RECLAMATION
Managing Water in the West

U.S. Department of the Interior
Bureau of Reclamation

IRR 2016 Sch A-11 F.Z18.XLSM
12/22/2015

CENTRAL VALLEY PROJECT
SCHEDULE OF ESTIMATED IRRIGATION DIRECT PUMPING OPERATION & MAINTENANCE COSTS
2016 IRRIGATION WATER RATES

A	B	C	D	E	F	G	H	I	J	K	L
	2016 Projected Deliveries										
			Tehama-Colusa Canal Relifts							Corning Canal Relifts	
Facility/Contractor	**Wintu PP**		**Colusa County WD**	**Dunnigan WD**	**Glenn Valley WD**	**Kanawha WD**	**Orland-Artois WD**	**Westside WD**		**Corning WD**	**Proberta WD**
Ref	<Sch A-12>		<Sch A-12>	<Sch A-12>	<Sch A-12>	<Sch A-12>	<Sch A-12>	<Sch A-12>		<Sch A-12>	<Sch A-12>
Corning Canal											
Corning WD										8,113	
Proberta WD											1,522
Cow Creek Unit											
Bella Vista WD	4,636										
Tehama-Colusa Canal											
Colusa County WD			26,647								
Dunnigan WD				6,584							
Glenn Valley WD					753						
Kanawha WD						19,527					
Orland-Artois WD							22,099				
Westside WD								26,957			
Total Deliveries	4,636		26,647	6,584	753	19,527	22,099	26,957		8,113	1,522
Est. 2016 Non-Recurring O&M Cost	$ -		$ -	$ -		$ -	$ -	$ -		$ -	$ -
Est. 2016 O&M Cost	$ 66		$ 491,565	$ 5,224	$ -	$ 87,405	$ 66,851	$ 36,778		$ 42,404	$ 847
Total (Sch. A-9)	$ 66		$ 491,565	$ 5,224	$ -	$ 87,405	$ 66,851	$ 36,778		$ 42,404	$ 847
Direct Pumping: 3/											
Cost Per A/F Remittance to WAPA			$ 18.45			$ 4.48	$ 3.03				
Cost Per A/F Offset for Direct Pumping	$ 0.01			$ 0.79	$ -			$ 1.36		$ 5.23	$ 0.56
Other PUE Remittance to WAPA: 3/											
Paid as Other PUE			$ 195,336			$ 34,733	$ 26,565				
Paid thru Direct Pumping PUE			$ 7.33			$ 1.78	$ 1.20				
Credit in O&M Rate for Other PUE			$ (7.33)			$ (1.78)	$ (1.20)				

