\$ 69.76	\$ 0.03853	\$ 69.76	\$ 0.04748	\$13,366
Commercial - Repair Shops/Service S	\$ 69.76	\$ 0.05798	\$ 69.76	\$ 0.04448	\$103,671
Commercial - Light Industrial	\$ 69.76	\$ 0.07759	\$ 69.76	\$ 0.08872	\$168,279
Commercial - Market	\$ 69.76	\$ 0.08320	\$ 69.76	\$ 0.08786	\$310,668
Commercial - Restaurant	\$ 69.76	\$ 0.10731	\$ 69.76	\$ 0.10062	\$669,486
Commercial - Other	\$ 69.76	\$ 0.04969	\$ 69.76	\$ 0.06125	\$1,410,049
<i>% Allocation of Revenue</i>			<b>100%</b>	<b>0%</b>	
Schools (Billed Annually/student)	.52/Student	N.A.	\$ 10.20	\$ -	\$188,394
<i>% Allocation of Revenue</i>					
1. Number of multi-family units =	4,722				

# Table 11 - Comparison of Current and Proposed Sewer Charges

Customer Class	Existing 2011 Rates		Proposed New Rates	
	Basic	Variable (\$ per cf)	Basic	Variable (\$ per cf)
Single Family Residential	\$77.33	\$0.02898	\$62.20	\$0.03353
Multi Family Residential	\$77.33	\$0.02898	\$30.42	\$0.02617
Commercial - Laundromat	\$69.76	\$0.03853	\$69.76	\$0.04748
Commercial - Repair Shops/Service Station	\$69.76	\$0.05798	\$69.76	\$0.04448
Commercial - Light Industrial	\$69.76	\$0.07759	\$69.76	\$0.08872
Commercial - Market	\$69.76	\$0.08320	\$69.76	\$0.08786
Commercial - Restaurant	\$69.76	\$0.10731	\$69.76	\$0.10062
Commercial - Other	\$69.76	\$0.04969	\$69.76	\$0.06125
Schools	\$5.52/student	\$4.80000	\$10.20/student	--

Table 13 - Allocation of Recycled Water Revenue Requirements

Classification Components	Net Revenue Requirements	Customer Classes			Basis of Classification
		Commercial Landscape (Recycled Only)	Recreational Turf (Recycled Only)	Residential - Dual Plumbed (Recycled Only)	
<b>Commodity</b>	<b>\$ 385,945</b>	\$ 136,922	\$ 57,499	\$ 191,525	(COM)
<b>Capacity</b>	<b>\$ 409,695</b>	\$ 102,142	\$ 83,922	\$ 223,631	(CAP)
<b>Fire Protection</b>	<b>\$ -</b>	\$ -	\$ -	\$ -	(FP)
<b>Customer Related</b>	<b>\$ 235,562</b>	\$ 10,224	\$ 802	\$ 224,536	(CA)

Table 14 - Proposed Dual-Plumbed RECYCLED Rates for 2011

Recycled Water Customer Class	Customers	Dual-Plumbed Basic Charge (\$/bi-mo.)	Water Consumption (ccf/yr) <sup>2</sup>	Commodity Rates (Tied to Potable Rates) <sup>3</sup>		Rate Revenue
				(\$/ccf)	(\$/cf)	
<i>Customers</i>						
Total Dual-Plumbed - Basic Charges	3,360	<b>\$20.00</b>	--	--	--	\$403,200
<i>Tiered Dual-Plumbed Recycled Rates</i>		<i>Breakpoint</i>			<i>Dual-Plumbed Tiered Rates</i>	
Tier 1 ( <b>50%</b> of Potable Water -Tier 1)	3,000 c.f/mo.	--	272,000	\$0.5096	<b>\$0.00510</b>	\$138,606
Tier 2 ( <b>70%</b> of Potable Water -Tier 2)	4,500 c.f/mo.	--	69,000	\$0.8611	<b>\$0.00861</b>	\$59,417
Tier 3 ( <b>90%</b> of Potable Water -Tier 3)	-	--	<u>122,000</u>	<u>\$1.4419</u>	<b><u>\$0.01442</u></b>	<u>\$175,916</u>
Total - Commodity Rates	--	--	463,000	--	--	\$373,938
<i>Total Dual-Plumbed</i>						\$777,138

