

<p>DISTRICT COURT, WATER DIVISION 4, COLORADO 1200 N. Grand Avenue, Bin A Montrose, CO 81401</p> <p>CONCERNING THE APPLICATION FOR WATER RIGHTS OF UPPER GUNNISON RIVER WATER CONSERVANCY DISTRICT</p> <p>in Gunnison County.</p>	<p style="text-align: center;">▲ COURT USE ONLY ▲</p> <p style="text-align: center;">Case Number: 03 CW 49</p>
<p style="text-align: center;">FINDINGS OF FACT, CONCLUSIONS OF LAW, RULING OF THE REFEREE, AND JUDGMENT AND DECREE OF THE WATER COURT</p>	

This matter comes before the Referee upon the application of the Upper Gunnison River Water Conservancy District (District) for approval of a plan for augmentation including exchange. The Referee, having made such investigations as are necessary to determine whether the statements in the application are true, and having become fully advised with respect to the subject matter of the application, hereby enters and makes the following Ruling.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

1. The Application for Approval of Plan for Augmentation Including Exchange was filed on February 26, 2003.
2. Timely and adequate notice of the pendency of this proceeding *in rem* was given in the manner required by law. This Court has jurisdiction over the subject matter of this proceeding and over all who have standing to appear as parties, whether they have appeared or not.
3. Statements of opposition were timely filed by the Colorado Water Conservation Board (CWCB), Redlands Water & Power Company and Uncompahgre Valley Water Users Association. No person or entity sought to intervene. The time for filing statements of opposition and motions to intervene has expired.

4. The consultation report of the Division Engineer was filed with the Water Referee on May 24, 2005. A copy of the report was served on all parties on May 26, 2005. The Court has considered the report and recommendations of the Division Engineer.

5. The District is a water conservancy district established pursuant to the Water Conservancy Act, §37-45-101, *et seq.*, C.R.S. (2009) and is entitled to make appropriations of water to benefit citizens within the Upper Gunnison River Water Conservancy District boundaries. As such it is entitled to the governmental agency exception to the anti-speculation doctrine in §37-92-103(3)(a)(I), C.R.S. (2009) and is authorized to initiate and implement a plan for augmentation for the benefit of water users within its boundaries pursuant to § 37-92-302(5), C.R.S. (2009).

6. Subject to the terms and conditions of this decree, this plan for augmentation will augment out-of-priority diversions by wells, surface diversions and ponds within the boundaries of the District and within the boundaries of the Contract Area by providing a substitute supply of water when senior water rights downstream of the Wayne N. Aspinall Unit of the Colorado River Storage Project (Aspinall Unit) place a valid call on the Gunnison River. The boundaries of the District and the Contract Area are depicted on the map attached to this decree as *EXHIBIT A*.

7. The District has entered into an intergovernmental agreement with the Colorado River Water Conservation District and this plan provides augmentation within the boundaries of the Contract Area pursuant to that agreement.

8. Operation of this plan for augmentation will provide replacement water to augment out-of-priority diversions only in the event of a call originating downstream of the Aspinall Unit. It does not allow out-of-priority diversions when the call is from a water right upstream of the Aspinall Unit.

9. Water will be released from Blue Mesa Reservoir and be delivered to the Gunnison River at the outlet works of Crystal Dam in amounts and timing sufficient to replace out-of-priority depletions by upstream structures participating in the plan for augmentation (Participating Structures) and thus prevent injury to downstream senior water rights from such depletions.

10. The replacement of out-of-priority depletions described in paragraphs 8 and 9 above includes an exchange. The reach of the exchange extends from the outlet works of Crystal Dam upstream to the respective points of diversion of the Participating Structures. The District seeks approval of an appropriative right of exchange for this exchange.

11. A water right was decreed to Blue Mesa Reservoir out of the Gunnison River in Case No. 80CW156, with a priority date of November 13, 1957, for storage of 940,755 acre-feet of water per year for domestic and municipal, irrigation and stock watering, industrial, hydropower,

piscatorial, wildlife, recreation and other purposes. Historically this water right has been used for all of the decreed purposes.

12. The initial point of survey of Blue Mesa Dam is located at a point on the right abutment being the intersection of the center line of the axis of the dam and of the center line of the outlet works tunnel, whence the Southwest corner of Section 31, Township 49 North, Range 4 West, N.M.P.M. bears North 78°36'44" West a distance of 3,207.07 feet. Blue Mesa Reservoir is a unit of the Aspinall Unit, which also includes Morrow Point Dam and Reservoir and Crystal Dam and Reservoir, located downstream of Blue Mesa Reservoir.

13. The District entered into a Long-Term Water Service Contract with the United States Department of the Interior, Bureau of Reclamation, dated April 1, 2004, Contract No. 04-WC-40-010 (Water Service Contract), which allows the District to purchase up to 500 acre-feet of municipal and industrial water stored in Blue Mesa Reservoir (Contract Water) and to resell the water to non-agricultural water users within the District and the Contract Area under third-party contracts in a form approved by the Bureau of Reclamation. The Water Service Contract is effective for 40 years from the date of execution.

14. The Water Service Contract provides that the District shall pay the United States annually for the quantity of water the District has sold under approved third-party contracts (Third-Party Agreements). The District resells the water at the same rate paid by the District to the United States, plus an annual administration fee to reimburse a portion of the cost of administering this plan for augmentation.

15. The payment rate for delivery of water under the Water Service Contract is reviewed and adjusted annually as of January 15 in accordance with the established Debt Service Methodology used for pricing water service from the Colorado River Storage Project. The Third-Party Agreements likewise provide for an annual payment rate adjustment.

16. Water users within the District boundaries or within the Contract Area who require a source of replacement water to permit out-of-priority depletions which would otherwise be curtailed by a call on the Gunnison River by a senior water right diverting water downstream from the Aspinall Unit may apply to the District to purchase water acquired by the District under the Water Service Contract.

