



IN REPLY REFER TO:

BCOO-4200
WTR-1.10

United States Department of the Interior

BUREAU OF RECLAMATION

Lower Colorado Regional Office

P.O. Box 61470

Boulder City, NV 89006-1470



DEC 05 2007

Ms. Patricia Mulroy
General Manager
Southern Nevada Water Authority
1001 South Valley View Boulevard
Las Vegas, NV 89153-0001

Mr. George Caan
Director
Colorado River Commission of Nevada
555 East Washington Avenue, Suite 3100
Las Vegas, NV 89101-1065

Subject: Las Vegas Valley Return Flow Methodology

Dear Ms. Mulroy and Mr. Caan:

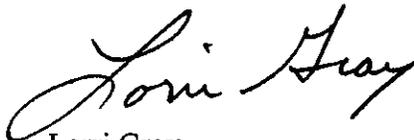
The Bureau of Reclamation is in receipt of your June 6, 2007, and November 2, 2007, letters requesting an update of the Las Vegas Valley Return Flow Credit Methodology (Enclosure 1). Reclamation met with staff members from your offices to discuss this issue. Reclamation adopted the "Procedure for Determining Return Flow Credits to Nevada from Las Vegas Wash" on September 14, 1984, and has modified and updated the methodology used in the procedure to reflect evolving conditions. The methodology was last updated by Reclamation through a letter dated July 29, 2003, to the Colorado River Commission of Nevada (CRC) and the Southern Nevada Water Authority. The current methodology is set forth in a chart entitled "Example: Total Nevada Return Flow Credit and Consumptive Use for Calendar year 2002 with July 2003 Modifications" (Enclosure 2).

Your letter of May 19, 2003, and Reclamation's letter of July 29, 2003, anticipated additional discussions and methodology updates relating to "how the current methodology might be changed in the future to provide southern Nevada greater ability to fully develop and utilize its non-Colorado River water resources." Your recent letters propose specific administrative updates to reflect the anticipated importation of groundwater and surface water into the Las Vegas valley under Nevada state law and include a proposed procedure to streamline the existing methodology.

Reclamation agrees that the administrative updates to the Las Vegas valley return flow methodology proposed in your letter of June 6, 2007, and refined in your letter of November 2, 2007, provide an acceptable method of accounting for Nevada's consumptive use of Colorado River water. Beginning with calendar year 2008, Reclamation will account for Nevada's consumptive use of Colorado River water in accordance with Exhibit A of your November 2, 2007, letter entitled, "Nevada's Consumptive Use Accounting (page 1)" (Enclosure 3) when municipal and industrial (M&I) groundwater pumping in the Las Vegas valley is less than or equal to 47,340 acre-feet over the accounting year. Should the M&I groundwater pumping in the Las Vegas valley exceed 47,340 acre-feet over the accounting year, CRC will recalculate lines 6 and 9 of the above exhibit in accordance with Exhibit A of your November 2, 2007, letter entitled, "Nevada's Consumptive Use Accounting (page 2)" (Enclosure 4).

In reporting Nevada's consumptive use, Reclamation will utilize CRC's electronic water diversion and return flow data reporting system. If you have questions regarding the implementation of the changes in the calculation of Nevada's return flow methodology as described in this letter, please contact Mr. Paul Matuska at 702-293-8164. If you have administrative questions, please contact Ms. Ruth Thayer at 702-293-8426.

Sincerely,



Lorri Gray
Regional Director

Enclosures -- 4

cc: Mr. Herb R. Guenther
Director
Arizona Department of Water Resources
3550 North Central Avenue
Phoenix, AZ 85012-2105

Mr. Gerald R. Zimmerman
Executive Director
Colorado River Board of California
770 Fairmont Avenue, Suite 100
Glendale, CA 91203-1035
(with enclosures to each)



SOUTHERN NEVADA
WATER AUTHORITY

STATE OF NEVADA



COLORADO RIVER COMMISSION
OF NEVADA

June 6, 2007

Jayne Harkins, Acting Regional Director
Larry Walkoviak, Deputy Regional Director
U.S. Bureau of Reclamation
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