Table 15 - Commercial Landscape Options *(Assumes Fixed & Commodity Charges)*<sup>a</sup>

Commercial Landscape - Options	<u>% of Potable Fixed Charge</u>	<u>% of Potable Variable Rate</u>	Fixed Charge (3/4" Meter)	Commodity Rates		Target Volum. Rev. Reqt
				(\$/ccf)	(\$/cf)	
Option 1	80%	86%	\$32.80	\$1.1836	\$0.01184	\$136,922
Option 2	70%	91%	\$28.70	\$1.2554	\$0.01255	\$136,922
<b>Option 3 (Selected)</b>	<b>60%</b>	<b>96%</b>	<b>\$24.60</b>	<b>\$1.3272</b>	<b>\$0.01327</b>	<b>\$136,922</b>

**Table 16 - Current vs. Proposed Commercial Recycled Rates**

Customer Class	Existing 2011 Rates			
	Basic	Variable (\$ per cf)		
Commercial Landscape	\$143.84	\$0.00831		
Meter Size	Proposed Rates (w/ Basic Charge)		Proposed Commodity Rate (w/o Basic Charge)	
	Basic <sup>a</sup>	(\$ per cf)		
5/8"	<b>\$24.60</b>	\$0.01327	\$0.01230	
3/4"	<b>\$24.60</b>	"	"	
1"	<b>\$36.19</b>	"	"	
1.5"	<b>\$62.68</b>	"	"	
1.5" T	<b>\$74.27</b>	"	"	
2"	<b>\$95.79</b>	"	"	
2" T	<b>\$95.79</b>	"	"	
3"	<b>\$185.19</b>	"	"	
3" T	<b>\$201.75</b>	"	"	
4"	<b>\$284.53</b>	"	"	
4" T	<b>\$355.72</b>	"	"	
6"	<b>\$559.36</b>	"	"	
6" T	<b>\$781.21</b>	"	"	
8" T	<b>\$1,332.52</b>	"	"	
12" T	<b>\$2,767.92</b>	"	"	

*a. Proportionally adjusted Rec Turf (Potable) Fixed charges.*

# AVERAGE BILL COMPARISONS



# SINGLE FAMILY RESIDENTIAL WATER\*

## 50-50

Usage	Bi-monthly Average Consumption	Current Rate	Previously Adopted 2012 Rates	Proposed 2012 Rates	Estimated Difference	
					Bi-monthly Cost	Monthly Cost
Low	1,053 cf	\$ 39.67	\$ 41.66	\$ 61.68	\$20.02	\$10.01
Medium	3,057 cf	\$ 70.13	\$ 73.63	\$ 89.95	\$16.32	\$ 8.16
High	7,686 cf	\$151.93	\$159.53	\$168.01	\$ 8.48	\$ 4.24

\*Domestic Irrigation transferred to Single Family Residential

CF = Cubic Feet

# SINGLE FAMILY RESIDENTIAL WASTEWATER\* 50-50

Usage	Bi-monthly Average Consumption	Current Rate	Previously Adopted 2012 Rates	Proposed 2012 Rates	Estimated Difference	
					Bi-monthly Cost	Monthly Cost
Low	800 cf	\$100.51	\$105.54	\$ 93.45	(\$12.09)	(\$6.05)
Medium	1,800 cf	\$129.49	\$135.97	\$128.64	(\$ 7.33)	(\$3.66)
High	3,500 cf	\$178.76	\$187.70	\$188.48	\$ 0.78	\$ 0.39