17. Upon receipt of an application, payment of all required fees and obtaining such other information as the District may require, the District will enter into a *Third-Party Agreement for Purchase of Aspinall Unit Storage Water for Long-Term Water Service* with qualified water users for purchase and sale of water stored in Blue Mesa Reservoir. Each Third-party Agreement

will define the Participating Structure and will be submitted to the Bureau of Reclamation for review and approval.

18. The District will maintain records of Third-Party Agreements it has entered into in sufficient detail to enable the Division Engineer to determine the total annual augmentation requirements for all Participating Structures. The District will make available the Third-Party Agreements, annual reports, diversion records and other records related to operation of the augmentation plan during regular business hours upon reasonable notice. The District will also provide annual reports of diversions by Participating Structures to the Division Engineer. The form and content of the annual report shall be subject to review and revision by the Division Engineer.

19. When a senior water right diverting water from the Gunnison River downstream of the Aspinall Unit places a valid call upon the river, the Division Engineer will operate this plan for augmentation by requesting releases of water from Blue Mesa Reservoir when such releases are necessary to protect vested water rights or decreed conditional water rights from injury by out-of-priority depletions by Participating Structures.

Stream Depletions

20. For purposes of this plan for augmentation, “dwelling unit” means a structure or any part of a structure designed for residential purposes having one or more rooms, not more than one kitchen and at least one bathroom, that is intended for long-term occupancy by one or more persons for living and sleeping purposes and that may or may not be placed on a permanent foundation.

21. Based upon the State Engineer’s assumption that daily indoor household use is 350 gallons per day per dwelling unit, the total annual diversion by a well for indoor household use is 0.39205 acre-feet per dwelling unit.

22. If a dwelling unit utilizes an individual sewage disposal system, the annual consumptive use by the well serving that dwelling unit from indoor household use is ten percent (10%) of the total amount diverted by the well. Therefore, the stream depletion by a well serving a dwelling unit utilizing an individual sewage disposal system will not exceed 0.0392 acre-feet per year. The depletion occurs at a uniform rate throughout the year.

23. If a dwelling unit is connected to a wastewater treatment facility, the annual consumptive use by the well serving that dwelling unit from indoor household use is five percent (5%) of the total amount diverted by the well. Therefore, the stream depletion by a well serving a dwelling

unit connected to a wastewater treatment facility will not exceed 0.0196 acre-feet per year. The depletion occurs at a uniform rate throughout the year.

24. Consumptive use by a well diverting water for lawn irrigation has been determined by the District's engineering consultants using a modified Blaney-Criddle assessment adjusted for precipitation and temperature conditions in each elevation zone within the District. The calculation of stream depletions from lawn irrigation is contained in Table 8A attached to this Decree as *EXHIBIT B*.

25. Consumptive use resulting from evaporation from ponds and other water surfaces in each elevation zone within the District has been determined by the District's engineering consultants. The calculation of stream depletions from evaporation is contained in Table 1 attached to this Decree as *EXHIBIT C*.

26. Diversions for drinking and sanitary uses other than in single dwelling units are to be estimated based on the tables attached to this Decree as *EXHIBIT D*. Since not all situations are listed in this Appendix, the determination of such diversions shall be approved by the Division Engineer. Consumptive use of such diversions is ten percent for individual non-evaporative sewage disposal systems and five percent for central wastewater treatment systems that discharge effluent within the drainage of diversion.

27. Consumptive use of water diverted for stock watering purposes is assumed to be one hundred percent of diversions and results in stream depletions of eleven (11) gallons per animal watered per day.

28. The consumptive use calculations described in paragraphs 24 through 27 were reviewed and approved by the State Engineer in Case No. 03CW107, Water Division 4. Stream depletions from any other uses authorized to be augmented under this plan for augmentation shall be determined by the Division Engineer on a case-by-case basis, consistent with the provisions of paragraphs 24 through 27. Determinations by the Division Engineer of depletions from other uses pursuant to this paragraph 28 shall be subject to review by this Court under its retained jurisdiction pursuant to § 37-92-304(6) C.R.S. (2009), for the period prescribed in paragraph 44 below.

Excluded Areas

29. The exchange described in this Decree cannot operate on the following tributaries of the Gunnison River upstream of the listed structures or the lower terminus of listed instream flow reaches because water rights decreed to those structures or reaches can exercise a local call that would interrupt the exchange.

100810

Stream Name	Local Calling Right
Tomichi Creek	Biebel Ditches No.1 and No.2
Stubbs Gulch	Graham Ditch
Powderhorn Creek	Schecker Ditch
Trout Creek	Johnson Ditch
Little Cimarron River	McKinley Ditch
Ohio Creek	CWCB Instream Flow
East River	East River No. 2 Ditch
Slate River	CWCB Instream Flow
Antelope Creek	Hamor Ditch
Cimarron Creek	McMinn Ditch

The District shall not include in this plan for augmentation any structures on the listed tributaries upstream of the point of diversion of the local calling rights identified above. Attached *EXHIBIT E* shows the locations of the points of diversion of the local calling rights and lists a legal description for the points of diversion. The map is for guidance only, and is subject to change by the Division Engineer in accordance with Colorado law.

Appropriative Right of Exchange

30. The District operated the exchange described in paragraphs 8 through 10 beginning on July 15, 2003, pursuant to a Substitute Water Supply Plan approved by the State Engineer pursuant to § 37-92-308, C.R.S. Approximately 234.5 acre-feet of water acquired by the District under a Temporary Water Service Contract with the United States, and resold to water users under contracts approved by the Division Engineer, were released from Blue Mesa Reservoir during 2003. The releases were made at the request of the Division Engineer for delivery to the calling senior water right decreed to the Gunnison Tunnel to replace out-of-priority diversions by 101 structures upstream of Blue Mesa Reservoir.

31. The operation and administration by the Division Engineer of the exchange described in paragraph 30 established a practice of exchange that constitutes an appropriative right subject to adjudication in this action in accordance with § 37-80-120(4), C. R. S. (2009).

