



DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RESOURCES

John W. Hickenlooper
Governor

Mike King
Executive Director

Dick Wolfe, P.E.
Director/State Engineer

February 10, 2014

Ms. Angela Aldred, P.E.
Deere & Ault Consultants Inc.
600 S. Airport Road, Building A, Suite 205
Longmont, CO 80503

Re: Evans #2 Pit, 2014-2015 Substitute Water Supply Plan Renewal
DRMS File No. M-2000-041
SE $\frac{1}{4}$ Section 35, SW $\frac{1}{4}$ Section 36, T20S, R63W, 6th P.M., and
NW $\frac{1}{4}$ Section 1, NE $\frac{1}{4}$ Section 2, T21S, R63W, 6th P.M.
Water Division 2, Water District 14
SWSP ID 2709

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Plan Period: April 1, 2014 – March 31, 2015

FEB 11 2014

Division of Reclamation,
Mining & Safety

Dear Ms. Aldred:

We have reviewed your December 31, 2013 letter requesting an amendment of the substitute water supply plan for April 1, 2014-March 31, 2015, in accordance with Senate Bill 89-120 for a sand and gravel pit (well permit no. 54064-F, ID 1406561) owned by Stonewall Springs Quarry, LLC/Morley Companies and operated by Fremont Paving & RediMix, Inc. (Fremont Paving). The applicants shall be responsible for compliance with this plan, but the State Engineer's Office may also pursue the landowner for eventual compliance.

PLAN OPERATION

This pit did not exist, and no ground water was exposed, prior to January 1, 1981. This plan proposes to replace depletions to the Arkansas River that result from mining aggregate. There will not be a concrete batch plant.

Fremont Paving is actively backfilling water surface areas and is expected to have reduced the exposed water surface area to 8.0 acres. This would include approximately 4.4 acres at the northwest sedimentation pond, 0.9 acres at the southwest sedimentation pond, and up to 2.7 acres of dewatering trench.

DEPLETIONS

Well permit no. 54064-F (ID 1406561) was obtained to expose water in this pit. Fremont Paving will continue to mine the site with an allowance to disturb up to 50 acres. This plan is based on 8 acres of exposed water surface area for June 2014 through March 2015, broken down above. The total of 8 acres of exposed ground water will result in 27.58 acre-feet of evaporative loss (see attached Table 1). A total of 3.25 acre-feet of water is expected to be consumed by mining operations, consisting of 2.94 acre-feet of water lost in 100,000 tons of aggregate and 0.31 acre-feet used for dust suppression (see attached Table 2). Total operations with evaporation will result in 31.02 acre-feet of consumptive use. Projected uses and consumption during the 2014 plan year are as shown in the attached Tables 1, 2, and 3.

Office of the State Engineer

1313 Sherman Street, Suite 818 • Denver, CO 80203 • Phone: 303-866-3581 • Fax: 303-866-3589
<http://water.state.co.us>

The stream depletion analysis is also attached (see attached Table 3) providing a monthly distribution of the steam depletion. Total stream depletions are calculated to be 31.02 acre-feet for the April 1, 2014 through March 31, 2015 plan year.

REPLACEMENT

During April 2014 through March 2015, leased 32 acre-feet of fully consumable replacement credits from the Arkansas Groundwater Users Association ("AGUA") available pursuant to a 2-year lease, will be provided to cover mining depletions. The credits will be generated through the delivery of fully consumable water available to AGUA from the Board of Water Works of Pueblo, from the City of Aurora, or from the Pueblo West Metropolitan District, to AGUA's Excelsior Recharge Ponds located immediately west of Chico Creek. The lease provides that AGUA will deliver up to 32 acre-feet to the Arkansas River by means of recharge ponds on the Excelsior Ditch. According to the request, a copy of the lease will be submitted under separate cover. Attached Table 3 shows the proposed monthly replacement schedule for the 2014 plan year. Projected post plan depletions will be replaced with 8.3 acre-feet of fully consumable water from AGUA.

The State and Division Engineers have reviewed the plan and the adequacy of each source of water provided for use as augmentation water, including, where necessary, the historical consumptive use of each water right, and return flows from diversion of waters imported into the Arkansas River Basin or other fully consumable waters proposed for use as augmentation water.