\*Domestic Irrigation transferred to Single Family Residential

CF = Cubic Feet

# SINGLE FAMILY RESIDENTIAL WATER AND WASTEWATER\* 50-50

Usage	Bi-monthly Average Consumption	Current Rate	Previously Adopted 2012 Rates	Proposed 2012 Rates	Estimated Difference	
					Bi-monthly Cost	Monthly Cost
Low	1,053 cf	\$140.19	\$147.20	\$155.12	\$7.93	\$3.96
Medium	3,057 cf	\$199.62	\$209.60	\$218.60	\$9.00	\$4.50
High	7,686 cf	\$330.69	\$347.22	\$356.48	\$9.26	\$4.63

\*Domestic Irrigation transferred to Single Family Residential (wastewater calculations based on low use of 800 cf, medium use of 1,800 cf and high use of 3,500 cf)

CF = Cubic Feet

# SINGLE FAMILY DUAL PLUMBED\* 50-50

Usage	Bi-monthly Average Consumption	Current Rate	Previously Adopted 2012 Rates	Proposed 2012 Rates	Estimated Difference	
					Bi-monthly Cost	Monthly Cost
Low	1,053 cf	\$144.34	\$151.56	\$156.60	\$ 5.04	\$ 2.52
Medium	3,057 cf	\$232.86	\$244.50	\$242.50	(\$ 2.00)	(\$ 1.00)
High	7,686 cf	\$496.89	\$521.73	\$619.59	\$97.86	\$48.93

\*Domestic Irrigation transferred to Single Family Residential (wastewater calculations based on low use of 800 cf, medium use of 1,800 cf and high use of 3,500 cf)

CF = Cubic Feet

# SINGLE FAMILY RESIDENTIAL WATER\*

## 70-30

Usage	Bi-monthly Average Consumption	Current Rate	Previously Adopted 2012 Rates	Proposed 2012 Rates	Estimated Difference	
					Bi-monthly Cost	Monthly Cost
Low	1,053 cf	\$ 39.67	\$ 41.66	\$ 48.15	\$ 6.49	\$ 3.25
Medium	3,057 cf	\$ 70.13	\$ 73.63	\$ 87.92	\$14.29	\$ 7.14
High	7,686 cf	\$151.93	\$159.53	\$197.66	\$38.13	\$19.07

\*Domestic Irrigation transferred to Single Family Residential

CF = Cubic Feet

# SINGLE FAMILY RESIDENTIAL WASTEWATER\* 70-30

Usage	Bi-monthly Average Consumption	Current Rate	Previously Adopted 2012 Rates	Proposed 2012 Rates	Estimated Difference	
					Bi-monthly Cost	Monthly Cost
Low	800 cf	\$100.51	\$105.54	\$ 93.45	(\$12.09)	(\$6.05)
Medium	1,800 cf	\$129.49	\$135.97	\$128.64	(\$ 7.33)	(\$3.66)
High	3,500 cf	\$178.76	\$187.70	\$188.48	\$ 0.78	\$ 0.39

\*Domestic Irrigation transferred to Single Family Residential

CF = Cubic Feet

# SINGLE FAMILY RESIDENTIAL WATER AND WASTEWATER\* 70-30

Usage	Bi-monthly Average Consumption	Current Rate	Previously Adopted 2012 Rates	Proposed 2012 Rates	Estimated Difference	
					Bi-monthly Cost	Monthly Cost
Low	1,053 cf	\$140.19	\$147.20	\$141.60	(\$ 5.60)	(\$ 2.80)
Medium	3,057 cf	\$199.62	\$209.60	\$216.56	\$ 6.96	\$ 3.48
High	7,686 cf	\$330.69	\$347.22	\$386.13	\$38.91	\$19.45

\*Domestic Irrigation transferred to Single Family Residential (wastewater calculations based on low use of 800 cf, medium use of 1,800 cf, and high use of 3,500 cf)  
CF = Cubic Feet