General Findings

32. The plan for augmentation proposed by the District, if administered in accordance with the terms and conditions of this decree, will prevent injury to vested water rights and decreed conditional water rights of others. The District is, therefore, entitled to a decree approving the plan for augmentation described herein.

TERMS AND CONDITIONS TO PREVENT INJURY

33. The following terms and conditions will prevent injury to vested water rights and decreed conditional water rights and are applicable to the approval of the plan for augmentation sought in this case:

(a) The exchange shall be operated only at such times as there are flows in the respective reaches of the exchange sufficient to satisfy the legal entitlement of all diverting decreed priorities (including exchanges) within the exchange reach which are senior to the Participating Structures seeking to divert out-of-priority. Further, the exchange will be operated only at such times when there is a live flow of water in the stream within the exchange reach.

(b) The water service contract with the United States described in paragraph 13 must remain in effect.

(c) The augmentation requirements of each Participating Structure are calculated in accordance with the provisions of paragraphs 20 through 28.

(d) The owners of all Participating Structures shall install and maintain measuring devices on such structures as required by the Division Engineer and provide diversion records for the structures to the District, or provide water use and depletion accounting forms sufficient to meet reasonable accounting needs of the Division Engineer.

34. After the date of this decree, the District shall not include in this plan for augmentation any structure that is located within or upstream of the reach of a senior decreed CWCB instream flow water right without completing the following procedure:

(a) The District shall prepare an analysis of the historical flows in said reach to determine if flows in excess of the decreed instream flow water right have consistently

occurred in amounts sufficient to permit the exchange approved in this decree to operate in said reach. The analysis shall utilize, without limitation, stream gauge data from a gauge within said instream flow reach, or a statistical analysis of stream gauge data from the nearest appropriate gauge or gauges, for the driest year of record for the Upper Gunnison Basin. Upon approval of the analysis by the CWCB pursuant to paragraph 34.(c) or 34.(d), Participating Structures shall be permitted to deplete the flows of said instream flow reach to the extent of the flows in excess of the decreed instream flow water right for said reach.

(b) If future hydrologic conditions result in lower flows at the selected gauge than were recorded in the year of record utilized in the District's analysis, the CWCB may require the District to prepare an updated analysis before accepting additional structures in this plan for augmentation that are located within or upstream of the reach of a CWCB instream flow water right.

(c) When the District has completed the analysis pursuant to paragraph 34.(a), the District shall deliver a copy of the analysis to the Stream and Lake Protection Section of the CWCB by electronic mail and by U. S. Mail at the following address: 1313 Sherman Street, Room 721, Denver, CO 80203, or to such other address designated by the CWCB by written notice to the District. CWCB shall have sixty days from the date of the electronic mailing to review and approve the analysis. If no objection is delivered by CWCB to the District within that period, the analysis shall be deemed accepted and the procedure in paragraph 34.(a) shall be deemed completed.

(d) If CWCB disagrees with the District's analysis, it shall state specific reasons for such disagreement, which may not include disapproval of the methodology procedure in paragraph 34.(a). In the event of disagreement by the CWCB, the District may apply to the water court for a hearing to determine that the District's analysis demonstrates that flows in excess of the decreed instream flow water right have consistently occurred in amounts sufficient to permit the exchange approved in this decree to operate in said reach, utilizing data from the driest year of record on the date of the analysis. If the court deems the CWCB rejection to be consistent with the terms of this decree, the District shall have the burden of proof to establish the determination required by this paragraph 34.(d). Because this determination constitutes reconsideration of the question of injury to the vested rights of others, the court shall retain jurisdiction over this plan for augmentation for the purpose of making the determination required in this paragraph 34.(d) indefinitely.

(e) Paragraph 34 shall not apply to Participating Structures for which Third-Party Agreements were signed prior to the date of this decree.

(f) Once a structure has been included in this plan for augmentation in accordance with the procedure described in paragraph 34, it may not be subsequently excluded from the plan as a result of updated analyses by the District or changes in hydrologic conditions.

(g) Actual valid gauge data would take precedent over that obtained by statistical analysis.

35. Except as provided in paragraph 34.(d), with respect to the period of retained jurisdiction required by § 37-92-304(6), C.R.S. (2009) the court finds that a period from the signing of the decree until seven years following an out-of-priority diversion by the last Participating Structure included in the plan is sufficient. Notice will be provided by the District to the Division Engineer and the CWCB upon inclusion of the last Participating Structure in the plan.

RULING

IT IS HEREBY RULED AND ORDERED:

36. The foregoing Findings of Fact and Conclusions of Law are hereby incorporated into and form a part of this decree, as if fully set forth herein at this point.

37. The facts alleged in the application are true.

38. The Application for approval of the plan for augmentation, including an appropriative right of exchange, described herein is APPROVED.

39. The exchange described in paragraphs 8 through 10 and paragraphs 30 through 31 is hereby APPROVED and decreed absolute in the amount of 234.5 acre-feet per year in total volume, and conditionally decreed in the amount of 265.5 acre-feet per year for proposed future exchange. The maximum rate of exchange shall be as determined by the Division Engineer when releases are needed to meet a senior call recognized and lawfully administered by the Division Engineer placed by a water right downstream of the Aspinall Unit, but not to exceed 4.0 c.f.s. Pursuant to §37-92-305(10), C.R.S. (2009), the priority date decreed herein for the appropriative right of exchange shall be July 15, 2003.

40. No owners of or persons entitled to use water under a vested water right or decreed conditional water right will be injured or injuriously affected by the operation of this plan for augmentation, including the appropriative right of exchange, so long as the terms and conditions of this decree are administered as set forth herein. The State Engineer shall curtail all out-of-priority diversions, the depletions from which are not so replaced as to prevent injury to vested water rights.

