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§ 417.5 Duties of the Commissioner of Indian Affairs with respect to Indian reservations.

(a) The Commissioner of Indian Affairs (herein termed ''Commissioner'') will engage in consultations with various tribes and other water users on the Indian Reservations listed in Article II (D) of said Supreme Court Decree, similar to those engaged in by the Regional Director with regard to Contractors as provided in § 417.2 of this part. After consideration of all comments and suggestions advanced by said tribes and other water users on said Indian Reservations concerning water conservation measures and operating practices in the diversion, delivery, distribution and use of Colorado River water, the Commissioner shall, within the limits prescribed in said decree, make a determination as to the estimated amount of water to be diverted for use on each Indian Reservation covered by the above decree. Said determination shall be made prior to the beginning of each calendar year. That determination shall be based upon, but not necessarily limited to, such factors as: The area to be irrigated, climatic conditions, location, land classifications, the kinds of crops raised, cropping practices, the type of irrigation system in use, the condition of water carriage and distribution facilities, record of water orders, and rejections of ordered water, general operating practices, the operating efficiencies and methods of irrigation of the tribes and water users on each reservation, the amount and rate of return flows to the river, municipal water requirements, and other uses on the reservation. The Commissioner of Indian Affairs shall deliver to the Regional Director written notice of the amount of water to be diverted for use upon each Indian Reservation for each year 60 days prior to the beginning of each calendar year and the basis for said determination. The determination of the Commissioner shall be final and conclusive unless within 30 days of the date of receipt of such notice the Regional Director submits his written comments and objections to the Commissioner of Indian Affairs and requests further consultation. If after such further consultation, timely taken, the Commissioner does not modify his determination and so advises the Regional Director in writing or if modifications are made by the Commissioner but the Regional Director still does not agree therewith, the Regional Director may, within 30 days after receipt of the Commissioner's response, appeal to the Secretary of the Interior for a decision on the matter. During the pendency of such appeal and until disposition thereof by the Secretary, water deliveries will be made to the extent legally and physically available according to the Commissioner's determination or according to the Commissioner's determination for the preceding calendar year, whichever is less.

(b) Modifications of said determinations due to changed conditions, emergency or hardship may be made by the Commissioner, subject, however, to the right of the Regional Director to appeal to the Secretary, as provided in the case of an initial determination by the Commissioner. During the pendency of such an appeal, water deliveries will be made on the basis of the initial determination.

§ 417.6 General regulations.

In addition to the recommendations and determinations formulated according to the procedures set out above, the right is reserved to issue regulations of general applicability to the topics dealt with herein.

PART 418—OPERATING CRITERIA AND PROCEDURES FOR THE NEWLANDS RECLAMATION PROJECT, NEVADA

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APPENDIX A TO PART 418—CALCULATION OF EFFICIENCY EQUATION

AUTHORITY: 43 U.S.C. 391, et seq.; 43 U.S.C. 373; 43 U.S.C. 614, et seq.; 104 Stat. 3289, Pub. L. 101–618.

SOURCE: 62 FR 66467, Dec. 18, 1997, unless otherwise noted.

GENERAL PROVISIONS

§ 418.1 Definitions.

Bureau means the Bureau of Reclamation.

Decrees means the *Alpine* decree (*United States* v. *Alpine Land and Reservoir Co.*, 503 F. Supp. 877 (D. Nev. 1980)) and the *Orr Ditch* decree (*United States* v. *Orr Water Ditch Co.*, Equity No. A–3 (D. Nev.))

District means the Truckee-Carson Irrigation District or any other approved Newlands Project operator.

Eligible land means Project land which at the time of delivery has a valid water right and either:

(1) Is classified as irrigable under Bureau land classification standards (Reclamation Instruction Series 510); or

(2) Has a paid out Project water right.

Full reservoir means 295,500 acre-feet in Lahontan Reservoir using Truckee River diversions. The Reservoir can fill above 295,500 acre-feet to 316,500 acre-feet with Carson River inflow and the use of flash boards. Intentional storage on the flash boards will occur only after the peak runoff.

Project means the Newlands Irrigation Project in western Nevada.

§ 418.2 How Project water may be used.

Project water may be delivered only to serve valid water rights used for:

(a) Maintenance of wetlands and fish and wildlife including endangered and threatened species;

(b) Recreation;

(c) Irrigation of eligible land; and

(d) Domestic and other uses of Project water as defined by the decrees.

§ 418.3 Effect of these regulations on water rights.

This part governs water uses within existing rights. This part does not in any way change, amend, modify, abandon, diminish, or extend existing rights. Water rights transfers will be determined by the Nevada State Engineer under the provisions of the *Alpine* decree.

§ 418.4 Prohibited deliveries.

The District must not deliver Project water or permit its use except as provided in this part. No Project water will be released in excess of the maximum allowable diversion or delivered to ineligible lands. Delivery of water to

land in excess of established water duties is prohibited.

§418.5 Responsibility for violations.

Violations of the terms and provisions of this part must be reported immediately to the Bureau. The District or individual water users will be responsible for any shortages to water users occasioned by waste or excess delivery or delivery of water to ineligible land as provided in this part.

§418.6 Fallon Paiute-Shoshone Indian Reservation.

Nothing in this part affects:

(a) The authority of the Fallon Paiute-Shoshone Tribe to use water on the Tribe's reservation which was delivered to the Reservation in accordance with this part; or

(b) The Secretary's trust responsibility with respect to the Fallon Paiute-Shoshone Tribe.

CONDITIONS OF WATER DELIVERY

§418.7 Who may receive irrigation deliveries.

Project irrigation water deliveries may be made only to eligible land to be irrigated. The District must maintain records for each individual water right holder indicating the number of eligible acres irrigated and the amount of water ordered and delivered.

§418.8 Types of eligible land.

(a) *Eligible land actually irrigated.* During each year, the District, in cooperation with the Bureau, must identify and report to the Bureau the location and number of acres of eligible land irrigated in the Project. Possible irrigation of ineligible land will also be identified. The Bureau will review data to ensure compliance with this part. The District, in cooperation with the Bureau, will be responsible for field checking potential violations and immediately stopping delivery of Project water to any ineligible land. The Bureau may also audit as appropriate.

(b) *Eligible land with transferred water rights.* The District water rights maps dated August 1981 through January 1983 will be used as the basis for determining which lands have a valid water right. The original maps will be maintained by the District. The District must provide copies of the maps to the Bureau. The District will alter the maps and the copies to account for water right transfers as the transfers are approved by the Nevada State Engineer.

(c) *Other eligible land.* The Bureau will also identify eligible land that was not irrigated during the prior irrigation season.

§418.9 Reporting changes in eligible land.

(a) *Eligible land anticipated to be irrigated.* (1) Anticipated changes in irrigated eligible land from the prior year will be reported to the Bureau's Lahontan Area Office by the District by March 1 of each year. The District will adjust the acreage of the eligible land anticipated to be irrigated to correct for inaccuracies, water right transfers that have been finally approved by the Nevada State Engineer, and any other action that affects the number of eligible acres, acres anticipated to be irrigated, or water deliveries.

(2) As the adjustments are made, the District will provide updated information to the Bureau for review and approval. The District must adjust anticipated water allocations to individual water users accordingly. The allocations will at all times be based on a maximum annual entitlement of 3.5 acre-feet (AF) per acre of bottom land, 4.5 AF per acre of bench land, and 1.5 AF per acre of pasture land that is anticipated to be irrigated and not on the number of water-righted acres.

(3) The District will provide the individual water users with the approved data regarding the anticipated acreage to be irrigated and water allocations for each water user that year.

(i) Any adjustments based on changes in lands anticipated to be irrigated during the irrigation season must be reported by the individual water user to the District.

(ii) The District will, in turn, notify the Bureau of any changes in irrigated acreage which must be accounted for.

(iii) Each landowner's anticipated acreage must be less than or equal to the landowner's eligible acreage.

(4) Should a landowner believe that the number of acres of eligible land he or she is entitled to irrigate is different from the number of acres as approved by the Bureau, the landowner must notify the District and present appropriate documentation regarding the subject acreage. The District must record the information and present the claim to the Bureau for further consideration.

(i) If the Bureau determines there is sufficient support for the landowner's claim, then adjustments will be made to accommodate the changes requested by the landowner.

(ii) If the Bureau disallows the landowner's claim, the Bureau must notify the District in writing. The District will, in turn, inform the landowner of the disposition of the claim and the reasons therefore, and will further instruct the landowner that he or she may seek judicial review of the Bureau's determination under the decrees. If the dispute affects the current year, then the Bureau and the District will seek to expedite any court proceeding.

(b) *Changes in domestic and other uses.* By March 1 of each year, the District must report to the Bureau all anticipated domestic and other water uses. This notification must include a detailed explanation of the criteria used in allowing the use and sufficient documentation on the type and amount of use by each water user to demonstrate to the satisfaction of the Bureau that each water user is in compliance with the criteria. With adequate documentation, the District may notify the Bureau of any changes in domestic water requirements at any time during the year.