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A	B	C	D	E	F	G	H	I	J	K	L
	San Luis Canal Relifts						San Felipe Out-of-Basin				
			Westlands WD 1/							Cross Valley Contractors 2/	
Facility/Contractor	Panoche WD	San Luis WD	Westlands WD Relifts	Pleasant Valley PP	Pleasant Valley Relifts	Total	Gianelli PP	Coyote PP	Pacheco PP	State Delta PP	Dos Amigos PP
Ref	<Sch A-12>	<Sch A-12>	<Sch A-12>	<Sch A-12>	<Sch A-12>	(E+F)				<Sch A-12>	<Sch A-12>
Cross Valley Canal											
County of Fresno										531	531
County of Tulare										940	940
Hills Valley ID										661	661
Kern-Tulare ID										10,165	10,165
Lower Tule River ID - CVC										5,290	5,290
Pixley ID										5,267	5,267
Tri-Valley WD										176	176
San Felipe Unit											
San Benito County WD							8,663		8,663		
Santa Clara Valley WD							9,787	9,787	9,787		
San Luis Canal											
Panoche WD -SLC	21,364										
San Luis WD - SLC		24,442									
Westlands WD - SLC			284,141	31,876	6,046	316,017					
Westlands WD - SLC (DD#2)			734	82	16	816					
Total Deliveries	21,364	24,442	284,875	31,959	6,061	316,834	18,450	9,787	18,450	23,030	23,030
Est. 2016 Non-Recurring O&M Cost	$ -	$ -	$ -	$ -	$ -	$ -				$ -	$ -
Est. 2016 O&M Cost	$ 1,851	$ 938,772	$ 2,673,937	$ 479,144	$ 80,203	$ 3,233,284	$ 304,883	$ 48,979	$ 313,658	$ 134,303	$ 105,077
Total (Sch. A-9)	$ 1,851	$ 938,772	$ 2,673,937	$ 479,144	$ 80,203	$ 3,233,284	$ 304,883	$ 48,979	$ 313,658	$ 134,303	$ 105,077
Direct Pumping: 3/											
Cost Per A/F Remittance to WAPA		$ 38.41				$ 10.20	$ 16.52	$ 5.00	$ 17.00		
Cost Per A/F Offset for Direct Pumping	$ 0.09									$5.83	$4.56
Other PUE Remittance to WAPA: 3/											
Paid as Other PUE		$ 373,045	$ 1,062,556	$ 190,400	$ 31,871	$ 1,284,827	$ 121,153	$ 19,463	$ 124,640		
Paid thru Direct Pumping PUE		$ 15.26				$ 4.06	$ 6.57	$ 1.99	$ 6.76		
Credit in O&M Rate for Other PUE		$ (15.26)				$ (4.06)	$ (6.57)	$ (1.99)	$ (6.76)		

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2016 IRRIGATION WATER RATES

FOOTNOTES:

1/ Westlands WD & Westlands WD DD#2 (DD#2) deliveries are based on firm supplies:

		Allocated 2016 Deliveries	
	Ratios	**Westlands WD**	**DD#2**
Westlands WD Relifts:			
High Side - Relift Pumps	0.26957	85,187	220
Low Side (LS) - Gravity Feed	0.62957	198,953	514
Subtotal	0.89913	284,141	734
Pleasant Valley PP:			
High Side - Relift Pump	0.01913	6,046	16
Coalinga Canal, LS - Gravity	0.08174	25,831	67
Subtotal (Pleasant Valley PP)	0.10087	31,876	82
Total - WWD Deliveries	1.0000	316,017	816

2/ Cross Valley Canal Estimated 2016 Project Use Energy Cost

	Dos Amigos PP	**Stat Delta PP**
2016 PUE Estimate		
Direct Billed	$ 1,701,413	$ 212,568
Cross Valley Canal 2016 Projected Cost	$ 106,094	$ 135,603
Total	$ 1,807,508	$ 348,171

	Deliveries	Ratio	**Dos Amigos PP**	**Stat Delta PP**
M&I	223	0.00959	$ 1,017	$ 1,300
Irrigation	23,030	0.99041	$ 105,077	$ 134,303
Total	23,253	1.00000	$ 106,094	$ 135,603

3/ Project Use Energy payment is being remitted to Western Area Power Authority for storage and direct pumping based on the deliveries of a select few contractors. The rates for the select few contractors are reduced as a credit in the O&M rates. All contractors will ultimately pay for the storage and direct pumping service but as an offset to the amount paid by the select few.

