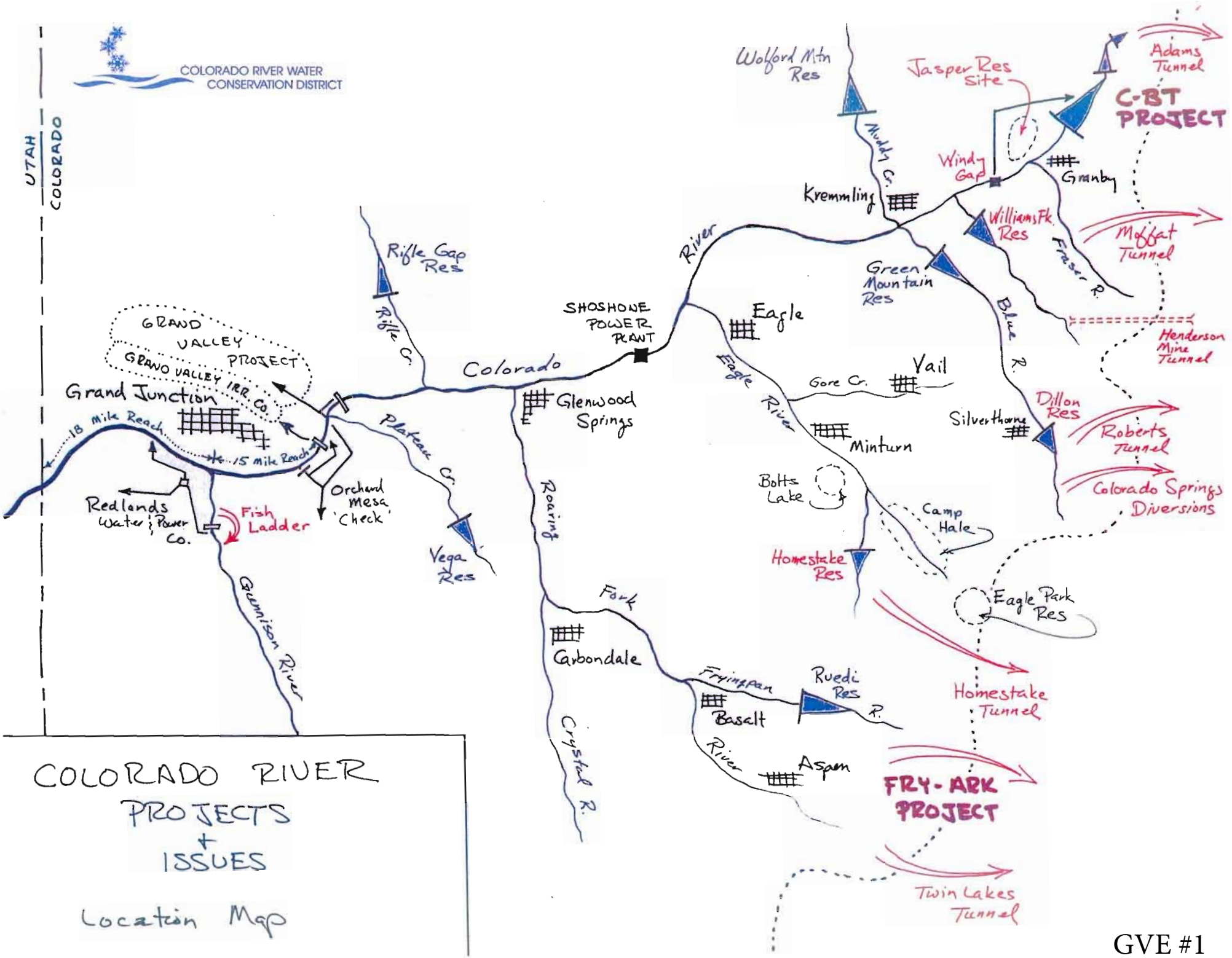
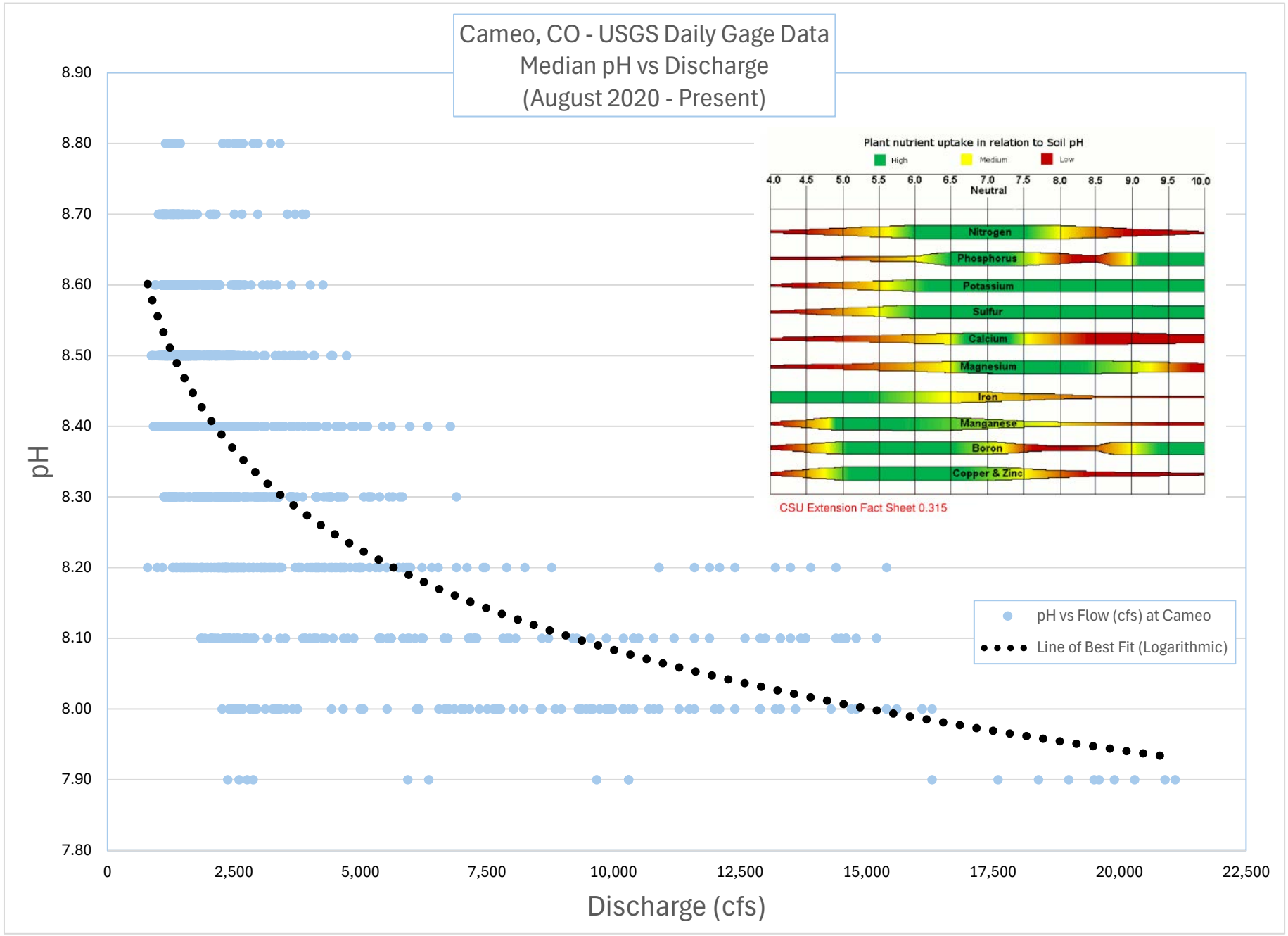
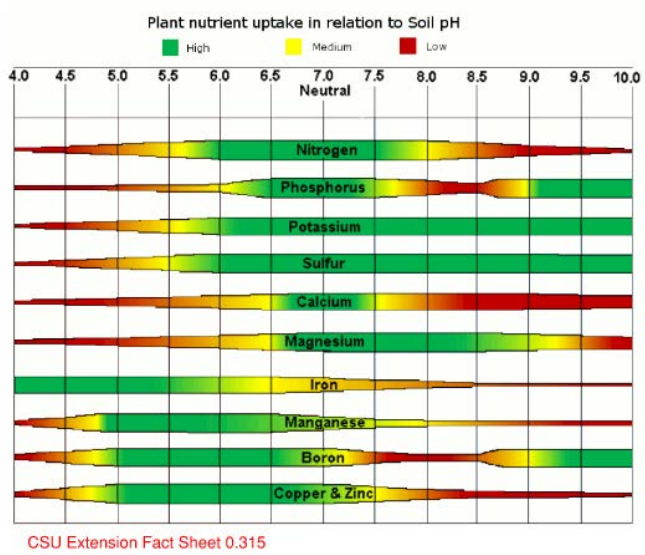

COLORADO RIVER WATER CONSERVATION DISTRICT
UTAH
COLORADO
Wolford Mtn Res
Jasper Res Site
Adams Tunnel
C-BT PROJECT
Muddy Cr.
Windy Gap
Granby
Kremmling
Williams Fk. Res
Fraser R.
Moffat Tunnel
Rifle Gap Res
Rifle Cr.
River
Green Mountain Res
Blue R.
Henderson Mine Tunnel
SHOSHONE POWER PLANT
Eagle
GRAND VALLEY PROJECT
GRAND VALLEY IRR. CO.
Grand Junction
Colorado
Eagle River
Gore Cr.
Vail
Dillon Res
Silverthorne
Roberts Tunnel
18 Mile Reach
15 Mile Reach
Plateau Cr.
Glenwood Springs
Minturn
Colorado Springs Diversions
Redlands Water & Power Co.
Fish Ladder
Orchard Mesa Check
Bolts Lake
Camp Hale
Roaring Fork
Homestake Res
Eagle Park Res
Vega Res
Gunnison River
Carbondale
Frying Pan
Ruedi Res
Basalt
Homestake Tunnel
Crystal R.
River
Aspen
FRY-ARK PROJECT
Twin Lakes Tunnel
COLORADO RIVER PROJECTS + ISSUES
Location Map

GVE #1


Cameo, CO - USGS Daily Gage Data
Median pH vs Discharge
(August 2020 - Present)
pH
8.90
8.80
8.70
8.60
8.50
8.40
8.30
8.20
8.10
8.00
7.90
7.80
0
2,500
5,000
7,500
10,000
12,500
15,000
17,500
20,000
22,500
Discharge (cfs)
pH vs Flow (cfs) at Cameo
Line of Best Fit (Logarithmic)
Plant nutrient uptake in relation to Soil pH
High
Medium
Low
4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0
Neutral
Nitrogen
Phosphorus
Potassium
Sulfur
Calcium
Magnesium
Iron
Manganese
Boron
Copper & Zinc
CSU Extension Fact Sheet 0.315

GVE #2

Cameo, CO - USGS Daily Gage Data
Maximum pH vs Discharge
(August 2020 - Present)



pH vs Flow (cfs) at Cameo

Line of Best Fit (Logarithmic)

pH

9.20
9.00
8.80
8.60
8.40
8.20
8.00
7.80

0 2,500 5,000 7,500 10,000 12,500 15,000 17,500 20,000 22,500

Discharge (cfs)

DISTRICT COURT, WATER DIVISION NO. 5, COLORADO

Case No. 91CW247

FINDINGS OF FACT, CONCLUSIONS OF LAW, JUDGMENT AND DECREE

CONCERNING THE APPLICATION FOR WATER RIGHTS OF THE GRAND VALLEY WATER USERS ASSOCIATION, ORCHARD MESA IRRIGATION DISTRICT, AND THE UNITED STATES OF AMERICA, IN MESA COUNTY, COLORADO

FINDINGS OF FACT

1. Filing of Application. This matter was commenced on December 30, 1991 by the filing of an Application to Confirm and Approve Appropriative Right of Exchange which application was amended by leave of Court on May 24, 1993.

2. Co-Applicants. The application and amendment were filed by the United States of America (the "United States"), the Grand Valley Water Users Association, a corporation (the "Association"), and the Orchard Mesa Irrigation District, a corporation ("OMID"). The United States, the Association and OMID are referred to herein as the "Co-Applicants."

3. Objectors.

3.1 Statements of Opposition Opposing Application. The following parties filed timely Statements of Opposition opposing the application or seeking protective terms and conditions:

Basalt, Town of
Basalt Water Conservancy District
Carbondale, Town of
Collbran, Town of
Colorado Division of Wildlife
Colorado Springs, City of
Copper Mountain, Inc.
Copper Mountain Consolidated Metropolitan District (successor-in-interest to Copper Mountain Water & Sanitation District)
DeBeque, Town of
Eagle, Town of
Glenwood Springs, City of

Grand County Water & Sanitation District No. 1
Middle Park Water Conservancy District
Mid Valley Metropolitan District
Mobil Mining and Minerals Company
Natec Resources, Inc.
New Castle, Town of
North Barton Creek Ltd. Liability Company
Palisade, Town of
Parachute, Town of
Pueblo, Board of Water Works of
Public Service Company of Colorado
Ralston Resorts, Inc. (successor-in-interest to Keystone Resorts Management, Inc. and Breckenridge Ski Corporation)
Rifle, City of
Rifle Land Associates, Ltd.
Silverthorne, Town of
Spruce Valley Ranch Foundation
Summit County Commissioners, Board of
Union Oil Company of California
Upper Eagle Regional Water Authority

3.2 Statements of Opposition in Support of Application. The following parties filed timely Statements of Opposition in support of the application:

Colorado River Water Conservation District
Colorado State Engineer
Division Engineer, Water Division No. 5
Grand Valley Irrigation Company

3.3 Intervenors. The following parties did not file timely Statements of Opposition, but were granted leave to intervene as Objectors:

Aurora, City of
Colorado Water Conservation Board
Cyprus Climax Metals Company
Exxon Company, U.S.A.
Englewood, City of
Frisco, Town of
Vail Associates, Inc.
Vail Valley Consolidated Water District

3.4 Withdrawals. The following parties subsequently withdrew their Statements of Opposition:

Collbran, Town of (by Order dated January 29, 1996)
Englewood, City of (by Withdrawal dated March 8, 1996 and Amended Withdrawal dated September 24, 1996)
Natec Resources, Inc. (by Order dated January 29, 1996)

4. Stipulation. On or about September 23, 1996, the parties filed the Stipulation and Agreement attached hereto as Attachment 1. The Stipulation and Agreement has been executed by the Co-Applicants and by all the Objectors who remain parties to the case and provides that the parties to the Stipulation and Agreement agree to the entry of a decree herein granting the application as amended and incorporating the terms of the Stipulation and Agreement.

5. Jurisdiction. Timely and adequate notice of the filing and contents of the application and amendment to the application herein was given in the manner required by law. The time for filing Statements of Opposition and for seeking leave to intervene has expired. The Court has jurisdiction over the subject matter of this proceeding and over all persons and owners of property affected hereby, irrespective of whether or not those persons and owners of property have appeared.

6. Relief Requested by Application. The application requests confirmation of an appropriative right of substitution and exchange for an existing exchange on the Colorado River which is based on the operation of a structure commonly referred to as the Orchard Mesa Check. Co-Applicants request adjudication of an absolute right for this existing exchange, in the amount of 640 c.f.s., with a priority of April 1, 1926.

7. Description of Exchange Facilities. In order to describe the exchange, it is helpful to describe the facilities by which the exchange is operated. These facilities are described as follows:

7.1 Point of Diversion. The point of diversion for the exchange and the upstream point of the exchange is the headgate on the right (West) side of the Grand Valley Project diversion dam on the Colorado River (commonly referred to as the "Roller Dam") located in the Northwest Quarter of Section 13, Township 10 South, Range 98 West, 6th P.M., in Mesa County, Colorado, on the right (West) bank of the Colorado River at a point whence the Southwest Corner of said Section 13 bears South 16°41' West 4,023 feet (the "Upstream Point of Exchange").

7.2 Point of Delivery of Substitute Supply. The water diverted by exchange is returned to the Colorado River immediately upstream from the Grand Valley Irrigation Company ("GVIC") diversion dam, which is located at a point on the right (West) bank of the Colorado River from whence the Northeast Corner of Section 3, Township 1 South, Range 2 East, of the Ute Meridian, in Mesa County, Colorado, bears North 13°18' East 1,800 feet (the "Downstream Point of Exchange").

7.3 Delivery Facilities. The water diverted by exchange at the Upstream Point of Exchange is delivered for a distance of approximately 4.6 miles through the Highline Canal located on the right (West) bank of the Colorado River, at which point it is diverted under the Colorado River by means of a siphon into the Orchard Mesa Power Canal located on the left (East) bank of the Colorado River. The Orchard Mesa Power Canal delivers the water diverted by exchange for a distance of approximately 3.8 miles to the Grand Valley Power Plant and the OMID Pumping Plant.

7.4 Grand Valley Power Plant. The Grand Valley Power Plant is owned by the United States and leased to the Association, OMID and the Public Service Company of Colorado. A portion of the water diverted by exchange is diverted into the Grand Valley Power Plant for power generation purposes.

7.5 OMID Pumping Plant. The remainder of the water diverted by exchange is diverted into the OMID Pumping Plant to operate hydraulic pumps which lift irrigation water into OMID irrigation canals.

7.6 Afterbay. All the water used for non-consumptive power generation purposes at the Grand Valley Power Plant and non-consumptive operation of hydraulic pumps at the OMID Pumping Plant passes into a common afterbay located below the Grand Valley Power Plant and the OMID Pumping Plant (the "Afterbay"). If the water in the Afterbay is allowed to flow in its natural course, it reenters the Colorado River at a point below the GVIC diversion dam.

7.7 Orchard Mesa Check. The Orchard Mesa Check (the "Check") is a structure which can be operated to alter the point at which water in the Afterbay reenters the Colorado River. The Check is located at or near the downstream end of the Afterbay, across the channel through which water from the Afterbay flows back to the Colorado River. The Check consists of three mechanically operated radial gates and a bypass channel which parallels the Colorado River to a point immediately above the GVIC diversion dam. The Check is operated by lowering one or more of the three radial gates. The lowered gate or gates block the flow in the channel leading from the Afterbay to the Colorado River, thus raising the level of the water in the Afterbay by up to eight feet, more or less. Raising the level of the water in the Afterbay causes water in the Afterbay to flow through the Check's

bypass channel. The water flowing in this bypass channel returns to the Colorado River immediately above the GVIC diversion dam. Thus, the operation of the Check alters the point at which water in the Afterbay is returned to the Colorado River. When the Check is not being operated, water flowing into the Afterbay is returned to the Colorado River at a point below the GVIC diversion dam. When the Check is being operated, some or all of the water flowing into the Afterbay is returned to the Colorado River above the GVIC diversion dam, where it can then be diverted by GVIC which owns water rights senior in priority to the water rights owned by Co-Applicants. The Check may be operated in varying degrees to return more or less water in the Afterbay to the Colorado River above the GVIC diversion dam depending upon the demands of GVIC and the Co-Applicants and the amount of water available at the Roller Dam.

8. Description of Orchard Mesa Check Exchange. The operation of the Check constitutes an appropriative right of substitution and exchange. This existing exchange has been operated as described below.

8.1 Point of Diversion/Upstream Point of Exchange. The point of diversion for the exchange, which is also referred to herein as the Upstream Point of Exchange, is the Roller Dam on the Colorado River, the location of which is set forth in paragraph 7.1, above.

8.2 Point of Delivery of Substitute Supply/Downstream Point of Exchange. The point of delivery of the substitute supply, which is also referred to herein as the Downstream Point of Exchange, is a point at which water diverted into the Check bypass channel returns to the Colorado River immediately above the GVIC diversion dam, the location of which is set forth in paragraph 7.2, above.