§ 418.10 Determining the amount of water duty to be delivered.

(a) Eligible land may receive no more than the amount of water in acre-feet per year established as maximum farm headgate delivery allowances by the decrees. All water use is limited to that amount reasonably necessary for economical and beneficial use under the decrees.

(b) The annual water duty as assigned by the decrees is a maximum of 4.5 AF per acre for bench lands and a maximum of 3.5 AF per acre for bottom lands. The water duty for fields with a mixture of bench and bottom lands must be the water duty of the majority acreage. Bench and bottom land designations as finally approved by the United States District Court for the District of Nevada will be used in determining the maximum water duty for any parcel of eligible land. The annual water duty for pasture land established by contract is 1.5 AF per acre.

§ 418.11 Valid headgate deliveries.

The valid water deliveries at the headgate are set by the product of eligible land actually irrigated multiplied by the appropriate water duty in accordance with §§ 418.8 and 418.10. The District will regularly monitor all water deliveries and report in accordance with § 418.9. No amount of water will be delivered in excess of the individual water user's headgate entitlement. In the event excess deliveries should occur, such amount will be automatically reflected in the efficiency deficit adjustment to the Lahontan storage. Water delivered in excess of entitlements must not be considered valid for purposes of computing project efficiency.

§ 418.12 Project efficiency.

(a) The principal feature of this part is to obtain a reasonable level of efficiency in supplying water to the headgate by the District. The efficiency targets established by this part are the cornerstone of the enforcement and the incentive provisions and when implemented will aid other competing uses.

(b) The efficiency is readily calculable at the year's end, readily applicable to water appropriate to that year, able to be compared to other irrigation systems even though there may be many dissimilarities, appropriate for long term averaging, adjustable to any headgate delivery level including droughts or allocations, automatically adjusts to changes during the year and accurately accounts for misappropriated water. Efficiency also can be achieved through any number of measures from operations to changes in the facilities and can be measured as an

end product without regard to the approach. Thus it is flexible enough to allow local decision making and yet is fact based to minimize disputes.

(c) Assuming the headgate deliveries are valid and enforceable, conveyance efficiency is the only remaining variable in determining the quantity of water needed to be supplied to the District. Conveyance efficiency is a measure of how much water is released into the irrigation system relative to actual headgate deliveries. Differences in efficiency, therefore, are directly convertible to acre-feet. The differences in efficiency, expressed as a quantity in acre-feet, may be added to or subtracted from the actual Lahontan Reservoir storage level before it is compared to the monthly storage objective. Thus, the diversions from the Truckee River, operation of other facilities (e.g., Stampede Reservoir) and decisions related to Lahontan Reservoir are made after the efficiency storage adjustments have been made. Operating decisions are made as if the adjusted storage reflected actual conditions.

(1) *Efficiency incentive credits.* In any year that the District's actual efficiency exceeds the target efficiency for the actual headgate delivery, two-thirds of the resultant savings, in water, will be credited to the District as storage in Lahontan. This storage amount will remain in Lahontan Reservoir as water available to the District to use at its discretion consistent with Nevada and Federal law. Such uses may include wetlands (directly or incidentally), power production, recreation, a hedge against future shortages or whatever else the District determines. The storage is credited at the end of the irrigation season from which it was earned. This storage ''floats'' on top of the reservoir so that if it is unused it will be spilled first if the reservoir spills. The District may use all capacity of Lahontan Reservoir not needed for project purposes to store credits.

(2) *Efficiency disincentive debits.* In any year that the District's actual efficiency falls short of the target appropriate to the actual headgate deliveries, then the resultant excess water that was used is considered borrowed from the future. Thus it becomes a storage debit adjustment to the actual Lahontan Reservoir storage level for determining all operational decisions. The debit may accumulate but may not exceed a maximum as defined in § 418.13(b). The debit must be offset by an existing incentive credit or, if none is available, by a subsequent incentive at a full credit (not a 2/3 credit), or finally by a restriction of actual headgate deliveries by the District. This would only be done prospectively (a subsequent year) so the District and the water users can prepare accordingly. Since the debit does not immediately affect other competing uses or the District (except in a real drought), it allows for future planning and averaging over time.

(3) *Efficiency targets.* To determine the efficiency target, the system delivery losses were divided into categories such as seepage, evaporation and operational losses. The ''reasonable'' level of savings for each category was then determined by starting with current operating experience and applying the added knowledge from several measures. Means of achieving the efficiency targets, including the specific conservation measures and amounts, are identified in the table Possible Water Conservation Measures for the Newlands Project. Applicable target efficiencies will be determined each year as described in § 418.13 (a)(4).

(4) *Available conservation measures.* The water conservation measures referred to in paragraph (c)(3) of this section and others currently available to the District are listed in the following table. The table has been revised based upon the Bureau of Reclamation's Final Report to Congress of the Newlands Project Efficiency Study, 1994.

POSSIBLE WATER CONSERVATION MEASURES FOR THE NEWLANDS PROJECT

Conservation measures[1]	Expected savings in acre-feet (AF) per year[2]	Notes
1. Water ordering	1,000	Require 48-hour advance notice.
2. Adjust Lahontan Dam releases frequently	++[3]	Match releases to demand with daily adjustments.
3. Increase accuracy of delivery records and measurement devices	12,000	Account for deliveries to nearest cfs and to nearest minute.
4. Change operation of regulating reservoirs	??[4]	Eliminate use of all or parts of regulating reservoirs; drain at end of season.
5. Shorten irrigation season	4,000	Reduce by 2 weeks.
6. Control delivery system	++	Eliminate spills, better scheduling, grouping deliveries.
7. System improvements	??	O&M activity: repair leaky gates, reshape canals, improve measuring devices.
8. Dike off 2/3 S-Line Reservoir	2,720	500 ft. dike; (5′ evaporation, 0.75′ seepage).
9. Dike off south half of Harmon Reservoir	2,130	5,000 ft. dike; large savings considering canal losses (5′ evap., 1.8′ seepage).
10. Dike off west half of Sheckler Reservoir	2,400	6,000 ft. dike.
11. Eliminate use of Sheckler Reservoir	4,000	Use for Lahontan spill capture only; restore 200 ft. of E-Canal; A-Canal is OK.
12. Line 20 miles of Truckee Canal[5]	20,000	Reduces O&M.
13. Line large canals	26,100–31,000	Line large net losers first.
14. Line regulatory reservoirs	2.3 AF/acre	
15. Reuse drain water for irrigation	7,100	Assuming blended water quality would be adequate
16. Ditch rider training each year	??	
17. Canal automation	??	Reduced canal fluctuations.
18. Community rotation system	??	Grouping deliveries by area.
19. Reclamation Reform Act water conservation plan:	??	District implementation of water conservation plan.
a. Weed and phreatophyte control		
b. Fix gate leaks		
c. Water measurement		
d. Automation		
e. Communication		
20. Pumps and wells for small diverters	400	
21. Water pricing by amount used	++	Incurs administrative costs to implement.
22. Incentive programs	??	For District personnel and/or water users.
23. Drain canals	1,065	At the end of each irrigation season.
24. Acquire parcels with inefficient delivery[6]	22,280	Acquire and retire water rights from irrigated acreage with particularly inefficient delivery. Lesser savings from transferring water rights to lands with more efficient delivery.

[1]The first seven measures were considered in developing the water budget in Table 1 for the 1988 OCAP. Additional measures could be implemented by the District to help achieve efficiency requirements.
[2]Water savings have been updated in accordance with Bureau of Reclamation's Report to Congress on Newlands Project Efficiency, April 1994.
[3]++ indicates a positive number for savings but not quantifiable at this time.
[4]?? indicates uncertainty as to savings.
[5]This measure was included in the 1988 OCAP and effects overall Project efficiency; it is recognized that savings from this measure are not accounted for in the OCAP.
[6]Identified in the 1994 BOR Efficiency Study: 31 Corporation, below Sagouspe Dam, and N Canal.

(5) The measures in paragraph (c)(4) of this section are discretionary choices for the District. The range of measures available to the District provides a level of assurance that the target efficiency is reasonably achievable. The resultant efficiency targets were also compared to the range of efficiencies actually experienced by other irrigation systems that were considered comparable in order to provide a further check on ''reasonable.'' Most of the delivery losses are relatively constant regardless of the amount of deliveries. The efficiency will necessarily vary with the amount of headgate deliveries.

(6) The target efficiency for any annual valid headgate delivery can be derived from the table in Appendix A to this part.

§ 418.13 Maximum allowable limits.

(a) *Maximum allowable diversions.* (1) A provisional water budget in the Newlands Project Water Budget table must be recalculated for each irrigation season to reflect anticipated water-righted acres to be irrigated. At the start of the irrigation season, the maximum allowable diversion (MAD)

for each year must be determined by revising the first 10 lines of the Newlands Project Water Budget table based on acres of eligible land anticipated to actually be irrigated in that year (§418.9(a)) and the water duties for those lands (§418.10). At the end of the irrigation season, the required target efficiency must be recalculated for the irrigation season based on the actual irrigated acres and percent use of headgate entitlements.