SUBJECT: LAS VEGAS VALLEY RETURN FLOW CREDIT METHODOLOGY

Dear Ms. Harkins and Mr. Walkoviak:

Thank you for meeting with Colorado River Commission (Commission) and Southern Nevada Water Authority (SNWA) staff on January 31, 2007, to discuss potential administrative updates to the current return flow credit methodology¹ for a more complete consumptive use reporting. As we discussed, the water resource portfolio in southern Nevada is changing. The SNWA intends to import non-Colorado River water into the Las Vegas Valley under Nevada state law. At this meeting we explored the manner in which the introduction of that water into the Las Vegas Valley's water portfolio might best be reflected in the existing consumptive use reporting. This discussion was a follow-up to that of May 1, 2003, summarized in our letter to you of May 19, 2003, and focused on administrative updates to the methodology.

The SNWA and the Commission believe that updating the methodology would cause it to better reflect current and anticipated water use patterns and hydrology of the Las Vegas Valley. The updated methodology would:

¹ References in this correspondence to the "return flow credit methodology" or "RFC Procedure" are references to the "Procedure for Determining Return Flow Credits to Nevada from Las Vegas Wash" (RFC Procedure) dated September 14, 1984, and subsequent modifications thereto, including those incorporated in correspondence between Reclamation and the Commission dated May 21, 1991, and May 13, 2003.

Jayne Harkins and Larry Walkoviak

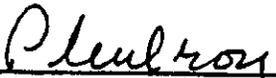
Page 2

June 6, 2007

- Report the importation of groundwater and surface water into the Las Vegas Valley;
- Presume that 98% of up to 180,000 acre feet per year of ground and surface water imported into the Las Vegas Valley under Nevada state law will be fully consumptively used either directly or via wastewater reuse in the Las Vegas Valley and not reaching Lake Mead and that all water reaching Lake Mead (less precipitation measured in the manner currently used in the RFC Procedure) is derived from Colorado River Water;
- Eliminate calculations which are no longer needed. This alteration will streamline the methodology by reflecting key elements of water use, re-use and return flow, but eliminating calculations which, although reflective of water use, are unnecessary to the determination of return flow credit;
- Utilize the Commission's electronic water diversion and return flow data reporting system so as to obtain all necessary data to ensure compliance with these objectives, thereby permitting Reclamation to verify water diversions, movement, use or non-use, reuse, conservation or other information necessary for Reclamation to perform its compliance obligations and Article V of the Consolidated Decree accounting responsibilities.
- The Commission's Consumptive Use Report would be consistent with Exhibit A, attached to this letter.

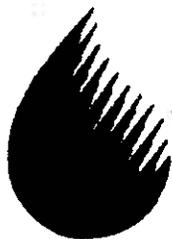
The SNWA and the Commission therefore request that the Bureau of Reclamation administratively update the methodology in accordance with this letter. Once you've had a chance to review this letter, we'd appreciate the opportunity to meet with you again so that the administrative update to the methodology can be finalized and implemented during calendar year 2008. Again, we appreciate your meeting with us regarding return flow credits for the Las Vegas valley.

Sincerely,


Patricia Mulroy, General Manager
Southern Nevada Water Authority


Richard W. Bunker, Chairman
Colorado River Commission of Nevada

Attachment



SOUTHERN NEVADA
WATER AUTHORITY

STATE OF NEVADA



COLORADO RIVER COMMISSION
OF NEVADA

November 2, 2007

Jayne Harkins, Deputy Regional Director
U.S. Bureau of Reclamation
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

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SUBJECT: LAS VEGAS VALLEY RETURN FLOW CREDIT METHODOLOGY

Dear Ms. Harkins:

By letter dated June 6, 2007 the Colorado River Commission of Nevada (CRC) and Southern Nevada Water Authority (SNWA) requested that the Bureau of Reclamation (BOR) administratively update the Las Vegas Valley return flow credit methodology. On September 12, 2007 BOR met with representatives of the Lower Basin states to discuss the proposed administrative updates to the methodology.