8.3 Exchange Reach. The reach of the Colorado River over which the exchange depletes river flows (the "Exchange Reach") extends from the Upstream Point of Exchange described in paragraph 7.1, above, to the Downstream Point of Exchange described in paragraph 7.2, above, and is approximately 8.4 miles in length.

8.4 Source. The source of the water diverted by exchange is the Colorado River.

8.5 Description of Operation of Exchange. The exchange operates by the diversion of water out of the Colorado River at the Upstream Point of Exchange, delivery of that water through the Highline Canal and the Power Canal to the Grand Valley Power Plant and the OMID Pumping Plant for non-consumptive power generation and hydraulic pumping purposes, and the return of the same amount of water to the Colorado River at the Downstream Point of Exchange through operation of the Check. The water returned to the Colorado River at the Downstream Point of Exchange by diversion through the Check bypass

channel can then be diverted by GVIC which owns water rights senior in priority to the water rights owned by Co-Applicants.

8.6 Amount. The maximum flow rate of the exchange is 640 c.f.s., absolute.

8.7 Use. The water diverted by exchange is used for non-consumptive power generation and hydraulic pumping purposes at the Grand Valley Power Plant and the OMID Pumping Plant.

8.8 Priority. The date of initiation of the appropriation is April 1, 1926, the date of completion of construction of the Check and the Check bypass channel. The appropriation was completed with reasonable diligence by the operation of the exchange up to its maximum rate of flow and beneficial use of water diverted by exchange for the uses described above. Co-Applicants have complied with the requirements of Rule 89, C.R.C.P., the exchange has been administered in a manner consistent with recognition of the original priority date of the exchange, and, pursuant to § 37-92-305(10), C.R.S., Co-Applicants are entitled to recognition of the original priority date of April 1, 1926 for this existing exchange, without postponement under § 37-92-306, C.R.S.

9. Terms and Conditions. The terms and conditions set forth below will prevent injury to the vested water rights and conditional water rights of others and will ensure that the substitute supply made available under the exchange will be of a quality, quantity and continuity adequate to meet the requirements of the uses to which the water of senior appropriators has normally been put.

9.1 Quality of substitute supply. The same water which is diverted by exchange out of the Colorado River at the Upstream Point of Exchange shall be returned to the Colorado River at the Downstream Point of Exchange. The return of the same water, after its use in non-contaminating power generating and hydraulic pumping facilities, will ensure that the water returned to the river, i.e., the substitute supply, is of a quality to meet the requirements of the uses to which senior appropriators have normally put such water.

9.2 Quantity of substitute supply. The amount of water returned to the Colorado River above the GVIC diversion dam at the Downstream Point of Exchange by operation of the Check (the "substitute supply") shall equal or exceed the amount of water diverted by exchange out of the Colorado River by means of the Roller Dam at the Upstream Point of Exchange.

9.3 Continuity of substitute supply. The water diverted by exchange out of the Colorado River at the Upstream Point of Exchange shall be returned to the Colorado River at the Downstream Point of Exchange in approximately the same time as it would take that water to flow in the Colorado River from the Upstream Point of Exchange to the Downstream Point of Exchange if the water were left in the river.

9.4 Intervening Seniors. All water rights located between the Upstream Point of Exchange and the Downstream Point of Exchange, i.e., within the Exchange Reach, which are senior to the date of appropriation of the exchange, shall be fully satisfied by the remaining flows subject to their call.

9.5 Terms of Stipulation Incorporated. The terms and conditions of the Stipulation and Agreement attached hereto as Attachment 1 are incorporated herein.

10. Decree Administrable. The Court notes that, by way of the Stipulation and Agreement attached hereto as Attachment 1, the State and Division Engineer for Water Division No. 5 stipulated to the entry of this decree. The Court finds that this decree is administrable by the Division Engineer for Water Division No. 5.

CONCLUSIONS OF LAW

11. Incorporation of Findings of Fact. The Court incorporates the foregoing Findings of Fact to the extent that these may constitute conclusions of law.

12. Jurisdiction. Timely and adequate notice of the filing and contents of the application and the amendment to the application herein was given in the manner required by law. The time for filing Statements of Opposition and for seeking leave to intervene has expired. The Court has jurisdiction over all persons and owners of property affected hereby, irrespective of whether or not those persons and owners of property have appeared.

13. Subject Matter Jurisdiction. The Court has jurisdiction over the subject matter of this proceeding. The application herein is one contemplated by law, and adjudication of the exchange described in this decree is authorized by law and is within the jurisdiction of this Court. §§ 37-80-120, 37-92-101, *et seq.*, C.R.S. The right of substitution and exchange decreed herein is an appropriative water right, with a priority date and, like other appropriative water rights, must be exercised within the priority system and in accordance with applicable state law. §§ 37-80-120(4), 37-92-101, *et seq.*, C.R.S.

14. Appropriative Right of Exchange. The appropriative right of exchange confirmed herein was initiated on April 1, 1926, was diligently prosecuted thereafter, and was completed with reasonable diligence by the diversion of water by exchange and the application of such water to the beneficial uses described herein. §§ 37-92-305(1), 37-92-305(9)(a) C.R.S.

15. Non-Injury. Subject to the terms and conditions of the Stipulation and Agreement, the exchange may be operated under terms and conditions which prevent injury to the vested water rights and conditional water rights of others, including the requirement that the substitute supply made available under the exchange will be of a quality, quantity and continuity adequate to meet the requirements of the uses to which the water of senior appropriators has normally been put. §§ 37-80-120(2), (3) & (4), 37-92-305(3) & (5), C.R.S.

16. Entitlement to Original Priority Without Postponement. Pursuant to § 37-92-305(10), C.R.S., Co-Applicants are entitled to recognition of the original priority date of April 1, 1926 for the exchange described herein, without postponement under § 37-92-306, C.R.S.

JUDGMENT AND DECREE

Based on the foregoing Findings of Fact and Conclusions of Law, it is hereby adjudged, ordered and decreed that:

17. Incorporation of Findings of Fact and Conclusions of Law. The foregoing Findings of Fact and Conclusions of Law are incorporated herein as if set out verbatim.

18. Confirmation of Orchard Mesa Check Exchange. Subject to the terms and conditions set forth herein, the Court hereby confirms and approves the Orchard Mesa Check Exchange which is more specifically described in the Findings of Fact, above, in the amount of 640 c.f.s., absolute, with a priority date of April 1, 1926, without postponement under § 37-92-306, C.R.S.

19. Terms and Conditions. The terms and conditions set forth in the Stipulation and Agreement, as well as paragraph 9, above, will prevent injury to the vested water rights and conditional water rights of others and will ensure that the substitute supply made available under the exchange will be of a quality, quantity and continuity adequate to meet the requirements of the uses to which the water of senior appropriators has normally been put.

20. Approval and Incorporation of Stipulation and Agreement. The parties have executed the Stipulation and Agreement attached hereto as Attachment 1. The Court, having reviewed the Stipulation and Agreement and being otherwise fully advised in the premises, hereby approves the Stipulation and Agreement and incorporates it into this decree as though it were restated here in full.

21. Retained Jurisdiction. The Court shall retain permanent jurisdiction over the subject matter of this case and parties hereto for all purposes set forth in the Stipulation and Agreement; provided, however, that the priority date and amount of the exchange are finally determined hereby and will not be further considered under the Court's retained jurisdiction.

22. Filing of Decree with State and Division Engineers. A copy of these Findings of Fact, Conclusions of Law, Judgment and Decree shall be filed with the State Engineer and the Division Engineer for Water Division No. 5.

Dated at Glenwood Springs, Colorado, this 1st day of October, 1996.

THOMAS W. OSSOLA
Water Judge
Water Division No. 5

Copy of the foregoing mailed to all
Counsel of record ✓ Water
Referee ---- Div. Engineer ✓ and
State Engineer ✓ Date 10-02-96
Deputy Clerk, Water Div. No. 5

GVE #3

Exhibit E

Orchard Mesa Check Exchange
Water Division No. 5 - Case 91CW247

Applicant	Counsel	Firm and Address
United States of America	Bruce D. Bernard, Esquire Stephen G. Bartell, Esquire	U.S. Department of Justice Environment and Natural Resources Division General Litigation Section 999 18th Street, Suite 945 Denver, Colorado 80202
Grand Valley Water Users Association	Mark Hermundstad, Esquire	Williams, Turner & Holmes, P.C. 200 North 6th Street, #103 P.O. Box 338 Grand Junction, Colorado 81502
Orchard Mesa Irrigation District	Flint B. Ogle, Esquire	Dufford, Waldeck, Milburn & Krohn, L.L.P. 744 Horizon Court, Suite 300 Grand Junction, Colorado 81506
Objector	**Counsel**	**Firm and Address**
City of Aurora, Colorado, acting by and through its Utility Enterprise	John M. Dingess, Esquire	Duncan, Ostrander & Dingess, P.C. 7800 East Union Avenue, #200 Denver, Colorado 80237
Basalt, Town of New Castle, Town of Mid-Valley Metropolitan District Rifle, City of	Loyal E. Leavenworth, Esquire	Leavenworth & Associates, P.C. P.O. Drawer 2030 Glenwood Springs, Colorado 81602

9/CW247

Exhibit E

Orchard Mesa Check Stations
Water Division No. 5 - Case 91CW247

Basalt Water Conservancy District Copper Mountain, Inc. Copper Mountain Consolidated Metropolitan District Mobil Mining & Minerals Company	Scott Balcomb, Esquire Lori Satterfield, Esquire	Delaney & Balcomb, P.C. 818 Colorado Avenue P.O. Drawer 790 Glenwood Springs, Colorado 81602
Carbondale, Town of Debeque, Town of Eagle, Town of Palisade, Town of	Sherry A. Caloia, Esquire	Caloia, Houpt & Light, P.C. 1204 Grand Avenue Glenwood Springs, Colorado 81601
Frisco, Town of Glenwood Springs, City of North Barton Creek, LLC Parachute, Town of Rifle Land Associates, Ltd. Silverthorne, Town of Spruce Valley Ranch Foundation	David W. Robbins, Esquire Mark J. Wagner, Esquire	Hill & Robbins, P.C. 1441 18th Street, #100 Denver, Colorado 80202
Colorado Division of Wildlife Colorado State Engineer Colorado Water Conservation Board Division Engineer, Water Division No. 5	Gale A. Norton, Attorney General Stephen K. Erkenbrack, Chief Deputy Attorney General Timothy M. Tymkovich, Solicitor General Jennifer L. Gimbel, Deputy Attorney General Wendy Weiss, First Assistant Attorney General	Natural Resources Section 1525 Sherman, 5th Floor Denver, Colorado 80203

91CW247

Exhibit E

Orchard Mesa Check Exchange
Water Division No. 1 - Case 91CW247

Colorado River Water Conservation District	David C. Hallford, Esquire	201 Centennial Street, #204 (81601) P.O. Box 1120 Glenwood Springs, Colorado 81602
Colorado Springs, City of	Mark T. Pifher, Esquire Wm Kelly Dude, Esquire	Dude, Pifher & Lebel, P.C. 104 South CascadeAvenue, Suite 204 Colorado Springs, Colorado 80903
Cyprus Climax Metals Company	Brian M. Nazarenus, Esquire	Gorsuch, Kirgis, L.L.C. 1401 17th Street, #1100 Denver, Colorado 80202
Exxon Company, U.S.A. Board of County Commissioners of Summit County, Colorado Vail Associates, Inc. Vail Valley Consolidated Water District Upper Eagle Regional Water Authority	Glenn E. Porzak, Esquire Steven Bushong, Esquire	Porzak, Browning & Johnson, L.L.P. 1300 Walnut Street, Suite 100 Boulder, Colorado 80302
Grand County Water & Sanitation District No. 1 Middle Park Water Conservancy District	Stanley W. Cazier, Esquire	Baker, Cazier & McGowan 62495 U.S. Highway 40, E P.O. Box 500 Granby, Colorado 80446
Grand Valley Irrigation Company	Frederick G. Aldrich, Esquire John T. Howe, Esquire	Hoskin, Farina, Aldrich & Kampf, P.C. 200 Grand Avenue, Suite 400 P.O. Box 40 Grand Junction, Colorado 81502
Pueblo, Colorado, Board of Water Works of	William F. Mattoon, Esquire William A. Paddock, Esquire Peter C. Fleming, Esquire	Peterson, Fonda, Farley, Mattoon Crockenberg & Garcia, P.C. 650 Thatcher Building P.O. Box 35 Pueblo, Colorado 81002 Carlson, Hammond & Paddock, L.L.C. 1700 Lincoln Street, Suite 3900 Denver, Colorado 80203

91CW247

Exhibit E

Orchard Mesa Check Exchange
Water Division No. 1 - Case 91CW247

Public Service Company of Colorado	William A. Hillhouse II, Esquire Kenneth L. Salazar, Esquire	Parcel, Mauro, Hultin & Spaanstra, P.C. 1801 California Street, Suite 3600 Denver, Colorado 80202
Ralston Resorts, Inc.	Gary L. Greer, Esquire	Sherman & Howard, L.L.C. 633 Seventeenth Street, Suite 3000 Denver, Colorado 80202
Union Oil Company of California (UNOCAL)	Charles N. Woodruff, Esquire James R. Montgomery, Esquire	Moses, Wittemyer, Harrison & Woodruff, P.C. 1002 Walnut, #300 (80302) P.O. Box 1440 Boulder, Colorado 80306

91cw247

91CW247

ATTACHMENT 1
TO FINDINGS OF FACT, CONCLUSIONS OF LAW, JUDGMENT AND DECREE

DISTRICT COURT, WATER DIVISION NO. 5, STATE OF COLORADO

Case No. 91CW247

STIPULATION AND AGREEMENT

CONCERNING THE APPLICATION FOR WATER RIGHTS OF THE GRAND VALLEY WATER USERS ASSOCIATION, ORCHARD MESA IRRIGATION DISTRICT, AND THE UNITED STATES OF AMERICA, IN MESA COUNTY, COLORADO

This Stipulation and Agreement, dated as of September 4, 1996, is made between the Co-Applicants, the Grand Valley Water Users Association, the Orchard Mesa Irrigation District ("OMID"), the United States of America ("United States"), and the following parties who are collectively referred to herein as the "Objectors":

Aurora, City of
Basalt, Town of
Basalt Water Conservancy District
Carbondale, Town of
Colorado Division of Wildlife
Colorado River Water Conservation District
Colorado Springs, City of
Colorado State Engineer
Colorado Water Conservation Board
Copper Mountain, Inc.
Copper Mountain Consolidated Metropolitan District (successor-in-interest to Copper Mountain Water and Sanitation District)
Cyprus Climax Metals Company
DeBeque, Town of
Division Engineer, Water Division No. 5
Eagle, Town of
Exxon Company, U.S.A.
Frisco, Town of
Glenwood Springs, City of
Grand County Water & Sanitation District No. 1
Grand Valley Irrigation Company
Middle Park Water Conservancy District
Mid Valley Metropolitan District
Mobil Mining & Minerals Company

New Castle, Town of
North Barton Creek Ltd. Liability Company
Palisade, Town of
Parachute, Town of
Pueblo, Board of Water Works of
Public Service Company of Colorado
Ralston Resorts, Inc. (successor-in-interest to Keystone Resorts Management, Inc., and Breckenridge Ski Corporation)
Rifle, City of
Rifle Land Associates, Ltd.
Silverthorne, Town of
Spruce Valley Ranch Foundation
Summit County Commissioners, Board of
Union Oil Company of California
Upper Eagle Regional Water Authority
Vail Associates, Inc.
Vail Valley Consolidated Water District

In consideration of the mutual agreements contained herein, Co-Applicants and Objectors agree as follows:

1. Definitions. Unless otherwise indicated, the following terms shall have the following definitions in this Stipulation and Agreement and in any decree which may be subsequently entered in this case:

- "15-Mile Reach" shall mean the reach of the Colorado River which extends, from the point at which the tailrace common to the Grand Valley Power Plant and the OMID pumping plant returns to the Colorado River below the Grand Valley Irrigation Company ("GVIC") diversion dam, downstream to the confluence of the Colorado River and Gunnison River.

- "Blue River Decrees" shall mean the stipulations, judgments, orders and decrees entered in consolidated Civil Action Nos. 2782, 5016 and 5017, United States District Court, District of Colorado, including without limitation the decrees dated October 12, 1955, and April 16, 1964.

- "HUP" shall mean the so-called "historic users pool" defined as water to be released from the Green Mountain Reservoir power pool as described in paragraphs 2 and 3 of the Operating Policy.

- "HUP beneficiaries" shall mean those persons or entities for whose benefit releases are made from the HUP pursuant to the Operating Policy.

- "OMID Right" shall mean the 450 c.f.s. decreed as Priority No. 197 as renumbered to the OMID System of Canals and Ditches by decree of the Mesa County District Court entered on July 25, 1941, in Case No. 5812.

- "Operating Policy" shall mean the Operating Policy for Green Mountain Reservoir; Colorado-Big Thompson Project, Colorado (Volume 48, No. 247 Federal Register 12/22/83; as amended in Volume 52, No. 176 Federal Register 9/11/87).

- "Orchard Mesa Check" shall mean the three mechanically operated radial gates and the bypass channel by which the water level in the common afterbay of the Grand Valley Power Plant and the OMID pumping plant can be raised to a level which causes water to flow through the bypass channel and return to the Colorado River immediately upstream of the GVIC diversion dam, and shall include any replacement structure in the same location which performs that same function.

- "Parties" shall mean each of the parties to this Stipulation and Agreement as identified in the first unnumbered paragraph, above. A "party" shall mean one of the parties.

- "Power Right" shall mean the 800 c.f.s., 400 c.f.s. during the irrigation season, decreed to the United States for the Grand Valley Project by decree of the Mesa County District Court entered July 25, 1941, in Case No. 5812.

- "Shoshone Rights" shall mean the water rights decreed for and associated with the Shoshone Power Plant (a.k.a. the Glenwood Power Canal), adjudicated for 1,250 c.f.s. on December 9, 1907, with an appropriation date of January 7, 1902, and adjudicated for 158 c.f.s. on February 7, 1956, with an appropriation date of May 15, 1929.

2. Application. The Co-Applicants filed an application on December 30, 1991, which application was amended on May 24, 1993, for approval of an exchange of water based upon the discharge of water from the common afterbay of the Grand Valley Power Plant and the OMID pumping plant into the Colorado River upstream from the GVIC diversion dam by means of the Orchard Mesa Check. The Co-Applicants have claimed an absolute right for an existing exchange of water with a 1926 priority date. Attached hereto as Exhibit A and incorporated herein by this reference is a list of all of the decreed water

rights of the Co-Applicants (the "Co-Applicants' Water Rights"), Mesa County Irrigation District and Palisade Irrigation District which are legally divertible at the headgate of the Government Highline Canal (commonly referred to as the "Roller Dam"). Attached hereto as Exhibit B and incorporated herein by this reference is a list of all the decreed water rights of the GVIC (the "GVIC Water Rights") which are legally divertible at the GVIC diversion dam.

3. Decree Provisions. The parties agree to the entry of a decree in Case No. 91CW247, in the form of the proposed decree attached hereto as Exhibit C, granting the application as amended and incorporating the terms of this Stipulation and Agreement.

3.a. Except as provided in paragraphs 3.a.(1), (2) and (3), below, the United States agrees not to exercise the Power Right from April 1 through October 31 of each year so as to place an administrative call which results in the curtailment of diversions by upstream water rights.