NEWLANDS PROJECT WATER BUDGET

Line		1988 OCAP[1], Base	1988 OCAP, 1992 Assumptions	1988 0CAP, 1992 w/o Additional Acres	1995 Example
1	Irrigated Acreage (acres)	60,900	64,850	61,630	59,075
2	Maximum Headgate Entitlement [2]	226,450	237,485	226,555	206,230
	Distribution System Losses				
	Evaporation:				
3	Canals/Laterals	6,000	6,200	6,000	5,838
4	Regulatory Reservoirs	15,000	7,500	7,500	7,500
	Seepage:				
5	Canals/Laterals	50,000	51,000	48,500	46,481
6	Regulatory Reservoirs	7,000	4,000	4,000	4,000
7	Operational Losses	87,980	40,800	39,400	38,270
8	TOTAL LOSSES [3]	165,980	109,500	105,400	102,089
9	Max. Allowable Diversion[4] (MAD)	392,430	346,985	331,955	308,319
10	Projected Efficiency (%) [5] Assuming 100% Water Use	58.4	68.4	68.2	66.9
11	Expected Headgate Entitlement Unused[6]	20,930	23,700	22,700	13,611
12	Diversion Reduction for Unused Water[7]	25,430	26,500	25,400	15,279
13	Expected Irrigation Diversions[8]	367,000	320,485	306,555	293,040
14	Expected Efficiency (%) [9]	56.0	66.7	66.5	65.7 [10]

1. All values are in acre-feet except where noted. The first 3 columns of numbers come from the 1988 OCAP, Table 1.
2. Derived by multiplying the acreage by the appropriate water duty.
3. In deriving the 1988 OCAP water budget, it was recognized that the District had reduced losses by 7,400 acre-feet prior to 1988.
4. Maximum Headgate Entitlement (line 2) plus Total Losses (line 8).
5. Maximum Headgate Entitlement (line 2) divided by Maximum Allowable Diversion (line 9) multiplied by 100.
6. Water delivery records show that, historically, lands have been irrigated with less than their full entitlement. In the 1988 OCAP base, the unused portion of the entitlement was assumed to be approximately 9 percent; in the 1988 OCAP 10 percent; in the 1995 example 6.6 percent.
7. Unused Water (line 11) plus a proportional share of Operational Loss (line 7).
8. Maximum Allowable Diversion (line 9) minus Diversion Reduction (line 12).
9. Maximum Headgate Entitlement (line 2) minus Unused Water (line 11) divided by Expected Irrigation Diversion (line 13) multiplied by 100.
10. Expected efficiency at 93.4 percent use of headgate entitlement; other entries based on 90 percent.

(2) The MAD will be calculated annually to ensure an adequate water supply for all water right holders whose water use complies with their decreed entitlement and this part. The MAD is the maximum amount of water permitted to be diverted for irrigation use on the Project in that year. It is calculated to ensure full entitlements can be provided, but is expected to significantly exceed Project requirements. The MAD will be established by the Bureau at least 2 weeks before the start of each irrigation season. All releases of

water from Lahontan Reservoir and diversions from the Truckee Canal (including any diversions from the Truckee Canal to Rock Dam Ditch) must be charged to the MAD except as provided in §§ 418.23 and 418.35 of this part.

(3) On the basis of the methodology adopted in this part (i.e., actual irrigated acres multiplied by appropriate water duties divided by established project efficiency) an example of the MAD calculated for the projected irrigated acreage as shown in the Newlands Project Water Budget table would be 308,319 acre-feet for the 1995 Example. The sample MAD corresponds to a system efficiency for full deliveries at 66.9 percent for 1995 actual acres. Target efficiencies must be based on the percentage of maximum headgate entitlement delivered and not on the percent of water supply available.

(4) The table Expected Project Distribution System Efficiency shows the target efficiencies which will be used over the range of irrigated acreage and percent use of entitlement expected in the future. At the beginning of the irrigation season, the target efficiencies from the Expected Project Distribution System Efficiency table used to calculate the MAD will be based on the expected irrigated acreage and expected percent use of entitlement. At the end of the irrigation season, the actual acreage irrigated and actual percent use of entitlement will be used to determine the required efficiency from the Expected Project Distribution System Efficiency. The target efficiencies are read directly from the table if the acreage and use of entitlement values are shown, otherwise the target efficiency must be extrapolated from the table or calculated using the Efficiency Equation. Appendix A of this part shows the calculations used to derive the Efficiency Equation and the efficiency targets.

Expected Project Distribution System Efficiency (Not Valid Below 75 Percent Headgate Delivery)														
Project Acreage	Efficiency Equation A and B values: Effic. = AxD + B		Actual Project Headgate Delivery Expressed as a Percent of Full Entitlement (efficiency equation variable D)											
	A	B	75%	80%	85%	90%	91%	92%	93%	94%	95%	96%	98%	100%
64,850	0.1840	49.02	62.8	63.7	64.7	65.6	65.8	65.9	66.1	66.3	66.5	66.7	67.1	67.4
64,500	0.1842	48.97	62.8	63.7	64.6	65.5	65.7	65.9	66.1	66.3	66.5	66.7	67.0	67.4
64,000	0.1845	48.90	62.7	63.7	64.6	65.5	65.7	65.9	66.1	66.2	66.4	66.6	67.0	67.3
63,500	0.1847	48.83	62.7	63.6	64.5	65.5	65.6	65.8	66.0	66.2	66.4	66.6	66.9	67.3
63,000	0.1850	48.76	62.6	63.6	64.5	65.4	65.6	65.8	66.0	66.2	66.3	66.5	66.9	67.3
62,500	0.1853	48.69	62.6	63.5	64.4	65.4	65.5	65.7	65.9	66.1	66.3	66.5	66.8	67.2
62,000	0.1856	48.62	62.5	63.5	64.4	65.3	65.5	65.7	65.9	66.1	66.2	66.4	66.8	67.2
61,500	0.1858	48.54	62.5	63.4	64.3	65.3	65.5	65.6	65.8	66.0	66.2	66.4	66.8	67.1
61,000	0.1861	48.47	62.4	63.4	64.3	65.2	65.4	65.6	65.8	66.0	66.1	66.3	66.7	67.1
60,500	0.1864	48.39	62.4	63.3	64.2	65.2	65.4	65.5	65.7	65.9	66.1	66.3	66.7	67.0
60,000	0.1867	48.31	62.3	63.3	64.2	65.1	65.3	65.5	65.7	65.9	66.1	66.2	66.6	67.0
59,500	0.1870	48.24	62.3	63.2	64.1	65.1	65.3	65.4	65.6	65.8	66.0	66.2	66.6	66.9
59,000	0.1873	48.16	62.2	63.1	64.1	65.0	65.2	65.4	65.6	65.8	66.0	66.1	66.5	66.9
58,500	0.1876	48.08	62.1	63.1	64.0	65.0	65.1	65.3	65.5	65.7	65.9	66.1	66.5	66.8
58,000	0.1879	47.99	62.1	63.0	64.0	64.9	65.1	65.3	65.5	65.7	65.8	66.0	66.4	66.8
57,500	0.1882	47.91	62.0	63.0	63.9	64.9	65.0	65.2	65.4	65.6	65.8	66.0	66.4	66.7
57,000	0.1886	47.83	62.0	62.9	63.9	64.8	65.0	65.2	65.4	65.6	65.7	65.9	66.3	66.7
56,500	0.1889	47.74	61.9	62.9	63.8	64.7	64.9	65.1	65.3	65.5	65.7	65.9	66.3	66.6
56,000	0.1892	47.66	61.8	62.8	63.7	64.7	64.9	65.1	65.3	65.4	65.6	65.8	66.2	66.6
55,500	0.1895	47.57	61.8	62.7	63.7	64.6	64.8	65.0	65.2	65.4	65.6	65.8	66.1	66.5
55,000	0.1899	47.48	61.7	62.7	63.6	64.6	64.8	64.9	65.1	65.3	65.5	65.7	66.1	66.5
54,500	0.1902	47.39	61.7	62.6	63.6	64.5	64.7	64.9	65.1	65.3	65.5	65.6	66.0	66.4
54,000	0.1906	47.30	61.6	62.5	63.5	64.4	64.6	64.8	65.0	65.2	65.4	65.6	66.0	66.4
53,500	0.1909	47.20	61.5	62.5	63.4	64.4	64.6	64.8	65.0	65.1	65.3	65.5	65.9	66.3
53,000	0.1913	47.11	61.5	62.4	63.4	64.3	64.5	64.7	64.9	65.1	65.3	65.5	65.9	66.2
52,500	0.1916	47.01	61.4	62.3	63.3	64.3	64.4	64.6	64.8	65.0	65.2	65.4	65.8	66.2
52,000	0.1920	46.91	61.3	62.3	63.2	64.2	64.4	64.6	64.8	65.0	65.2	65.3	65.7	66.1

(5) Adjustments in the MAD must be made by the Bureau each year based on changes in irrigated eligible land from the prior year and subsequent decisions concerning transfers of Project water rights, using the methodology established in this section.