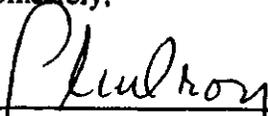
In advance of the September 12 meeting, California representatives raised concerns regarding that element of the methodology related to the calculation of the quantity of effluent that reaches Lake Mead as a result of M&I groundwater pumping in the Las Vegas Valley. At the September 12 meeting SNWA and CRC proposed a change to Exhibit A to include a recalculation of this element of the methodology to take into account the possibility of groundwater pumping in the Las Vegas Valley in excess of current quantities. It is SNWA and CRC's understanding that this proposed change was acceptable to all parties. A revised Exhibit A reflecting this change is enclosed and SNWA and CRC request that this revised Exhibit A replace the Exhibit A attached to the June 6 letter.

SNWA and CRC proposed in their June 6 letter that the methodology be updated to presume that 98% of all ground and surface water imported into the Las Vegas Valley under Nevada state law will be fully consumptively used either directly or via wastewater reuse in the Las Vegas Valley. This 2% reduction in imported water equates to an overall 5% reduction in the amount of the effluent that would have reached Lake Mead if the imported water were taken to full consumptive use. SNWA and CRC believe that this 5% overall reduction is consistent with previous agreements and request that BOR update the methodology accordingly.

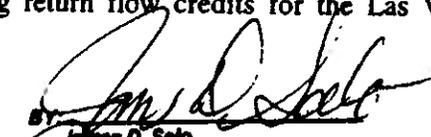
November 2, 2007
Letter to Jayne Harkins
Page 2

Therefore, based upon the information contained in both this letter and the June 6 letter, SNWA and CRC request that the Bureau of Reclamation administratively update the methodology. Again, we appreciate your meeting with us regarding return flow credits for the Las Vegas Valley.

Sincerely,



Patricia Mulroy, General Manager
Southern Nevada Water Authority



James D. Salo
Deputy Executive Director
Colorado River Commission- NV
Date: _____
George Caan, Executive Director
Colorado River Commission of Nevada

Enclosure

c: Herb Guenther, Director, Arizona Department of Water Resources
Jerry Zimmerman, Executive Director, Colorado River Board of California

Example: Total Nevada Return Flow Credit and Consumption Use by Category for Calendar Year 2002 with July 2003 Modifications in Bold Type