# SINGLE FAMILY DUAL PLUMBED 70-30

Usage	Bi-monthly Average Consumption	Current Rate	Previously Adopted 2012 Rates	Proposed 2012 Rates	Estimated Difference	
					Bi-monthly Cost	Monthly Cost
Low	1,053 cf	\$144.34	\$151.56	\$165.27	\$ 13.71	\$ 6.86
Medium	3,057 cf	\$232.86	\$244.50	\$262.66	\$ 18.16	\$ 9.08
High	7,686 cf	\$496.89	\$521.73	\$671.44	\$149.71	\$74.85

\*Domestic Irrigation transferred to Single Family Residential (wastewater calculations based on low use of 800 cf, medium use of 1,800 cf, and high use of 3,500 cf)

CF = Cubic Feet

# COST RECOVERY ALLOCATION METHODOLOGY BOARD OPTIONS

- Option 1: Adopt the cost recovery methodology of collecting 50% of revenue from fixed charges and 50% of revenue from variable commodity charges for water, wastewater and recycled water
- Option 2: Adopt the cost recovery methodology of collecting 30% of revenue from fixed charges and 70% of revenue from variable commodity charges for water, wastewater and recycled water

# COST RECOVERY ALLOCATION METHODOLOGY BOARD OPTIONS

- Option 3: Take other action as directed by the Board
- Option 4: Take no action

# RECOMMENDED ACTION

Option 1

# DOMESTIC IRRIGATION SUMMARY

- Domestic Irrigation rate is unique to the District
  - Implemented many years ago to promote water use
- Domestic Irrigation rate has been a topic of debate for decades
- In *Bighorn-Desert View Water Agency v. Virjil, et al.*, the California Supreme Court ruled in 2006 that water rates are subject to Prop. 218
- Existing Domestic Irrigation rate is not based on the Cost of Services Principles

# DOMESTIC IRRIGATION SUMMARY

- The Domestic Irrigation rate class in its current form does not allow new service applications
- Domestic Irrigation rate customers need to be moved into an existing rate class (open to all qualifying customers)

# AG COMMISSION DISCUSSION RESULTS

- Able to process 100 applications per month
- Provided simple Small Farm Irrigation Rate Application
- Customers with Ag related interests will have an adequate amount of time to apply
- Targeted outreach to Domestic Irrigation customers to provide no cost water audits and grant funded water conservation devices

# DOMESTIC IRRIGATION RATE CLASS BOARD OPTIONS

- Option 1: Eliminate the Domestic Irrigation customer class upon adoption of proposed rates, move the Domestic Irrigation customers into the Single Family Residential customer class, allow Domestic Irrigation customers to apply for Small Farm certification, and move them to the Small Farm customer class upon approval

# DOMESTIC IRRIGATION RATE CLASS BOARD OPTIONS

- **Option 2:** Eliminate the Domestic Irrigation customer class upon adoption of proposed rates, move the Domestic Irrigation customers into the Small Farm customer class, allow Domestic Irrigation customers up to three years to apply for Small Farm certification. If they do not meet the requirements within three years, move them into the Single Family Residential customer class

# DOMESTIC IRRIGATION RATE CLASS BOARD OPTIONS

- Option 3: Take other action as directed by the Board
- Option 4: Take no action

# DOMESTIC IRRIGATION OPTIONS

- Options 1 and 2 are both reasonable approaches to resolve the Domestic Irrigation rate class issue
- The most conservative approach is to transfer existing Domestic Irrigation customers to the Single Family Residential customer class upon adoption of the new rates
  - Small positive financial impact to Single Family Residential and other classes
  - Large financial impact to Domestic Irrigation customers

# RECOMMENDED ACTION

Option 1

# EL DORADO COUNTY OFFICE OF EDUCATION PROPOSAL

- Requested that property tax monies be redirected to offset the proposed increase