(6) If the MAD for a given year will not meet the water delivery requirements for the eligible land to be irrigated due to weather conditions, canal breaks, or some other unusual or unforeseen condition, the District must ask the Bureau for additional water.

(i) The District's request must include a written statement containing a detailed explanation of the reasons for the request.

(ii) The Bureau must promptly review the request and after consultation with the Federal Water Master and other interested parties, will determine if the request or any portion of it should be approved. The Bureau will make reasonable adjustments for unforeseen causes or events but will not make adjustments to accommodate waste or Project inefficiency or other uses of water not in accordance with this part or with State and Federal law.

(iii) The Bureau will then notify the District of its determination. If the District does not agree with the Bureau's decision, it may seek judicial review. The Bureau and the District will seek to expedite the court proceeding in order to minimize any potential adverse effects.

(b) *Maximum allowable efficiency debits (MED).* The debits in Lahontan Reservoir storage from the District's actual conveyance efficiency not achieving the target efficiency can accumulate over time. If these amounts of borrowed storage get too large they may not be offset later by increased efficiencies and may severely affect the District's water users by imposing an added ''drought'' on top of a real one. Therefore, the maximum efficiency debit cushion is set at 26,000 acre-feet. However, unlike the MAD, it only applies to the subsequent year's operation. The MED is approximately 9 percent of the headgate entitlements.

MONITORING DIVERSIONS

§ 418.14 Recordkeeping requirements.

(a) By the end of each month, the District must submit to the Bureau's Lahontan Area Office reports for the previous month which document monthly inflow and outflow in acre-feet from the Truckee and Carson divisions of the Project for that month. Reports must include any data the Bureau may reasonably require to monitor compliance with this part.

(b) Accounting for farm headgate deliveries must be based on the amount of water actually delivered to the water user. Project operations must provide for the amount of water ordered and the distribution system losses.

(c) The District must keep records of all domestic and other water uses showing the purpose and amount of water usage for each entity. The District must make the records available for review by the Bureau upon request. The Bureau may audit all records kept by the District.

§ 418.15 Operations monitoring.

(a) The Bureau will work with the District to monitor Project operations and will perform field inspections of water distribution during the irrigation season.

(1) Staff members of the Bureau's Lahontan Area Office and the District will meet as often as necessary during the irrigation season after each water distribution report has been prepared to examine the amounts of water used to that point in the season.

(2) On the basis of the information obtained from field observations, water use records, and consultations with District staff, the Bureau will determine at monthly intervals whether the rate of diversion is consistent with this part for that year.

(3) The District will be informed in writing of suggested adjustments that may be made in management of diversions and releases as necessary to achieve target efficiencies and stay within the MAD.

(b) Project operations will be monitored in part by measuring flows at key locations. Specifically, Project diversions (used in the calculations under § 418.18 below) will be determined by:

(1) Adding flows measured at:

(i) Truckee Canal near Wadsworth—U.S. Geological Survey (USGS) gauge number 10351300;

(ii) Carson River below Lahontan Dam—USGS gauge number 10312150;

(iii) Rock Dam Ditch near the end of the concrete lining; and

(2) Subtracting:

(i) Flows measured at the Truckee Canal near Hazen—USGS gauge number 10351400;

(ii) The Carson River at Tarzyn Road near Fallon (below Sagouspe Dam) for satisfying water rights outside of the Project boundaries as described in § 418.25, USGS gauge number 10312275;

(iii) Estimated losses in the Truckee Canal; and

(iv) Spills, precautionary drawdown, and incentive water released at Lahontan Dam under §§ 418.24 and 418.36.

OPERATIONS AND MANAGEMENT

§ 418.16 Using water for power generation.

All use of Project water for power generation must be incidental to releases charged against Project diversions, precautionary drawdown, incentive water (§ 418.35), or spills.

§ 418.17 Truckee and Carson River water use.

Project water must be managed to make maximum use of Carson River water and to minimize diversions of Truckee River water through the Truckee Canal. This will make available as much Truckee River water as possible for use in the lower Truckee River and Pyramid Lake.

§ 418.18 Diversions at Derby Dam.

(a) Diversions of Truckee River water at Derby Dam must be managed to maintain minimum terminal flow to Lahontan Reservoir or the Carson River except where this part specifically permits diversions.

(b) Diversions to the Truckee Canal must be managed to achieve an average terminal flow of 20 cfs or less during times when diversions to Lahontan Reservoir are not allowed (the flows must be averaged over the total time diversions are not allowed in that calendar year; i.e., if flows are not allowed in July and August and then are allowed in September then not allowed in October and November, the average flow will be averaged over the four months of July, August, October, and November).

(c) The Bureau will work cooperatively with the District on monitoring the flows at the USGS gage on the Truckee Canal near Hazen to determine if and when flows are in excess of those needed in accord with this part and bringing the flows back into compliance when excessive.

(d) Increases in canal diversions which would reduce Truckee River flows below Derby Dam by more than 20 percent in a 24-hour period will not be allowed when Truckee River flow, as measured by the gauge below Derby Dam, is less than or equal to 100 cfs.

(e) Diversions to the Truckee Canal will be coordinated with releases from Stampede Reservoir and other reservoirs, in cooperation with the Federal Water Master, to minimize fluctuations in the Truckee River below Derby Dam in order to meet annual flow regimes established by the United States Fish and Wildlife Service for listed species in the lower Truckee River.

§ 418.19 Diversions from the Truckee River to the Truckee Division.

Sufficient water, if available, will be diverted from the Truckee River through the Truckee Canal to meet the direct irrigation, domestic and other entitlements of the Truckee Division.

§ 418.20 Diversions from the Truckee River to Lahontan Reservoir, January through June.

(a) Truckee River diversions through the Truckee Canal will be made to meet Lahontan Reservoir end-of-month storage objectives for the months of January through June. The current month storage objective will be based, in part, on the monthly Natural Resources Conservation Service (NRCS) April through July runoff forecast for the Carson River near Fort Churchill. The forecast will be used to determine the target storage for Lahontan Reservoir and anticipated diversion requirements for the Carson Division. The Bureau, in consultation with the District, Federal Water Master, Fish and Wildlife Service, the Pyramid Lake

Paiute Tribe, and other affected parties, will determine the exceedance levels and predicted Carson River inflows based on the reliability of the NRCS forecast and other available information such as river forecasts from other sources. The end-of-month storage objectives may be adjusted any time during the month as new forecasts or other information become available.

(b) The January through June storage objective will be calculated using the following formula:

$$LSOCM=TSM/J-(C1^* AJ)+L+(C2^* CDT)$$

Where:

(1) LSOCM=current end-of-month storage objectives for Lahontan Reservoir.

(2) TSM/J=current end-of-month May/June Lahontan Reservoir target storage.

(3) C1* AJ=forecasted Carson River inflow for the period from the end of the current month through May or June, with AJ being the Bureau's April through July runoff forecast for the Carson River at Fort Churchill and C1 being an adjustment coefficient.

(4) L=an average Lahontan Reservoir seepage and evaporation loss from the end of the current month through May or June.

(5) C2* CDT=projected Carson Division demand from the end of the current month through May or June, with CDT being the total Carson Division diversion requirement (based on eligible acres anticipated to be irrigated times the appropriate duty times a 95 percent usage rate), and C2 being the estimate of the portion of the total diversion requirement to be delivered during this period.

(6) Values for TSM/J will vary with the Carson Division water demand as shown in § 418.22 and the Adjustments to Lahontan Reservoir Storage Targets table. Values C1, L and C2 are defined in the following table along with an example of TSM/J for Carson River water demand of 271,000 acre-feet.

MONTHLY VALUES FOR LAHONTAN STORAGE COMPUTATIONS

	January	February	March	April	May	June
TSM/J	174.0	174.0	174.0	174.0	174.0	190.0
C1/MAY	0.863	0.734	0.591	0.394		
C1/JUNE	1.190	1.061	0.918	0.721	0.327	
L/MAY	13.9	12.5	9.9	7.1		
L/JUNE	18.2	16.8	14.2	11.4	4.3	
C2/MAY	0.30	0.30	0.28	0.18		
C2/JUNE	0.47	0.47	0.45	0.35	0.17	

(c) The Lahontan Reservoir storage objective for each month is contained in the following table.

LAHONTAN RESERVOIR STORAGE OBJECTIVES

Period	Monthly storage objective
January through April	Lowest of the May calculation, the June calculation, or full reservoir.
May	Lower of the June calculation or full reservoir.
June	June storage target.

