PECOS RIVER COMPACT

Report of the River Master

Water Year 2011

Accounting Year 2012

Final Report

June 27, 2012

Neil S. Grigg
River Master of the Pecos River
749 S. Lemay, Ste. A3, PMB 330
Fort Collins, Colorado 80524

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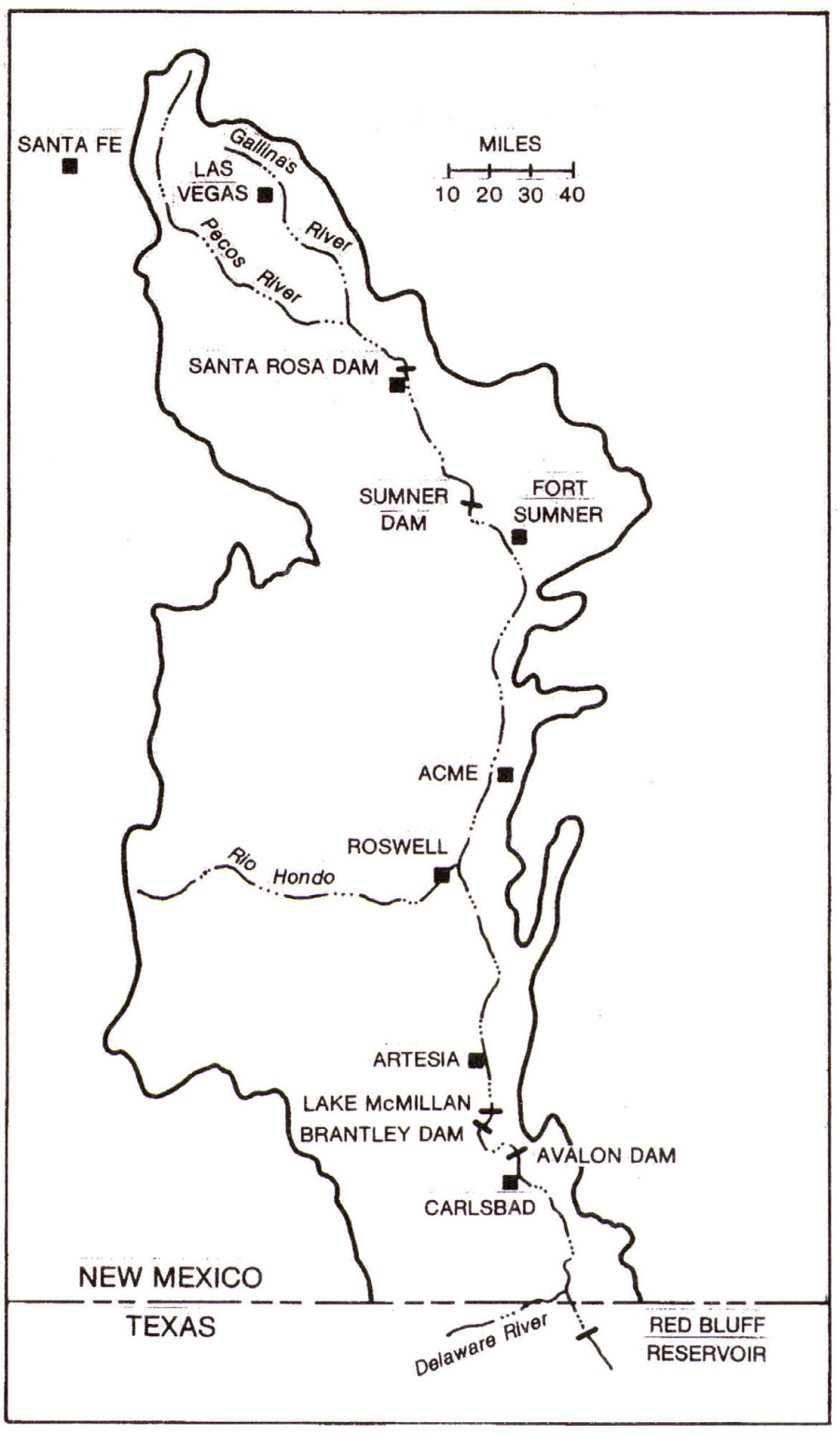