Line	Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Annual
1	Groundwater contributing to wastewater discharge to Wash	1,081	1,081	2,141	2,141	4,282	4,282	8,564	8,564	17,128	17,128	34,256	34,256	75,384	75,384
1A	Groundwater contributing to wastewater discharge to Wash	87	87	174	174	348	348	696	696	1,392	1,392	2,784	2,784	6,144	6,144
2	Total Colorado River Water (Deducted)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2A	Total CR Water (Deducted)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Colorado River Water (Deducted)	24,513	24,513	49,026	49,026	98,052	98,052	196,104	196,104	392,208	392,208	784,416	784,416	1,743,636	1,743,636
3A	Colorado River Water (Deducted)	10	10	20	20	40	40	80	80	160	160	320	320	720	720
4	Return of Groundwater To Total Water (1A + 2B)	28,503	28,503	57,006	57,006	114,012	114,012	228,024	228,024	456,048	456,048	912,096	912,096	2,048,256	2,048,256
4A	Return of Groundwater To Total Water (1A + 2B)	3,976	3,976	7,952	7,952	15,904	15,904	31,808	31,808	63,616	63,616	127,232	127,232	285,456	285,456
5	Wastewater Effluent Production And Availability	0.7%	1.7%	3.0%	3.0%	6.0%	6.0%	12.0%	12.0%	24.0%	24.0%	48.0%	48.0%	108.0%	108.0%
5A	Wastewater Effluent Production And Availability	13,600	13,600	27,200	27,200	54,400	54,400	108,800	108,800	217,600	217,600	435,200	435,200	982,400	982,400
6	Groundwater Production of Wastewater Effluent (2 + 4)	13,600	13,600	27,200	27,200	54,400	54,400	108,800	108,800	217,600	217,600	435,200	435,200	982,400	982,400
6A	Groundwater Production of Wastewater Effluent (2 + 4)	1,017	1,017	2,034	2,034	4,068	4,068	8,136	8,136	16,272	16,272	32,544	32,544	73,224	73,224
7	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7A	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8A	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9A	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10A	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11A	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12A	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13A	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14A	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15A	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16A	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17A	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A	Return of Wastewater Effluent (10 + 11 + 12)	15,733	15,733	31,466	31,466	62,932	62,932	125,864	125,864	251,728	251,728	503,456	503,456	1,133,568	1,133,568
A (1A + 2B) / (1 + 1A + 2B)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
B	Return of Wastewater Effluent (10 + 11 + 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B (1 + 1A + 2B)	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%	0.0%	0.0%
C	Return of Wastewater Effluent (10 + 11 + 12)	15,733	15,733	31,466	31,466	62,932	62,932	125,864	125,864	251,728	251,728	503,456	503,456	1,133,568	1,133,568
C (1A + 2B) / (1 + 1A + 2B)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
18	Total Las Vegas Valley Return Flow Credit (17 + B + C)	15,733	15,733	31,466	31,466	62,932	62,932	125,864	125,864	251,728	251,728	503,456	503,456	1,133,568	1,133,568
18A	Total Las Vegas Valley Return Flow Credit (17 + B + C)	15,733	15,733	31,466	31,466	62,932	62,932	125,864	125,864	251,728	251,728	503,456	503,456	1,133,568	1,133,568
19	Las Vegas Valley Consumption Use (2 + 10)	11,212	11,212	22,424	22,424	44,848	44,848	89,696	89,696	179,392	179,392	358,784	358,784	800,000	800,000
19A	Las Vegas Valley Consumption Use (2 + 10)	11,212	11,212	22,424	22,424	44,848	44,848	89,696	89,696	179,392	179,392	358,784	358,784	800,000	800,000
20	Other Colorado River Diversions (A+B+C and 19)	1,000	1,000	2,000	2,000	4,000	4,000	8,000	8,000	16,000	16,000	32,000	32,000	72,000	72,000
20A	Other Colorado River Diversions (A+B+C and 19)	1,000	1,000	2,000	2,000	4,000	4,000	8,000	8,000	16,000	16,000	32,000	32,000	72,000	72,000
21	Total Nevada Return Flow Credit (18 + 20)	16,733	16,733	33,466	33,466	66,932	66,932	133,864	133,864	267,728	267,728	535,456	535,456	1,205,568	1,205,568
21A	Total Nevada Return Flow Credit (18 + 20)	16,733	16,733	33,466	33,466	66,932	66,932	133,864	133,864	267,728	267,728	535,456	535,456	1,205,568	1,205,568
22	Difference in Total Nevada Return Flow Credit (without July 2003 modification) - with July 2003 modification	1,000	1,000	2,000	2,000	4,000	4,000	8,000	8,000	16,000	16,000	32,000	32,000	72,000	72,000
22A	Difference in Total Nevada Return Flow Credit (without July 2003 modification) - with July 2003 modification	1,000	1,000	2,000	2,000	4,000	4,000	8,000	8,000	16,000	16,000	32,000	32,000	72,000	72,000
23	Total Nevada Consumption Use with July 2003 modification	12,212	12,212	24,424	24,424	48,848	48,848	97,696	97,696	195,392	195,392	390,784	390,784	872,000	872,000
23A	Total Nevada Consumption Use with July 2003 modification	12,212	12,212	24,424	24,424	48,848	48,848	97,696	97,696	195,392	195,392	390,784	390,784	872,000	872,000
24	Difference in Total Nevada Consumption Use (without July 2003 modification) - with July 2003 modification	1,000	1,000	2,000	2,000	4,000	4,000	8,000	8,000	16,000	16,000	32,000	32,000	72,000	72,000
24A	Difference in Total Nevada Consumption Use (without July 2003 modification) - with July 2003 modification	1,000	1,000	2,000	2,000	4,000	4,000	8,000	8,000	16,000	16,000	32,000	32,000	72,000	72,000
25	Total Nevada Consumption Use (without July 2003 modification)	13,212	13,212	26,424	26,424	52,848	52,848	105,696	105,696	211,392	211,392	422,784	422,784	944,000	944,000
25A	Total Nevada Consumption Use (without July 2003 modification)	13,212	13,212	26,424	26,424	52,848	52,848	105,696	105,696	211,392	211,392	422,784	422,784	944,000	944,000

