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Sent: Monday, June 30, 2014 6:20 PM

To: Grober, Les@Waterboards

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Subject: RE: Conserved Water Accounting under TUCP Order

Les--

In its May 2, 2014 Order Modifying and Renewing an Order that Approved a Temporary Urgency Change in License and Permit Terms and Conditions Requiring Compliance with the Delta Water Quality Objectives in Response to Drought Conditions, the State Water Resources Control Board (Board) required the Department of Water Resources (DWR) and the U.S. Bureau of Reclamation (Reclamation) to “calculate and maintain a record of the amount of water conserved through the changes authorized by this Order” and to “submit such records on a monthly basis to the State Water Board by the end of the following month.”

In compliance with that requirement, DWR and Reclamation (the Projects) are presenting the attached tables showing daily accounting for conserved water under the Order for the month of May, along with the detailed summary below.

Under the terms of D-1641, in a Critical Year when the May 1 Sac River Index is less than 8.1 MAF at the 90% exceedance level, the outflow requirement decreases from a 3-day average of 7,100 cfs to a 14-day average of 4,000 cfs. In the May 2, 2014 TUCP Order, the Board further relaxed the outflow requirement to 3,000 cfs on a 30-day average. The Order also modified the Western Delta agricultural standard compliance point from Emmaton to Threemile Slough.

From May 1-13, all D-1641 objectives were being met, including the 14-day outflow greater than 4,000 cfs. Therefore, no water was conserved under the Order during this period.

The May 2 Order was in effect beginning on May 14, when the 14-day outflow dropped below 4,000 cfs. At the same time, Emmaton electrical conductivity began to increase, ultimately exceeding the 14-day EC limit on May 26. DSM2 modeling indicates that increasing releases by about 1,200 cfs/day beginning May 14 and continuing through May 28 would have kept 14-day EC values at Emmaton below the standard.

By not increasing outflows to meet the 4,000 cfs outflow required under D-1641, and by modifying the Agricultural standard from Emmaton to Threemile Slough, the Projects conserved approximately 45 TAF. In total, the TUCP Order has allowed the Projects to conserve approximately 263 TAF February through May.

Please note, the May 2 Order included the following statement on page 7: “Under the current hydrology, DWR and Reclamation are also required during May to meet one day of compliance with the Chipps Island requirements contained in Table 4.” However, no Chipps Island X2 days were actually required in May under D-1641, as April’s Eight River Index was 1,712 TAF.

Also note that this summary does not include water that was potentially conserved related to San Joaquin River flow objectives. This matter will be addressed at a later date.

If you have any questions or would like more information, please contact Mr. Dan Yamanaka at (916) 574-0456 for DWR or Mr. Paul Fujitani at (916) 979-2197 for Reclamation.

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MAY date	X2 (0 days at Chipps Island, 0 days at Collinsville; 0 Chipps Island carry-over days)						TUCP in Effect		Daily Combined Exports (cfs)	Emmaton Historical 14- day EC (uS/cm)	Emmaton Modeled 14- Day EC (uS/cm)	ESTIMATED Emmaton Savings ¹ (cfs)	Total Δ Outflow (cfs)	Water Conserved (TAF)
	equivalent 14- day outflow under D1641	calculated 14-day outflow	daily EC at Chipps Isl.	14-day EC at Chipps Isl.	daily EC at CLL	14-day EC at CLL	for Emmaton	for Outflow						
5/1/2014	4,000	6,507	8.62	7.58	5.33	4.46			2,276	811			0	0.00
5/2/2014	4,000	6,453	9.18	7.67	5.89	4.54			808	852			0	0.00
5/3/2014	4,000	6,320	9.97	7.80	6.36	4.64			1,130	902			0	0.00
5/4/2014	4,000	6,125	10.12	8.01	6.50	4.80			1,144	972			0	0.00
5/5/2014	4,000	6,038	9.60	8.18	6.13	4.91			1,120	1,027			0	0.00
5/6/2014	4,000	5,974	8.99	8.22	5.61	4.97			1,122	1,052			0	0.00
5/7/2014	4,000	5,900	8.74	8.34	5.24	5.06			1,193	1,093			0	0.00
5/8/2014	4,000	5,702	8.88	8.48	5.23	5.16			1,193	1,133			0	0.00
5/9/2014	4,000	5,564	9.37	8.61	5.68	5.28			1,001	1,169			0	0.00
5/10/2014	4,000	5,204	9.37	8.73	5.75	5.36			1,128	1,206			0	0.00
5/11/2014	4,000	4,913	8.55	8.80	5.74	5.47			1,130	1,219			0	0.00
5/12/2014	4,000	4,601	8.98	8.93	5.94	5.59			1,121	1,255			0	0.00
5/13/2014	4,000	4,271	9.77	9.14	6.28	5.74			1,112	1,314			0	0.00
5/14/2014	4,000	3,960	10.74	9.35	6.95	5.90	x	x	1,056	1,376		1,200	1,240	2.46
5/15/2014	4,000	3,892	12.12	9.60	8.19	6.11	x	x	1,016	1,456		1,200	1,308	2.60
5/16/2014	4,000	3,787	13.25	9.89	9.27	6.35	x	x	788	1,569		1,200	1,413	2.80
5/17/2014	4,000	3,771	14.28	10.20	9.61	6.58	x	x	917	1,699	1,620	1,200	1,429	2.83
5/18/2014	4,000	3,846	14.34	10.50	9.69	6.81	x	x	1,046	1,831	1,690	1,200	1,354	2.69
5/19/2014	4,000	3,769	14.10	10.82	9.64	7.06	x	x	1,044	1,966	1,773	1,200	1,431	2.84
5/20/2014	4,000	3,734	13.34	11.13	8.90	7.29	x	x	1,042	2,075	1,865	1,200	1,466	2.91
5/21/2014	4,000	3,725	12.47	11.40	8.43	7.52	x	x	1,066	2,162	1,951	1,200	1,475	2.93
5/22/2014	4,000	3,726	12.80	11.68	8.36	7.74	x	x	1,036	2,255	2,021	1,200	1,474	2.92
5/23/2014	4,000	3,750	13.54	11.97	9.39	8.01	x	x	1,047	2,367	2,086	1,200	1,450	2.88
5/24/2014	4,000	3,735	13.88	12.30	9.71	8.29	x	x	962	2,499	2,160	1,200	1,465	2.91
5/25/2014	4,000	3,655	13.81	12.67	9.96	8.60	x	x	1,048	2,667	2,245	1,200	1,545	3.07
5/26/2014	4,000	3,600	14.10	13.04	10.05	8.89	x	x	1,009	2,820	2,338	1,200	1,600	3.17
5/27/2014	4,000	3,550	14.55	13.38	10.40	9.18	x	x	1,216	2,965	2,423	1,200	1,650	3.27
5/28/2014	4,000	3,520	14.01	13.61	9.80	9.39	x	x	1,218	3,067	2,492	1,200	1,680	3.33
5/29/2014	4,000	3,559	13.88	13.74	9.14	9.45		x	1,218	3,126	2,533		441	0.00
5/30/2014	4,000	3,630	14.76	13.85	10.48	9.54		x	1,026	3,177	2,559		370	0.73
5/31/2014	4,000	3,664	14.72	13.88	10.47	9.60		x	1,013	3,193	2,580		336	0.67

Total for May (TAF): 45.00

¹From results of DSM2 modeling.