Map of Pecos River Basin Showing Accounting Reaches

PECOS RIVER COMPACT
Supreme Court of the United States
No. 65, Original
Amended Decree

Final Report of the River Master
Water Year 2011 - Accounting Year 2012
June 27, 2011

Purpose of the Report. In its Amended Decree issued March 28, 1988 the Supreme Court of the United States appointed a River Master of the Pecos River and directed him to "... Deliver to the parties a Preliminary Report setting forth the tentative results of the calculations required by Section III.B.1 of this Decree by May 15 of the accounting year..." and to consider "... any written objections to the Preliminary Report submitted by the parties prior to June 15 of the accounting year..." and to deliver "... to the parties a Final Report setting forth the final results of the calculations required by Section III.B.1 of this Decree by July 1 of the accounting year." This is the required Final Report with the determination of:

a. The Article III(a) obligation;

b. Any shortfall or overage, which calculation shall disregard deliveries of water pursuant to an Approved Plan;

c. The net shortfall, if any, after subtracting any overages accumulated in previous years, beginning with water year 1987.

Result of Calculations and Statement of Shortfall or Overage. The results of the calculations in this Final Report show that New Mexico's delivery in Water Year 2011 was an overage of 500 acre-feet. The accumulated overage since the beginning of Water Year 1987 is 100,100 acre-feet.

Neil S. Grigg
River Master of the Pecos River

Pecos River Compact		
Accumulated Shortfall or Overage		
	June 27, 2012	
Water Year	Annual Overage or Shortfall, AF	Accumulated Overage or Shortfall, AF
1987	15,400	15,400
1988	23,600	39,000
1989	2,700	41,700
1990	-14,100	27,600
1991	-16,500	11,100
1992	10,900	22,000
1993	6,600	28,600
1994	5,900	34,500
1995	-14,100	20,400
1996	-6,700	13,700
1997	6,100	19,800
1998	1,700	21,500
1999	1,400	22,900
2000	-12,300	10,600
2001	-700	9,900
2002	-3,000	6,900
2003	2,000	8,900
2004	8,300	17,200
2005	24,000	41,200
2006	26,100	67,300
2007	25,200	92,500
2008	6,000	98,500
2009	1,600	100,100
2010	-500	99,600
2011	500	100,100

Table 1. General Calculation of Annual Departures, TAF, WY 2011			
4/29/2012			
	WY 2009	WY 2010	WY 2011
B.1.a. Index Inflows			
(1) Annual flood inflow			
(a) Gaged flow Pecos R bel Alamogordo Dam	97.0	116.2	87.4
(b) Flood Inflow Alamogordo - Artesia (Table 2)	7.4	7.9	-12.2
(c) Flood Inflow Artesia - Carlsbad (Table 3)	7.8	10.0	12.8
(d) Flood Inflow Carlsbad - State Line (Table 4)	12.5	9.4	0.5
Total (annual flood inflow)	124.7	143.5	88.5
(2) Index Inflow (3-year avg)			118.9
B.1.b. 1947 Condition Delivery Obligation			44.0
(Index Outflow)			
B.1.c. Average Historical (Gaged) Outflow			
(1) Annual historical outflow			
(a) Gaged Flow Pecos River at Red Bluff NM	44.0	60.6	24.6
(b) Gaged Flow Delaware River nr Red Bluff NM	2.7	5.6	1.0
(c) Metered diversions Permit 3254 into C-2713	0.0	0.0	0.0
Total Annual Historical Outflow	46.7	66.2	25.6
(2) Average Historical Outflow (3-yr average)			46.2
B.1.d. Annual Departure			2.2
C. Adjustments to Computed Departure			
1. Adjustments for Depletions above Alam Dam			
a. Depletions Due to Irrigation (Table 5)	0	0.5	3.3
b. Depl fr Operation of Santa Rosa Reservoir (Table 6)	3.4	4.1	2.7
c. Transfer of Water Use to Upstream of AD		0	0.0
Recomputed Index Inflows			
(1) Annual flood inflow			
(a) Gaged flow Pecos R bel Alamogordo Dam	100.4	120.8	93.4
(b) Flood Inflow Alamogordo - Artesia	7.4	7.9	-12.2
(c) Flood Inflow Artesia - Carlsbad	7.8	10.0	12.8
(d) Flood Inflow Carlsbad - State Line	12.5	9.4	0.5
Total (annual flood inflow)	128.1	148.1	94.5
Recomputed Index Inflow (3-year avg)			123.6
Recomputed 1947 Condition Del Outflow			46.5
(Index Outflow)			
Recomputed Annual Departures			-0.3
Credits to New Mexico			
C.2 Depletions Due to McMillan Dike			0.9
C.3 Salvage Water Analysis			0
C.4 Unappropriated Flood Waters			0
C.5 Texas Water Stored in NM Reservoirs			0
C.6 Beneficial C.U. Delaware River Water			0
Final Calculated Departure, TAF			0.5