3.a.(1) During the months April through October, at any time diversions at the Roller Dam under the irrigation rights listed on Exhibit A are less than 1,310 c.f.s., the Power Right may be exercised so as to maintain a total call of 1,310 c.f.s. at the Roller Dam by the water rights listed on Exhibit A.

3.a.(2) In addition, at any time during the months April through October that diversions by the GVIC Water Rights are less than 400 c.f.s., the Power Right may be exercised for up to the amount that diversions by such GVIC rights are less than 400 c.f.s.; provided, however, that if GVIC gives written notice to the parties pursuant to paragraphs 3.e.(1) or (2) that the GVIC Water Rights shall no longer be subject to the terms of paragraph 3.b., then, at any time during the months April through October, the Power Right may be exercised for up to the amount that GVIC's diversions are less than the amount of GVIC's then existing decreed water rights or less than 400 c.f.s., whichever is less.

3.a.(3) If the Orchard Mesa Check is physically inoperable due to an Act of God or an emergency situation beyond the control of the Co-Applicants, the United States may exercise the Power Right to the full decreed amount for a period not to exceed a total of 14 days during the April 1 through October 31 period in any given year or until the Orchard Mesa Check becomes operable, whichever occurs first. For purposes of this provision, an emergency situation shall not be deemed to occur if the Orchard Mesa Check is inoperable due to a lack of funding or the non-performance of ordinary maintenance.

3.a.(4) Any calls of the Power Right pursuant to paragraphs 3.a.(1), (2) and (3), above, may be made only when and to the extent the Power Right is in priority, there is capacity in the power canal, and all water called thereunder is delivered to and through the Grand Valley Power Plant.

3.a.(5) For purposes of paragraph 3 of this Stipulation and Agreement, the priority date of the Power Right shall be considered to be August 3, 1934. So long as none of the provisions of paragraph 3 of this Stipulation and Agreement are suspended, the United States agrees not to seek administration under a more senior priority, which the United States asserts is decreed as February 27, 1908. By agreeing not to assert a 1908 priority for the Power Right while paragraph 3 of this Stipulation and Agreement is not suspended, the United States does not waive and shall not be estopped from asserting the right to seek administration under a 1908 priority, nor shall Objectors be estopped from challenging a 1908 priority, in the event any of the provisions of paragraph 3 of this Stipulation and Agreement shall be suspended, as addressed in paragraphs 3.b.(6), 5.c. and 5.d., below. The parties agree that the time for raising claims and defenses concerning the priority of the Power Right is tolled so long as none of the provisions of paragraph 3 of this Stipulation and Agreement are suspended.

3.a.(6) No provision of this Stipulation and Agreement shall be considered to affect in any way the right of the United States to call for the 800 c.f.s. power right from November 1 through March 31.

3.b. During the period April 1 through October 31 of any year that the conditions set forth in paragraphs 3.b.(1), (2) and (3), below, are met, diversions by HUP beneficiaries (except the HUP beneficiaries who own and/or operate the water rights listed in Exhibits A and B) shall not be curtailed by any administrative call by the water rights listed in Exhibits A and B:

3.b.(1) the Orchard Mesa Check is physically operable. For purposes of this provision, the Orchard Mesa Check shall be considered to be physically operable unless it is rendered inoperable due to an Act of God or an emergency situation beyond the control of the Co-Applicants. An emergency situation shall not be deemed to occur if the Orchard Mesa Check is inoperable due to a lack of funding or the non-performance of ordinary maintenance. If the Orchard Mesa Check is rendered inoperable, Co-Applicants shall make best efforts to bring the facility back into operation as soon as possible.

3.b.(2) there is at least 66,000 acre feet of water available for releases for the benefit of HUP beneficiaries when Green Mountain Reservoir ceases to be in-priority for its initial fill under the Blue River Decrees. Nothing in this Stipulation and Agreement shall be construed to limit or diminish the ability of the United States to exercise its full right to fill Green Mountain Reservoir as provided by the Blue River Decrees.

3.b.(3) the Shoshone Rights continue to be exercised in a manner substantially consistent with their historical operations for hydropower production at their currently decreed point of diversion.

3.b.(4) As provided in paragraph 3.c., below, this paragraph 3.b. shall not cause increased curtailment of diversions by non-HUP beneficiaries.

3.b.(5) If any of the three conditions set forth in paragraphs 3.b.(1), (2) or (3), above, is not met, Co-Applicants and GVIC (based on concurrence of any three out of four of those entities) may give written notice to the parties that the Operating Criteria developed pursuant to paragraph 5, below, and the non-curtailment provisions of this paragraph 3.b. shall be inoperative until each of said three conditions is being met (if paragraph 3.b. is rendered inoperative under this provision, it shall not be considered to be suspended for the purposes of this Stipulation and Agreement). During any period that the Operating Criteria are inoperative, no water in the HUP shall be deemed to be surplus to the needs of the HUP beneficiaries, and releases from the HUP shall only be made to replace out-of-priority depletions by HUP beneficiaries and to make direct deliveries to HUP beneficiaries. To the extent that such releases are less than the out-of-priority depletions of HUP beneficiaries, the water rights listed in Exhibits A and B may place an administrative call and seek curtailment of diversions by HUP beneficiaries, provided, however, that nothing herein shall diminish or limit the statutory authority and responsibility of the Division 5 Engineer.

3.b.(6) If any of the three conditions set forth in paragraphs 3.b.(1), (2) or (3), above, is not met, Co-Applicants and GVIC (based on concurrence of any three out of four of those entities) may give written notice to the parties that the terms of paragraph 3.a. of this Stipulation and Agreement are suspended until each of said three conditions is being met. During any period that the terms of paragraph 3.a. are suspended, the United States may fully exercise the Power Right, and the parties may raise the matters addressed in paragraphs 3.a.(5), 3.e., 3.f. and 3.g. of this Stipulation and Agreement. If an action raising any such matter is commenced during any period of

suspension of paragraph 3.a., the parties to such action shall be free to continue to prosecute and defend such action to its conclusion, notwithstanding that the conditions set forth in paragraphs 3.b.(1), (2) and (3) become fully satisfied and paragraph 3.a. goes back in effect after commencement of such action.

3.c. The parties recognize that under the terms of paragraph 3.b. of this Stipulation and Agreement, there may be instances when the actual releases from the HUP will be less than the out-of-priority depletions of the HUP beneficiaries. In such instances, the Division Engineer shall not curtail the water right(s) of any entity not entitled to benefits of the HUP to the extent that entity's water right(s) would otherwise have been in priority to divert if the out-of-priority depletions of HUP beneficiaries would have been fully replaced in the absence of the execution of this Stipulation and Agreement and the decree based thereon.

3.d. The provisions of paragraphs 3.a. and 3.b. of this Stipulation and Agreement shall not be considered to intend, evidence, or represent abandonment in whole or in part of any of the Co-Applicants' Water Rights, the GVIC Water Rights or other water rights listed on Exhibit A and Exhibit B, including, but not limited to, the Power Right.

3.e. Issues concerning waste and reasonable efficiency in the exercise of the water rights, diversion, carriage and delivery systems of the Co-Applicants, GVIC and other owners of the water rights listed on Exhibits A and B, are not determined in this proceeding and all claims and defenses regarding those issues are dismissed without prejudice and shall not be raised by any of the parties in any proceeding before the Division 5 Engineer or the State Engineer or in any judicial proceeding so long as none of the provisions of paragraph 3 of this Stipulation and Agreement are suspended. The parties agree that the time for raising claims and defenses concerning these issues is tolled so long as none of the provisions of paragraph 3 of this Stipulation and Agreement are suspended. Nothing herein shall diminish or limit the statutory authority and responsibility of the Division 5 Engineer. Nothing herein shall affect the rights of the parties regarding the disposition of water saved through implementation of conservation measures. Nor shall anything herein affect the rights of the parties regarding issues relating to administration of water rights, except those issues which the parties have agreed not to raise pursuant to paragraphs 3.a.(5), 3.e., 3.f. and 3.g.

3.e.(1) If, during any period of suspension of paragraph 3.a., an action is brought by any party to this Stipulation and Agreement raising issues concerning waste or reasonable efficiency in the exercise of the GVIC Water Rights, GVIC may then give written notice to the parties that the GVIC Water Rights shall no longer be subject to the terms of paragraph 3.b.

3.e.(2) In the event that any person or entity not a party to this Stipulation and Agreement brings an action raising issues concerning waste or reasonable efficiency in the exercise of the GVIC Water Rights, GVIC may give written notice to the parties that the GVIC Water Rights shall no longer be subject to the terms of paragraph 3.b. If GVIC elects to give such notice, the parties to this Stipulation and Agreement may then join in any such action or bring a separate action concerning issues of waste or reasonable efficiency in the exercise of the GVIC Water Rights.

3.f. Issues concerning the historical administration of Co-Applicants' Water Rights and GVIC's Water Rights and operation of the Orchard Mesa Check as a precondition to exercise of a call by such water rights and as a term and condition of the decree adjudicating the exchange herein are not determined in this proceeding, and all claims and defenses regarding those issues are dismissed without prejudice and shall not be raised so long as none of the provisions of paragraph 3 of this Stipulation and Agreement are suspended. The parties agree that the time for raising claims and defenses concerning the historical administration and operation of the Orchard Mesa Check is tolled as long as none of the provisions of paragraph 3 of this Stipulation and Agreement are suspended.

3.g. Certain Objectors moved the Court for partial summary judgment on the issue of whether OMID is precluded by the terms of the decrees heretofore awarded it from pumping more than 125 c.f.s. for actual irrigation usage. On June 22, 1995, the Court entered an order denying the motion based on the Court's conclusion that "it cannot be said as a matter of law that OMID is limited to an irrigation right of 125 c.f.s." The Court's Order did not preclude the parties from raising and litigating at trial issues concerning whether or not the OMID Right should be limited to 125 c.f.s., nor did it preclude the parties from raising these issues in a separate action. These issues are not determined in this proceeding and all claims and defenses regarding those issues are dismissed without prejudice and shall not be raised so long as none of the provisions of paragraph 3 of this Stipulation and Agreement are suspended. The parties agree that the time for raising claims and defenses concerning such issues is tolled as long as none of the provisions of paragraph 3 of this Stipulation and Agreement are suspended.

4. Operating Policy.

4.a. Nothing contained in this Stipulation and Agreement shall in any manner be construed or intended to limit the availability of water from Green Mountain Reservoir for contract pursuant to paragraphs 4 through 7 of the Operating Policy, subject to the terms and conditions of such contracts, or otherwise adversely affect any Green Mountain Reservoir water service contract.

4.b. Nothing in this Stipulation and Agreement or in the Operating Criteria attached hereto as Exhibit D shall be construed as a consent to the validity or enforceability of the Operating Policy or a waiver or relinquishment of any claims or defenses regarding the validity or enforceability of the Operating Policy.

5. Green Mountain Reservoir Historic User Pool Operating Criteria.

5.a. Co-Applicants and Objectors have jointly developed the Green Mountain Reservoir Historic User Pool Operating Criteria, attached hereto and incorporated herein as Exhibit D ("Operating Criteria"), in order to meet the purposes set forth therein, including defining the terms and conditions under which water in the HUP is surplus to the needs of HUP beneficiaries ("HUP surplus water"). HUP surplus water shall be available for delivery to beneficial uses in Western Colorado under contracts ("HUP surplus water contracts") to be developed by the Bureau of Reclamation. The parties agree that HUP surplus water contracts will provide that HUP surplus water will be delivered to and through the Grand Valley Power Plant to the extent that there is capacity in the power canal and water is needed to produce power at the Grand Valley Power Plant, and that HUP surplus water contracts may provide for delivery of HUP surplus water to other locations and facilities to the extent that there is not capacity in the power canal or that water is not needed to produce power at the Grand Valley Power Plant. Any HUP surplus water contract, entered into pursuant to this Stipulation and Agreement, for delivery of HUP surplus water upstream of the 15-Mile Reach shall be for non-consumptive use only. HUP surplus water contracts shall provide that return flows from delivery of HUP surplus water to and through the Grand Valley Power Plant shall be returned to the river through the tailrace common to the Grand Valley Power Plant and the OMID pumping plant, and that deliveries or return flows of HUP surplus water delivered to other locations and facilities shall flow through the 15-Mile Reach or be returned or delivered to the Colorado River as near as practicable to the upstream point of the 15-Mile Reach, thereby augmenting flows for the recovery of endangered Colorado River fish species.

5.b. The Operating Criteria shall be binding upon and observed by the parties; provided, however, that the Operating Criteria may be amended by mutual agreement of the parties or otherwise modified as provided in this paragraph 5 and paragraph 6 of this Stipulation and Agreement. The parties agree to implement the Operating Criteria and, if necessary, to use good faith efforts to modify such criteria to promote the purposes set forth in paragraph 2 of the Operating Criteria.

5.c. If any party desires to request a modification to the Operating Criteria, based upon an allegation that use of one or more of the party's water rights in existence as of May 31, 1996 have been injured by the Operating Criteria and/or this Stipulation and Agreement, whether such injury be in water quantity, water quality or any injury which occurs as a result of a significant expansion of the amount of water required to offset or satisfy the demands of HUP beneficiaries, as a result of amendment or modification of the Operating Policy, or as a result of a substantial change in the manner in which the Shoshone Rights are exercised, the parties shall follow the procedures set forth below.

5.c.(1) Notice of the asserted injury shall be mailed to all parties to this Stipulation and Agreement. A party's failure to assert a particular type of injury during a given water year shall not limit that party's right to assert such an injury in subsequent water years unless the conditions upon which the claimed injury are based have existed during any five years out of any seven year period following execution of this Stipulation and Agreement.

5.c.(2) The parties shall each have the opportunity to designate a representative to serve on a committee which will review the injury claim and make an initial determination as to whether the alleged injury exists and, if so, whether it was caused by operation of the Operating Criteria and/or the provisions of this Stipulation and Agreement. Any party choosing not to designate a representative shall be deemed to accept the finding of the committee.

5.c.(2)(A) In the event the committee unanimously determines that no injury has occurred or that the injury alleged was not caused in whole or part by operation of the Operating Criteria and/or this Stipulation and Agreement, then the Operating Criteria and all provisions of this Stipulation and Agreement shall remain in full force and effect. If the committee cannot unanimously agree, then the party claiming injury may submit the issue to arbitration in accordance with paragraph 5.c.(3), below.

5.c.(2)(B) If the committee unanimously determines that injury has been caused in whole or in part by the operation of the Operating Criteria and/or this Stipulation and Agreement, then the committee shall attempt to reach agreement as to how to modify the Operating Criteria and/or this Stipulation and Agreement to alleviate such injury to the satisfaction of the parties. If such an agreement is reached, the Operating Criteria and/or this Stipulation and Agreement shall be modified in accordance with that agreement and a stipulated motion to modify this Stipulation and Agreement shall be filed with the Court and any modifications to appropriate documents shall be made.

5.c.(2)(C) In the event the committee unanimously determines that injury has occurred and that it was caused in whole or in part by operation of the Operating Criteria and/or this Stipulation and Agreement, but cannot determine how to alleviate the injury to the satisfaction of the parties, the Operating Criteria and the provisions of paragraph 3 of this Stipulation and Agreement shall be suspended. In that event, any participating party may file a motion in this case or a separate action for determination of such issue and for appropriate relief. The Operating Criteria and the provisions of paragraph 3 of this Stipulation and Agreement shall remain suspended unless and until the Court determines otherwise.

5.c.(2)(D) The committee shall have a maximum period of one year from the date notice of the asserted injury is sent to the parties in which to make its determination of injury and, if injury is found, to reach agreement concerning how to alleviate the injury. During this period, the Operating Criteria and all provisions of this Stipulation and Agreement shall remain in full force and effect.

5.c.(3) Upon written notification from the committee organized under paragraph 5.c.(2), above, notifying all parties that the committee has been unable to agree upon a determination of injury or noninjury, or upon expiration of the one year period to make such determination, any party claiming injury may submit the issue of whether injury has occurred by operation of the Operating Criteria and/or this Stipulation and Agreement to arbitration.

5.c.(3)(A) Arbitration shall be governed by the rules of the American Arbitration Association (or, if it no longer exists, a similar organization). A panel of three arbitrators shall be selected as follows: (i) One person shall be selected by Co-Applicants and GVIC; (ii) One person shall be selected by Objectors; and, (iii) The two

selected arbitrators shall select a third. The arbitrators shall be engineers, hydrologists, geologists, or practicing or retired water lawyers familiar with Colorado water law. None of the arbitrators shall have had any previous association with this case, absent the express consent of the parties.

5.c.(3)(B) Any party to the Stipulation and Agreement may participate as a party in the arbitration. All participating parties shall share in the costs of arbitration equally. Participating parties shall cooperate to conclude the arbitration expeditiously.

5.c.(3)(C) The arbitrators shall issue a written determination within 60 days following the conclusion of the taking of evidence. The arbitrators are only authorized to make determinations as to whether injury has occurred and, if so, whether it was caused by the Operating Criteria and/or this Stipulation and Agreement.

5.c.(3)(C)(i) If the arbitrators determine that injury has occurred and that it was caused by operation of the Operating Criteria and/or this Stipulation and Agreement, the Operating Criteria and the provisions of paragraph 3 of this Stipulation and Agreement shall be suspended. The parties shall then re-convene the committee organized under paragraph 5.c.(2), above, and the committee shall attempt to reach agreement as to how to alleviate such injury to the satisfaction of the parties. If such an agreement is reached, the Operating Criteria and/or this Stipulation and Agreement shall be modified in accordance with that agreement and a stipulated motion to modify this Stipulation and Agreement shall be filed with the Court and any modifications to appropriate documents shall be made. The committee shall have a maximum of six months from the date the arbitrators' determination is sent to the parties in which to reach agreement concerning how to alleviate the injury. Upon written notification from the committee notifying all parties that the committee has been unable to agree as to how to alleviate the injury, or upon expiration of the six month period for the committee to reach agreement, any participating party may proceed as provided in paragraph 5.c.(2)(C), above. The Operating Criteria and the provisions of paragraph 3 of this Stipulation and Agreement shall remain suspended unless and until the committee is able to unanimously agree on necessary modifications to the Operating Criteria and/or this Stipulation and Agreement, or unless and until the Court determines otherwise.

5.c.(3)(C)(ii) If the arbitrators determine that no injury has occurred, or that injury has occurred but was not caused by operation of the Operating Criteria and/or this Stipulation and Agreement, the Operating Criteria and all provisions of this Stipulation and Agreement shall remain in full force and effect.

5.c.(3)(D) Any party to the arbitration who disagrees with the arbitrators' decision may file a motion in this case or a separate action for de novo review of the issue of injury and its causation and any issues related thereto, including whether the Operating Criteria and/or whether any provisions of this Stipulation and Agreement should be suspended, reinstated, or modified.

5.d. In the event the Operating Criteria are suspended, no water in the HUP shall be deemed to be surplus to the needs of the HUP beneficiaries, and releases from the HUP shall only be made to replace out-of-priority depletions by HUP beneficiaries and to make direct deliveries to HUP beneficiaries. In the event the Operating Criteria are suspended, the provisions of paragraph 3 of this Stipulation and Agreement shall also be suspended, and the Power Right may be fully exercised and the water rights listed in Exhibits A and B may place an administrative call and seek curtailment of diversions by HUP beneficiaries to the extent that HUP releases are less than the out-of-priority depletions of HUP beneficiaries.

5.e. In the event the Operating Criteria or HUP surplus water contracts are determined to be invalid or unenforceable by a court of competent jurisdiction, then the Operating Criteria shall be deemed suspended under paragraph 5.d., and paragraph 5.d. shall apply.