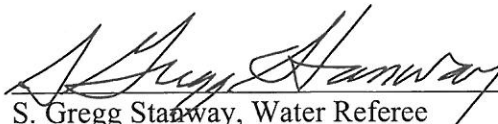
41. The District shall file an annual report with the Division Engineer by April 30th of each year itemizing diversions and replacements made under this plan during the previous calendar year.

42. The District shall notify this Court of any change in mailing address.

43. This decree shall be filed with the water clerk and a copy shall be filed with the State Engineer and Division Engineer, Water Division No. 4.

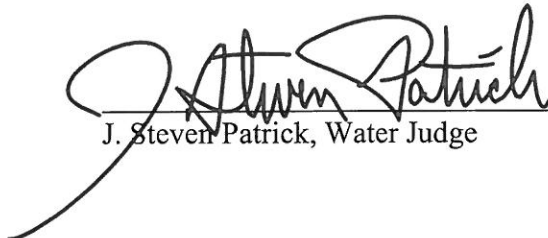
44. Pursuant to § 37-92-304(6) C.R.S. (2009), this court retains jurisdiction over this plan for augmentation, including the Tables and Appendices attached, for reconsideration of the question of injury to the vested rights of others for a period of seven years following an out-of-priority diversion by the last Participating Structure included in the plan.

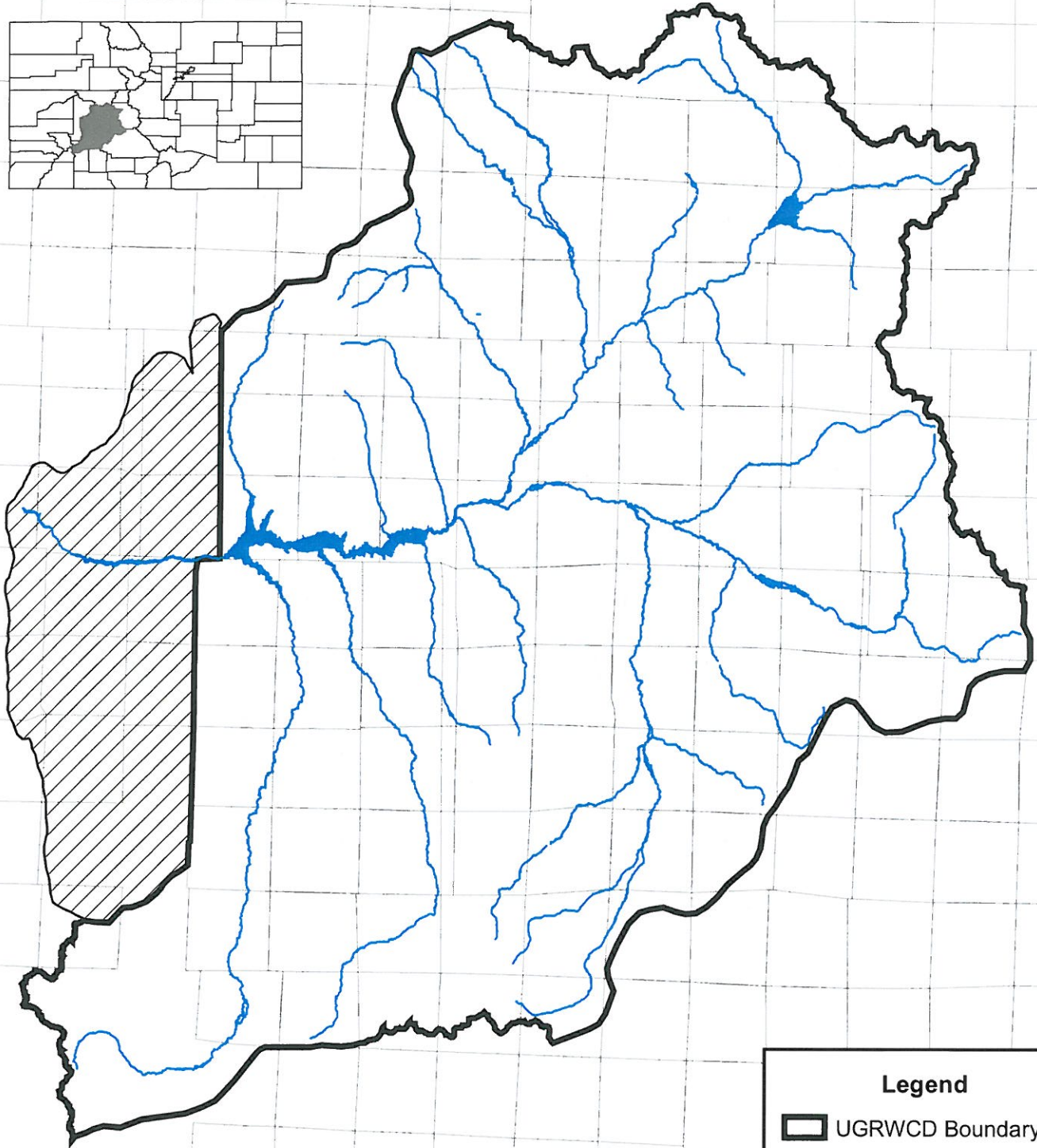
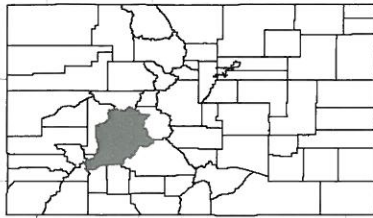
DONE this 12th day of August, 2010.


S. Gregg Starway, Water Referee

No protest was filed to this matter. The foregoing ruling is confirmed and approved and is made the Judgment and Decree of this Court.

Dated this 8th day of Sep., 2010.


J. Steven Patrick, Water Judge



Legend

-  UGRWCD Boundary
-  CRWCD Contract Area

Prepared for Upper Gunnison
River Water Conservancy District

0 5 10 20 30
Scale in Miles



Date: February 25, 2003

Rev.
Date:

Job No. U213

Drawn by: RLH

Checked by: RLH

Helton & Williamsen, P.C.