Table 2. Determination of Flood Inflows, Alamogordo Dam to Artesia (B.3), WY 2011

4/21/2012

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOT
Flow bel Sumner Dam	1.7	3.4	30.6	5.2	5.9	7.0	16.4	5.3	4.8	4.6	1.5	0.9	87.4
FtSumner Irrig Div	0.0	2.2	3.6	4.9	4.5	4.2	4.0	4.2	4.3	4.5	0.0	0.0	36.5
Ft Sumner ID Return	0.8	0.6	1.4	1.5	2.3	2.3	2.3	2.3	2.1	1.9	1.0	0.8	19.3
Flow past FS IDist	2.5	1.8	28.3	1.9	3.8	5.1	14.7	3.4	2.6	2.0	2.5	1.7	70.3
Channel loss	0.2	0.2	5.2	1.3	1.5	1.6	2.6	1.6	0.8	0.8	0.8	0.2	17.0
Residual Flow	2.2	1.6	23.1	0.5	2.2	3.5	12.1	1.8	1.8	1.3	1.7	1.5	53.3
Base Inflow	2.0	1.7	1.4	1.5	1.4	0.4	0.5	0.3	0.2	0.6	1.0	2.1	13.1
River Pump Divers	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Residual, Artesia	4.3	3.3	24.4	1.9	3.6	3.9	12.5	2.0	2.0	1.8	2.7	3.6	66.1
Pecos Flow Artesia	4.4	3.8	22.9	5.1	2.2	1.2	7.1	1.1	0.3	0.8	1.7	3.2	53.9
Flood Inflow, AD-Art	0.1	0.5	-1.5	3.2	-1.4	-2.7	-5.4	-1.0	-1.7	-1.0	-0.9	-0.4	-12.2

Note: Whenever the computed flow past the District is less than the return flow, set the flow past the District equal to the return flow (Manual, B.3.d).

Table 3. Determination of Flood Inflows, Artesia to Carsbad, WY 2011 (B.4)													
4/21/2012													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOT
Rio Penasco at Dayton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourmile Draw nr Lakew	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
South Seven Rivers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rocky Arroyo at Hwy Br	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flood Inflow, Art-DS3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pecos R at Dam Site 3	1.3	1.3	4.2	10.6	8.9	9.1	9.4	4.3	3.5	1.2	1.1	1.3	56.1
CB Sprgs New Water (from Table 7)	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-9.7
Total Inflow, DS3 - CB	0.5	0.5	3.4	9.8	8.1	8.3	8.6	3.5	2.7	0.4	0.3	0.5	46.4
Evap Loss, Lake Avalon (from Table 10)	0.2	0.3	0.5	0.6	0.7	0.7	0.6	0.6	0.3	0.3	0.2	0.1	5.2
Storage Chg, Lake Avalon (from Table 11)	0.6	0.4	-1.7	0.3	0.2	-0.3	-0.1	0.2	0.3	-0.5	0.5	0.6	0.5
Carls ID diversions	0.0	0.0	5.5	9.7	8.0	8.4	8.0	3.4	2.5	1.2	0.0	0.0	46.7
93% CID diver	0.0	0.0	5.1	9.0	7.4	7.8	7.4	3.1	2.4	1.1	0.0	0.0	43.4
Other depletions	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	1.4
Dark Canyon at Csbad	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pecos b Dark Canyon	1.4	1.2	1.0	1.0	0.9	0.4	0.3	0.2	0.4	0.5	0.6	0.8	8.7
Pecos R at Carlsbad	1.4	1.2	1.0	1.0	0.9	0.4	0.3	0.2	0.4	0.5	0.6	0.8	8.7
Total Outflow	2.3	1.9	5.1	11.1	9.3	8.8	8.4	4.3	3.5	1.5	1.4	1.6	59.2
Flood Inflow, DS3-CB	1.8	1.4	1.6	1.3	1.2	0.5	-0.1	0.7	0.9	1.2	1.1	1.1	12.8
Flood Inflow, Art-CB	1.8	1.4	1.6	1.3	1.2	0.5	-0.1	0.7	0.9	1.2	1.1	1.1	12.8