6. Entry of Decree. The parties agree that the decree attached hereto as Exhibit C shall be entered by the Court and that the Court shall retain jurisdiction for the purposes of considering any motion filed pursuant to paragraph 5 of this Stipulation and Agreement. In the event the Operating Criteria and the provisions of paragraph 3 of this Stipulation and Agreement are suspended, the parties shall then be free to raise any and all claims, whether in this case or in a separate action, including but not limited to, the matters addressed in paragraphs 3.a.(5), 3.e., 3.f. and 3.g. of this Stipulation and Agreement, except that the priority date and rate of the exchange shall not be relitigated. The parties agree that the Court shall not use the entry of the decree adjudicating the exchange and the priority thereof in a manner prejudicial to the positions or claims of either Co-Applicants or Objectors in any such subsequently filed motion or action. Any and all claims and defenses

asserted in this proceeding, including issues as to the relevancy of various matters to this application, may be asserted by the parties and shall not be deemed waived.

7. Binding Effect. Upon the execution of this Stipulation and Agreement by all of the parties hereto, which execution must take place on or before September 4, 1996, and upon the Court's approval of this Stipulation and Agreement, this Stipulation and Agreement shall become effective and the rights and obligations created hereby shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns; provided, however, that the Operating Criteria and the limitations set forth in paragraphs 3.a. and 3.b. shall not take effect until the beginning of the 1997 irrigation season, i.e., April 1, 1997. The parties to this Stipulation and Agreement may consist of less than all the parties to Case No. 91CW247 only if the parties to this Stipulation and Agreement consent in writing to the full effectiveness hereof notwithstanding the failure of other parties to Case No. 91CW247 to execute the same.

8. Authority of Counsel to Bind Parties. Counsel executing this Stipulation and Agreement represent that they are authorized by their client(s) to do so.

9. Notice. All notices required or permitted under this Stipulation and Agreement shall be effective when sent to a party by certified United States mail, return receipt requested, to the address shown for that party on the attached Exhibit E, or to any new address of any party or any party's successor-in-interest, provided that notice of any such new address has been sent to all parties in accordance with this paragraph.

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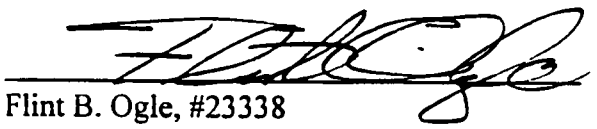

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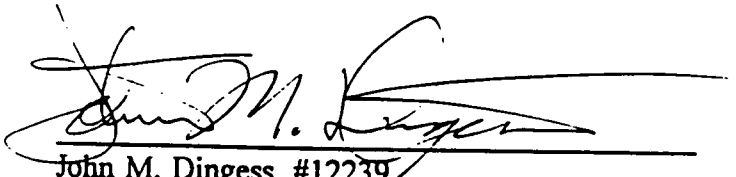

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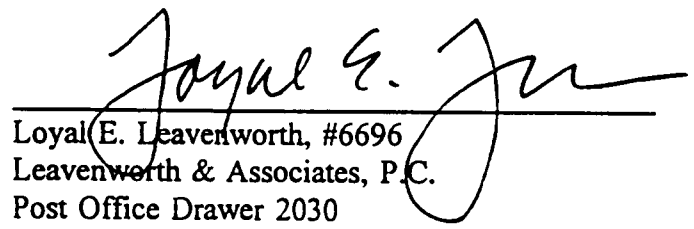

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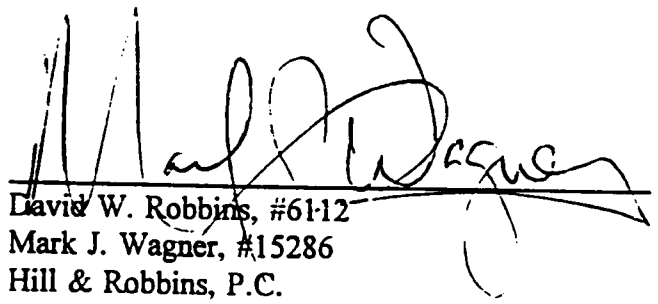

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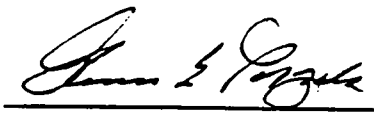

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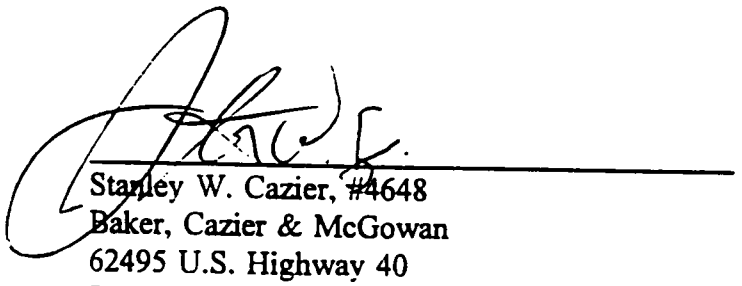

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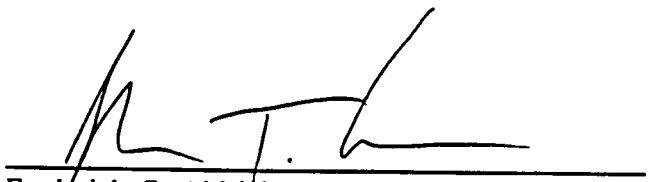

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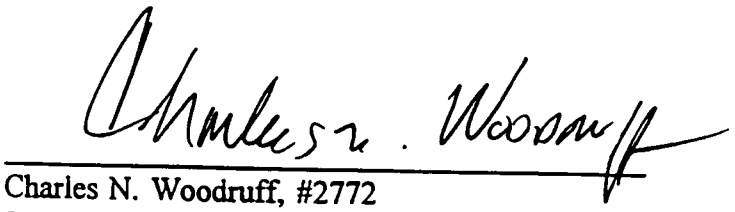

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ATTORNEYS FOR UNOCAL

EXHIBIT A

Stipulation and Agreement
Case No. 91CW247, Water Division No. 5

CO-APPLICANTS' WATER RIGHTS

Owner	Amount/cfs	Adjudication Date	Appropriation Date	Source
Irrigation use:				
Orchard Mesa Irrigation District	450	07/22/1912	10/25/1907	Colorado R.
Orchard Mesa Irrigation District	10.2	07/22/1912	10/01/1900	Colorado R.
Grand Valley Water Users Association/United States	730	07/22/1912	02/27/1908	Colorado R.
Palisade Irrigation District	80	07/22/1912	10/01/1889	Colorado R.
Palisade Irrigation District	23.5	07/25/1941	06/01/1918	Colorado R.
Mesa County Irrigation District	40	07/22/1912	07/06/1903	Colorado R.
Power:				
Grand Valley Water Users Association/United States 1/	400/800	07/25/1941	02/27/1908	Colorado R.

1/ 400 during irrigation season & 800 during non-irrigation season.

91CW247

GVE #3

EXHIBIT B

Stipulation and Agreement
Case No. 91CW247, Water Division No. 5

GVIC WATER RIGHTS

Owner	Amount/cfs	Adjudication Date	Appropriation Date	Source
Grand Valley Irrigation Company	520.81	07/22/1912	08/22/1882	Colorado River
Grand Valley Irrigation Company	119.47	07/25/1941	04/26/1914	Colorado River

91CW247

GVE #3

91CW247

EXHIBIT C
Stipulation and Agreement
Case No. 91CW247, Water Division No. 5

DISTRICT COURT, WATER DIVISION NO. 5, COLORADO

Case No. 91CW247

FINDINGS OF FACT, CONCLUSIONS OF LAW, JUDGMENT AND DECREE

CONCERNING THE APPLICATION FOR WATER RIGHTS OF THE GRAND VALLEY WATER USERS ASSOCIATION, ORCHARD MESA IRRIGATION DISTRICT, AND THE UNITED STATES OF AMERICA, IN MESA COUNTY, COLORADO

FINDINGS OF FACT

1. Filing of Application. This matter was commenced on December 30, 1991 by the filing of an Application to Confirm and Approve Appropriative Right of Exchange which application was amended by leave of Court on May 24, 1993.

2. Co-Applicants. The application and amendment were filed by the United States of America (the "United States"), the Grand Valley Water Users Association, a corporation (the "Association"), and the Orchard Mesa Irrigation District, a corporation ("OMID"). The United States, the Association and OMID are referred to herein as the "Co-Applicants."

3. Objectors.

3.1 Statements of Opposition Opposing Application. The following parties filed timely Statements of Opposition opposing the application or seeking protective terms and conditions:

Basalt, Town of
Basalt Water Conservancy District
Carbondale, Town of
Collbran, Town of
Colorado Division of Wildlife
Colorado Springs, City of
Copper Mountain, Inc.
Copper Mountain Consolidated Metropolitan District (successor-in-interest to Copper Mountain Water & Sanitation District)

DeBeque, Town of
Eagle, Town of
Glenwood Springs, City of
Grand County Water & Sanitation District No. 1
Middle Park Water Conservancy District
Mid Valley Metropolitan District
Mobil Mining and Minerals Company
Natec Resources, Inc.
New Castle, Town of
North Barton Creek Ltd. Liability Company
Palisade, Town of
Parachute, Town of
Pueblo, Board of Water Works of
Public Service Company of Colorado
Ralston Resorts, Inc. (successor-in-interest to Keystone Resorts Management, Inc. and Breckenridge Ski Corporation)
Rifle, City of
Rifle Land Associates, Ltd.
Silverthorne, Town of
Spruce Valley Ranch Foundation
Summit County Commissioners, Board of
Union Oil Company of California
Upper Eagle Regional Water Authority

3.2 Statements of Opposition in Support of Application. The following parties filed timely Statements of Opposition in support of the application:

Colorado River Water Conservation District
Colorado State Engineer
Division Engineer, Water Division No. 5
Grand Valley Irrigation Company

3.3 Intervenors. The following parties did not file timely Statements of Opposition, but were granted leave to intervene as Objectors:

Aurora, City of
Colorado Water Conservation Board
Cyprus Climax Metals Company
Exxon Company, U.S.A.
Englewood, City of
Frisco, Town of

Vail Associates, Inc.
Vail Valley Consolidated Water District

3.4 Withdrawals. The following parties subsequently withdrew their Statements of Opposition:

Collbran, Town of (by Order dated January 29, 1996)
Englewood, City of (by Withdrawal dated March 8, 1996)
Natec Resources, Inc. (by Order dated January 29, 1996)

4. Stipulation. On or about September 23, 1996, the parties filed the Stipulation and Agreement attached hereto as Attachment 1. The Stipulation and Agreement has been executed by the Co-Applicants and by all the Objectors who remain parties to the case and provides that the parties to the Stipulation and Agreement agree to the entry of a decree herein granting the application as amended and incorporating the terms of the Stipulation and Agreement.

5. Jurisdiction. Timely and adequate notice of the filing and contents of the application and amendment to the application herein was given in the manner required by law. The time for filing Statements of Opposition and for seeking leave to intervene has expired. The Court has jurisdiction over the subject matter of this proceeding and over all persons and owners of property affected hereby, irrespective of whether or not those persons and owners of property have appeared.

6. Relief Requested by Application. The application requests confirmation of an appropriative right of substitution and exchange for an existing exchange on the Colorado River which is based on the operation of a structure commonly referred to as the Orchard Mesa Check. Co-Applicants request adjudication of an absolute right for this existing exchange, in the amount of 640 c.f.s., with a priority of April 1, 1926.

7. Description of Exchange Facilities. In order to describe the exchange, it is helpful to describe the facilities by which the exchange is operated. These facilities are described as follows:

7.1 Point of Diversion. The point of diversion for the exchange and the upstream point of the exchange is the headgate on the right (West) side of the Grand Valley Project diversion dam on the Colorado River (commonly referred to as the "Roller Dam") located in the Northwest Quarter of Section 13, Township 10 South, Range 98 West, 6th P.M., in Mesa County, Colorado, on the right (West) bank of the Colorado River at a point whence the Southwest Corner of said Section 13 bears South 16°41' West 4,023 feet (the "Upstream Point of Exchange").

7.2 Point of Delivery of Substitute Supply. The water diverted by exchange is returned to the Colorado River immediately upstream from the Grand Valley Irrigation Company ("GVIC") diversion dam, which is located at a point on the right (West) bank of the Colorado River from whence the Northeast Corner of Section 3, Township 1 South, Range 2 East, of the Ute Meridian, in Mesa County, Colorado, bears North 13°18' East 1,800 feet (the "Downstream Point of Exchange").

7.3 Delivery Facilities. The water diverted by exchange at the Upstream Point of Exchange is delivered for a distance of approximately 4.6 miles through the Highline Canal located on the right (West) bank of the Colorado River, at which point it is diverted under the Colorado River by means of a siphon into the Orchard Mesa Power Canal located on the left (East) bank of the Colorado River. The Orchard Mesa Power Canal delivers the water diverted by exchange for a distance of approximately 3.8 miles to the Grand Valley Power Plant and the OMID Pumping Plant.

7.4 Grand Valley Power Plant. The Grand Valley Power Plant is owned by the United States and leased to the Association, OMID and the Public Service Company of Colorado. A portion of the water diverted by exchange is diverted into the Grand Valley Power Plant for power generation purposes.

7.5 OMID Pumping Plant. The remainder of the water diverted by exchange is diverted into the OMID Pumping Plant to operate hydraulic pumps which lift irrigation water into OMID irrigation canals.

7.6 Afterbay. All the water used for non-consumptive power generation purposes at the Grand Valley Power Plant and non-consumptive operation of hydraulic pumps at the OMID Pumping Plant passes into a common afterbay located below the Grand Valley Power Plant and the OMID Pumping Plant (the "Afterbay"). If the water in the Afterbay is allowed to flow in its natural course, it reenters the Colorado River at a point below the GVIC diversion dam.

7.7 Orchard Mesa Check. The Orchard Mesa Check (the "Check") is a structure which can be operated to alter the point at which water in the Afterbay reenters the Colorado River. The Check is located at or near the downstream end of the Afterbay, across the channel through which water from the Afterbay flows back to the Colorado River. The Check consists of three mechanically operated radial gates and a bypass channel which parallels the Colorado River to a point immediately above the GVIC diversion dam. The Check is operated by lowering one or more of the three radial gates. The lowered gate or gates block the flow in the channel leading from the Afterbay to the Colorado River, thus raising the level of the water in the Afterbay by up to eight feet, more or less. Raising the level of the water in the Afterbay causes water in the Afterbay to flow through the Check's

bypass channel. The water flowing in this bypass channel returns to the Colorado River immediately above the GVIC diversion dam. Thus, the operation of the Check alters the point at which water in the Afterbay is returned to the Colorado River. When the Check is not being operated, water flowing into the Afterbay is returned to the Colorado River at a point below the GVIC diversion dam. When the Check is being operated, some or all of the water flowing into the Afterbay is returned to the Colorado River above the GVIC diversion dam, where it can then be diverted by GVIC which owns water rights senior in priority to the water rights owned by Co-Applicants. The Check may be operated in varying degrees to return more or less water in the Afterbay to the Colorado River above the GVIC diversion dam depending upon the demands of GVIC and the Co-Applicants and the amount of water available at the Roller Dam.

8. Description of Orchard Mesa Check Exchange. The operation of the Check constitutes an appropriative right of substitution and exchange. This existing exchange has been operated as described below.

8.1 Point of Diversion/Upstream Point of Exchange. The point of diversion for the exchange, which is also referred to herein as the Upstream Point of Exchange, is the Roller Dam on the Colorado River, the location of which is set forth in paragraph 7.1, above.

8.2 Point of Delivery of Substitute Supply/Downstream Point of Exchange. The point of delivery of the substitute supply, which is also referred to herein as the Downstream Point of Exchange, is a point at which water diverted into the Check bypass channel returns to the Colorado River immediately above the GVIC diversion dam, the location of which is set forth in paragraph 7.2, above.

8.3 Exchange Reach. The reach of the Colorado River over which the exchange depletes river flows (the "Exchange Reach") extends from the Upstream Point of Exchange described in paragraph 7.1, above, to the Downstream Point of Exchange described in paragraph 7.2, above, and is approximately 8.4 miles in length.

8.4 Source. The source of the water diverted by exchange is the Colorado River.

8.5 Description of Operation of Exchange. The exchange operates by the diversion of water out of the Colorado River at the Upstream Point of Exchange, delivery of that water through the Highline Canal and the Power Canal to the Grand Valley Power Plant and the OMID Pumping Plant for non-consumptive power generation and hydraulic pumping purposes, and the return of the same amount of water to the Colorado River at the Downstream Point of Exchange through operation of the Check. The water returned to the Colorado River at the Downstream Point of Exchange by diversion through the Check bypass

channel can then be diverted by GVIC which owns water rights senior in priority to the water rights owned by Co-Applicants.

8.6 Amount. The maximum flow rate of the exchange is 640 c.f.s., absolute.

8.7 Use. The water diverted by exchange is used for non-consumptive power generation and hydraulic pumping purposes at the Grand Valley Power Plant and the OMID Pumping Plant.

8.8 Priority. The date of initiation of the appropriation is April 1, 1926, the date of completion of construction of the Check and the Check bypass channel. The appropriation was completed with reasonable diligence by the operation of the exchange up to its maximum rate of flow and beneficial use of water diverted by exchange for the uses described above. Co-Applicants have complied with the requirements of Rule 89, C.R.C.P., the exchange has been administered in a manner consistent with recognition of the original priority date of the exchange, and, pursuant to § 37-92-305(10), C.R.S., Co-Applicants are entitled to recognition of the original priority date of April 1, 1926 for this existing exchange, without postponement under § 37-92-306, C.R.S.

9. Terms and Conditions. The terms and conditions set forth below will prevent injury to the vested water rights and conditional water rights of others and will ensure that the substitute supply made available under the exchange will be of a quality, quantity and continuity adequate to meet the requirements of the uses to which the water of senior appropriators has normally been put.

9.1 Quality of substitute supply. The same water which is diverted by exchange out of the Colorado River at the Upstream Point of Exchange shall be returned to the Colorado River at the Downstream Point of Exchange. The return of the same water, after its use in non-contaminating power generating and hydraulic pumping facilities, will ensure that the water returned to the river, i.e., the substitute supply, is of a quality to meet the requirements of the uses to which senior appropriators have normally put such water.

9.2 Quantity of substitute supply. The amount of water returned to the Colorado River above the GVIC diversion dam at the Downstream Point of Exchange by operation of the Check (the "substitute supply") shall equal or exceed the amount of water diverted by exchange out of the Colorado River by means of the Roller Dam at the Upstream Point of Exchange.

9.3 Continuity of substitute supply. The water diverted by exchange out of the Colorado River at the Upstream Point of Exchange shall be returned to the Colorado River at the Downstream Point of Exchange in approximately the same time as it would take that water to flow in the Colorado River from the Upstream Point of Exchange to the Downstream Point of Exchange if the water were left in the river.

9.4 Intervening Seniors. All water rights located between the Upstream Point of Exchange and the Downstream Point of Exchange, i.e., within the Exchange Reach, which are senior to the date of appropriation of the exchange, shall be fully satisfied by the remaining flows subject to their call.

9.5 Terms of Stipulation Incorporated. The terms and conditions of the Stipulation and Agreement attached hereto as Attachment 1 are incorporated herein.