EXHIBIT A

Table 8A
Lagged Streamflow Effects from Outdoor Water Use for Lawn Irrigation
(Includes the alluvium of the mainstems of the Gunnison River & Tomichi Creek, and all areas north of these)
Note: October depletions are not reflected herein

Elevation Range		Distance from the Stream	Lagged Stream Depletions from Irrigation of Blue Grass (ac-ft/ec)												Total
Lower	Upper		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
6600	6799	Less than 100	0.00	0.00	0.00	0.00	0.39	0.48	0.48	0.39	0.32	0.00	0.00	0.00	2.06
		100 to 499	0.01	0.01	0.01	0.00	0.30	0.42	0.44	0.39	0.34	0.08	0.03	0.02	2.06
		500 to 999	0.04	0.03	0.02	0.01	0.18	0.32	0.38	0.37	0.35	0.18	0.10	0.06	2.06
		Greater than 1000	0.10	0.06	0.04	0.04	0.06	0.17	0.26	0.31	0.34	0.30	0.22	0.14	2.06
6800	6999	Less than 100	0.00	0.00	0.00	0.00	0.38	0.46	0.46	0.38	0.31	0.00	0.00	0.00	1.99
		100 to 499	0.01	0.01	0.01	0.00	0.29	0.41	0.43	0.38	0.33	0.07	0.03	0.02	1.99
		500 to 999	0.04	0.03	0.02	0.01	0.18	0.31	0.37	0.36	0.34	0.18	0.09	0.06	1.99
		Greater than 1000	0.09	0.06	0.04	0.04	0.06	0.17	0.25	0.30	0.33	0.29	0.21	0.14	1.99
7000	7199	Less than 100	0.00	0.00	0.00	0.00	0.37	0.45	0.45	0.37	0.30	0.00	0.00	0.00	1.93
		100 to 499	0.01	0.01	0.01	0.00	0.28	0.40	0.42	0.37	0.31	0.07	0.03	0.02	1.93
		500 to 999	0.04	0.03	0.02	0.01	0.17	0.30	0.35	0.34	0.32	0.17	0.09	0.06	1.93
		Greater than 1000	0.09	0.06	0.04	0.04	0.06	0.16	0.24	0.29	0.31	0.28	0.20	0.13	1.93
7200	7399	Less than 100	0.00	0.00	0.00	0.00	0.35	0.43	0.43	0.35	0.29	0.00	0.00	0.00	1.86
		100 to 499	0.01	0.01	0.01	0.00	0.27	0.38	0.40	0.35	0.30	0.07	0.03	0.02	1.86
		500 to 999	0.04	0.03	0.02	0.01	0.17	0.29	0.34	0.33	0.31	0.17	0.09	0.06	1.86
		Greater than 1000	0.09	0.06	0.04	0.04	0.06	0.16	0.24	0.28	0.30	0.27	0.20	0.13	1.86
7400	7599	Less than 100	0.00	0.00	0.00	0.00	0.34	0.42	0.42	0.34	0.28	0.00	0.00	0.00	1.80
		100 to 499	0.01	0.01	0.01	0.00	0.26	0.37	0.39	0.34	0.29	0.07	0.03	0.02	1.80
		500 to 999	0.04	0.03	0.02	0.01	0.18	0.28	0.33	0.32	0.30	0.16	0.09	0.06	1.80
		Greater than 1000	0.09	0.06	0.04	0.04	0.06	0.15	0.23	0.27	0.29	0.26	0.19	0.12	1.80
7600	7799	Less than 100	0.00	0.00	0.00	0.00	0.33	0.40	0.40	0.33	0.27	0.00	0.00	0.00	1.73
		100 to 499	0.01	0.01	0.01	0.00	0.26	0.36	0.37	0.33	0.28	0.06	0.03	0.02	1.73
		500 to 999	0.04	0.03	0.02	0.01	0.15	0.27	0.32	0.31	0.29	0.15	0.08	0.05	1.73
		Greater than 1000	0.08	0.05	0.04	0.04	0.05	0.15	0.22	0.26	0.28	0.26	0.18	0.12	1.73
7800	7999	Less than 100	0.00	0.00	0.00	0.00	0.32	0.39	0.39	0.32	0.26	0.00	0.00	0.00	1.67
		100 to 499	0.01	0.01	0.01	0.00	0.25	0.34	0.36	0.32	0.27	0.06	0.03	0.02	1.67
		500 to 999	0.04	0.03	0.02	0.01	0.15	0.26	0.31	0.30	0.28	0.15	0.08	0.05	1.67
		Greater than 1000	0.08	0.05	0.04	0.04	0.05	0.14	0.21	0.25	0.27	0.25	0.18	0.11	1.67
8000	8199	Less than 100	0.00	0.00	0.00	0.00	0.30	0.37	0.37	0.30	0.25	0.00	0.00	0.00	1.60
		100 to 499	0.01	0.01	0.01	0.00	0.24	0.33	0.35	0.30	0.26	0.06	0.03	0.02	1.60
		500 to 999	0.03	0.03	0.02	0.01	0.14	0.25	0.30	0.29	0.27	0.14	0.08	0.05	1.60
		Greater than 1000	0.08	0.05	0.03	0.03	0.05	0.13	0.20	0.24	0.26	0.24	0.17	0.11	1.60
8200	8399	Less than 100	0.00	0.00	0.00	0.00	0.29	0.36	0.36	0.29	0.24	0.00	0.00	0.00	1.54
		100 to 499	0.01	0.01	0.01	0.00	0.23	0.32	0.33	0.29	0.25	0.06	0.02	0.02	1.54
		500 to 999	0.03	0.02	0.02	0.01	0.14	0.24	0.28	0.28	0.26	0.14	0.07	0.05	1.54
		Greater than 1000	0.07	0.05	0.03	0.03	0.05	0.13	0.19	0.23	0.25	0.23	0.16	0.11	1.54
8400	8599	Less than 100	0.00	0.00	0.00	0.00	0.28	0.34	0.34	0.28	0.23	0.00	0.00	0.00	1.47
		100 to 499	0.01	0.01	0.01	0.00	0.22	0.30	0.32	0.28	0.24	0.05	0.02	0.02	1.47
		500 to 999	0.03	0.02	0.02	0.01	0.13	0.23	0.27	0.26	0.25	0.13	0.07	0.05	1.47
		Greater than 1000	0.07	0.05	0.03	0.03	0.05	0.12	0.19	0.22	0.24	0.22	0.15	0.10	1.47
8600	8799	Less than 100	0.00	0.00	0.00	0.00	0.27	0.33	0.33	0.27	0.22	0.00	0.00	0.00	1.41
		100 to 499	0.01	0.01	0.01	0.00	0.21	0.29	0.30	0.27	0.23	0.05	0.02	0.01	1.41
		500 to 999	0.03	0.02	0.01	0.01	0.13	0.22	0.26	0.25	0.24	0.13	0.07	0.04	1.41
		Greater than 1000	0.07	0.04	0.03	0.03	0.04	0.12	0.18	0.21	0.23	0.21	0.15	0.10	1.41
8800	8999	Less than 100	0.00	0.00	0.00	0.00	0.25	0.31	0.31	0.25	0.21	0.00	0.00	0.00	1.34
		100 to 499	0.01	0.01	0.01	0.00	0.20	0.28	0.29	0.25	0.22	0.05	0.02	0.01	1.34
		500 to 999	0.03	0.02	0.01	0.01	0.12	0.21	0.25	0.24	0.23	0.12	0.06	0.04	1.34
		Greater than 1000	0.06	0.04	0.03	0.03	0.04	0.11	0.17	0.20	0.22	0.20	0.14	0.09	1.34
Greater than 9000		Less than 100	0.00	0.00	0.00	0.00	0.24	0.30	0.30	0.24	0.20	0.00	0.00	0.00	1.28
		100 to 499	0.01	0.01	0.01	0.00	0.19	0.26	0.28	0.24	0.21	0.05	0.02	0.01	1.28
		500 to 999	0.03	0.02	0.01	0.01	0.11	0.20	0.24	0.23	0.22	0.11	0.06	0.04	1.28
		Greater than 1000	0.06	0.04	0.03	0.03	0.04	0.11	0.16	0.19	0.21	0.19	0.13	0.09	1.28