Table 4. Summary Table for Computations, Carlsbad to State Line - WY 2011 (B.5)							
4/29/2012							
	BCB - RB	BCB - RB*	Del R	DC			
	RM	USGS	USGS				
Jan	0.0	0.1	0.0	0.0			
Feb	0.1	0.0	0.0	0.0			
Mar	0.0	0.1	0.0	0.0			
Apr	0.0	0.2	0.0	0.0			
May	0.0	0.2	0.0	0.0			
Jun	0.0	0.1	0.0	0.0			
Jul	0.0	0.1	0.0	0.0			
Aug	0.1	0.1	0.0	0.0			
Sep	0.2	0.2	0.1	0.0			
Oct	0.0	0.0	0.0	0.0			
Nov	0.0	0.0	0.0	0.0			
Dec	0.0	0.1	0.0	0.0			
Total	0.4	1.4	0.1	0.0			
Summary of flood inflows, Carlsbad to State Line, TAF							
Red Bluff - Carlsbad + Dark C RM calcs)					0.4		
Delaware River (USGS Computation					0.1		
Total Flood Inflow, Carlsbad to State Line					0.5		
* USGS calculations BCB-RB for comparison only.							

Table 5. Depletions Due to Irrigation Above Sumner Dam - WY 2011 (C.1.a)								
4/22/2012								
	APR	MAY	JUN	JUL	AUG	SEPT	OCT	TOTAL
Precip Las Vegas FAA AP	0.00	0.15	0.90	1.26	2.68	1.71	1.07	7.77
Eff prec Las Veg FAA AP	0.00	0.15	0.87	1.20	2.35	1.59	1.03	7.19
Precip Pecos Natl Monument	0.33	0.00	0.06	1.53	2.60	0.78	1.93	7.23
Eff Precip Pecos RS	0.32	0.00	0.06	1.43	2.29	0.76	1.77	6.63
Precip Santa Rosa	0.00	0.04	0.05	1.51	1.39	2.03	1.72	6.74
Eff Precip Santa Ro	0.00	0.04	0.05	1.42	1.31	1.85	1.60	6.27
Average eff precip, ft	0.01	0.01	0.03	0.11	0.17	0.12	0.12	0.56
Consumptive use, ft	0.19	0.36	0.36	0.30	0.27	0.18	0.11	1.77
Unit depletion rate (CU less eff precip), ft	0.18	0.35	0.33	0.19	0.10	0.06	0.00	1.22
Acres (most recent inventory)	11529							
Streamflow depletion (actual use), AF	14113							
1947 depletion, AF	10804							
Difference (actual use - 1947 depletion), TAF	3.3							
Adjustment to Gaged Flow, Pecos River below Sumner Dam, TAF =						3.3		

Table 6. Depletions Due to Santa Rosa Reservoir Operations - WY 2011 - (C.1.b)