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2016 IRRIGATION WATER RATES

A	B	C	D	E	F	G	H	I
	Acre-Feet		**Ratio of Acre-Feet**				**For Water Ratesetting**	
	M&I	**Irrigation**	**M&I**	**Irrigation**	**Total**	**Total $**	**M&I**	**Irrigation**
Ref	<Sch A-12>	<Sch A-12>	(C/(C+D))	(D/(C+D))	(E+F)	<Meter Costs>	(E*H)	(F*H)
Used in Schedule 9								
Storage:								
Friant D&R	111	N/A	100.00%		100.00%	$ 12,647	$ 12,647	$ -
Shasta D&R (Includes Jdg F Carr PH)	1,294	2,798	31.62%	68.38%	100.00%	$ 351,674	$ 111,209	$ 240,466
Columbia Mowry (Based on Avg. KWH's)	68,283	467,124	12.75%	87.25%	100.00%	$ 22,938	$ 2,925	$ 20,012
Folsom Pump Plant	27,281	N/A	100.00%		100.00%	$ 141,151	$ 141,151	$ -
New Melones Dam & Reservoir	23,905	31,752	42.95%	57.05%	100.00%	$ 6,349	$ 2,727	$ 3,622
Gianelli WR Pump-Gen Plt	7,513	255,755	2.85%	97.15%	100.00%	$ 4,350,451	$ 124,153	$ 4,226,298
Regen. Credit - San Luis PP	7,513	255,755	2.85%	97.15%	100.00%	$ (2,714,658)	$ (77,470)	$ (2,637,187)
SFU Gianelli WR PGP (Direct Pumping)	75,370	18,450	80.33%	19.67%	100.00%	$ -	$ -	$ -
Offseting Revenue for PUE Paid to WAPA							**$ 317,341**	**$ 1,853,211**
Conveyance Pumping (Direct Bill):								
Corning Pumping Plant	N/A	11,753		100.00%	100.00%	$ 184,209	$ -	$ 184,209
Dos Amigos Pumping Plant	9,263	363,640	2.48%	97.52%	100.00%	$ 1,701,413	$ 42,263	$ 1,659,150
O'Neill Pump-Gen Plt	86,103	383,814	18.32%	81.68%	100.00%	$ 1,818,570	$ 333,217	$ 1,485,353
Regen. Credit - O'Neill Pump-Gen Plt	86,103	383,814	18.32%	81.68%	100.00%	$ (176,199)	$ (32,285)	$ (143,914)
Jones Pumping Plant	134,701	922,160	12.75%	87.25%	100.00%	$ 11,664,355	$ 1,486,667	$ 10,177,688
In-Lieu of Jones Pumping						$ 212,568	$ -	$ 212,568
Total Coveyance Pumping Direct Bill							**$ 1,829,862**	**$ 13,575,053**

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A	B	C	D	E	F	G	H	I
	Acre-Feet		**Ratio of Acre-Feet**				**For Water Ratesetting**	
	M&I	**Irrigation**	**M&I**	**Irrigation**	**Total**	**Total $**	**M&I**	**Irrigation**
Ref	<Sch A-12>	<Sch A-12>	(C/(C+D))	(D/(C+D))	(E+F)	<Meter Costs>	(E*H)	(F*H)
Used in Schedule 11 Page 1								
Direct Pumping:								
Gianelli PGP - SFU	75,370	18,450				$ 1,550,357	$ 1,245,475	$ 304,883
Contra Costa PP	76,770	-	100.00%		100.00%	$ 857,659	$ 857,659	$ -
Colusa CWD (Incl. Arb./Will O&M Office)	126	26,647	0.47%	99.53%	100.00%	$ 493,889	$ 2,324	$ 491,565
Kanawha WD	6	19,527	0.03%	99.97%	100.00%	$ 87,432	$ 27	$ 87,405
Orland-Artois WD	N/A	22,099		100.00%	100.00%	$ 66,851	$ -	$ 66,851
Pleasant Valley PP	-	25,898		100.00%	100.00%	$ 479,144	$ -	$ 479,144
Pleasant Valley Relifts	N/A	6,061		100.00%	100.00%	$ 80,203	$ -	$ 80,203
San Luis WD Relifts	1,576	24,442	6.06%	93.94%	100.00%	$ 999,303	$ 60,531	$ 938,772
Westlands WD Relifts	2,138	284,874	0.74%	99.26%	100.00%	$ 2,694,005	$ 20,068	$ 2,673,937
Coyote PP - Out of Basin	35,999	4,894	88.03%	11.97%	100.00%	$ 409,296	$ 360,316	$ 48,979
Pacheco PP - Out of Basin	75,370	18,450	80.33%	19.67%	100.00%	$ 1,594,982	$ 1,281,324	$ 313,658
Paid Directly As PUE to WAPA							3,827,724	5,485,396
Glenn Valley WD	N/A	753		100.00%	100.00%		$ -	$ -
Corning WD	N/A	8,113		100.00%	100.00%	$ 42,404	$ -	$ 42,404
Dunnigan WD	N/A	6,584		100.00%	100.00%	$ 5,224	$ -	$ 5,224
Westside WD	N/A	26,957		100.00%	100.00%	$ 36,778	$ -	$ 36,778
Proberta WD	N/A	1,522		100.00%	100.00%	$ 847	$ -	$ 847
Panoche WD - SLC	N/A	21,364		100.00%	100.00%	$ 1,851	$ -	$ 1,851
Pleasant Valley PP	4,268	-	100.00%		100.00%	$ 78,964	$ 78,964	$ -
State-Delta PP - Cross Valley Canal (CVC)	223	23,030	0.96%	99.04%	100.00%	$ 135,603	$ 1,300	$ 134,303
Dos Amigos PP - CVC (Offset with Direct Pumping)	223	23,030	0.96%	99.04%	100.00%	$ 106,094	$ 1,017	$ 105,077
Wintu PP	3,683	4,636	44.27%	55.73%	100.00%	$ 119	$ 53	$ 66
City of Shasta Lake (Shasta PP)	1,354	-	100.00%		100.00%	$ 91,744	$ 91,744	$ -
Offseting Revenue for PUE Paid to WAPA							173,079	326,549
Direct Pumping Total							$ 4,000,802	$ 5,811,945
Reimbursable Billing						$ 10,202		
Project General						$ 23,349		
Nonreimbursable F&W						$ 58,987		
Nonreimbursable Demo Treatment						$ 19,247		
						$ 27,500,000	$ 6,148,006	$ 21,240,210