10. Decree Administrable. The Court notes that, by way of the Stipulation and Agreement attached hereto as Attachment 1, the State and Division Engineer for Water Division No. 5 stipulated to the entry of this decree. The Court finds that this decree is administrable by the Division Engineer for Water Division No. 5.

CONCLUSIONS OF LAW

11. Incorporation of Findings of Fact. The Court incorporates the foregoing Findings of Fact to the extent that these may constitute conclusions of law.

12. Jurisdiction. Timely and adequate notice of the filing and contents of the application and the amendment to the application herein was given in the manner required by law. The time for filing Statements of Opposition and for seeking leave to intervene has expired. The Court has jurisdiction over all persons and owners of property affected hereby, irrespective of whether or not those persons and owners of property have appeared.

13. Subject Matter Jurisdiction. The Court has jurisdiction over the subject matter of this proceeding. The application herein is one contemplated by law, and adjudication of the exchange described in this decree is authorized by law and is within the jurisdiction of this Court. §§ 37-80-120, 37-92-101, *et seq.*, C.R.S. The right of substitution and exchange decreed herein is an appropriative water right, with a priority date and, like other appropriative water rights, must be exercised within the priority system and in accordance with applicable state law. §§ 37-80-120(4), 37-92-101, *et seq.*, C.R.S.

14. Appropriative Right of Exchange. The appropriative right of exchange confirmed herein was initiated on April 1, 1926, was diligently prosecuted thereafter, and was completed with reasonable diligence by the diversion of water by exchange and the application of such water to the beneficial uses described herein. §§ 37-92-305(1), 37-92-305(9)(a) C.R.S.

15. Non-Injury. Subject to the terms and conditions of the Stipulation and Agreement, the exchange may be operated under terms and conditions which prevent injury to the vested water rights and conditional water rights of others, including the requirement that the substitute supply made available under the exchange will be of a quality, quantity and continuity adequate to meet the requirements of the uses to which the water of senior appropriators has normally been put. §§ 37-80-120(2), (3) & (4), 37-92-305(3) & (5), C.R.S.

16. Entitlement to Original Priority Without Postponement. Pursuant to § 37-92-305(10), C.R.S., Co-Applicants are entitled to recognition of the original priority date of April 1, 1926 for the exchange described herein, without postponement under § 37-92-306, C.R.S.

JUDGMENT AND DECREE

Based on the foregoing Findings of Fact and Conclusions of Law, it is hereby adjudged, ordered and decreed that:

17. Incorporation of Findings of Fact and Conclusions of Law. The foregoing Findings of Fact and Conclusions of Law are incorporated herein as if set out verbatim.

18. Confirmation of Orchard Mesa Check Exchange. Subject to the terms and conditions set forth herein, the Court hereby confirms and approves the Orchard Mesa Check Exchange which is more specifically described in the Findings of Fact, above, in the amount of 640 c.f.s., absolute, with a priority date of April 1, 1926, without postponement under § 37-92-306, C.R.S.

19. Terms and Conditions. The terms and conditions set forth in the Stipulation and Agreement, as well as paragraph 9, above, will prevent injury to the vested water rights and conditional water rights of others and will ensure that the substitute supply made available under the exchange will be of a quality, quantity and continuity adequate to meet the requirements of the uses to which the water of senior appropriators has normally been put.

20. Approval and Incorporation of Stipulation and Agreement. The parties have executed the Stipulation and Agreement attached hereto as Attachment 1. The Court, having reviewed the Stipulation and Agreement and being otherwise fully advised in the premises,

hereby approves the Stipulation and Agreement and incorporates it into this decree as though it were restated here in full.

21. Retained Jurisdiction. The Court shall retain permanent jurisdiction over the subject matter of this case and parties hereto for all purposes set forth in the Stipulation and Agreement; provided, however. that the priority date and amount of the exchange are finally determined hereby and will not be further considered under the Court's retained jurisdiction.

22. Filing of Decree with State and Division Engineers. A copy of these Findings of Fact, Conclusions of Law. Judgment and Decree shall be filed with the State Engineer and the Division Engineer for Water Division No. 5.

Dated at Glenwood Springs, Colorado, this ____ day of _____, 1996.

THOMAS W. OSSOLA
Water Judge
Water Division No. 5

91CW247

EXHIBIT D

Stipulation and Agreement

Case No. 91CW247

GREEN MOUNTAIN RESERVOIR HISTORIC USER POOL

OPERATING CRITERIA

1. DEFINITIONS. The definitions set forth in paragraph 1 of the forgoing Stipulation and Agreement are incorporated herein. For purposes of these Operating Criteria and the Stipulation and Agreement, "HUP surplus water" shall mean that amount of the HUP which, in accordance with paragraph 8 of the Operating Policy is included in that portion of the stored water in Green Mountain Reservoir in excess of that necessary to meet the objectives of paragraphs 2 and 4 of the Operating Policy, and which is determined under these Operating Criteria to be available for releases for HUP surplus water contracts at any particular time after taking into consideration releases to be made to meet the replacement and direct delivery needs of HUP beneficiaries.

2. PURPOSES AND OBJECTIVES. The purposes and objectives of these Operating Criteria are to:

2.a. Ensure that a sufficient quantity of water is retained in the HUP for release to meet the replacement needs of HUP beneficiaries throughout the irrigation season.

2.b. Ensure that a sufficient quantity of water is retained in the HUP for release to meet the direct delivery needs of the Grand Valley Water Users Association, Orchard Mesa Irrigation District, Grand Valley Irrigation Company, Mesa County Irrigation District and Palisade Irrigation District throughout the irrigation season.

2.c. Ensure that a sufficient quantity of water is retained in the HUP at the end of the irrigation season for release to meet the winter needs of HUP beneficiaries.

2.d. Define the terms and conditions under which water in the HUP is surplus to the needs of HUP beneficiaries, and therefore available for delivery to beneficial uses in Western Colorado, in accordance with paragraph 8 of the Operating Policy, under contract(s) to be developed, and indirectly to the 15-Mile Reach to augment flows for the recovery of endangered Colorado River fish species.

3. HUP Operating Criteria. Figure 1, attached to these Operating Criteria, depicts the estimated "Upstream HUP Replacement Allocation," estimated "Winter HUP Allocation," and estimated "Total HUP Draw Down Band".

3.a. The Upstream HUP Replacement Allocation represents the maximum volume required to fully meet the irrigation, domestic and municipal replacement needs of HUP beneficiaries upstream of Shoshone (a.k.a. the Glenwood Power Canal) for the remainder of the irrigation season. The total volume of water estimated for this purpose is 14,685 acre-feet at the beginning of the irrigation season. This volume diminishes throughout the irrigation season as depicted in Figure 1. Attachment A to these Operating Criteria documents the data and technical analyses used to estimate this volume.

3.b. The Winter HUP Allocation represents the maximum volume required to fully meet the domestic and municipal replacement needs of HUP beneficiaries during the winter or non-irrigation season. The total volume of water estimated for this

purpose is 500 acre-feet. Attachment A to these Operating Criteria documents the data and technical analyses used to estimate this volume.

3.c. The Total HUP Draw Down Band represents the estimated range of storage volumes that will serve as a guideline for managing HUP releases in dry years similar to those analyzed in Attachment A to these Operating Criteria to accomplish the purposes of Section 2 as more fully described in Section 3.d and 3.e of these Operating Criteria. Attachment A to these Operating Criteria documents the data and technical analyses used to estimate this range of volumes.

3.d. In order to meet the purposes and objectives of Section 2, above, the Bureau of Reclamation, after direct consultation with the Grand Valley Water Users Association, Orchard Mesa Irrigation District, Grand Valley Irrigation Company, Colorado Division of Water Resources, Colorado Water Conservation Board and Fish and Wildlife Service (the Bureau of Reclamation and the above mentioned entities with whom the Bureau of Reclamation shall consult in managing releases of water from the HUP are hereafter collectively referred to as the "managing entities"), will attempt to manage the release of water from the HUP to maintain actual storage conditions within the range of storage volumes as represented by the Total HUP Draw Down Band and will attempt to manage the release of water from the HUP so that the entire HUP, except the Winter HUP Allocation, will be released by the end of the irrigation season unless the managing entities determine that the release of such water is not necessary to meet the purposes and objectives of Section 2, above, considering hydrologic, demand and operational conditions. However, it is expressly recognized that in some years release of

the entire HUP by the end of the irrigation season may not be necessary or possible. Grand Valley Water Users Association, Orchard Mesa Irrigation District and Grand Valley Irrigation Company retain exclusive control of determining their irrigation demands, subject to the otherwise applicable administrative powers of the Colorado Division of Water Resources and the provisions of the Stipulation and Agreement. It is recognized that actual storage conditions may deviate from the indicated range due to hydrologic, demand and operational conditions; however, the managing entities will take all reasonable actions to maintain actual HUP storage conditions within the indicated range. The obligation of the managing entities to take reasonable actions to maintain actual HUP storage conditions within the indicated range shall be limited to operation of the Orchard Mesa Check and such other actions as to which the managing entities agree. At any particular time during the irrigation season, the actual HUP storage volume shall not fall below the volume indicated by the sum of the Upstream HUP Replacement Allocation at that time and Winter HUP Allocation, as depicted in Figure 1, unless required by Acts of God or emergency situations beyond the control of the managing entities, or unless modified as provided for in paragraph 5 of the Stipulation and Agreement.

3.e. To accomplish management of the HUP as described in Section 3.d, the managing entities agree to participate in the following process.

3.e.(1) On or before June 30 of each year, the Bureau of Reclamation will conduct a meeting, involving the managing entities, to review HUP storage conditions, projected runoff forecasts, climatological conditions, projected irrigation

demands and 15-Mile Reach flow needs, and other operational conditions to determine an annual operational plan for the Green Mountain Reservoir HUP, the Orchard Mesa Check and the Grand Valley Power Plant ("Annual HUP Operating Plan"). The Annual HUP Operating Plan will cover water operations for the July through October irrigation season. Water in the HUP shall not be deemed to be surplus to the needs of HUP beneficiaries prior to the determination that there is at least 66,000 acre feet of water available for releases for the benefit of HUP beneficiaries when Green Mountain Reservoir ceases to be in priority for its initial fill under the Blue River Decrees, as provided by paragraph 3.b.(2) of the Stipulation and Agreement.

3.e.(2) The managing entities agree to participate in subsequent meetings during the irrigation season to reexamine HUP storage conditions, projected runoff forecasts, climatological conditions, projected irrigation demands and 15-Mile Reach flow needs, and other operational conditions on an as-needed basis to modify the Annual HUP Operating Plan. Any of the managing entities may call for a meeting, and all of the managing entities agree to participate to reexamine changing conditions and to modify the Annual HUP Operating Plan. All such meetings will be open to the public.

3.e.(3) The managing entities agree to make good faith efforts to develop an Annual HUP Operating Plan that is unanimously supported by the managing entities. If however, an Annual HUP Operating Plan cannot be developed that is unanimously agreed to, the Bureau of Reclamation reserves the right to establish a release schedule from the HUP for the irrigation season in question consistent with the Total HUP Draw Down Band and the State water right priority system. The Bureau of

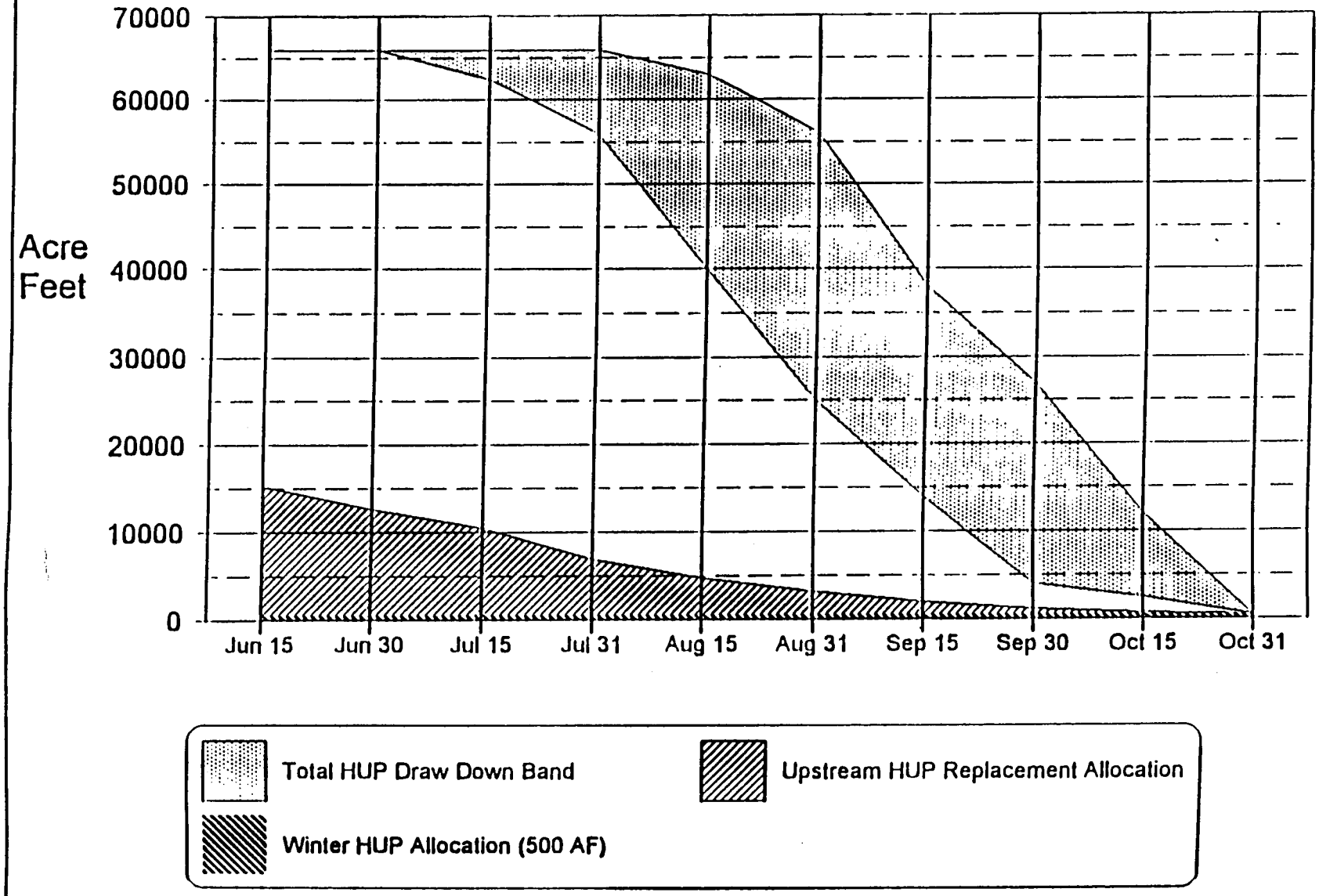
Reclamation's establishment of a release schedule pursuant to the preceding sentence shall not prevent any other of the managing entities from requesting a subsequent meeting to reexamine changing conditions and to develop the Annual HUP Operating Plan.

4. Nothing contained in these Operating Criteria shall diminish or limit the statutory authority and responsibility of the Colorado Division of Water Resources or be deemed to alter the duties and responsibilities of the Bureau of Reclamation under the Operating Policy, Senate Document 80 and the Blue River Decrees.

Figure 1

Green Mountain Reservoir

HUP Operating Criteria - Dry Years



January 11, 1996

91cw247

9/CW 247

July 18, 1996

Orchard Mesa Check Case: Effects of Settlement Proposal on 15-Mile Reach Flows

Hydrology studies were conducted to evaluate effects of the settlement proposal on flows and water quality in the Colorado River near Cameo, use of the Green Mountain Reservoir 66,000 acre-foot Historic User Pool (HUP), and use of Ruedi Reservoir for fish releases. This document contains study results pertaining to flows in the 15-Mile Reach ("Reach") of the Colorado River for seven drier than average years between 1977 and 1994.

To analyze the effects of the settlement proposal compared to historic conditions, a computer model was developed to simulate four different scenarios:

1) Historic Conditions (*Historic*)
2) Historic Conditions Without Ruedi Reservoir Fish Releases (*Historic without Ruedi*)
3) Settlement Proposal Without Ruedi Reservoir Fish Releases (*Settlement without Ruedi*)
4) Settlement Proposal with Ruedi Reservoir Fish Releases (*Settlement with Ruedi*)

The "*without Ruedi*" scenarios (2 and 3 above) were necessary because no Ruedi fish releases were made historically until 1989. Also, in 1989 and 1990, only 10,000 acre-feet were released for fish. The *Settlement with Ruedi* scenario assumes 20,000 acre-feet available for fish releases in all seven years analyzed.

Comparing results between *Historic without Ruedi* and *Settlement without Ruedi* shows the effect of the settlement due to changes in Green Mountain Reservoir HUP releases only (effects of Ruedi fish releases, if any, were removed). Comparing results between *Historic* and *Settlement with Ruedi* shows the effect of the settlement with both HUP releases and Ruedi fish releases. *Historic without Ruedi* and *Settlement without Ruedi* must be compared to evaluate the effect of the settlement in the years where historic Ruedi fish releases were less than 20,000 acre-feet (zero in 1977, 1981, and 1988; 10,000 acre-feet in 1989 and 1990). Although *Settlement with Ruedi* does provide an estimated flow projection, it should be compared with *Historic* only in the years where historic Ruedi fish releases actually totaled 20,000 acre-feet (1991 and 1994).

Analysis Results

Tables and graphs are attached showing estimated flows in the Reach from March through November for the seven years analyzed. In four of the years analyzed, the estimates show that releasing surpluses from the Green Mountain HUP under the terms of the settlement could result in higher average flows in the Reach than occurred historically (increases ranged from 6 cfs to 78 cfs). In two of the years evaluated (1977 and 1989), average flows under the settlement were essentially the same as historically (1 cfs to 2 cfs lower). In these years, no surplus HUP water was available to increase flows under the terms of the settlement. Lower average flows in 1994 are due to limited canal capacity to deliver surplus water from the HUP to the Grand Valley Power Plant (discussed below), not due to lack of water in the HUP. Results for 1994 with increased canal capacity to utilize the HUP show an average flow increase of about 37 cfs.

Modeling Approach

For each of the seven years evaluated, daily historic records were compiled for river flows, irrigation diversions, and releases from the two reservoir pools. The period March through November was modeled for each year. All seven years had below-average annual water yields, ranging from a low of 46 percent of the long term yield in 1977 to a high of 77 percent in 1991. The percentages below are based on the 1991 (58-year) long term yield of the United States Geological Survey (USGS) Colorado River near Cameo streamflow gaging site:

Year	Annual Yield (Acre Feet)	Percentage of Long Term Yield
1977	1,304,000	46
1981	1,529,000	54
1988	2,096,000	75
1989	1,851,000	66
1990	1,638,000	58
1991	2,174,000	77
1994	2,071,000	74

A computer model was used to calculate historic flows in the Reach and to calculate projected flows under the settlement proposal. USGS gaged records of flows in the Reach were not available for any year modeled except 1994; the 1994 historic flows were calculated in the same manner as the other years. Flow in the Reach was calculated as: flow at Cameo, minus irrigation and power diversions, plus flow from Plateau Creek, plus return flows from the Orchard Mesa Power and Pumping plants. The 15-Mile Reach historic flows calculated for 1994 are higher than the USGS gaged flows for 1994; this is believed to be due to accuracy problems with the Cameo and Palisade gages in 1994.