CONDITIONS OF APPROVAL

This substitute water supply plan is hereby approved pursuant to Section 37-90-137(11), C.R.S., subject to the following conditions:

1. This current plan shall be valid through March 31, 2015, unless otherwise revoked or modified.
2. Active mining of the site shall not exceed 50 acres unless an amendment to this plan has been approved.
3. The mined cell must be maintained in a de-watered state to the extent that the exposed water surface area does not exceed a total of 8 acres including all ponds, collection areas, dewatering trenches, and return trenches.
4. If the actual water surface exposure exceeds 8 acres, the additional evaporative depletion must be accounted for and replaced via an amendment to this plan.
5. The consumption associated with this mining operation is limited to evaporation, dust suppression, and water lost in product not to exceed a total of 31.02 acre-feet in lagged depletions during the 2014 plan year. **All diversions for dust suppression must be metered in compliance with the "Amended Rules Governing the Measurement of Tributary Ground Water Diversions Located in the Arkansas River Basin."** A certified totalizing flow meter must be maintained.
6. AGUA/Fremont Paving agree to replace out-of-priority depletions to senior surface water rights in Colorado and depletions to usable Stateline flows occurring after the expiration date of the plan (March 31, 2015) that are caused by diversions of groundwater during the life of the Plan. **To guarantee that sufficient augmentation water will be provided to replace such depletions, AGUA has committed 32 acre-feet required to cover depletions during the 2014 plan year. The water leases between AGUA and Fremont Paving and UAWCD and Fremont**

was not included with the submittal; therefore, a copy of the lease must be provided to both the Division Office and the State Engineer's Office prior to November 15, 2014.

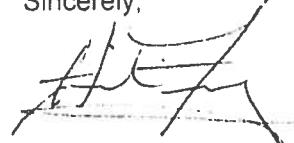
7. Releases of water by AGUA and UAWCD pursuant to this plan shall be coordinated with the Division Engineer and the Augmentation Coordinator and shall equal or exceed the depletions to be replaced on a monthly basis.
8. Accounting of water in this plan, including excavated area, area of actual ground water exposure, pumping, **stream depletions, and replacement water deliveries must be provided to the Water Commissioner (Peter.Kasper@state.co.us) and Division Engineer (Augmentation.Coordinator@state.co.us)** on forms and at times acceptable to them. Said accounting must be received by the 10th of the month following the month being reported. The name, mailing address, and phone number of the contact person who is responsible for operation and accounting of this plan must be provided on the accounting forms.
9. The approval of this substitute water supply does not relieve the applicant and/or landowner of the requirement to obtain a Water Court decree approving a permanent plan for augmentation or mitigation to ensure the permanent replacement of all depletions, including long-term evaporation losses after the gravel mining operations have ceased. Application for a decree should be made three years prior to the completion of mining with the intent of obtaining a decreed plan by the completion of mining. Approval of this substitute supply plan does not imply a position by this office on any related litigation.
10. A request for renewal of this plan must be submitted with the statutory fee then in effect at least 90 days prior to the date of expiration (January 1, 2015).
11. This substitute water supply plan may be revoked or modified at any time should it be determined that injury to other water rights has or will occur as a result of this plan.
12. Dewatering at this site will produce delayed depletions to the stream system. As long as the pit is continuously dewatered, the water returned to the stream system should be adequate to offset the depletions attributable to the dewatering operation. Once dewatering at the site ceases, the delayed depletions must be addressed. Accordingly, dewatering is required to continue during the terms of this approval. At least three years prior to completion of dewatering, a plan must be submitted that specifies how the post pumping dewatering depletions (including refilling of the pit) will be replaced, in time, place and amount. If dewatering of the site is discontinued, the pit would fill and cause additional depletions to the stream system due to increased evaporation. Therefore, the \$226,196 bond must continue to be held with the Division of Reclamation, Mining and Safety to line or backfill the ponds if dewatering is discontinued.
13. In accordance with amendments to Section 25-8-202-(7), C.R.S. and "Senate Bill 89-181 Rules and Regulations" adopted on February 4, 1992, the State Engineer shall determine whether or not the substitute supply is of a quality to meet requirements of use to senior appropriators. As such, water quality data or analysis may be requested at any time to determine if the water quality is appropriate for downstream water users.
14. Acceptance of these conditions shall be assumed unless a letter to the contrary is received by this office, the Division Engineer (310 E. Abriendo, Suite B, Pueblo, CO 81004), and the Water Commissioner (Pete Kasper) within two weeks of your receipt of this letter.