(d) Once the monthly Lahontan Reservoir storage objective has been determined, the monthly diversion to the Project from the Truckee River will be based upon water availability and Project demand as expressed in the following relationship:

$$TRD=TDD+TCL+CDD+LRL+LSOCM-ALRS-CRI$$

Where:

(1) TRD=current month Truckee River diversion in acre-feet to the Project.

(2) TDD=current month Truckee Division demand.

(3) TCL = current month Truckee Canal conveyance loss.

(4) CDD = current month Carson Division demand.

(5) LRL = current month Lahontan Reservoir seepage and evaporation losses.

(6) LSOCM = current month end-of-month storage objective for Lahontan Reservoir.

(7) ALRS = current month beginning-of-month storage in Lahontan Reservoir. (Includes accumulated Stampede credit described below and further adjusted for the net efficiency penalty or efficiency credit described in §§ 418.12, 418.36, and 418.37).

(8) CRI = current month anticipated Carson River inflow to Lahontan Reservoir (as determined by Reclamation in consultation with other interested parties).

(e) The following procedure is intended to ensure that monthly storage objectives are not exceeded. It may be implemented only if the following conditions are met:

(1) Diversions from the Truckee River are required to achieve the current month Lahontan Reservoir storage objective (LSOCM);

(2) Truckee River runoff above Derby Dam is available for diversion to Lahontan Reservoir;

(3) Sufficient Stampede Reservoir storage capacity is available.

(f) The Bureau, in consultation with the Federal Water Master, the District, Fish and Wildlife Service, the Bureau of Indian Affairs, and the Pyramid Lake Paiute Tribe will determine whether the calculated current month Truckee River diversion to Lahontan Reservoir (TRD-TDD-TCL) may be reduced during that month and the amount of reduction credit stored in Stampede Reservoir.

(1) Reductions in diversions may begin in November and continue until the end of June.

(2) Reductions in diversions to Lahontan Reservoir with credit storage in Stampede Reservoir may be implemented to the extent that:

(i) The reduction is in lieu of a scheduled release from Stampede Reservoir for the purpose of supplementing flows to Pyramid Lake; and/or

(ii) Water is captured in Stampede Reservoir that is scheduled to be passed through and diverted to the Truckee Canal.

(3) The Fish and Wildlife Service must approve any proposal to reduce diversions to Lahontan Reservoir for Newlands Project credit purposes without a comparable reduction in release from Stampede Reservoir or any conversion of Stampede Reservoir project water to Newlands Project credit water.

(4) The diversion to Lahontan Reservoir may be adjusted any time during the month as revised runoff forecasts become available. The accumulated credit will be added to current Lahontan Reservoir storage (ALRS) in calculating TRD. If the sum of accumulated credit and Lahontan Reservoir storage exceeds 295,000 acre-feet, credit will be reduced by the amount in excess of 295,000 acre-feet. Credit will also be reduced by the amount of precautionary drawdown or spills in that month. If the end-of-month storage in Lahontan Reservoir plus the accumulated credit in Stampede Reservoir at the end of June exceeds the end-of-month storage objective for Lahontan, the credit will be reduced by the amount exceeding the end-of-month storage objective.

(5) Following consultation with the District, the Federal Water Master, and other interested parties as appropriate, the Bureau will release credit water as needed for Project purposes from July 1 through the end of the irrigation season in which the credit accrues with timing priority given to meeting current year Project irrigation demands.

(6) Conveyance of credit water in the Truckee Canal must be in addition to regularly scheduled diversions for the Project and will be measured at the USGS gauge number 10351300 near Wadsworth.

(7) Newlands credit water in Stampede Reservoir storage will be subject to spill and will not carry over to subsequent years. Newlands credit water in Stampede can be exchanged to other reservoirs and retain its priority. The credit must be reduced to the extent that Lahontan Reservoir storage plus accumulated credit at the end of the previous month exceeds the storage objectives for that month. If Newlands credit water is spilled, it may be diverted to Lahontan Reservoir subject to applicable storage targets.

(i) The Bureau, in consultation with the District, the Federal Water Master, and other interested parties, may release Newlands Project credit water before July 1.

(ii) If any Newlands credit water remains in Stampede Reservoir storage after the end of the current irrigation season in which it accumulated, it will convert to water for cui-ui recovery and will no longer be available for Newlands credit water.

(iii) Newlands credit water stored in Stampede Reservoir will be available for use only on the Carson Division of the Newlands Project.

(g) Subject to the provisions of § 418.20 (b), LSOCM may be adjusted as frequently as necessary when new information indicates the need and diversions from the Truckee River to the Truckee Canal must be adjusted daily

or otherwise as frequently as necessary to meet the monthly storage objective.

§ 418.21 Diversion of Truckee River water to Lahontan Reservoir, July through December.

Truckee River diversions through the Truckee Canal to Lahontan Reservoir from July through December must be made only in accordance with the Adjustments to Lahontan Reservoir Storage Targets table and § 418.22. Diversions shall be started to achieve the end-of-month storage targets listed in the table in § 418.22 and will be discontinued when storage is forecast to meet or exceed the end-of-month storage targets at the end of the month. Diversions may be adjusted any time during the month as conditions warrant (i.e., new forecasts, information from other forecasts becoming available, or any other new information that may impact stream forecasts).

§ 418.22 Future adjustments to Lahontan Reservoir storage targets.

(a) The Lahontan Reservoir storage targets must be adjusted to accommodate changes in water demand in the Carson Division. Using the information reported by the District by March 1 of each year on eligible land expected to be irrigated and end-of-year data on eligible land actually irrigated (§ 418.9(b)), the Bureau will determine if the Lahontan Reservoir storage targets need to be changed. If no change is needed, the storage targets currently in effect will remain in effect.

(1) Only the actual water demand reported for full water years (100 percent water supply) will be considered. Targets will not be changed based on water demand reported for less than full water years.

(2) All changes in storage targets must start on October 1 of any year. If information provided by March 1 and other available information indicates that the Lahontan Reservoir storage targets must be changed, the new set of storage targets must be applied starting October 1 of the same year and remain in effect until changed according to this section.

(b) All changes to storage targets will be made according to the table in this section. The table of storage targets has been developed to provide a consistent Project water supply over a range of demands.

(1) A storage target adjustment must be made in increments of thousands of acre-feet for the change as indicated in the column listing Carson Division Demand and the complete set of monthly targets must be applied.

(2) If the change in reported water demand is above or below the values in the table of storage targets, the adjustment to the storage targets can be calculated. The calculated adjustment is the number that would appear in the column Target Adjustment in the table. The calculated Target Adjustment is then added or subtracted to the base storage target for each month. Target Adjustments must be made in whole increments of 1,000 acre-feet and calculated values will be rounded to the nearest 1,000 acre-feet.

(i) For demands greater than those set forth on the table, the formula for the Target Adjustment is: Target Adjustment = 0.00208 (Demand in acre-feet—271,000 acre-feet). For example, if water demand increased to 292,635 acre-feet per year, the Target Adjustment calculation would be = $0.00208 \times (292{,}535 - 271{,}000)$. The result would be a Target Adjustment of 45 or 45,000 acre-feet. This would be added to the base monthly storage target values so, the January-May target would be 219,000 acre-feet, June would be 235,000 acre-feet, and so on.

(ii) For demands less than those set forth on the table, the formula for the Target Adjustment is: Target Adjustment = 0.00174 (Demand in acre-feet—271,000 acre-feet). For example, if water demand decreased to 248,011 acre-feet per year, the Target Adjustment calculation would be = $0.00174 \times (248{,}011 - 271{,}000)$. The result would be a Target Adjustment of −40 or −40,000 acre-feet. This would be subtracted from the base monthly storage target values so, the January-May target would be 134,000 acre-feet, June would be 150,000 acre-feet, and so on.