Existing hydropower capacity constraints were also modeled to insure that release of any surplus Green Mountain HUP water was made only as power flow deliveries to the Orchard Mesa Power Plant. In two of the years analyzed (1991 and 1994), the existing capacity constraints restricted the release of surplus HUP water. To simulate the effect of delivering surplus water to other non-consumptive beneficial uses downstream from Cameo, two additional model runs were made for these years. Modeled hydropower capacities were increased by 200 cfs and then by 400 cfs, which resulted in partial and full utilization of the surplus HUP water, respectively.

In addition to historical records, the computer model uses several parameters that influence Green Mountain and Ruedi releases and flows in the Reach. These include the Green Mountain HUP drawdown rule curve, target flow for the 15-Mile Reach, and the hydropower capacity constraints discussed above.

Green Mountain Reservoir HUP Rule Curve

The rule curve determines the amount and timing of Green Mountain releases in the computer model. Rule curve configuration, and resulting release patterns affect the Cameo call, flows in the Reach, HUP use, Ruedi use, and water quality. The rule curves used in computer modeling were intended for example simulation purposes and are shown below. In all years except 1977 and 1989, the rule curves set the HUP volume to 66,000 acre feet on June 15, and set the minimum pool to 500 acre feet on October 31. In 1977 and 1989, historic HUP releases exceeded 66,000 acre-feet and the June 15 HUP volume was set accordingly.

Green Mountain HUP Rule Curves

	1977	1981	1988	1989	1990	1991	1994
Jun 15	66,750	66,000	66,000	71,750	66,000	66,000	66,000
Jun 30	66,000	66,000	66,000	71,750	66,000	66,000	65,000
Jul 15	65,000	66,000	66,000	71,750	66,000	66,000	64,000
Jul 31	60,000	63,000	61,000	71,750	64,800	60,000	58,000
Aug 15	42,423	47,000	53,000	70,000	55,200	51,000	51,000
Aug 31	34,190	30,000	37,600	63,000	36,200	39,000	40,000
Sep 15	17,697	20,000	22,500	43,000	12,900	29,000	30,000
Sep 30	4,089	10,000	18,500	30,000	4,900	15,000	20,000
Oct 15	2,500	7,000	11,000	12,000	2,300	7,000	8,000
Oct 31	500	500	500	500	500	500	500

15-Mile Reach Flow Targets

The computer model flow target for the Reach was in the 700 to 1,100 cfs range for all years analyzed except 1977, the driest year. The flow target set for each year was based on hydrologic conditions, not on the flow recommendations published in the May 1995 U.S. Fish and Wildlife Service report (*Relationships Between Flow and Rare Fish Habitat in the '15-Mile Reach of the Upper Colorado River'*). The target flow setting directly affects Ruedi fish releases in the model, and remains constant for the entire March through November period being modeled. If modeled flows in the Reach are lower than the target, the model attempts to release water for fish from Ruedi (limited by the release restrictions described below). If modeled flows in the Reach are higher than the target, the model does not make fish releases. The following flow targets were used for the model runs:

Year	15-Mile Reach Target Flows
1977	600 cfs
1981	800 cfs
1988	800 cfs
1989	800 cfs
1990	700 cfs
1991	1,100 and 1,110 cfs
1994	1,000 cfs

In the 1991 analysis with 400 cfs increased hydropower capacity, the flow target of 1,100 cfs resulted in the 20,000 acre-foot Ruedi pool not being fully utilized. Increasing the computer model target flow by 10 cfs (to 1,110 cfs) allowed use of the full supply of Ruedi water.

The model logic controlling Ruedi fish releases has many constraints and assumptions. These include a maximum flow below the reservoir of 250 cfs, a minimum flow of 110 cfs, and limiting total releases for the year to 20,000 acre-feet. At least 85,000 acre-feet must be kept in reservoir storage until Labor Day. The model assumes that a 20,000 acre-foot pool is available every year, that the reservoir is full on June 15, and does not calculate reservoir volume prior to June 15.

In the model, Ruedi fish releases are not restricted to the months of August, September, and October. This results in the model attempting to make Ruedi fish releases whenever flows in the Reach drop below the model target flow. In this study, this occurred most often in April, after irrigation diversions had begun, but before natural river flows increased due to runoff. In some of the drier years analyzed, the full 20,000 acre-foot pool was released before the end of October. In the 1977 analysis (the driest year), the full pool was released before August 15.

9/CW247

1977 Flow in the 15-Mile Reach (cfs)

		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
March	Max:	1,430	1,430	1,430	1,430
	Min:	251	251	251	377
	Avg:	948	948	948	966
April	Max:	870	870	870	951
	Min:	148	148	148	229
	Avg:	435	435	435	524
May	Max:	2,198	2,198	2,198	2,198
	Min:	542	542	542	570
	Avg:	1,047	1,047	1,047	1,052
June	Max:	3,297	3,297	3,297	3,297
	Min:	170	170	170	282
	Avg:	1,487	1,487	1,501	1,534
July	Max:	829	829	829	913
	Min:	0	0	84	210
	Avg:	244	244	266	389
August	Max:	722	722	693	693
	Min:	33	33	107	114
	Avg:	227	227	212	240
September	Max:	752	752	722	722
	Min:	253	253	349	349
	Avg:	483	483	468	468
October	Max:	1,197	1,197	1,197	1,197
	Min:	228	228	188	188
	Avg:	577	577	563	563
November	Max:	1,528	1,528	1,528	1,528
	Min:	854	854	854	854
	Avg:	1,310	1,310	1,310	1,310

March through November		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
	Max:	3,297	3,297	3,297	3,297
	Min:	0	0	84	114
	Avg:	748	748	747	780

9/CW247

1981 Flow in the 15-Mile Reach (cfs)

		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
March	Max:	1,303	1,303	1,303	1,303
	Min:	699	699	699	748
	Avg:	1,003	1,003	1,003	1,030
April	Max:	1,672	1,672	1,672	1,672
	Min:	228	228	228	354
	Avg:	779	779	779	853
May	Max:	5,512	5,512	5,512	5,512
	Min:	691	691	691	736
	Avg:	1,940	1,940	1,940	1,943
June	Max:	7,960	7,960	7,960	7,960
	Min:	1,325	1,325	1,325	1,325
	Avg:	4,040	4,040	4,040	4,040
July	Max:	1,787	1,787	1,787	1,787
	Min:	251	251	361	397
	Avg:	906	906	950	981
August	Max:	455	455	688	808
	Min:	28	28	213	339
	Avg:	240	240	603	728
September	Max:	843	843	843	843
	Min:	344	344	698	713
	Avg:	522	522	727	762
October	Max:	1,495	1,495	1,495	1,495
	Min:	257	257	716	716
	Avg:	813	813	899	899
November	Max:	1,878	1,878	1,878	1,878
	Min:	1,229	1,229	1,229	1,229
	Avg:	1,593	1,593	1,593	1,593

March through November		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
	Max:	7,960	7,960	7,960	7,960
	Min:	28	28	213	339
	Avg:	1,309	1,309	1,387	1,420

9/cw247

1988 Flow in the 15-Mile Reach (cfs)

		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
March	Max:	2,392	2,392	2,392	2,392
	Min:	1,774	1,774	1,774	1,774
	Avg:	2,012	2,012	2,012	2,012
April	Max:	2,995	2,995	2,995	2,995
	Min:	1,767	1,767	1,767	1,767
	Avg:	2,270	2,270	2,270	2,270
May	Max:	9,987	9,987	9,987	9,987
	Min:	2,133	2,133	2,133	2,133
	Avg:	5,057	5,057	5,057	5,057
June	Max:	10,730	10,730	10,730	10,730
	Min:	3,729	3,729	3,729	3,729
	Avg:	6,282	6,282	6,282	6,282
July	Max:	4,105	4,105	4,105	4,105
	Min:	367	367	547	648
	Avg:	1,406	1,406	1,453	1,503
August	Max:	740	740	732	844
	Min:	397	397	503	629
	Avg:	557	557	602	726
September	Max:	1,647	1,647	1,406	1,456
	Min:	301	301	308	434
	Avg:	672	672	695	777
October	Max:	642	642	800	802
	Min:	330	330	539	549
	Avg:	476	476	692	735
November	Max:	2,061	2,061	2,061	2,061
	Min:	457	457	457	457
	Avg:	1,687	1,687	1,687	1,687

March through November		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
	Max:	10,730	10,730	10,730	10,730
	Min:	301	301	308	434
	Avg:	2,262	2,262	2,299	2,333

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1989 Flow in the 15-Mile Reach (cfs)

		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
March	Max:	2,455	2,455	2,455	2,455
	Min:	1,412	1,412	1,412	1,412
	Avg:	1,964	1,964	1,964	1,964
April	Max:	4,032	4,032	4,032	4,032
	Min:	1,288	1,288	1,288	1,288
	Avg:	2,289	2,289	2,289	2,289
May	Max:	6,602	6,602	6,602	6,602
	Min:	1,322	1,322	1,322	1,322
	Avg:	3,862	3,862	3,862	3,862
June	Max:	5,867	5,867	5,867	5,867
	Min:	2,261	2,261	2,261	2,261
	Avg:	3,809	3,809	3,809	3,809
July	Max:	2,124	2,124	2,124	2,124
	Min:	579	579	384	493
	Avg:	1,236	1,236	1,199	1,220
August	Max:	1,177	1,177	1,177	1,177
	Min:	543	518	430	520
	Avg:	867	864	723	811
September	Max:	935	863	765	831
	Min:	404	320	473	599
	Avg:	662	575	639	734
October	Max:	825	825	705	803
	Min:	391	271	312	438
	Avg:	550	491	593	686
November	Max:	1,749	1,749	1,747	1,747
	Min:	1,053	1,053	1,049	1,049
	Avg:	1,596	1,596	1,594	1,594

March through November		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
	Max:	6,602	6,602	6,602	6,602
	Min:	391	271	312	438
	Avg:	1,867	1,851	1,849	1,882

9/CW247

1990 Flow in the 15-Mile Reach (cfs)

		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
March	Max:	1,562	1,562	1,562	1,562
	Min:	664	664	664	664
	Avg:	1,311	1,311	1,309	1,309
April	Max:	720	720	718	812
	Min:	147	147	147	224
	Avg:	489	489	488	566
May	Max:	4,911	4,911	4,911	4,911
	Min:	179	179	179	295
	Avg:	1,517	1,517	1,517	1,555
June	Max:	9,293	9,293	9,293	9,293
	Min:	2,090	2,090	2,090	2,090
	Avg:	4,966	4,966	4,966	4,966
July	Max:	2,231	2,231	2,231	2,231
	Min:	476	476	556	556
	Avg:	1,347	1,347	1,348	1,351
August	Max:	733	733	600	708
	Min:	348	260	82	208
	Avg:	498	456	494	616
September	Max:	690	645	694	748
	Min:	271	201	89	215
	Avg:	475	411	411	468
October	Max:	1,136	1,116	1,084	1,084
	Min:	344	300	333	333
	Avg:	589	549	573	573
November	Max:	1,780	1,780	1,776	1,776
	Min:	647	610	606	606
	Avg:	1,479	1,475	1,471	1,471

March through November		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
	Max:	9,293	9,293	9,293	9,293
	Min:	147	147	82	208
	Avg:	1,401	1,385	1,391	1,424

9/AW247

1991 Flow in the 15-Mile Reach (cfs)

existing hydropower capacity

		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
March	Max:	1,693	1,693	1,693	1,693
	Min:	1,319	1,319	1,319	1,319
	Avg:	1,454	1,454	1,453	1,453
April	Max:	2,347	2,347	2,347	2,347
	Min:	671	671	667	757
	Avg:	1,323	1,323	1,321	1,360
May	Max:	10,004	10,004	10,004	10,004
	Min:	948	948	944	954
	Avg:	5,209	5,209	5,208	5,217
June	Max:	11,971	11,971	11,971	11,971
	Min:	4,268	4,268	4,268	4,268
	Avg:	8,430	8,430	8,430	8,430
July	Max:	4,525	4,525	4,525	4,525
	Min:	1,188	1,188	1,188	1,188
	Avg:	2,377	2,377	2,377	2,377
August	Max:	1,168	1,168	1,168	1,168
	Min:	506	371	560	686
	Avg:	804	735	758	855
September	Max:	1,678	1,558	1,466	1,547
	Min:	579	444	570	696
	Avg:	991	909	919	996
October	Max:	1,490	1,445	1,413	1,413
	Min:	446	275	728	800
	Avg:	713	571	808	885
November	Max:	2,289	2,289	2,287	2,287
	Min:	1,248	1,248	1,246	1,246
	Avg:	1,938	1,936	1,934	1,934

March through November		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
	Max:	11,971	11,971	11,971	11,971
	Min:	446	275	560	686
	Avg:	2,574	2,541	2,570	2,604

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1991 Flow in the 15-Mile Reach (cfs)

+200 cfs hydropower capacity

		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
March	Max:	1,693	1,693	1,693	1,693
	Min:	1,319	1,319	1,319	1,319
	Avg:	1,454	1,454	1,453	1,453
April	Max:	2,347	2,347	2,347	2,347
	Min:	671	671	667	757
	Avg:	1,323	1,323	1,321	1,360
May	Max:	10,004	10,004	10,004	10,004
	Min:	948	948	944	954
	Avg:	5,209	5,209	5,208	5,217
June	Max:	11,971	11,971	11,971	11,971
	Min:	4,268	4,268	4,268	4,268
	Avg:	8,430	8,430	8,430	8,430
July	Max:	4,525	4,525	4,525	4,525
	Min:	1,188	1,188	1,188	1,188
	Avg:	2,377	2,377	2,377	2,377
August	Max:	1,168	1,168	1,168	1,168
	Min:	506	371	760	850
	Avg:	804	735	841	939
September	Max:	1,678	1,558	1,466	1,547
	Min:	579	444	770	896
	Avg:	991	909	1,019	1,096
October	Max:	1,490	1,445	1,413	1,413
	Min:	446	275	928	1,000
	Avg:	713	571	976	1,052
November	Max:	2,289	2,289	2,287	2,287
	Min:	1,248	1,248	1,246	1,246
	Avg:	1,938	1,936	1,934	1,934

March through November		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
	Max:	11,971	11,971	11,971	11,971
	Min:	446	275	667	757
	Avg:	2,574	2,541	2,610	2,643

9/AW247

1991 Flow in the 15-Mile Reach (cfs)

+400 cfs hydropower capacity

		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
March	Max:	1,693	1,693	1,693	1,693
	Min:	1,319	1,319	1,319	1,319
	Avg:	1,454	1,454	1,453	1,453
April	Max:	2,347	2,347	2,347	2,347
	Min:	671	671	667	757
	Avg:	1,323	1,323	1,321	1,363
May	Max:	10,004	10,004	10,004	10,004
	Min:	948	948	944	964
	Avg:	5,209	5,209	5,208	5,220
June	Max:	11,971	11,971	11,971	11,971
	Min:	4,268	4,268	4,268	4,268
	Avg:	8,430	8,430	8,430	8,430
July	Max:	4,525	4,525	4,525	4,525
	Min:	1,188	1,188	1,188	1,188
	Avg:	2,377	2,377	2,377	2,377
August	Max:	1,168	1,168	1,168	1,168
	Min:	506	371	960	968
	Avg:	804	735	981	1,079
September	Max:	1,678	1,558	1,466	1,542
	Min:	579	444	708	753
	Avg:	991	909	1,116	1,157
October	Max:	1,490	1,445	1,413	1,413
	Min:	446	275	539	665
	Avg:	713	571	837	939
November	Max:	2,289	2,289	2,287	2,287
	Min:	1,248	1,248	1,246	1,246
	Avg:	1,938	1,936	1,934	1,934

March through November		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
	Max:	11,971	11,971	11,971	11,971
	Min:	446	275	539	665
	Avg:	2,574	2,541	2,620	2,653

91CW247

1994 Flow in the 15-Mile Reach (cfs)

existing hydropower capacity

		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
March	Max:	2,342	2,342	2,342	2,342
	Min:	1,603	1,603	1,603	1,603
	Avg:	2,167	2,167	2,167	2,167
April	Max:	3,990	3,990	3,990	3,990
	Min:	850	850	850	895
	Avg:	1,958	1,958	1,948	1,953
May	Max:	7,715	7,715	7,715	7,715
	Min:	1,886	1,886	1,886	1,886
	Avg:	5,140	5,140	5,140	5,140
June	Max:	9,933	9,933	9,933	9,933
	Min:	1,794	1,794	1,794	1,794
	Avg:	4,797	4,797	4,797	4,797
July	Max:	1,620	1,620	1,620	1,620
	Min:	522	471	626	752
	Avg:	855	850	838	925
August	Max:	1,100	965	687	813
	Min:	541	478	643	769
	Avg:	817	722	667	793
September	Max:	1,176	1,018	888	1,014
	Min:	586	428	685	699
	Avg:	888	721	713	792
October	Max:	1,170	1,170	1,020	1,020
	Min:	537	537	708	708
	Avg:	779	747	750	750
November	Max:	1,802	1,802	1,802	1,802
	Min:	1,048	1,048	1,048	1,048
	Avg:	1,568	1,568	1,568	1,568

March through November		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
	Max:	9,933	9,933	9,933	9,933
	Min:	522	428	626	699
	Avg:	2,105	2,072	2,062	2,096

91CW247

1994 Flow in the 15-Mile Reach (cfs)

+200 cfs hydropower capacity

		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
March	Max:	2,342	2,342	2,342	2,342
	Min:	1,603	1,603	1,603	1,603
	Avg:	2,167	2,167	2,167	2,167
April	Max:	3,990	3,990	3,990	3,990
	Min:	850	850	850	895
	Avg:	1,958	1,958	1,948	1,953
May	Max:	7,715	7,715	7,715	7,715
	Min:	1,886	1,886	1,886	1,886
	Avg:	5,140	5,140	5,140	5,140
June	Max:	9,933	9,933	9,933	9,933
	Min:	1,794	1,794	1,794	1,794
	Avg:	4,797	4,797	4,797	4,797
July	Max:	1,620	1,620	1,620	1,620
	Min:	522	471	433	559
	Avg:	855	850	879	966
August	Max:	1,100	965	885	1,011
	Min:	541	478	489	615
	Avg:	817	722	724	849
September	Max:	1,176	1,018	900	1,011
	Min:	586	428	572	572
	Avg:	888	721	860	940
October	Max:	1,170	1,170	1,020	1,020
	Min:	537	537	759	759
	Avg:	779	747	924	924
November	Max:	1,802	1,802	1,802	1,802
	Min:	1,048	1,048	1,048	1,048
	Avg:	1,568	1,568	1,568	1,568

March through November		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
	Max:	9,933	9,933	9,933	9,933
	Min:	522	428	433	559
	Avg:	2,105	2,072	2,109	2,142