6/27/2012

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL
LS 2001 table (USBR); SRL 1997 tables used (COE)													
Lk Sumner ga ht, avg	54.01	55.20	52.49	49.86	48.17	44.32	38.76	35.25	32.67	31.13	34.29	40.90	
LS content, AF, avg	22737	24959	20106	16065	13778	9611	5734	3973	2914	2373	3557	7012	
LS area, acres, avg	1807	1927	1655	1425	1282	880	557	448	373	329	420	653	
LS evap, inches	4.88	4.45	10.54	16.16	17.94	20.81	16.55	14.27	10.67	8.44	6.14	0.94	131.79
.77 LS Evap	3.76	3.43	8.12	12.44	13.81	16.02	12.74	10.99	8.22	6.50	4.73	0.72	101.48
LS Precip, inches	0.00	0.50	0.12	0.00	0.00	0.00	0.31	0.84	0.72	1.16	0.00	2.48	6.13
Net LS Evap, inches	3.76	2.93	8.00	12.44	13.81	16.02	12.43	10.15	7.50	5.34	4.73	-1.76	95.35
LSum Evaploss, TAF	0.57	0.47	1.10	1.48	1.48	1.18	0.58	0.38	0.23	0.15	0.17	-0.10	7.67
L S Rosa ga ht, avg	25.91	25.97	19.64	13.65	13.16	12.50	1.68	98.55	99.43	0.55	0.50	0.71	
LSR content, AF, avg	42784	42910	31027	22299	21685	20875	10708	8580	9147	9905	9871	10017	
LSR area, acres, avg	2084	2089	1673	1264	1241	1214	728	627	662	693	692	697	
LSR evap, inches	3.72	4.98	8.58	11.59	13.67	16.02	14.49	11.00	8.83	8.12	4.88	3.76	109.64
.77 LSR Evap	2.86	3.83	6.61	8.92	10.53	12.34	11.16	8.47	6.80	6.25	3.76	2.90	84.42
LSR precip, inches	0.03	0.42	0.26	0.00	0.04	0.05	1.51	1.39	2.03	1.72	0.07	1.98	9.50
Net LSR Evap, inches	2.83	3.41	6.35	8.92	10.49	12.29	9.65	7.08	4.77	4.53	3.69	0.92	74.92
LSR Evaploss, TAF	0.49	0.59	0.88	0.94	1.08	1.24	0.59	0.37	0.26	0.26	0.21	0.05	6.98
Total evaploss, TAF	1.06	1.06	1.99	2.42	2.56	2.42	1.16	0.75	0.50	0.41	0.38	-0.04	14.66
Sum contents, AF	65521	67869	51133	38364	35463	30486	16442	12553	12061	12278	13428	17029	
1947 area, acres	2874	2929	2293	1882	1725	1561	997	800	800	800	844	1000	
1947 evaploss, TAF	0.90	0.71	1.53	1.95	1.99	2.08	1.03	0.68	0.50	0.36	0.33	-0.15	11.92
current-1947evaploss	0.16	0.35	0.46	0.47	0.57	0.33	0.13	0.07	0.00	0.05	0.05	0.10	2.74
						Annual adjustment for excess evaporation =							2.7

ADJUSTMENT FOR EXCESSIVE STORAGE IN SANTA ROSA RESERVOIR

			2010	2010	2011	2011
			Gage	Storage	Gage	Storage
EndYear Sumner Sto			4253.27	21427	4243.85	9209
EndYear S R Sto			4725.87	42701	4700.88	10136
Sum				64128		19345
Sto Adjustment, AF						0
Adjustm Ex Evap, TAF						2.7
Total Adjustment,TAF						2.7

Storage adjustment
Both equal or less than 129.3 TAF, adjustment is zero
Both greater than 129.3 TAF, subtract previous from current year
Current year less than 129.3 TAF, previous greater than 129.3 TAF, subtract previous year from 129.3 TAF
Current year greater than 129.3 TAF, previous year less than 129.3 TAF, subtract 129.3 TAF from current year