Table 1
Lake Evaporation Rates

RATES FOR ON CHANNEL LAKES													
Elevation Range		Net Lake Evaporation (feet) (calculated as lake evaporation minus effective precipitation using SEO SWSP Guidelines)											
Lower	Upper	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
6,600	6,799	0.00	0.00	0.00	0.28	0.40	0.50	0.48	0.37	0.33	0.21	0.10	0.00
6,800	6,999	0.00	0.00	0.00	0.28	0.39	0.49	0.48	0.37	0.33	0.21	0.10	0.00
7,000	7,199	0.00	0.00	0.00	0.27	0.39	0.49	0.47	0.36	0.32	0.21	0.10	0.00
7,200	7,399	0.00	0.00	0.00	0.27	0.39	0.49	0.47	0.36	0.32	0.21	0.10	0.00
7,400	7,599	0.00	0.00	0.00	0.27	0.38	0.48	0.47	0.36	0.32	0.21	0.10	0.00
7,600	7,799	0.00	0.00	0.00	0.24	0.37	0.47	0.45	0.35	0.31	0.20	0.09	0.00
7,800	7,999	0.00	0.00	0.00	0.21	0.36	0.46	0.44	0.34	0.30	0.19	0.09	0.00
8,000	8,199	0.00	0.00	0.00	0.18	0.35	0.45	0.43	0.33	0.29	0.19	0.09	0.00
8,200	8,399	0.00	0.00	0.00	0.15	0.34	0.44	0.42	0.32	0.28	0.18	0.09	0.00
8,400	8,599	0.00	0.00	0.00	0.12	0.33	0.43	0.41	0.31	0.27	0.17	0.09	0.00
8,600	8,799	0.00	0.00	0.00	0.09	0.32	0.43	0.40	0.30	0.27	0.17	0.09	0.00
8,800	8,999	0.00	0.00	0.00	0.06	0.31	0.42	0.39	0.29	0.26	0.16	0.09	0.00
Greater than 9,000		0.00	0.00	0.00	0.00	0.29	0.39	0.36	0.27	0.24	0.15	0.08	0.00
		Total											
		1.79											

RATES FOR OFF-CHANNEL LAKES

Elevation Range		Lake Evaporation (feet) (lake evaporation with no effective precipitation offset)											
Lower	Upper	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
6,600	6,799	0.00	0.00	0.00	0.31	0.43	0.53	0.55	0.44	0.38	0.26	0.14	0.00
6,800	6,999	0.00	0.00	0.00	0.31	0.42	0.53	0.54	0.44	0.37	0.25	0.14	0.00
7,000	7,199	0.00	0.00	0.00	0.30	0.42	0.52	0.54	0.44	0.37	0.25	0.14	0.00
7,200	7,399	0.00	0.00	0.00	0.30	0.42	0.52	0.54	0.44	0.37	0.25	0.13	0.00
7,400	7,599	0.00	0.00	0.00	0.30	0.42	0.52	0.53	0.43	0.37	0.25	0.13	0.00
7,600	7,799	0.00	0.00	0.00	0.27	0.41	0.51	0.53	0.43	0.36	0.25	0.13	0.00
7,800	7,999	0.00	0.00	0.00	0.23	0.41	0.50	0.52	0.42	0.36	0.24	0.13	0.00
8,000	8,199	0.00	0.00	0.00	0.20	0.40	0.50	0.51	0.42	0.35	0.24	0.13	0.00
8,200	8,399	0.00	0.00	0.00	0.17	0.39	0.49	0.50	0.41	0.35	0.24	0.13	0.00
8,400	8,599	0.00	0.00	0.00	0.14	0.39	0.48	0.50	0.40	0.34	0.23	0.12	0.00
8,600	8,799	0.00	0.00	0.00	0.10	0.38	0.47	0.49	0.40	0.34	0.23	0.12	0.00
8,800	8,999	0.00	0.00	0.00	0.07	0.38	0.47	0.48	0.39	0.33	0.23	0.12	0.00
Greater than 9,000		0.00	0.00	0.00	0.00	0.36	0.45	0.47	0.38	0.32	0.22	0.12	0.00
		Total											
		2.32											