Angela Aldred, P.E.
February 10, 2014

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Please contact me or Charlie DiDomenico, in Pueblo at (719) 542-3368, if you have any questions concerning this approval.

Sincerely,



Heidi Frey, P.E.
Water Resource Engineer

Enclosures: Tables 1-5

cc: Steven J. Witte, Division 2 Engineer (via email)
Pete Kasper, District 14 Water Commissioner (via email)
Mark Morley, Stonewall Springs Quarry/Morley Companies
Division of Reclamation, Mining and Safety

HCF/ Evans No 2 Pit Amendment 2014-15

Table 1

EVAPORATIVE LOSSES
Evans #2 Pit
2014 Plan Year

Plan Year 2014 Month	Percent of Annual Evaporation	(2)		(3)		(4)		(5)		(6)		(7) Net Pond Evaporation 8.0 acres (acres/et acre)
		Gross Pond Evaporation	Average Precipitation	70%	Effective Precipitation	Net Pond Evaporation						
April	9.0%	4.52	1.26	0.88	3.64	0.30	2.42					
May	12.0%	6.02	1.37	0.96	5.07	0.42	3.38					
June	14.5%	7.28	1.65	1.16	6.12	0.51	4.08					
July	15.0%	7.53	2.38	1.67	5.86	0.49	3.91					
August	13.5%	6.78	1.34	0.94	5.84	0.49	3.89					
September	10.0%	5.02	0.87	0.61	4.41	0.37	2.94					
October	7.0%	3.51	0.44	0.31	3.21	0.27	2.14					
November	4.0%	2.01	0.40	0.28	1.73	0.14	1.15					
December	3.0%	1.51	0.40	0.28	1.23	0.10	0.82					
January	3.0%	1.51	0.32	0.22	1.28	0.11	0.85					
February	3.5%	1.76	0.72	0.50	1.25	0.10	0.84					
March	5.5%	2.76	1.46	1.02	1.74	0.14	1.16					
Total	100.0%	50.20	12.61	8.83	41.37	3.45	27.58					

Notes:

- (1) Based SEO information for elevations below 6,500 feet.
- (2) Equals 50.2 inches from NWS 33, Map 3, times Column (1).
- (3) Based on climate data from Pueblo Memorial AP weather station (1981-2010)
- (4) Equals Column (3) times 70%.
- (5) Equals Column (2) minus Column (4).
- (6) Equals Column (5) divided by 12.
- (7) Equals Pond Surface Area times Column (6).

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Table 2

OPERATIONAL LOSSES
Evans #2 Pit
2014 Plan Year

Plan Year 2014 Month	Amount of Aggregate Production (tons)	Water Lost With Mined Aggregate (acre-feet)	Water Used for Dust Control (acre-feet)	(4) Total Operational Losses (acre-feet)	
				(1)	(3)
April	10,400	0.31	0.02	0.33	0.33
May	10,000	0.29	0.03	0.33	0.33
June	10,100	0.30	0.04	0.34	0.34
July	13,100	0.39	0.04	0.42	0.42
August	14,200	0.42	0.04	0.46	0.46
September	11,000	0.32	0.03	0.36	0.36
October	12,200	0.36	0.03	0.39	0.39
November	0	0.00	0.01	0.01	0.01
December	0	0.00	0.00	0.00	0.00
January	2,400	0.07	0.02	0.09	0.09
February	6,200	0.18	0.02	0.21	0.21
March	10,400	0.31	0.02	0.33	0.33
Total	100,000	2.94	0.31	3.25	3.25

Notes:

- (1) Projected mining provided by Fremont Paving & Redi-Mix.
- (2) Column (2) times 2000 times 4% divided by 62.4 divided by 43,560.
- (3) Based on 25,000 gallons per month as provided by Fremont Paving & Redi-Mix.
- (4) Equals the sum of Columns (2) and (3).