Table 7. Carlsbad Springs New Water WY 2011- (B.4.c)					
4/21/2012					
		TAF	AF/day	cfs	Totals
Pecos R bel DC		8.7	23.9	12.0	12.0
Dark Canyon		0.0	0.0	0.0	0.0
Pecos R bel Lake Avalon		0.0	0.0	0.0	0.0
Depletion, cfs					2.0
CID lag seep, cfs (from Table 8)					5.1
Return flow, cfs					1.0
Lake Av lagged seep, cfs (from Table 9)					18.2
PR seepage, cfs					3.0
Carls new water, cfs					-13.4
Carls new wat, TAF					-9.7
Carls new wat monthly, TAF					-0.8

Table 8. Carlsbad Main Canal Seepage Lagged - WY 2011 - [B.4.c.(1)(e)]													
4/21/2012													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL
WY 2011													
CID, TAF	0	0	5.46	9.73	7.95	8.43	8	3.38	2.53	1.23	0	0	46.7
days/mo	31	28	31	30	31	30	31	31	30	31	30	31	365
cfs	0	0.0	88.8	163.5	129.3	141.7	130.1	55.0	42.5	20.0	0.0	0.0	64.2
cfs, qtr avg			30.6			144.7			76.2			6.7	
WY 2010		1Q	2Q	3Q	4Q								
FLOWS, cfs				111.6	66.4								
SEVEN %				7.8	4.6								
WY 2010 lagged		1Q	2Q	3Q	4Q								
FLOWS, cfs		30.6	144.7	76.2	6.7								
SEVEN %		2.1	10.1	5.3	0.5								
LAG		3.9	6.6	6.4	3.7	Avg =	5.1	cfs					

Table 9. Lake Avalon Leakage Lagged - WY 2011 - B.4.c.(1)(g)													
4/21/2012													
WY 2011	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOT
WS NM rept	74.49	75.11	74.82	73.17	73.44	73.27	73.36	73.63	73.34	73.33	73.45	74.25	
ga ht, avg*	17.49	18.11	17.82	16.17	16.44	16.27	16.36	16.63	16.34	16.33	16.45	17.25	
cfs	21.6	24.6	23.2	15.3	16.6	15.8	16.2	17.5	16.1	16.1	16.6	20.5	
days	31	28	31	30	31	30	31	31	30	31	30	31	365
cfs avg	23.1			15.9			16.6			17.7			18.3
2010		1Q	2Q	3Q	4Q								
cfs				18.1	16.6								
2011 lagged		1Q	2Q	3Q	4Q								
cfs		23.1	15.9	16.6	17.7								
lag cfs		20.1	18.4	17.4	17.0	Avg =	18.2	cfs					
* Computed as WS elev by NM Report minus Gage datum at 3157.0 (USBR datum)													

Table 10. Evaporation Loss at Lake Avalon - WY 2011 - (B.4.f)													
4/21/2012													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOT
Av WS NM Rept	74.49	75.11	74.82	73.17	73.44	73.27	73.36	73.63	73.34	73.33	73.45	74.25	
Avalon ga ht, avg, ft*	17.49	18.11	17.82	16.17	16.44	16.27	16.36	16.63	16.34	16.33	16.45	17.25	
Avg area Avalon, ac**	704	745	725	622	638	628	634	650	632	632	639	688	
Panevap Brantley, in.	4.65	5.60	11.33	14.80	17.12	18.26	16.37	14.48	10.52	8.83	4.80	4.34	131.10
Lakeevap Brantley, in.	3.58	4.31	8.72	11.40	13.18	14.06	12.60	11.15	8.10	6.80	3.70	3.34	100.95
Precip Brantley, in.	0.00	0.03	0.00	0.00	0.00	0.73	0.79	0.67	1.61	0.56	0.00	1.47	5.86
Netevap, inches	3.58	4.28	8.72	11.40	13.18	13.33	11.81	10.48	6.49	6.24	3.70	1.87	95.09
Evaploss Av, TAF	0.21	0.27	0.53	0.59	0.70	0.70	0.62	0.57	0.34	0.33	0.20	0.11	5.16
* Computed as WS elev by NM Report minus Gage datum at 3157.0 (USBR datum)													
** Based on USBR Area and Capacity Table in effect January 1, 1997													