Notes:

- 1) Values shown for the 6,600 to 6,799 elevation range are the rates from Table 2 for a small reservoir located near Crystal Reservoir which is located at an approximate elevation of 6,760 feet
- 2) Values shown for the 7,400 to 7,599 elevation range are the rates from Table 2 for a small reservoir located near Blue Mesa Reservoir which is located at an approximate elevation of 7,500 feet
- 3) Values shown for the greater than 9,000 feet elevation range are the rates from Table 2 for a small reservoir located near Taylor Park Reservoir which is located at an approximate elevation of 9,330 feet
- 4) Values for intermediate elevation ranges determined by linear interpolation.
- 5) The on-stream criteria for ponds can only be used for Mine Land Reclamation Division permitted gravel pits and ponds on a year-around live stream.

GUIDELINES ON
INDIVIDUAL SEWAGE DISPOSAL SYSTEMS
REVISED 2000

COLORADO STATE BOARD OF HEALTH
AUTHORITY: CHAPTER 25, ARTICLE 10
Colorado Revised Statutes, 1973,
as Amended

COLORADO DEPARTMENT OF HEALTH
WATER QUALITY CONTROL DIVISION
4300 Cherry Creek Drive South
DENVER, CO 80246-1530

For Biodegradable Wastes Only

TABLE I
QUANTITIES AND BOD STRENGTH OF SEWAGE
FOR VARIOUS TYPES OF USES

TYPE OF ESTABLISHMENT	GALLONS/PERSON/DAY (AVERAGE) (UNLESS OTHERWISE STATED)	LBS. BOD5/PERSON/DAY (UNLESS OTHERWISE STATED)
Residential		
Single-family dwellings (two people per bedroom)	75	.20
Separate Distribution of Flows - Individual Residential use		
Bath/Shower	14.7	.014
Dishwasher	1.8	.002
Kitchen sink	4.4	.045
Additional for garbage grinder	1.4	.052
Laundry washer	19.5	.037
Lavatory	8.4	.021
Water closet	24.8	.029
Hotels and Motels - per room (without private baths)	50	.15
Hotels and Motels - per room (with private baths)	75	.15
Multiple-family dwellings or apartments	75	.20
Boarding and Rooming houses	50	.15
Mobile Home Parks	75	.20
(per space)	300	.80
Commercial		
Airports (per passenger)	5	.02
(per employee)	10	.06
Barber and Beauty Shops (per chair)	100	.70*
Bowling Alleys (per lane - toilet wastes only)	5	.03*
Bus Service Areas (not including food)	5	.02

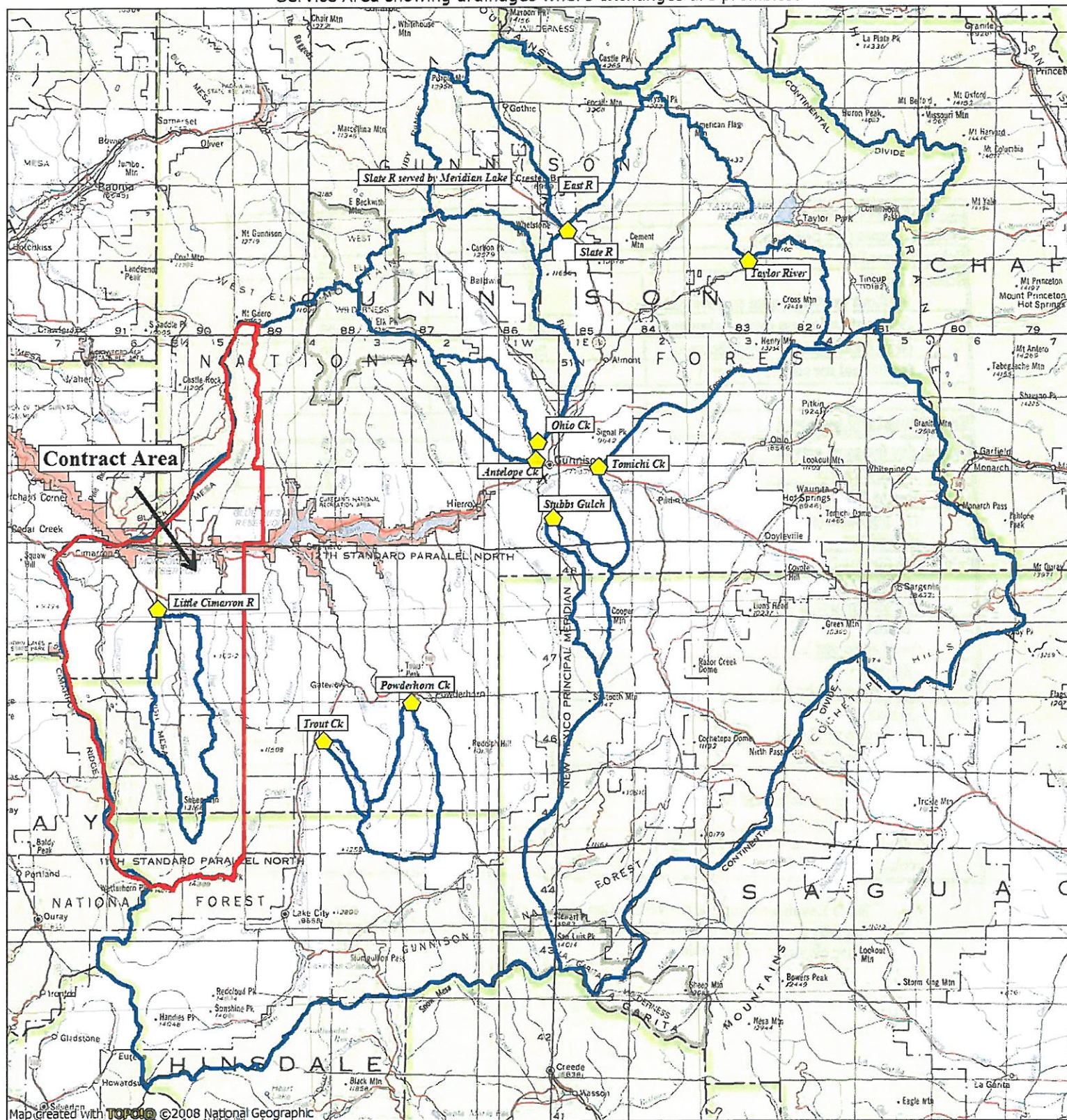
Country clubs		
(per member)	30	.02
(per employee)	20	.06
Dentist offices	50	.14*
(per non-wet chair)		
Doctors offices (per doctor)	250	.80*
Fairgrounds	5	.02
(per person attending)		
Factories and plants		
(exclusive of industrial wastes)		
(per employee per 8-hour shift-no showers)	20	.05
(per employee per 8-hour shift - showers provided)	35	.08
Food service establishments		
(per seat)		
Restaurant (Open 1 or 2 meals)	50	.06/meal served
24-hour Restaurant	75	.07/meal served
Restaurant with paper service only	25	.01/meal served
Additional for bars and cocktail lounges	30	.02
Drive-in Restaurant	50	.02
(per car space)		
Kennels (per dog)	30	.20
Laundries, self-service	400	.75
(per commercial washer)		
Office Buildings	15	.06
(per employee per 8-hour shift)		
Stores and Shopping Centers	.1	.01*
(per square foot of Retail space)		
Service Stations (per toilet fixture)	250	.50*
Stadiums, Race Tracks, Ball Parks (per seat)	5	.02
Theaters (Movie, Indoor, or Auditorium)	5	.02
Work or construction camps (semi-permanent - with flush toilets)	50	.17
Work or construction camps (semi-permanent - without flush toilets)	35	.02
Institutional (does not include kitchen wastewater flows)		
Churches (not including food)	5	.01