91 CW 247

1994 Flow in the 15-Mile Reach (cfs)

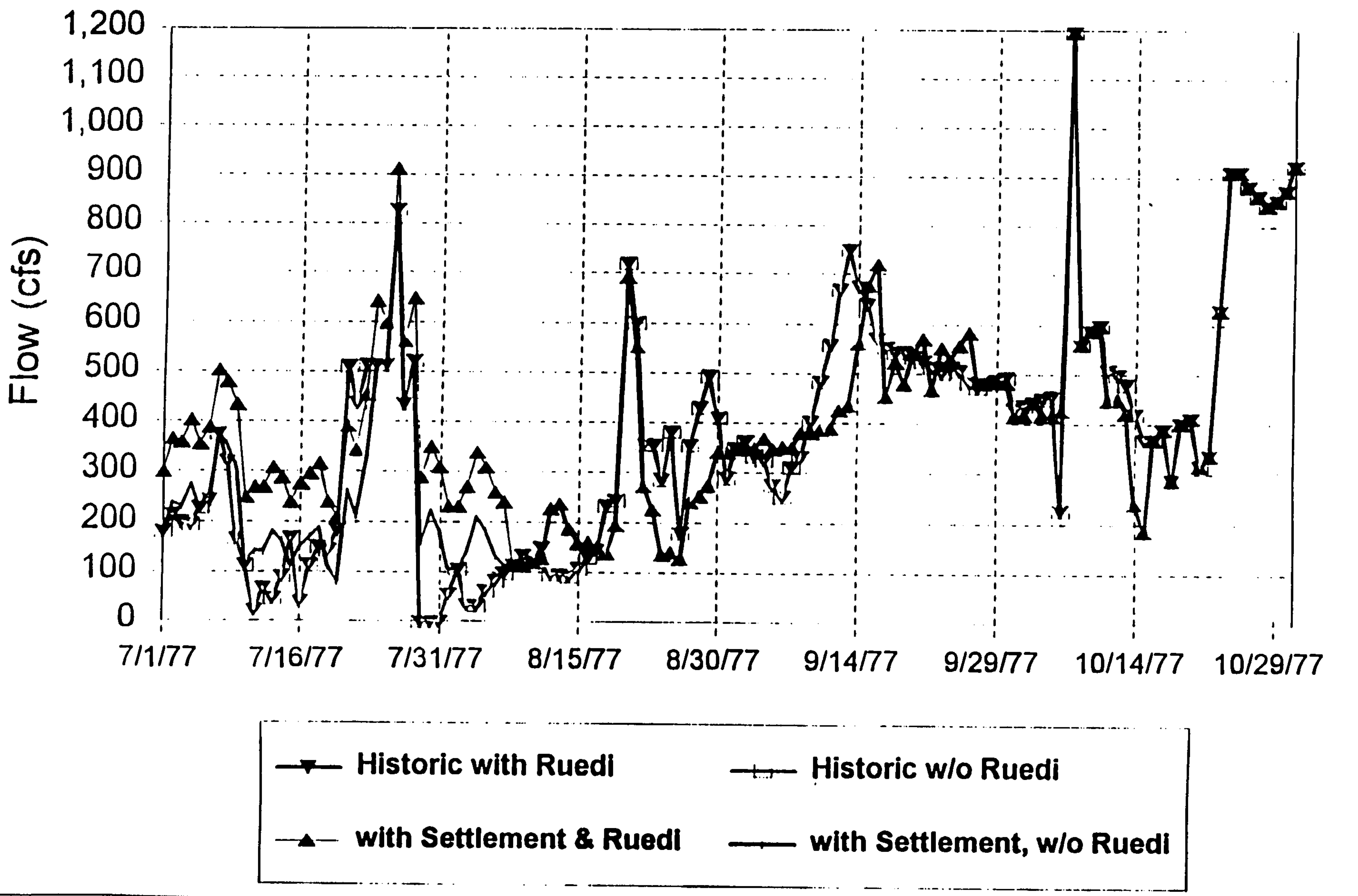
+400 cfs hydropower capacity

		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
March	Max:	2,342	2,342	2,342	2,342
	Min:	1,603	1,603	1,603	1,603
	Avg:	2,167	2,167	2,167	2,167
April	Max:	3,990	3,990	3,990	3,990
	Min:	850	850	850	895
	Avg:	1,958	1,958	1,948	1,953
May	Max:	7,715	7,715	7,715	7,715
	Min:	1,886	1,886	1,886	1,886
	Avg:	5,140	5,140	5,140	5,140
June	Max:	9,933	9,933	9,933	9,933
	Min:	1,794	1,794	1,794	1,794
	Avg:	4,797	4,797	4,797	4,797
July	Max:	1,620	1,620	1,620	1,620
	Min:	522	471	432	558
	Avg:	855	850	879	956
August	Max:	1,100	965	998	1,124
	Min:	541	478	489	615
	Avg:	817	722	728	846
September	Max:	1,176	1,018	1,090	1,139
	Min:	586	428	572	628
	Avg:	888	721	856	925
October	Max:	1,170	1,170	1,200	1,200
	Min:	537	537	662	662
	Avg:	779	747	926	955
November	Max:	1,802	1,802	1,802	1,802
	Min:	1,048	1,048	1,048	1,048
	Avg:	1,568	1,568	1,568	1,568

March through November		Historic	Historic w/o Ruedi	with Settlement w/o Ruedi	with Settlement and Ruedi
	Max:	9,933	9,933	9,933	9,933
	Min:	522	428	432	558
	Avg:	2,105	2,072	2,110	2,143