ADJUSTMENTS TO LAHONTAN RESERVOIR STORAGE TARGETS

Increase in Storage Targets for Carson Division Diversion Demand Greater than 271,000 acre-feet									
Target Adjust-ment	Carson Division Demand	Jan-May	June	July	Aug	Sep	Oct	Nov	Dec
0	271.0	174	190	160	100	64	52	74	101
1	271.5	175	191	161	101	65	53	75	102
2	272.0	176	192	162	102	66	54	76	103
3	272.4	177	193	163	103	67	55	77	104
4	272.9	178	194	164	104	68	56	78	105
5	273.4	179	195	165	105	69	57	79	106
6	273.9	180	196	166	106	70	58	80	107
7	274.4	181	197	167	107	71	59	81	108
8	274.8	182	198	168	108	72	60	82	109
9	275.3	183	199	169	109	73	61	83	110
10	275.8	184	200	170	110	74	62	84	111
11	276.3	185	201	171	111	75	63	85	112
12	276.8	186	202	172	112	76	64	86	113
13	277.3	187	203	173	113	77	65	87	114
14	277.7	188	204	174	114	78	66	88	115
15	278.2	189	205	175	115	79	67	89	116
16	278.7	190	206	176	116	80	68	90	117
17	279.2	191	207	177	117	81	69	91	118
18	279.7	192	208	178	118	82	70	92	119
19	280.1	193	209	179	119	83	71	93	120
20	280.6	194	210	180	120	84	72	94	121
21	281.1	195	211	181	121	85	73	95	122
22	281.6	196	212	182	122	86	74	96	123
23	282.1	197	213	183	123	87	75	97	124
24	282.5	198	214	184	124	88	76	98	125
25	283.0	199	215	185	125	89	77	99	126
26	283.5	200	216	186	126	90	78	100	127
27	284.0	201	217	187	127	91	79	101	128
28	284.5	202	218	188	128	92	80	102	129
29	284.9	203	219	189	129	93	81	103	130
30	285.4	204	220	190	130	94	82	104	131
31	285.9	205	221	191	131	95	83	105	132
32	286.4	206	222	192	132	96	84	106	133
33	286.9	207	223	193	133	97	85	107	134
34	287.3	208	224	194	134	98	86	108	135
35	287.8	209	225	195	135	99	87	109	136
36	288.3	210	226	196	136	100	88	110	137
37	288.8	211	227	197	137	101	89	111	138
38	289.3	212	228	198	138	102	90	112	139
39	289.8	213	229	199	139	103	91	113	140
40	290.2	214	230	200	140	104	92	114	141

Decrease in Storage Targets for Carson Division Diversion Demand Less than 271,000 acre-feet									
Target Adjust-ment	Carson Division Demand	Jan-May	June	July	Aug	Sep	Oct	Nov	Dec
0	271.0	174	190	160	100	64	52	74	101
-1	270.4	173	189	159	99	63	51	73	100
-2	269.9	172	188	158	98	62	50	72	99
-3	269.3	171	187	157	97	61	49	71	98
-4	268.7	170	186	156	96	60	48	70	97
-5	268.1	169	185	155	95	59	47	69	96
-6	267.6	168	184	154	94	58	46	68	95
-7	267.0	167	183	153	93	57	45	67	94
-8	266.4	166	182	152	92	56	44	66	93
-9	265.8	165	181	151	91	55	43	65	92
-10	265.3	164	180	150	90	54	42	64	91
-11	264.7	163	179	149	89	53	41	63	90
-12	264.1	162	178	148	88	52	40	62	89
-13	263.5	161	177	147	87	51	39	61	88
-14	263.0	160	176	146	86	50	38	60	87
-15	262.4	159	175	145	85	49	37	59	86
-16	261.8	158	174	144	84	48	36	58	85
-17	261.2	157	173	143	83	47	35	57	84
-18	260.7	156	172	142	82	46	34	56	83
-19	260.1	155	171	141	81	45	33	55	82
-20	259.5	154	170	140	80	44	32	54	81
-21	258.9	153	169	139	79	43	31	53	80
-22	258.4	152	168	138	78	42	30	52	79
-23	257.8	151	167	137	77	41	29	51	78
-24	257.2	150	166	136	76	40	28	50	77
-25	256.6	149	165	135	75	39	27	49	76
-26	256.1	148	164	134	74	38	26	48	75
-27	255.5	147	163	133	73	37	25	47	74
-28	254.9	146	162	132	72	36	24	46	73
-29	254.3	145	161	131	71	35	23	45	72
-30	253.8	144	160	130	70	34	22	44	71
-31	253.2	143	159	129	69	33	21	43	70
-32	252.6	142	158	128	68	32	20	42	69
-33	252.0	141	157	127	67	31	19	41	68
-34	251.5	140	156	126	66	30	18	40	67
-35	250.9	139	155	125	65	29	17	39	66
-36	250.3	138	154	124	64	28	16	38	65
-37	249.7	137	153	123	63	27	15	37	64

§ 418.23 Diversion of Rock Dam Ditch water.

Project water may be diverted directly to Rock Dam Ditch from the Truckee Canal only when diversions cannot be made from the outlet works of Lahontan Reservoir. Such diversions will require the prior written approval of the Bureau and be used in calculating Project diversions.

§ 418.24 Precautionary drawdown and spills from Lahontan Reservoir.

(a) Even though flood control is not a specifically authorized purpose of the Project, at the request of the District

and in consultation with other interested parties and the approval of the Bureau, precautionary drawdown of Lahontan Reservoir may be made to limit potential flood damage along the Carson River. The Bureau will develop criteria for precautionary drawdown in consultation with the District and other interested parties.

(1) The drawdown must be scheduled sufficiently in advance and at such a rate of flow in order to divert as much water as possible into the Project irrigation system for delivery to eligible land or storage in reregulating reservoirs for later use on eligible land.

(2) During periods of precautionary drawdown, or when water is spilled from Lahontan Reservoir, Project diversions will be determined by comparison with other years' data and normalized by comparison of differences in climatological data. The Bureau will estimate the normalization in consultation with the District and other interested parties.

(3) Spills from Lahontan Reservoir and precautionary drawdown of the reservoir to create space for storing flood waters from the Carson River Basin that are in excess of the normalized diversions will not be used in calculating Project diversions.

(4) Water captured in Project facilities as a result of a precautionary drawdown or spill will not be counted as storage in Lahontan Reservoir for the purpose of calculating Truckee River Diversions. Such water will not be counted as diversions to the Project unless such water is beneficially applied as described in (a)(5) of this section.

(5) Water from precautionary drawdowns or spills that is captured in Project facilities must be used to the maximum extent possible, and counted as deliveries to eligible lands in the year of the drawdown. If all the drawdown water captured in Project facilities cannot be used in the year of capture for delivery to eligible lands, then that water must be delivered to eligible lands in subsequent years to the maximum extent possible and counted against the water users' annual allocation.

(b) If a precautionary drawdown in one month results in a failure to meet the Lahontan Reservoir storage objective for that month, the storage objective in subsequent months will be reduced by one-half of the difference between that month's storage objective and actual end-of-month storage. The Bureau is not liable for any damage or water shortage resulting from a precautionary drawdown.

§ 418.25 Water use for other than Newlands Project purposes.

The District will release sufficient water to meet the vested water rights below Sagouspe Dam as specified in the *Alpine* decree. These water rights are usually met by return flows. Releases for these water rights will in no case exceed the portion of 1,300 acre-feet per year not supplied by return flows. This water must be accounted for at the USGS gauge number 10312275 (the Carson River at Tarzyn Road near Fallon). Releases for this purpose will not be considered in determining Project diversions since the lands to which the water is being delivered are not part of the Project. (See § 418.15(b)(2)(ii).) Any flow past this gage in excess of the amount specified in this part will be absorbed by the District as an efficiency loss.

§ 418.26 Charges for water use.

The District must maintain a financing and accounting system which produces revenue sufficient to repay its operation and maintenance costs and to discharge any debt to the United States. The District should give consideration to adopting a system which provides reasonable financial incentives for the economical and efficient use of water.

§ 418.27 Distribution system operation.

(a) The District must permit only its authorized employees or agents to open and close individual turnouts and operate the distribution system facilities. After obtaining Bureau approval, the District may appoint agents to operate individual headgates on a specific lateral if it can be shown that the water introduced to the lateral by a District employee is completely scheduled and can be fully accounted for with a reasonable allowance for seepage and evaporation losses.

(b) If agents need to adjust the scheduled delivery of water to the lateral to accommodate variable field conditions, weather, etc., they must immediately notify the District so proper adjustments can be made in the distribution system. Each agent must keep an accurate record of start and stop times for each delivery and the flow during delivery. This record will be given to the District for proper accounting of water delivered.

(c) The program of using agents to operate individual headgates will be reviewed on a regular basis by the District and the Bureau. If it is found that problems such as higher than normal losses, water not accounted for, etc., have developed on an individual lateral, the program will be suspended and the system operated by District employees until the problems are resolved.

ENFORCEMENT

§ 418.28 Conditions of delivery.

There are four basic elements for enforcement with all necessary quantities and review determined in accordance with the relevant sections of this part.

(a) *Valid headgate deliveries*. If water is delivered to ineligible land or in excess of the appropriate water duty then:

(1) The District will stop the illegal delivery immediately;

(2) The District will notify the Bureau of the particulars including the known or estimated location and amounts;

(3) The amount will not be included as a valid headgate delivery for purposes of computing the Project efficiency and resultant incentive credit or debit to Lahontan storage; and

(4) If the amount applies to a prior year, then the amount will be treated directly as a debit to Lahontan storage in the same manner as an efficiency debit.

(b) *District efficiency*. To the extent that the actual District efficiency determined for an irrigation season is greater or less than the established target efficiency, as determined for the corresponding actual valid headgate deliveries, then the difference in efficiency, expressed as a quantity in acre-feet, may be added to or subtracted from the actual Lahontan Reservoir storage level before it is compared to the monthly storage objective as follows:

(1) Greater efficiency—Credited to the District as storage in Lahontan or subtracted from any accumulated debit, or two-thirds as storage in Lahontan for their discretionary use in accordance with state law.