Hospitals (per bed space)	250	.20
Nursing Homes (per bed space)	100	.17
Schools, Boarding	100	.17
Schools, Day	15	.04
(without cafeteria, gym or showers)		
(with cafeterias, no gym or showers)	20	.08
(with cafeterias, gym and showers)	25	.10
(additional for school workers)	15	.06
Recreational and Seasonal		
Camps, day (no meal served)	15	.12
Luxury Resort	125	.17
Resort (night and day)	50	.12
Campground (seasonal occupancy - per unit)**	50	.12
Public Park (during hours when park is open)		
- Flush Toilet (per fixture per hour)	36	.04 lbs./ fixture
- Urinal (per fixture per hour)	10	.01 lbs./fixture
- Shower (per fixture per hour)	100	.10 lbs./ fixture
- Faucet (per fixture per hour)	15	.04 lbs./ fixture
Swimming pools and bathhouses	10	.06
Travel trailer parks (with individual water and sewage hookup - per unit) **	50	.12
(without individual water and sewage hookup - per unit) **	50	.12

* = BOD Levels needing further verification

** = Laundry facilities are to be calculated on a per commercial washer basis in accordance with other elements of this table.

Service Area showing drainages where exchanges are permitted



Map created with TOPOM © 2008 National Geographic



0 5 10 15 20 25 miles
0 5 10 15 20 25 30 35 40 km

TN/MN
10°
03/31/09

LEGAL DESCRIPTIONS

POINTS OF DIVERSION FOR LOCAL CALLING RIGHTS

Biebel Ditches Nos. 1 & 2: WD 28;

Biebel Ditches Nos. 1 & 2 is located within the NE/4 NW/4 SW/4 of Section 3, Township 49 North, Range 1 East, N.M.P.M., at a point 2122 feet north of the south section line and 1088 feet east of the west section line.

Graham Ditch: WD 28;

Graham Ditch is located within the SE/4 SW/4 NW/4 of Section 24, Township 49 North, Range 1 West, N.M.P.M., at a point 2317 feet south of the north section line and 935 feet east of the west section line.

Schecker Ditch: WD 62;

Schecker Ditch is located within the NE/4 SW/4 NW/4 of Section 5, Township 46 North, Range 2 West, N.M.P.M., at a point 1700 feet south of the north section line and 1150 feet east of the west section line.

Johnson Ditch: WD 62;

Johnson Ditch is located within the SE/4 NE/4NW/4 of Section 19, Township 46 North, Range 3 West, N.M.P.M., at a point 706 feet south of the north section line and 2905 feet west of the east section line.

McKinley Ditch: WD 62;

McKinley Ditch is located within the NW/4 NW/4 NW/4 of Section 12, Township 47 North, Range 6 West, N.M.P.M., at a point 58 feet south of the north section line and 220 feet east of the west section line.

East River No. 2 Ditch: WD 59;

East River No.2 Ditch is located within the SW/4 SW/4 NE/4 of Section 17, Township 14 South, Range 85 West, 6th P.M., at a point 2076 feet south of the north section line and 2020 feet west of the east section line.

Hamor Ditch: WD 59;

Hamor Ditch is located within the SW/4 SW/4 NE/4 of Section 27, Township 50 North, Range 1 West, N.M.P.M., at a point 1044 feet north of the south section line and 1981 feet west of the east section line.

McMinn Ditch: WD 62;

McMinn Ditch is located within the SE/4 SW/4 NW/4 of Section 5, Township 47 North, Range 6 West, N.M.P.M., at a point 2675 feet north of the south section line and 1182 feet east of the west section line.