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A	B	C	D	E	F	G
	Cost to Determine Ratio		Ratio		Distribution	
	M&I	Irrigation	M&I	Irrigation	M&I	Irrigation
Ref			(B/$3,906,688)	(C/$5,485,396)	(D*$411,455)	(E*$2,179,760)
Offseting Revenue for Storage PUE Paid to WAPA	$ 317,341	$ 1,853,211				
Offseting Revenue for Direct Pumping PUE Paid to WAPA	$ 173,079	$ 326,549				
Total Offsetting Revenue	$ 490,419	$ 2,179,760				

Determination of PUE sent to WAPA:

Based on Direct Pumping Cost:

A	B	C	D	E	F	G
Gianelli PGP - SFU	$ 1,245,475	$ 304,883	32.54%	5.56%	$ 159,574	121,153
Contra Costa PP	$ 857,659	$ -	22.41%		$ 109,886	
Colusa CWD (Incl. Arb./Will O&M Office)	$ 2,324	$ 491,565	0.06%	8.96%	$ 298	195,336
Kanawha WD	$ 27	$ 87,405	0.00%	1.59%	$ 3	34,733
Orland-Artois WD	$ -	$ 66,851		1.22%	$ -	26,565
Pleasant Valley PP	$ -	$ 479,144		8.73%	$ -	190,400
Pleasant Valley Relifts	$ -	$ 80,203		1.46%	$ -	31,871
San Luis WD Relifts	$ 60,531	$ 938,772	1.58%	17.11%	$ 7,755	373,045
Westlands WD Relifts	$ 20,068	$ 2,673,937	0.52%	48.75%	$ 2,571	1,062,556
Coyote PP - Out of Basin	$ 360,316	$ 48,979	9.41%	0.89%	$ 46,165	19,463
Pacheco PP - Out of Basin	$ 1,281,324	$ 313,658	33.47%	5.72%	$ 164,167	124,640
Total for Determining Rates to Remit to WAPA	$ 3,827,724	$ 5,485,396	100.00%	100.00%	$ 490,419	$ 2,179,760