Table 3

LAGGED DEPLETIONS AND PROPOSED REPLACEMENTS
Evans #2 Pit
2014 Plan Year

Plan Year 2014 Month	Net Evaporative Losses (acre-feet)	Total Operational Losses (acre-feet)	Total Losses from Evans #2 Pit (acre-feet)	Lagged Stream Depletions (acre-feet)	AGUA Replacement Credits (acre-feet)
			(1)	(2)	(3)
April-14	2.42	0.33	2.75	1.96	2.05
May-14	3.38	0.33	3.70	2.27	2.35
June-14	4.08	0.34	4.42	2.68	2.75
July-14	3.91	0.42	4.33	3.05	3.10
August-14	3.89	0.46	4.35	3.30	3.40
September-14	2.94	0.36	3.30	3.39	3.45
October-14	2.14	0.39	2.52	3.23	3.30
November-14	1.15	0.01	1.16	2.90	3.00
December-14	0.82	0.00	0.82	2.44	2.50
January-15	0.85	0.09	0.95	2.11	2.20
February-15	0.84	0.21	1.04	1.91	2.00
March-15	1.16	0.33	1.49	1.80	1.90
Total	27.58	3.25	30.83	31.02	32.00

Notes:

- (1) Equals Column (7), Table 1.
- (2) Equals Column (4), Table 2.
- (3) Equals the sum of Columns (1) and (2).
- (4) Based on Glover Calculations (T=100,000; s=0.2; X=2400; W=5000)
- (5) Fully Consumable credits from AGUA

Table 4
WATER ACCOUNTING FORM
Evans #2 Pit - Fremont Paving and Redi-Mix, Inc.
Pueblo, CO
April 1, 2014 to March 31, 2015

Plan Year 2014 Month	Net Pond Evaporation Rate (acre-feet/acre)	Exposed Water Surface Area (acres)	Net Pond Evaporation (acre-feet)	Amount of Aggregate Production (tons)	Water Lost With Minced Aggregate (acre-feet)	(5)	(6)	(7)	(8)	(9)
April-14	0.30		0.00		0.00				0.00	2.05
May-14	0.42		0.00		0.00				0.00	2.35
June-14	0.51		0.00		0.00				0.00	2.75
July-14	0.49		0.00		0.00				0.00	3.10
August-14	0.49		0.00		0.00				0.00	3.40
September-14	0.37		0.00		0.00				0.00	3.45
October-14	0.27		0.00		0.00				0.00	3.30
November-14	0.14		0.00		0.00				0.00	3.00
December-14	0.10		0.00		0.00				0.00	2.50
January-15	0.11		0.00		0.00				0.00	2.20
February-15	0.10		0.00		0.00				0.00	2.00
March-15	0.14		0.00		0.00				0.00	1.90
Total	27.58	—	0.00	0	0.00	0.00	0.00	0.00	32.00	0.00

Notes:

- (1) Net pond evaporation on exposed groundwater surface area.
- (2) ENTER: Amount of excavated area in acres.
- (3) Column (1) times Column (2)
- (4) ENTER: Amount of aggregate production in tons.
- (6) ENTER: Water used for dust control in acre-feet.
- (7) Equals the sum of Columns (3, 5 and 6).
- (8) Replacements made to the Arkansas River by AGUA
- (9) ENTER: Water pumped for dewatering of site in acre-feet.