Table 11. Change in Storage, Lake Avalon - WY 2011 - (B.4.g)														
(Gage heights are end of month)														
4/21/2012														
	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOT
	2010	2011												
WS NM Rept	74.0	74.8	75.3	72.8	73.3	73.6	73.2	73.0	73.3	73.8	73.0	73.8	74.7	
Gage EOM, ft*	17.0	17.8	18.3	15.8	16.3	16.6	16.2	16.0	16.3	16.8	16.0	16.8	17.7	
Storage, AF**	1789	2347	2718	1026	1333	1525	1271	1147	1333	1656	1147	1656	2275	
Change sto, TAF		0.6	0.4	-1.7	0.3	0.2	-0.3	-0.1	0.2	0.3	-0.5	0.5	0.6	0.5
* Computed as WS elev by NM Report minus Gage datum at 3157.0 (USBR datum)														
** Based on USBR Area and Capacity Table in effect January 1, 1997														

Table 12. Data Required for River Master Manual Calculations, Water Year 2011													
4/21/2012													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL
STREAMFLOW GAGING RECORDS, TAF													
Pecos R b Sumner Dam	1.7	3.4	30.6	5.2	5.9	7.0	16.4	5.3	4.8	4.6	1.5	0.9	87.4
Fort Sumner Main C	0.0	2.2	3.6	4.9	4.5	4.2	4.0	4.2	4.3	4.5	0.0	0.0	36.5
Pecos R nr Artesia	4.4	3.8	22.9	5.1	2.2	1.2	7.1	1.1	0.3	0.8	1.7	3.2	53.9
Rio Penasco at Dayton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourmile Draw nr Lakewood	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
South Seven Rivers nr Lkwd	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rocky Arroyo at Hwy Br nr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pecos R at Dam Site 3	1.3	1.3	4.2	10.6	8.9	9.1	9.4	4.3	3.5	1.2	1.1	1.3	56.1
Pecos bel Avalon Dam	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Carlsbad Main Canal	0.0	0.0	5.5	9.7	8.0	8.4	8.0	3.4	2.5	1.2	0.0	0.0	46.7
Dark Canyon at Carlsbad	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pecos below Dark Canyon	1.4	1.2	1.0	1.0	0.9	0.4	0.3	0.2	0.4	0.5	0.6	0.8	8.7
Pecos R at Red Bluff	4.1	3.4	3.3	2.3	2.0	1.4	1.2	1.0	1.2	1.2	1.6	2.1	24.6
Delaware R nr Red Bluff	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	1.0
GAGE HEIGHTS													
Avalon gage ht, end mo	74.80	75.30	72.80	73.30	73.60	73.20	73.00	73.30	73.80	72.99	73.80	74.70	
Avalon gage ht, avg	74.49	75.11	74.82	73.17	73.44	73.27	73.36	73.63	73.34	73.33	73.45	74.25	
Sumner Lake ga ht, end mo	54.74	55.04	50.71	49.13	46.66	41.65	37.26	33.32	32.23	30.59	37.37	43.85	
Sumner Lake gage ht, avg	54.01	55.20	52.49	49.86	48.17	44.32	38.76	35.25	32.67	31.13	34.29	40.90	
Lake S Rosa ga ht, end mo*	25.93	25.95	13.85	13.42	12.83	12.13	98.68	98.51	0.60	0.54	0.49	0.88	
Lake S Rosa ga ht, avg*	25.91	25.97	19.64	13.65	13.16	12.50	1.68	98.55	99.43	0.55	0.50	0.71	
* values are referred to 4700 foot level except Jul-Aug for end month and Aug-Sept for average level													
PRECIPITATION, INCHES													
Brantley Lake	0.00	0.03	0.00	0.00	0.00	0.73	0.79	0.67	1.61	0.56	0.00	1.47	5.86
Las Vegas FAA AP	0.16	0.13	0.03	0.00	0.15	0.90	1.26	2.68	1.71	1.07	0.04	0.75	8.88
Pecos National Monument	0.15	0.19	0.02	0.33	0.00	0.06	1.53	2.60	0.78	1.93	0.29	1.98	9.86
Santa Rosa*	0.03	0.42	0.26	0.00	0.04	0.05	1.51	1.39	2.03	1.72	0.07	1.98	9.50
Lake Santa Rosa	0.03	0.42	0.26	0.00	0.04	0.05	1.51	1.39	2.03	1.72	0.07	1.98	9.50
Sumner Lake	0.00	0.50	0.12	0.00	0.00	0.00	0.31	0.84	0.72	1.16	0.00	2.48	6.13
	* Note: data from Santa Rosa dam was substituted for missing Santa Rosa data												
PAN EVAPORATION, INCHES													
Lake Santa Rosa	3.72	4.98	8.58	11.59	13.67	16.02	14.49	11.00	8.83	8.12	4.88	3.76	109.64
Lake Sumner	4.88	4.45	10.54	16.16	17.94	20.81	16.55	14.27	10.67	8.44	6.14	0.94	131.79
Brantley Lake	4.65	5.60	11.33	14.80	17.12	18.26	16.37	14.48	10.52	8.83	4.80	4.34	131.10
OTHER REPORTS													
Base Acme-Art, TAF (USGS)	2.0	1.7	1.4	1.5	1.4	0.4	0.5	0.3	0.2	0.6	1.0	2.1	13.1
Pump depl Ac-Artesia, TAF	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Pumping, C-2713, Brine Part.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NM irrig inv, acres (3/9/2000)													11529
NM Transfer water use, TAF													0
NM salvaged water, TAF													0
Texas, water stored NM, TAF	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Texas, use Del water, TAF													