(2) Less efficient—Debited or added to Lahontan storage as an adjustment to the actual storage level.

(c) *Maximum Allowable Diversion (MAD)*. The MAD must be computed each year to determine the amount of water required to enable the delivery of full entitlements at established Project efficiencies. Project diversions must not exceed the MAD. Within the operating year, the Bureau will notify the District in writing of any expected imminent violations of the MAD. The District will take prompt action to avoid such violations. The Bureau will exercise reasonable latitude from month to month to accommodate the District's efforts to avoid exceeding the MAD.

(d) *Maximum Efficiency Debit (MED)*. If the MED exceeds 26,000 AF at the end of any given year, the District must prepare and submit to the Bureau for review and approval, a plan detailing the actions the District will take to either earn adequate incentive credits or to restrict deliveries to reduce the MED to less than 26,000 AF by the end of the next year. The plan must be submitted to the Bureau in writing before the date of March 1 immediately subsequent to the exceeding of the MED. If the District fails to submit an approvable plan, Project allocations will be reduced by an amount equal to the MED in excess of 26,000 plus 13,000 (one-half the allowable MED). Nominally this will mean a forced reduction of approximately five percent of entitlements. The Bureau will notify the District in writing of the specific allocation and method of derivation in sufficient time for the District to implement the allocation. Liabilities arising from shortages occasioned by operation of this provision must be the responsibility of the District or individual water users.

§ 418.29 Project management.

In addition to the provisions of § 418.28, if the District is found to be operating Project facilities or any part thereof in substantial violation of this part, then, upon the determination by the Bureau, the Bureau may take over from the District the care, operation, maintenance, and management of the diversion and outlet works (Derby Dam and Lahontan Dam/Reservoir) or any or all of the transferred works by giving written notice to the District of the determination and its effective date. Following written notification from the Bureau, the care, operation, and maintenance of the works may be retransferred to the District.

§ 418.30 Provisions required in future contracts.

The Bureau must provide in new, amended, or replacement contracts for the operation and maintenance of Project works, for the reservation by the Secretary of rights and options to enforce this part.

WATER MANAGEMENT AND CONSERVATION

§ 418.31 Conservation measures.

(a) Specific conservation actions will be needed for the District and its members to achieve a reasonable efficiency of operation as required by this part. The District is best able to determine the particular conservation measures that meet the needs of its water users. This ensures that the measures reflect the priorities and collective judgment of the water users; and will be practical, understandable and supported. The District also has the discretion to make changes in the measures they adopt as conditions or results dictate.

(b) The District will keep the Bureau informed of the measures they expect to utilize during each year. This will enable the Bureau to stay apprised of any helpful information that may, in turn, help the Bureau assist other irrigation districts. The Bureau will work cooperatively in support of the District's selection of measures and methods of implementation.

§ 418.32 Cooperative programs.

(a) The Bureau and the District will work cooperatively to develop a water management and conservation program to promote efficient management of water in the Project. The program will emphasize developing methods, including computerization and automation, to improve the District's operations and procedures for greater water delivery conservation.

(b) The Bureau will provide technical assistance to the District and cooperatively assist the District in their obligations and efforts to:

(1) Document and evaluate existing water delivery and measurement practices:

(2) Implement improvements to these practices; and

(3) Evaluate and, where practical, implement physical changes to Project facilities.

IMPLEMENTATION

§ 418.33 Purpose of the implementation strategy.

The intent of the implementation strategy for this part is to ensure that the District delivers water within entitlements at a reasonable level of efficiency as a long term average.

(a) The incentives and disincentives provided in this part are designed to encourage local officials with responsibilities for Project operations to select and implement through their discretionary actions, operating strategies which achieve the principles of this part.

(b) The specified efficiencies in the Expected Project Distribution System Efficiency table (§ 418.13 (a)(4)) were developed considering implementation of reasonable conservation measures, historic project operations, economics, and environmental effects.

(c) The efficiency target will be used as a performance standard to establish at the end of each year on the basis of actual operations, whether the District is entitled to a performance bonus in the form of incentive water or a reduction in storage for the amount borrowed ahead.

§ 418.34 Valid headgate deliveries.

Project water may be delivered to headgates only as provided in §§ 418.8 and 418.10. Water delivered to lands that are not entitled to be irrigated or not in accord with decreed water duties is difficult to quantify at best because it is not typically measured. Since it is not likely to be a part of the total actual headgate deliveries, yet is a part of the total deliveries to the Project, it will manifest itself directly as a lower efficiency. Thus, it will either reduce the District's incentive credit or increase the storage debit by the amount improperly diverted. All other users outside the Project are thereby held harmless but the District incurs the consequence. This approach should eliminate any potential disputes between the District and the Bureau regarding the quantity of water misappropriated.

§ 418.35 Efficiencies.

The established target efficiencies under this part are shown in the Expected Project Distribution System Efficiency table (§ 418.13 (a)(4)). The efficiency of the Project will vary with the amount of entitlement water actually delivered at the headgates. Since most of the distribution system losses such as evaporation and seepage do not change significantly with the amount of water delivered (i.e., these losses are principally a function of water surface area and the wetted perimeter of the canals), the Project efficiency requirement is higher as the percent of entitlement water actually delivered at the headgates increases. The actual efficiency is calculated each year after the close of the irrigation season based on actual measured amounts. The application of any adjustments to Lahontan Reservoir storage or Truckee River diversions resulting from the efficiency is always prospective.

§ 418.36 Incentives for additional long term conservation.

(a) As an incentive for the District to increase the efficiency of the delivery system beyond the expected efficiency of 65.7 percent (66.9 percent with full delivery) as shown in the Newlands Project Water Budget table, 1995 Example, the District will be allowed to store and use the Carson River portion of the saved water at its discretion, in accordance with Nevada State Law and this part.

(1) If the District is able to exceed its expected efficiency, the District may store in Lahontan Reservoir two-thirds (2/3) of the additional water saved. (The remaining one-third (1/3) of the water saved will remain in the Truckee River through reduced diversions to Lahontan Reservoir). This water will be considered incentive water saved from the Carson River and will not be counted as storage in determining diversions from the Truckee River or computing the target storage levels for Lahontan Reservoir under this part.

(2) For purposes of this part, incentive water is no longer considered Project water. The District may use the water for any purpose (e.g., wetlands, storage for recreation, power generation, shortage reduction) that is consistent with Nevada State Law and Federal Law. The water will be managed under the District's discretion and may be stored in Lahontan Reservoir until needed subject to the limitations in (a)(3) of this section.

(3) The amount of incentive water stored in Lahontan Reservoir will be reduced under the following conditions:

(i) There is a deficit created and remaining in Lahontan Reservoir from operations penalties in a prior year;

(ii) The District releases the water from the reservoir for its designated use;

(iii) During a spill of the reservoir, the amount of incentive water must be reduced by the amount of spill; and

(iv) At the discretion of the District, incentive water may be used to offset the precautionary drawdown adjustment to the Lahontan storage objective.

(v) At the end of each year, the amount of incentive water will be reduced by the incremental amount of evaporation which occurs as a result of the increased surface area of the reservoir due to the additional storage. The evaporation rate used will be either the net evaporation measured or the net historical average after precipitation is taken into account. The method of calculation will be agreed to

by the District and the Bureau in advance of any storage credit.

(b) An example of this concept is:

Example: Incentive Operation—(1) At the end of the 1996 irrigation season, the Bureau and the District audit the District's water records for 1996. The District's water delivery records show that 194,703 acre-feet of water were delivered to farm headgates. On the basis of their irrigated acreage that year (59,075) the farm headgate entitlement would have been 216,337 acre-feet. On the basis of 90 percent deliveries for 59,075 acres (194,203 divided by 216,337 = 0.90) the established Project efficiency requirement was 65.1 percent. (2) On the basis of the established Project efficiency (66.1 percent), the Project diversion required to make the headgate deliveries would be expected to be 291,909 acre-feet (194,703 divided by 0.651 = 291,909). An examination of Project records reveals that the District only diverted 286,328 acre-feet which demonstrated actual Project efficiency was 68 percent and exceeded requirements of this part.

(3) The 5,581 acre-feet of savings (291,909–286,328 = 5,581) constitutes the savings achieved through efficiency improvements and the District would then be credited two-thirds (3,721 acre-feet=5,581×2/3) of this water (deemed to be Carson River water savings) as incentive water.

(4) This incentive water may be stored in Lahontan Reservoir or otherwise used by the District in its discretion consistent with State and Federal Law (e.g., power generation, recreation storage, wildlife, drought protection, etc.).

§ 418.37 Disincentives for lower efficiency.

(a) If the District fails to meet the efficiencies established by this part, then, in effect, the District has borrowed from a subsequent year. The amount borrowed will be accounted for in the form of a deficit in Lahontan Reservoir storage. This deficit amount will be added to the actual Lahontan Reservoir storage quantity for the purpose of determining the Truckee River diversions to meet storage objectives as well as all other operating decisions.