Table 5
SUMMARY OF STREAM DEPLETION ANALYSIS RESULTS
Evans #2 Pit

Distance from Stream =
Transmissivity =
Specific Yield =
No-Flow Boundary =

2,400 ft
100,000
0.2
5,000 ft

Cumulative Time (months)	Month	Consumptive Use & Evaporation (ac-ft)	Lagged Stream Depletions (ac-ft)	Volume of Stream Depletions (ac-ft)	
1	Aug-00	2.13	0.21	Year 1	4.37
2	Sep-00	1.36	0.63		
3	Oct-00	1.03	0.71		
4	Nov-00	0.58	0.69		
5	Dec-00	0.20	0.60		
6	Jan-01	0.27	0.50		
7	Feb-01	0.47	0.48		
8	Mar-01	1.23	0.56		
9	Apr-01	1.88	0.80	Year 2	18.25
10	May-01	2.67	1.13		
11	Jun-01	3.31	1.54		
12	Jul-01	3.47	1.93		
13	Aug-01	3.05	2.20		
14	Sep-01	1.92	2.22		
15	Oct-01	1.46	2.04		
16	Nov-01	0.83	1.82		
17	Dec-01	0.27	1.53		
18	Jan-02	0.05	1.23		
19	Feb-02	0.06	0.99		
20	Mar-02	0.09	0.82		
21	Apr-02	0.16	0.70	Year 3	4.67
22	May-02	0.21	0.61		
23	Jun-02	0.26	0.55		
24	Jul-02	0.26	0.50		
25	Aug-02	0.22	0.45		
26	Sep-02	0.18	0.40		
27	Oct-02	0.12	0.35		
28	Nov-02	0.07	0.30		
29	Dec-02	0.05	0.25		
30	Jan-03	0.05	0.21		
31	Feb-03	0.06	0.18		
32	Mar-03	0.09	0.17		
33	Apr-03	0.16	0.16	Year 4	2.00
34	May-03	0.21	0.17		
35	Jun-03	0.26	0.19		
36	Jul-03	0.26	0.20		
37	Aug-03	0.22	0.21		
38	Sep-03	0.18	0.21		
39	Oct-03	0.12	0.19		
40	Nov-03	0.07	0.17		
41	Dec-03	0.05	0.15		
42	Jan-04	0.05	0.13		
43	Feb-04	0.06	0.11		
44	Mar-04	0.09	0.11		

Table 5
SUMMARY OF STREAM DEPLETION ANALYSIS RESULTS
Evans #2 Pit

Distance from Stream =

2,400 ft

Transmissivity =

100,000

Specific Yield =

0.2

No-Flow Boundary =

5,000 ft

Cumulative Time (months)	Month	Consumptive Use & Evaporation (ac-ft)	Lagged Stream Depletions (ac-ft)	Volume of Stream Depletions (ac-ft)
45	Apr-04	0.87	0.18	Year 5
46	May-04	1.62	0.43	
47	Jun-04	1.67	0.72	
48	Jul-04	1.66	0.91	
49	Aug-04	0.58	0.94	
50	Sep-04	0.18	0.76	
51	Oct-04	0.13	0.61	
52	Nov-04	0.07	0.50	
53	Dec-04	0.06	0.42	
54	Jan-05	0.05	0.35	
55	Feb-05	0.06	0.29	
56	Mar-05	0.15	0.26	
57	Apr-05	0.16	0.25	Year 6
58	May-05	0.21	0.24	
59	Jun-05	0.27	0.24	
60	Jul-05	0.25	0.25	
61	Aug-05	0.22	0.25	
62	Sep-05	0.18	0.24	
63	Oct-05	0.13	0.22	
64	Nov-05	0.07	0.19	
65	Dec-05	0.05	0.16	
66	Jan-06	0.05	0.14	
67	Feb-06	0.06	0.12	
68	Mar-06	3.11	0.41	
69	Apr-06	3.19	1.12	Year 7
70	May-06	3.24	1.55	
71	Jun-06	1.82	1.73	
72	Jul-06	1.80	1.65	
73	Aug-06	1.78	1.65	
74	Sep-06	1.73	1.67	
75	Oct-06	1.68	1.67	
76	Nov-06	0.07	1.51	
77	Dec-06	0.05	1.14	
78	Jan-07	0.05	0.91	
79	Feb-07	0.06	0.75	
80	Mar-07	1.64	0.78	
81	Apr-07	3.18	1.19	Year 8
82	May-07	3.23	1.69	
83	Jun-07	1.82	1.86	
84	Jul-07	1.80	1.76	
85	Aug-07	1.77	1.74	
86	Sep-07	1.73	1.74	
87	Oct-07	1.68	1.73	
88	Nov-07	0.07	1.56	
89	Dec-07	0.05	1.18	
90	Jan-08	0.05	0.94	
91	Feb-08	0.06	0.78	
92	Mar-08	1.64	0.80	

Table 5
SUMMARY OF STREAM DEPLETION ANALYSIS RESULTS
Evans #2 Pit

Distance from Stream =	2,400 ft
Transmissivity =	100,000
Specific Yield =	0.2
No-Flow Boundary =	5,000 ft