APPENDIX A

RIVER MASTER'S RESPONSE TO STATES' OBJECTIONS

RESPONSE TO STATES' OBJECTIONS

Final Report, Accounting Year 2012

NEW MEXICO'S OBJECTIONS

1. Table 6. Depletions Due to Santa Rosa Reservoir Operations - WY 2011 - (C.1.b)

New Mexico found an error in the Lake Sumner average area for December. This has been corrected on Table 6. The change did not affect the Preliminary Report's value for Final Calculated Departure on Table 1.

TEXAS'S OBJECTIONS

Texas did not have any objections.

FINAL CALCULATED DEPARTURE

The Preliminary Report's Final Calculated Departure was an overage of 0.5 TAF. After considering the states' objections, the Final Determination is an overage of 0.5 TAF.

Appendix B

CORRECTION TO FINAL REPORT, ACCOUNTING YEAR 2012

Corrected report

On July 20, 2011 Texas notified the River Master that a typographic error appeared in the Final Report for Accounting Year 2011. This error did not affect the Final Determination, and it is being corrected by filing this notice in the Preliminary Report and Final Report for Accounting Year 2012. Note the text below, which is a correction to the page shown from the Final Report for Accounting Year 2011.

RESPONSE TO STATES' OBJECTIONS

Final Report, Accounting Year 2011

NEW MEXICO'S OBJECTIONS

1. Table 4. Determination of flood Inflows, Carlsbad - State Line WY 2010 [B.5.]:
New Mexico found that the values in Table 4 for Delaware River flood inflows were entered incorrectly. This objection is accepted, and the revised Table 4 is included in the Final Report.

TEXAS'S OBJECTIONS

1. Table 4. Determination of flood Inflows, Carlsbad - State Line WY 2010 [B.5.]:
Texas found an error in the spreadsheet for computation of flood inflows by hydrograph scalping. The error was caused by a one-day transposition of the base flow, and Texas' objection is accepted. The River Master's computation for the revised values for the June – July – August period differed by 0.1 TAF from Texas' computation. A spreadsheet is attached with annotations to show where the changes were made.

FINAL CALCULATED DEPARTURE

The Preliminary Report's Final Calculated Departure was a shortfall of 0.5 TAF ~~an overage of 1.6 TAF~~. After considering the states' objections, the Final Determination is a shortfall of 0.5 TAF ~~an overage of 1.6 TAF~~.