(b) The amount of the deficit will be cumulative from year to year but will not be allowed to exceed 26,000 acre-feet (the expected variance between the MAD and actual water use). This limit is expected to avoid increasing the severity of drought and yet still allow for variations in efficiency over time due to weather and other factors. This approach should allow the District to plan its operation to correct for any deficiencies.

(c) The deficit can be reduced by crediting incentive water earned by the District or reducing the percentage of headgate entitlement delivered either through a natural drought or by the District and its water users administratively limiting deliveries while maintaining an efficiency greater than or equal to the target efficiency.

(d) If there is a natural drought and the shortage to the headgates is equal to or greater than the deficit, then the deficit is reduced to zero. If the shortage to headgates is less than the deficit then the deficit is reduced by an amount equal to the headgate shortage. During a natural drought, if the percentage of maximum headgate entitlement delivered is 75 percent or more then the District will be subject to the target efficiencies and resultant deficits or credits.

(e) If the District has a deficit in Lahontan Reservoir and earns incentive water, the incentive water must be used to eliminate the deficit before it can be used for any other purpose. The deficit must be credited on a 1 to 1 basis (i.e., actual efficiency savings rather than ⅓–⅔ for incentive water).

(f) An example of the penalty concept is:

Example: Penalty—In 1996 the District delivers 90 percent of the maximum headgate entitlement or 194,703 acre-feet 216,337×.90) but actually diverts 308,000 acre-feet. The efficiency of the Project is 63.2 percent (194,703 divided by 308,000). Since the established efficiency of 65.1 percent would have required a diversion of only 299,083 acre-feet (194,703 divided by .651) the District has operated the system with 8,917 acre-feet of excess losses. Therefore, 8,917 acre-feet was borrowed and must be added to the actual storage quantities of Lahontan Reservoir for calculating target storage levels and Truckee River diversions.

§ 418.38 Maximum allowable diversion.

(a) The MAD established in this part is based on the premise that the Project should be operated to ensure that it is capable of delivering to the headgate of each water right holder the full water entitlement for irrigable eligible acres and includes distribution system losses. The MAD will be established (and is likely to vary) each year.

The annual MAD will be calculated each year based on the actual acreage to be irrigated that year.

(b) Historically, actual deliveries at farm headgates have been approximately 90 percent of entitlements. This practice is expected to continue but the percentage is expected to change. This variance between headgate deliveries and headgate entitlements will be calculated annually under this part and is allowed to be diverted if needed and thereby provides an assurance that full headgate deliveries can be made. The expected diversion and associated efficiency target for the examples shown in the Newlands Project Water Budget table would be: 285,243 AF and 65.1 percent in 1996 and beyond. These are well below the MAD limits; however, the District may divert up to the MAD if it is needed to meet valid headgate entitlements.

Calculation of Efficiency Equation Slope and Y-Intercept for Adjusted OCAP

	1988 OCAP		With Adjusted OCAP										
	Projected for 1992	Without added ac.											
Irrigated Acreage	64,850	61,630	64,850	64,500	64,000	63,500	63,000	62,500	62,000	61,500	61,000	60,500	60,000
Max. Headgate Entitlement	237,485	226,555	226,586	225,363	223,616	221,869	220,122	218,375	216,628	214,881	213,134	211,387	209,640
Distribution System Losses													
Evaporation													
Canals/Laterals	6,200	6,000	6,200	6,178	6,147	6,116	6,085	6,054	6,023	5,992	5,961	5,930	5,899
Reg. Reservoirs	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500
Seepage													
Canals/Laterals	51,000	48,500	51,000	50,728	50,340	49,952	49,564	49,175	48,787	48,399	48,011	47,623	47,234
Reg. Reservoirs	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Operational Losses	40,800	39,400	40,800	40,648	40,430	40,213	39,996	39,778	39,561	39,343	39,126	38,909	38,691
Total System Losses	109,500	105,400	109,500	109,054	108,418	107,781	107,144	106,508	105,871	105,234	104,598	103,961	103,325
100% Use of Entitlement:													
Allowable Diversion	346,985	331,955	336,086	334,417	332,034	329,650	327,266	324,883	322,499	320,115	317,732	315,348	312,965
Conveyance Efficiency	68.44%	68.25%	67.42%	67.39%	67.35%	67.30%	67.26%	67.22%	67.17%	67.13%	67.08%	67.03%	66.99%
75% Use of Entitlement:													
Headgate Ent. Unused	59,371	56,639	56,646	56,341	55,904	55,467	55,031	54,594	54,157	53,720	53,284	52,847	52,410
Headgate Delivery	178,114	169,916	169,939	169,022	167,712	166,402	165,092	163,781	162,471	161,161	159,851	158,540	157,230
Diversion Reduction	68,717	65,554	65,563	65,209	64,704	64,198	63,693	63,187	62,682	62,176	61,671	61,165	60,660
Allowable Diversion	278,268	266,401	270,523	269,208	267,330	265,452	263,574	261,696	259,817	257,939	256,061	254,183	252,305
Conveyance Efficiency	64.01%	63.78%	62.82%	62.78%	62.74%	62.69%	62.64%	62.58%	62.53%	62.48%	62.43%	62.37%	62.32%
Slope	0.1774	0.1787	0.1840	0.1842	0.1845	0.1847	0.1850	0.1853	0.1856	0.1858	0.1861	0.1864	0.1867
Y-Intercept	50.70	50.38	49.02	48.97	48.90	48.83	48.76	48.69	48.62	48.54	48.47	48.39	48.31

Note: (1) The average water duty with Adjusted OCAP assumed to be 3.494 acre-feet/acre based on 1995 conditions.

(2) The conveyance efficiency of the unused entitlement (75% use) assumed to be 86.4% based on Figure 1 and Table 1 of 1988 OCAP.

Calculation of Efficiency Equation Slope and Y-Intercept for Adjusted OCAP

Adjusted OCAP (continued)

Calculation of Efficiency Equation Slope and Y-Intercept for Adjusted OCAP																
Adjusted OCAP (continued)																
Irrigated Acreage	59,500	59,000	58,500	58,000	57,500	57,000	56,500	56,000	55,500	55,000	54,500	54,000	53,500	53,000	52,500	52,000
Max. Headgate Ent.	207893	206146	204399	202652	200905	199158	197411	195664	193917	192170	190423	188676	186929	185182	183435	181688
Distribution Losses																
Evaporation																
Canal/Laterals	5868	5837	5806	5775	5743	5712	5681	5650	5619	5588	5557	5526	5495	5464	5433	5402
Reg. Reservoirs	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500
Seepage																
Canal/Laterals	46846	46458	46070	45682	45293	44905	44517	44129	43741	43352	42964	42576	42188	41800	41411	41023
Reg. Reservoirs	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
Operational Losses	38474	38257	38039	37822	37604	37387	37170	36952	36735	36517	36300	36083	35865	35648	35430	35213
Total System Losses	102688	102051	101415	100778	100141	99505	98868	98231	97595	96958	96321	95685	95048	94411	93775	93138
100% Use of Ent.																
Allowable Diversion	310581	308197	305814	303430	301046	298663	296279	293895	291512	289128	286744	284361	281977	279593	277210	274826
Convey. Efficiency	66.94%	66.89%	66.84%	66.79%	66.74%	66.68%	66.63%	66.58%	66.52%	66.47%	66.41%	66.35%	66.29%	66.23%	66.17%	66.11%
75% Use of Ent.																
Entitlement Unused	51973	51537	51100	50663	50226	49790	49353	48916	48479	48043	47606	47169	46732	46296	45859	45422
Headgate Delivery	155920	154610	153299	151989	150679	149369	148058	146748	145438	144128	142817	141507	140197	138887	137576	136266
Diversion Reduction	60154	59649	59143	58638	58132	57627	57121	56616	56110	55605	55099	54594	54088	53583	53077	52572
Allowable Diversion	250427	248549	246670	244792	242914	241036	239158	237280	235401	233523	231645	229767	227889	226011	224133	222254
Convey. Efficiency	62.26%	62.20%	62.15%	62.09%	62.03%	61.97%	61.91%	61.85%	61.78%	61.72%	61.65%	61.59%	61.52%	61.45%	61.38%	61.31 %
Slope	0.1870	0.1873	0.1876	0.1879	0.1882	0.1886	0.1889	0.1892	0.1895	0.1899	0.1902	0.1906	0.1909	0.1913	0.1916	0.1920
Y-Intercept	48.24	48.16	48.08	47.99	47.91	47.83	47.74	47.66	47.57	47.48	47.39	47.30	47.20	47.11	47.01	46.91
Note: (1) The average water duty with Adjusted OCAP assumed to be 3.494 acre-feet/acre based on 1995 conditions.																
(2) The conveyance efficiency of the unused entitlement (75% use) assumed to be 86.4% based on Figure 1 and Table 1 of 1988 OCAP.																