# EL DORADO COUNTY OFFICE OF EDUCATION PROPOSAL DISCUSSION

- Existing Recreational Turf rates are not adequate to cover the actual cost of providing service
- Current Recreational Turf rates are approximately 50% lower than Single Family Residential rates
  - Similar service
  - Recreational Turf peaking factor is 2.25
  - Single Family Residential at 1.76
- Proposed Recreational Turf rates are the same as Single Family Residential rates

# EL DORADO COUNTY OFFICE OF EDUCATION PROPOSAL DISCUSSION

- Schools, community services district sports fields and public parks are clearly a benefit to the public
- Directly allocating non-rate revenue to schools and other public agencies that provide a public good is permissible under Prop. 218 and other governing law

# EL DORADO COUNTY OFFICE OF EDUCATION PROPOSAL DISCUSSION

- If schools and public agencies received a larger direct assignment of these revenues, it would reduce the rate increase they would otherwise experience as Recreational Turf customers, but that reassignment of revenue would increase all other water customers' bills slightly
- Recreational Turf rate class includes a diverse group of public and private schools, churches, golf courses and homeowner associations

# EL DORADO COUNTY OFFICE OF EDUCATION PROPOSAL DISCUSSION

- Attempting to financially support and assist needy causes, such as, public education and local community service districts during these tough economic times, poses numerous questions regarding fairness and equality within customer classes
- Staff has set aside \$100,000 in grant funds to provide schools, community service districts, and other Recreational Turf customers with water conservation devices

# EL DORADO COUNTY OFFICE OF EDUCATION PROPOSAL DISCUSSION

- Given the complexities and customer equity issues associated with the Office of Education proposal, staff is not recommending the direct assignment of property tax to schools

# RECREATIONAL TURF RATE CLASS BOARD OPTIONS

- Option 1: Board to consider the El Dorado County Office of Education proposal to redirect property tax allocation to support schools and community service districts as one of the alternatives
- Option 2: Take other action as directed by the Board
- Option 3: Take no action

# RECOMMENDED ACTION

## Option 3



# REVENUE REQUIREMENTS DRAFT MODEL

- Water
  - Overall water revenue will require an increase in addition to the previously Board adopted 5% rate increase based on several contingencies
    - District Capital Improvement Plan (CIP) - Approved
    - District Budget - In process
    - Domestic Irrigation customer class results - Policy decision
    - Debt service coverage targets - Policy decision
    - Potential refinancing opportunity - Pending
    - Potential prepayment of debt - Pending
    - Fixed vs. variable cost allocation revision - Policy decision

# REVENUE REQUIREMENTS DRAFT MODEL

- Water
  - The proposed cost of services allocation methodology will have a different effect on each customer class

# REVENUE REQUIREMENTS DRAFT MODEL

- Wastewater
  - The previously Board adopted 5% rate increase in overall wastewater revenue appears to be adequate
    - Single Family Residence rates may not require the previously adopted 5% increase in 2012 based on several contingencies
      - District Capital Improvement Plan (CIP) - **Approved**
      - District Budget - **In process**
      - Debt service coverage targets - **Policy decision**
      - Potential refinancing opportunity - **Pending**
      - Potential prepayment of debt - **Pending**

# REVENUE REQUIREMENTS DRAFT MODEL

- Wastewater
  - The proposed cost of services allocation methodology will have a different effect on each customer class

# NEXT STEPS

- Board direction
  - Cost recovery of fixed vs. variable - October 11
  - Domestic Irrigation customer class - October 11
  - EDC Office of Education proposal - October 11
  - Adoption of reduced CIP - Completed
  - Budget adoption - October/November
  - Debt restructure proposal - October/November
  - Debt prepayment option - October/November
  - Establish debt service goals - October/November
  - Public workshops
    - Pending Board direction on schedule

# DISCUSSION