Cumulative Time (months)	Month	Consumptive Use & Evaporation (ac-ft)	Lagged Stream Depletions (ac-ft)	Volume of Stream Depletions (ac-ft)
93	Apr-08	1.98	1.09	Year 9
94	May-08	1.83	1.29	
95	Jun-08	2.03	1.41	
96	Jul-08	2.79	1.61	
97	Aug-08	2.12	1.81	
98	Sep-08	1.73	1.80	
99	Oct-08	0.31	1.61	
100	Nov-08	0.09	1.25	
101	Dec-08	0.06	1.00	
102	Jan-09	0.05	0.81	
103	Feb-09	0.06	0.67	
104	Mar-09	1.64	0.72	
105	Apr-09	1.79	1.01	Year 10
106	May-09	2.48	1.25	
107	Jun-09	3.05	1.58	
108	Jul-09	2.90	1.89	
109	Aug-09	2.58	2.04	
110	Sep-09	2.02	2.06	
111	Oct-09	1.58	1.97	
112	Nov-09	0.93	1.79	
113	Dec-09	0.56	1.55	
114	Jan-10	0.59	1.33	
115	Feb-10	0.85	1.22	
116	Mar-10	1.11	1.19	
117	Apr-10	0.26	1.12	Year 11
118	May-10	0.77	0.96	
119	Jun-10	0.67	0.93	
120	Jul-10	0.90	0.91	
121	Aug-10	1.10	0.94	
122	Sep-10	0.74	0.95	
123	Oct-10	0.27	0.85	
124	Nov-10	0.41	0.72	
125	Dec-10	0.28	0.65	
126	Jan-11	0.04	0.55	
127	Feb-11	0.00	0.44	
128	Mar-11	0.04	0.36	
129	Apr-11	0.25	0.32	Year 12
130	May-11	0.14	0.31	
131	Jun-11	0.17	0.28	
132	Jul-11	0.22	0.26	
133	Aug-11	0.25	0.26	
134	Sep-11	0.16	0.25	
135	Oct-11	1.18	0.33	
136	Nov-11	0.57	0.49	
137	Dec-11	0.40	0.47	
138	Jan-12	0.48	0.45	
139	Feb-12	0.62	0.47	
140	Mar-12	0.90	0.53	

REC'D BY
DEC 8 2015
FBI - BOSTON

Table 5
SUMMARY OF STREAM DEPLETION ANALYSIS RESULTS
Evans #2 Pit

Distance from Stream =

2,400 ft

Transmissivity =

100,000

Specific Yield =

0.2

No-Flow Boundary =

5,000 ft

Cumulative Time (months)	Month	Consumptive Use & Evaporation (ac-ft)	Lagged Stream Depletions (ac-ft)	Volume of Stream Depletions (ac-ft)
141	Apr-12	1.53	0.68	Year 13
142	May-12	1.96	0.93	
143	Jun-12	2.36	1.19	
144	Jul-12	2.30	1.43	
145	Aug-12	2.08	1.57	
146	Sep-12	1.71	1.62	
147	Oct-12	1.35	1.57	
148	Nov-12	0.90	1.45	
149	Dec-12	0.57	1.28	
150	Jan-13	0.57	1.12	
151	Feb-13	0.63	1.02	
152	Mar-13	0.90	0.98	
153	Apr-13	4.18	1.31	Year 14
154	May-13	5.38	2.17	
155	Jun-13	4.45	2.80	
156	Jul-13	4.33	3.05	
157	Aug-13	3.89	3.22	
158	Sep-13	3.22	3.25	
159	Oct-13	2.32	3.10	
160	Nov-13	1.15	2.77	
161	Dec-13	0.81	2.35	
162	Jan-14	0.95	2.04	
163	Feb-14	1.23	1.87	
164	Mar-14	1.80	1.83	
165	Apr-14	2.75	1.96	Year 15
166	May-14	3.70	2.27	
167	Jun-14	4.42	2.68	
168	Jul-14	4.33	3.05	
169	Aug-14	4.35	3.30	
170	Sep-14	3.30	3.39	
171	Oct-14	2.52	3.23	
172	Nov-14	1.16	2.90	
173	Dec-14	0.82	2.44	
174	Jan-15	0.95	2.11	
175	Feb-15	1.04	1.91	
176	Mar-15	1.49	1.80	
TOTAL		203.14	194.84	31.02

203.14 Consumptive Use & Evaporation through 2014 Plan Year
 194.84 Stream Depletions Through the 2014 Plan Year
 8.30 Post-2014 Plan Year Depletions