Exhibit A
(Example using approximate data)
Nevada's Consumptive Use Accounting (page 1)

Line	Item	Consumptive Use (AFY)
1	Above Hoover Dam	
2	Total Colorado River Water Diverted Above Hoover Dam	561,000
3	Gauged Flow of Las Vegas Wash below Lake Las Vegas (USGS #9419800)	297,000
4	Precipitation Runoff (Estimated)	12,000
5	Imported Groundwater and Surface Water	
6*	2 % of Imported Groundwater and Surface Water	100,000
7	Effluent Reaching Lake Mead From LV Valley M&I Groundwater Pumping	2,000
8	Total Las Vegas Wash Adjusted Gauge Flow (2-3-5-6)	0
9*	Total Other Nevada Flow to Lake Mead Above Hoover Dam	283,000
10	Colorado River Bypassing Gauge, less Phreatophyte Use below Gauge	2,000
	Consumptive Use Above Hoover (1-7-8-9)	1,000
		275,000
11	Below Hoover Dam	
12	Total Colorado River Water Diverted Below Hoover Dam	35,000
13	Total Flow to Colorado River Below Hoover Dam	10,000
	Consumptive Use Below Hoover Dam	25,000
14	Summary	
15	Total Diversions From Colorado River (1 + 11)	596,000
16	Total Nevada Flow to Colorado River (7 + 8 + 9+12)	296,000
	Total Nevada Consumptive Use (14 - 15)	300,000

*If Las Vegas Valley M&I Groundwater rights exceed 47,340, then lines 6 and 9 above will be recalculated based on method on page 2 and replaced with values from Lines 13 and D from page 2.

Exhibit A
(Example using approximate data)
Nevada's Consumptive Use Accounting (page 2)

Line	Item
1	Total Las Vegas Valley Groundwater
1A	Recovered Colorado River Water
2	Total Colorado River Water Diverted (S.N.W.S. - B.C. + B.M.L. - NPS)
2A	Total CR Water Recharged in the Las Vegas Valley
2AA	Total Imported Ground and Surface Water
2B*	Total Colorado River Water Less Recharge + Total Imported (2 - 2A + 2AA)
3*	Ratio of Groundwater to Total Water (1 / (1 + 1A + 2B))
4	Wastewater Effluent Produced and Available
5*	Groundwater Portion of Wastewater Effluent (3 x 4)
6	Historic Use (Pre-SNWS; Actual up to 9,190)
7	Phreatophyte Uses (Actual up to 12,000)
8	Total Secondary Use
9*	Additional Secondary Uses (8 - 6)
10*	Remaining Groundwater Effluent (8 - 6 - 7)
11*	Ratio of Remaining Groundwater Effluent (10 / (10 + 4 - 5))
12*	Additional Secondary Uses of Groundwater Effluent (11 x 9)
13*	Groundwater Effluent Remaining in Weir at Gage (10 - 12)
A	Ratio of Colorado River Water to Total Water Supply (1A + 2B) / (1 + 1A + 2B)
B	Underflow of Colorado River Water Bypassing Gage (A x 1600)
C	Phreatophyte Use of CR Water below Gauge (A x 300)
D	Colorado River Underflow less Phreatophyte Use below Gage