1977 Flow in the 15-Mile Reach

Target flow 600 cfs

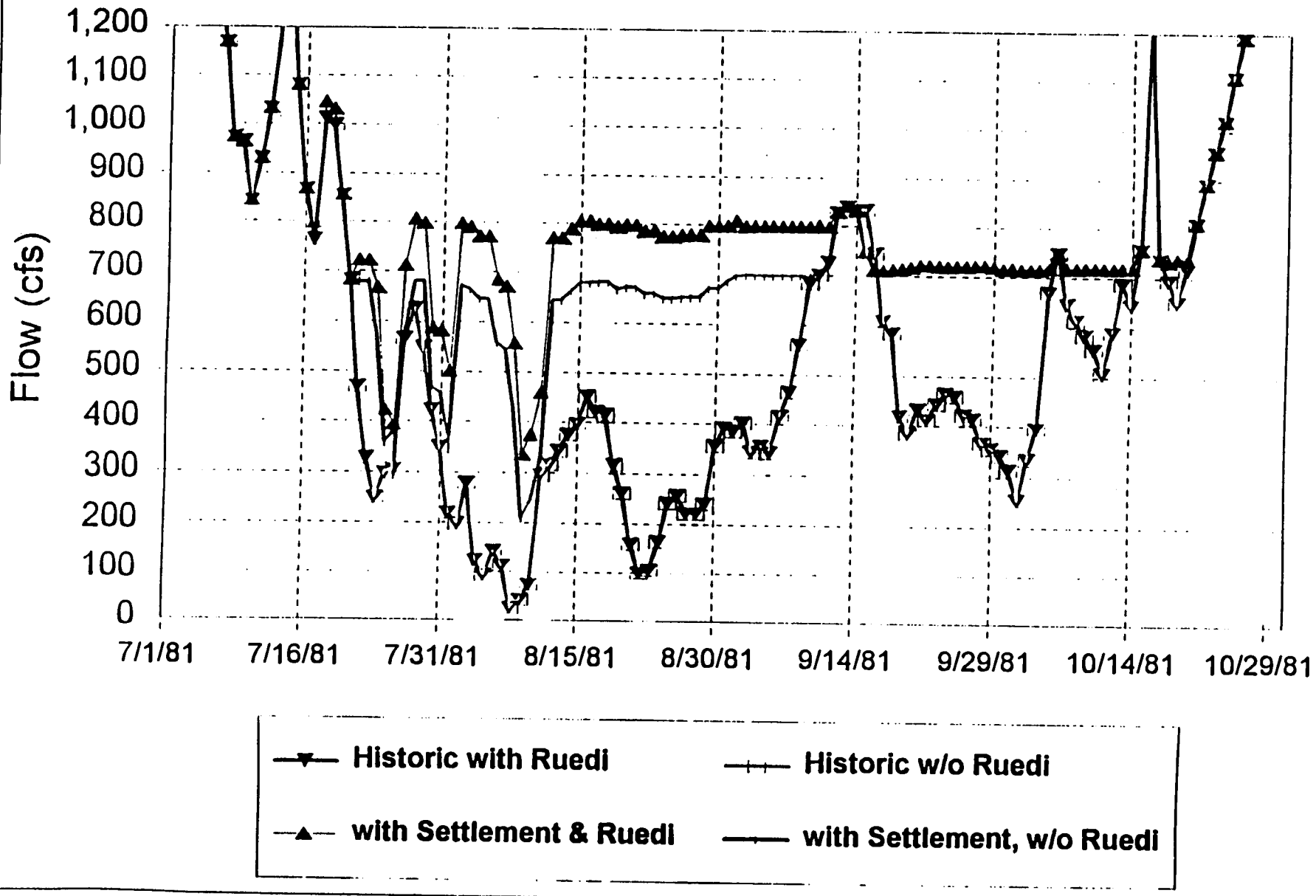


91W247

July 16, 1996

1981 Flow in the 15-Mile Reach

Target flow 800 cfs

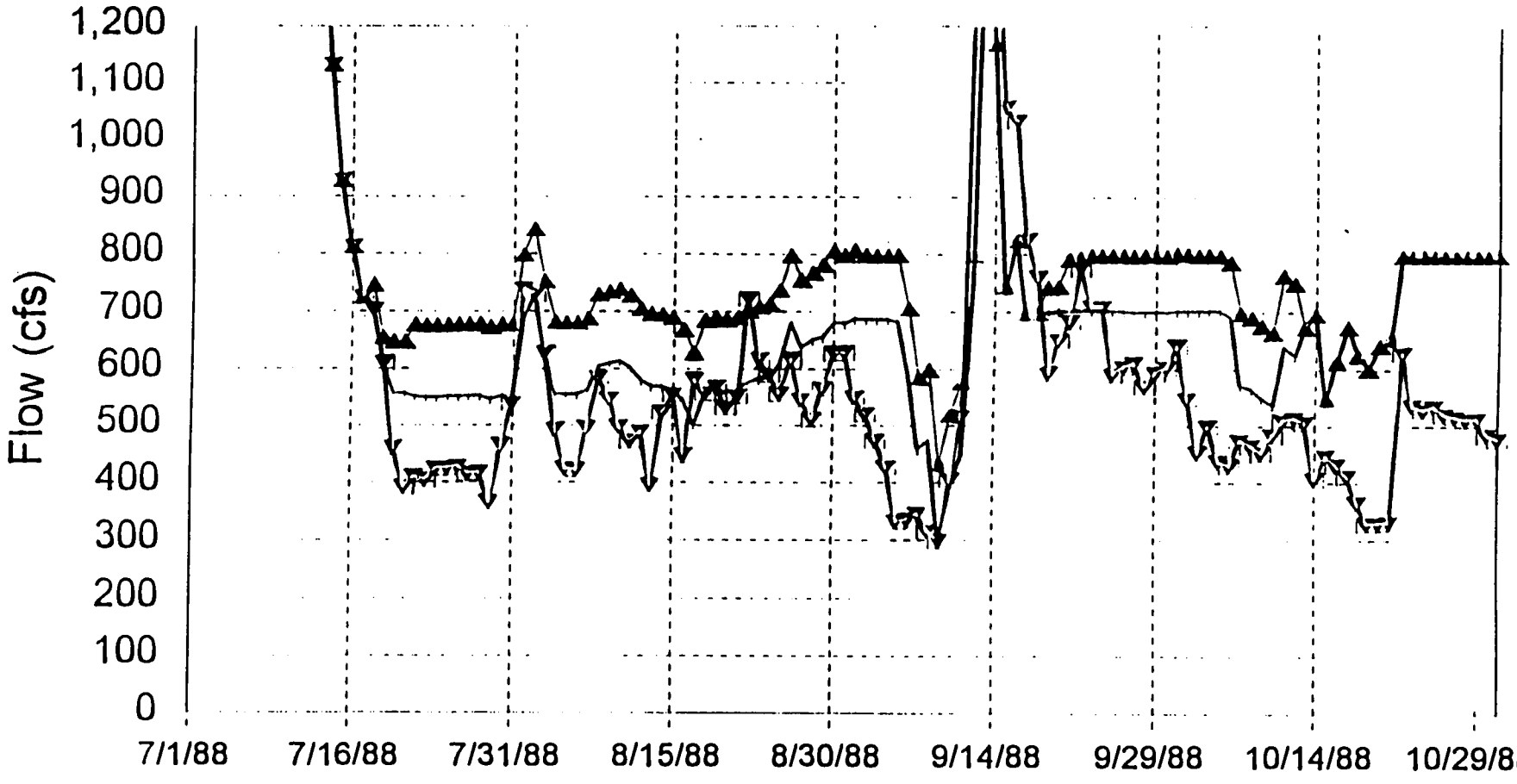


91 dw 347

July 16, 1996

1988 Flow in the 15-Mile Reach

Target flow 800 cfs

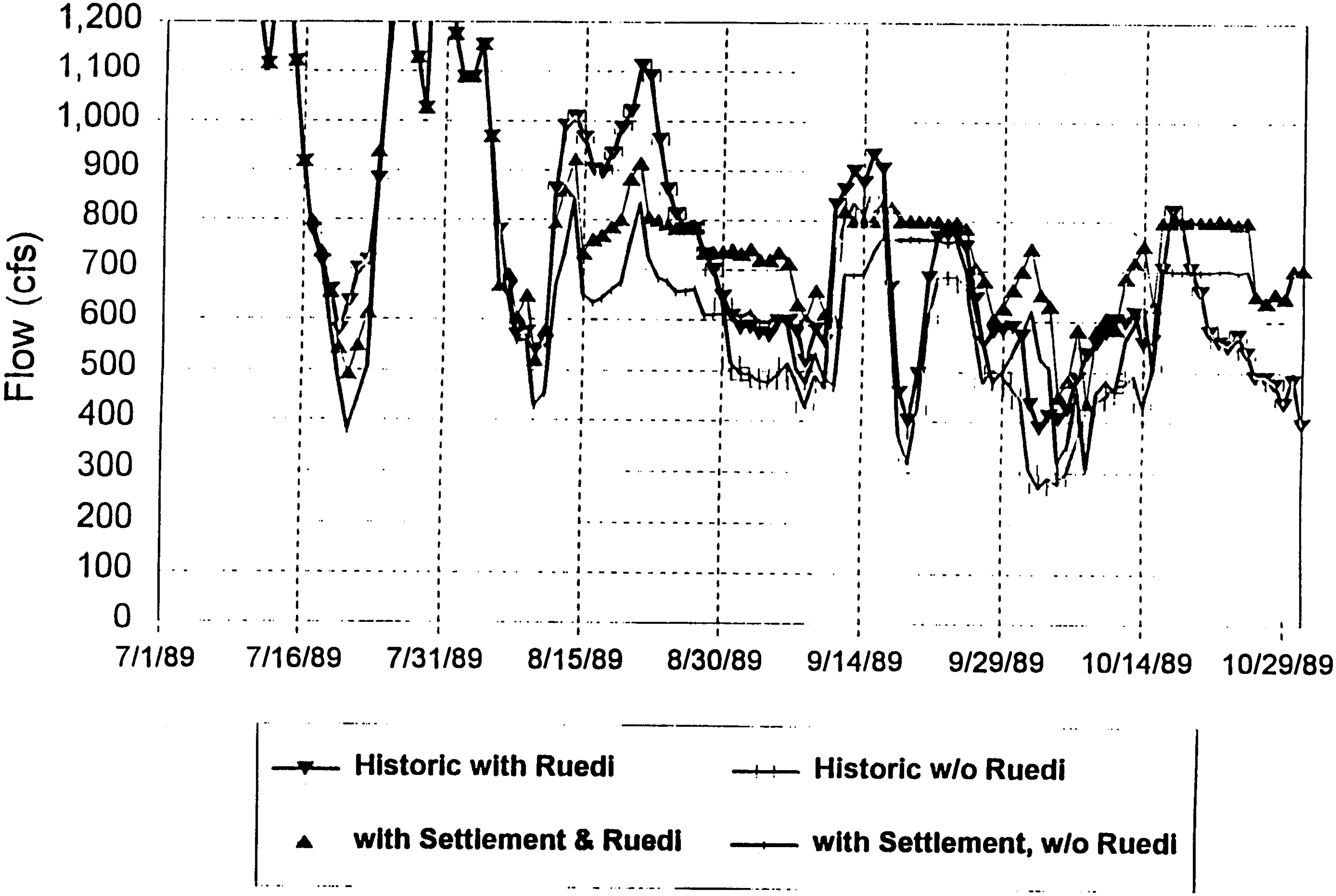


July 16, 1996

91aw247

1989 Flow in the 15-Mile Reach

Target flow 800 cfs

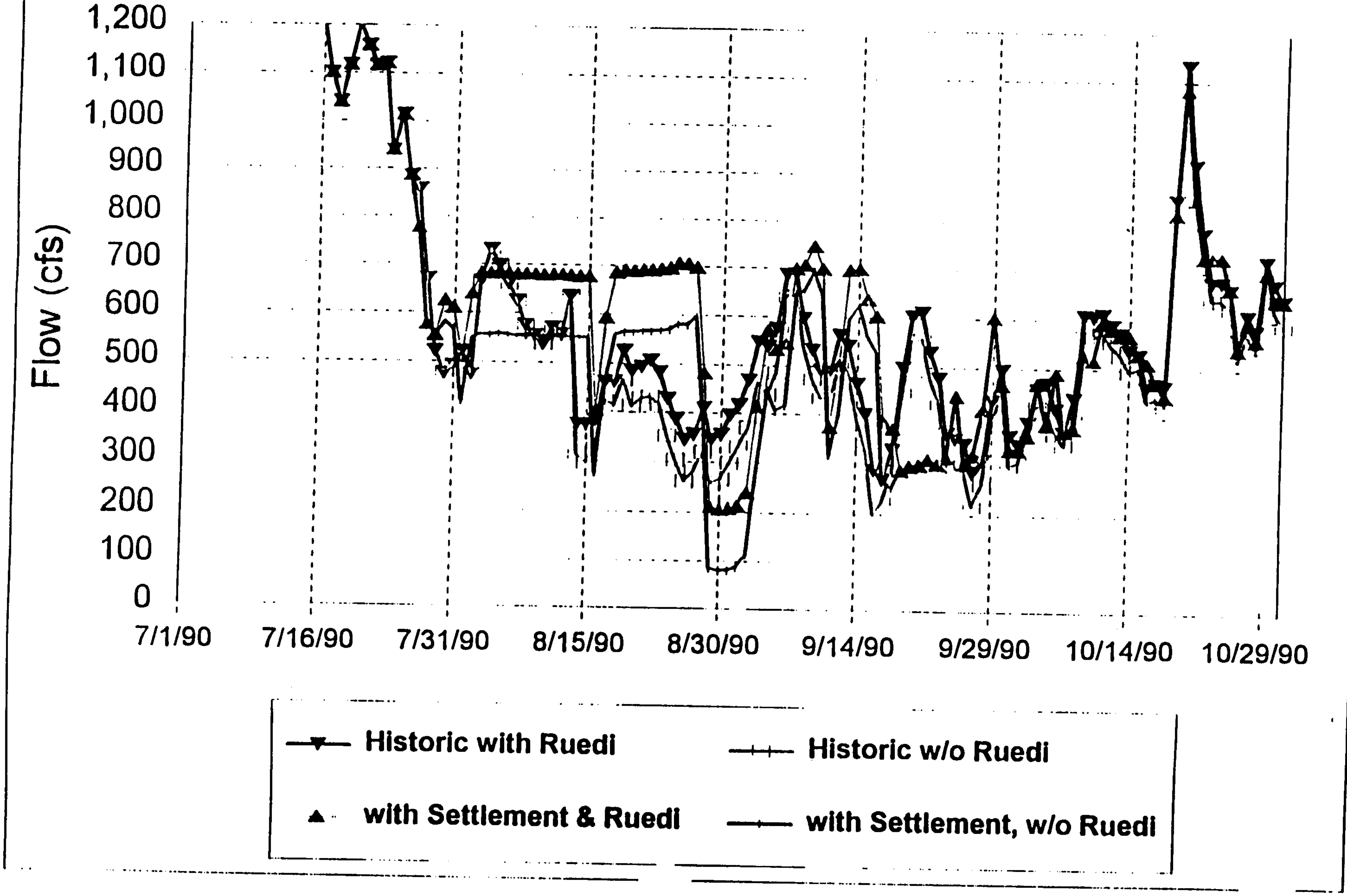


July 16, 1996

91CW247

1990 Flow in the 15-Mile Reach

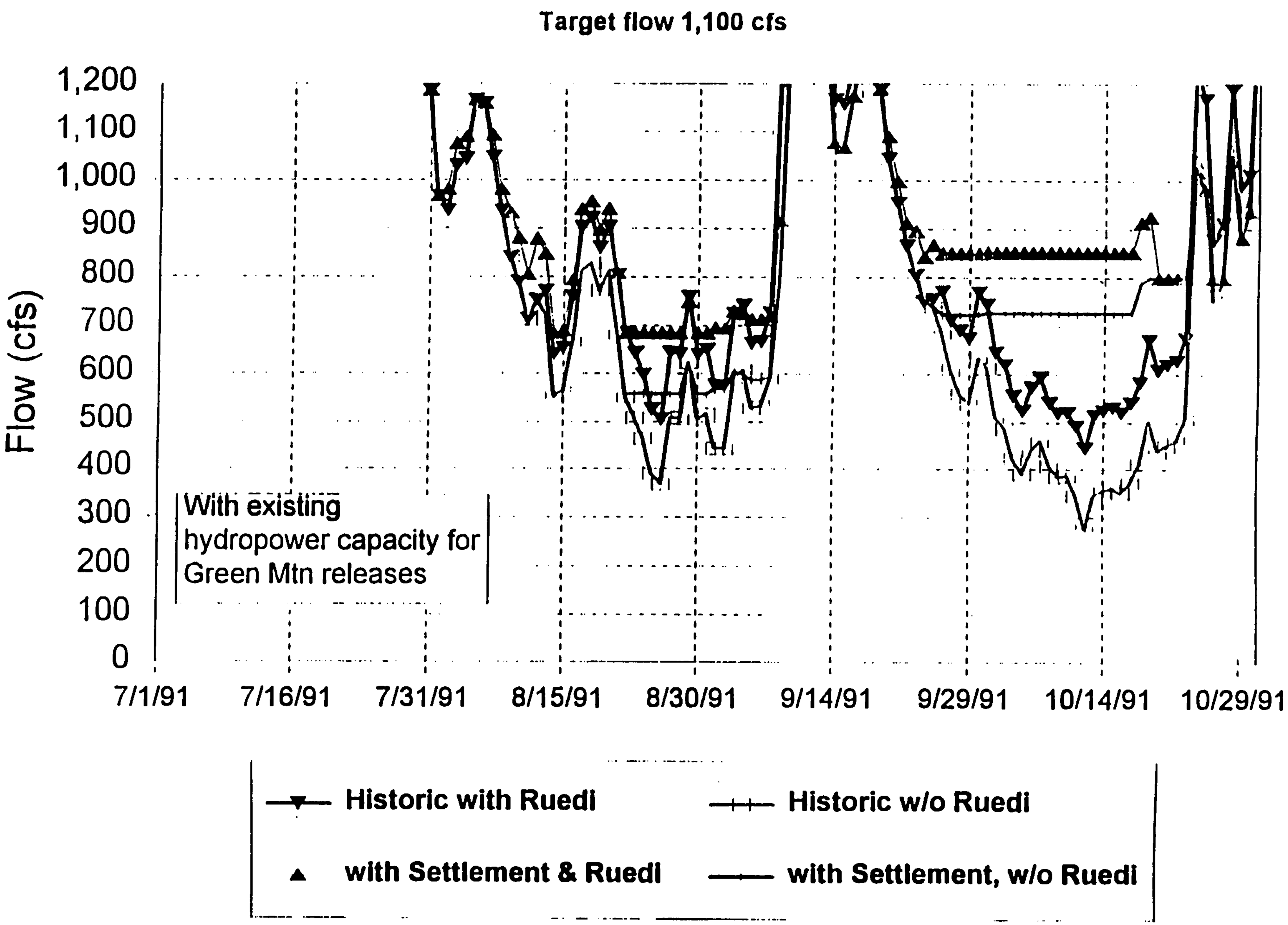
Target flow 700 cfs



9/6W247

July 16, 1996

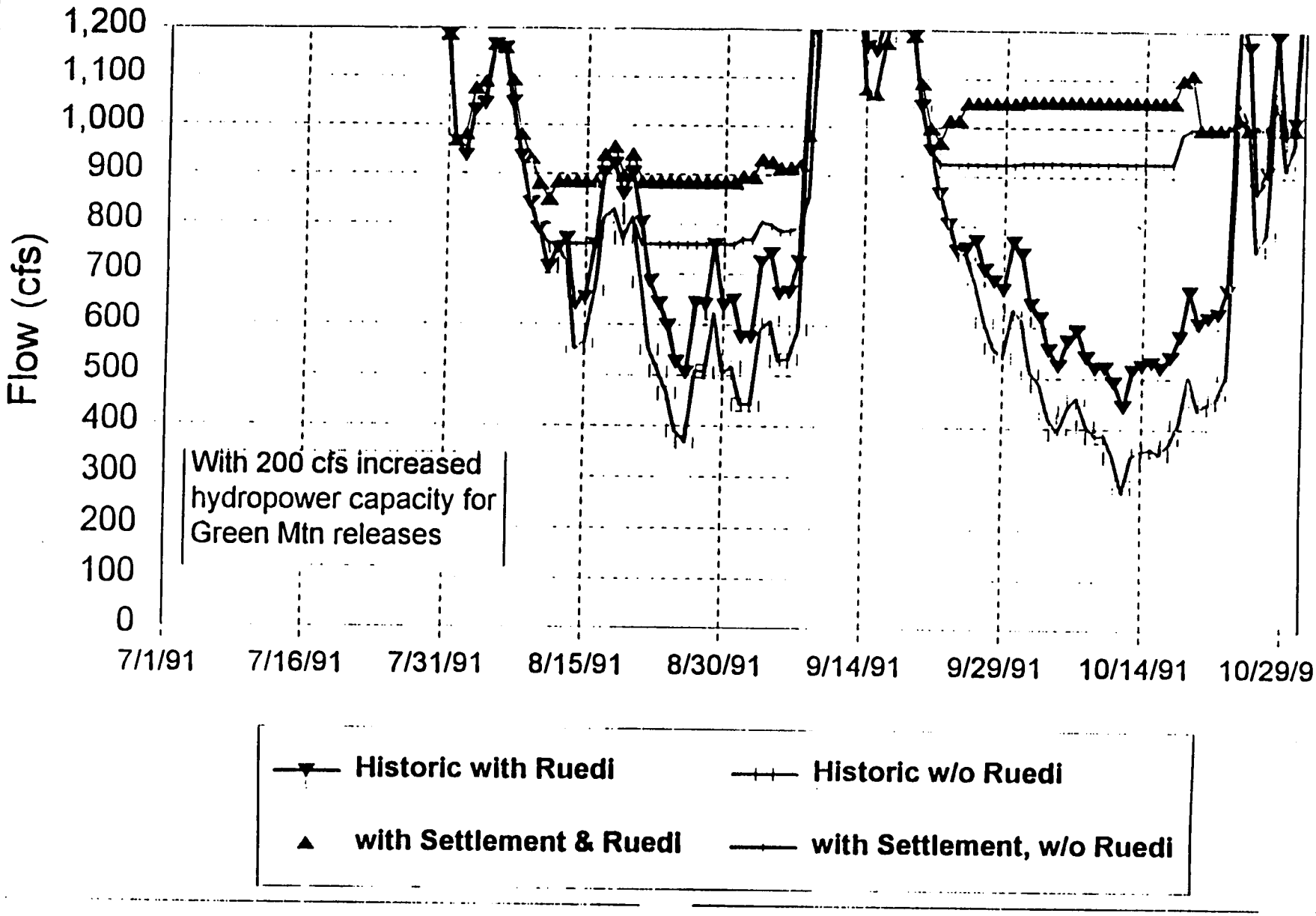
1991 Flow in the 15-Mile Reach



July 16, 1996

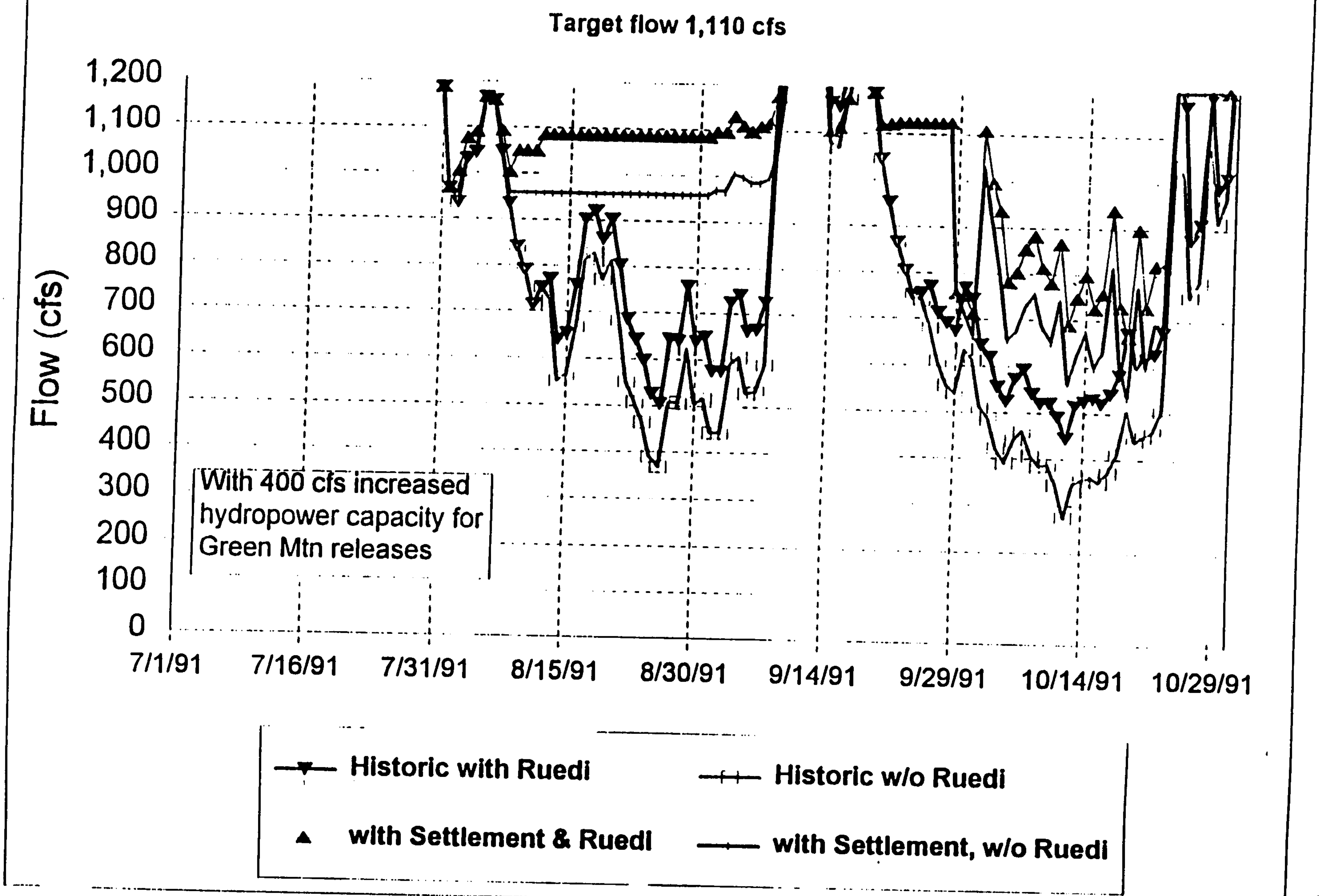
1991 Flow in the 15-Mile Reach

Target flow 1,100 cfs



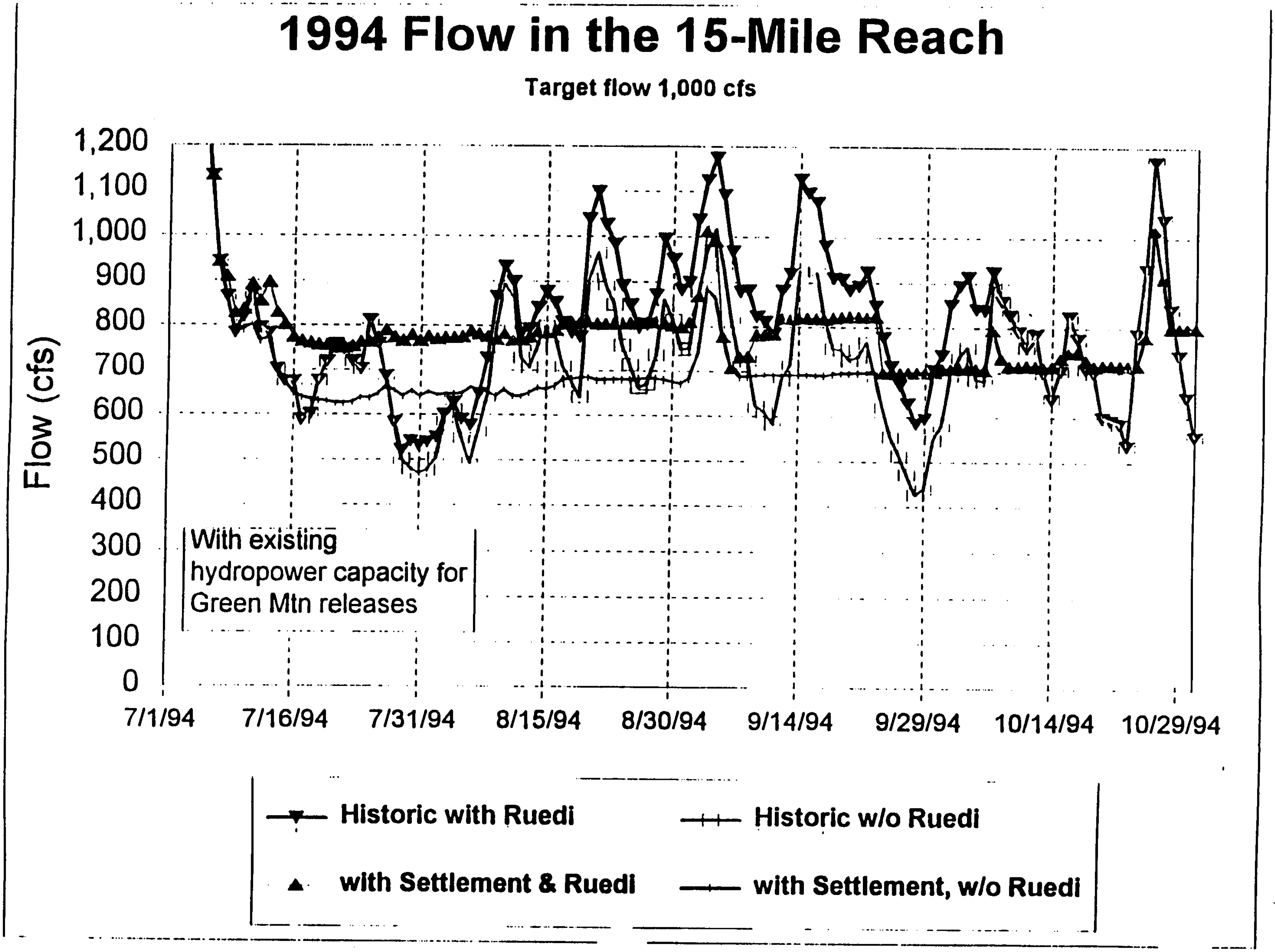
July 16, 1996

1991 Flow in the 15-Mile Reach



9/w247

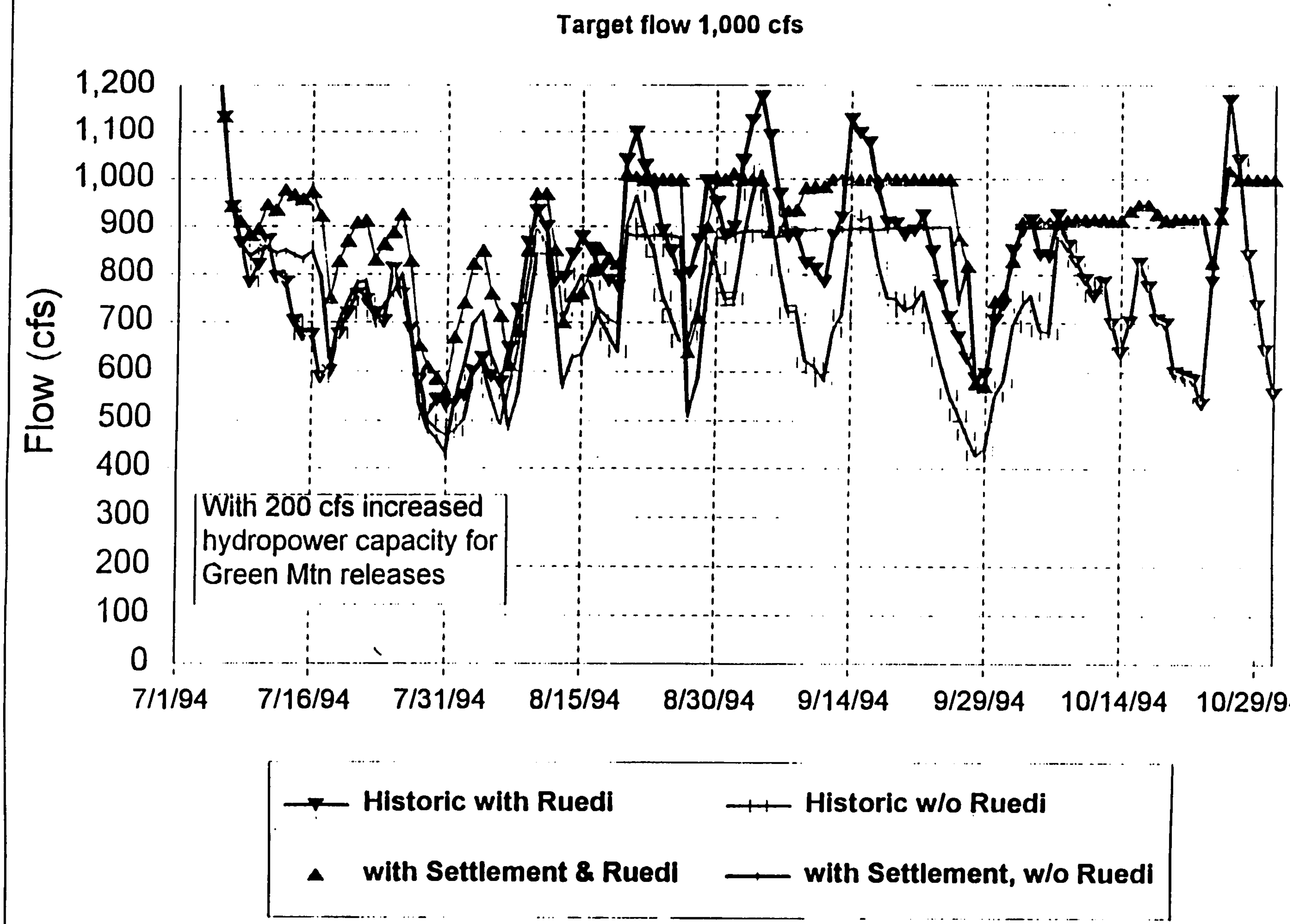
July 16, 1996



9/0347

July 16, 1996

1994 Flow in the 15-Mile Reach

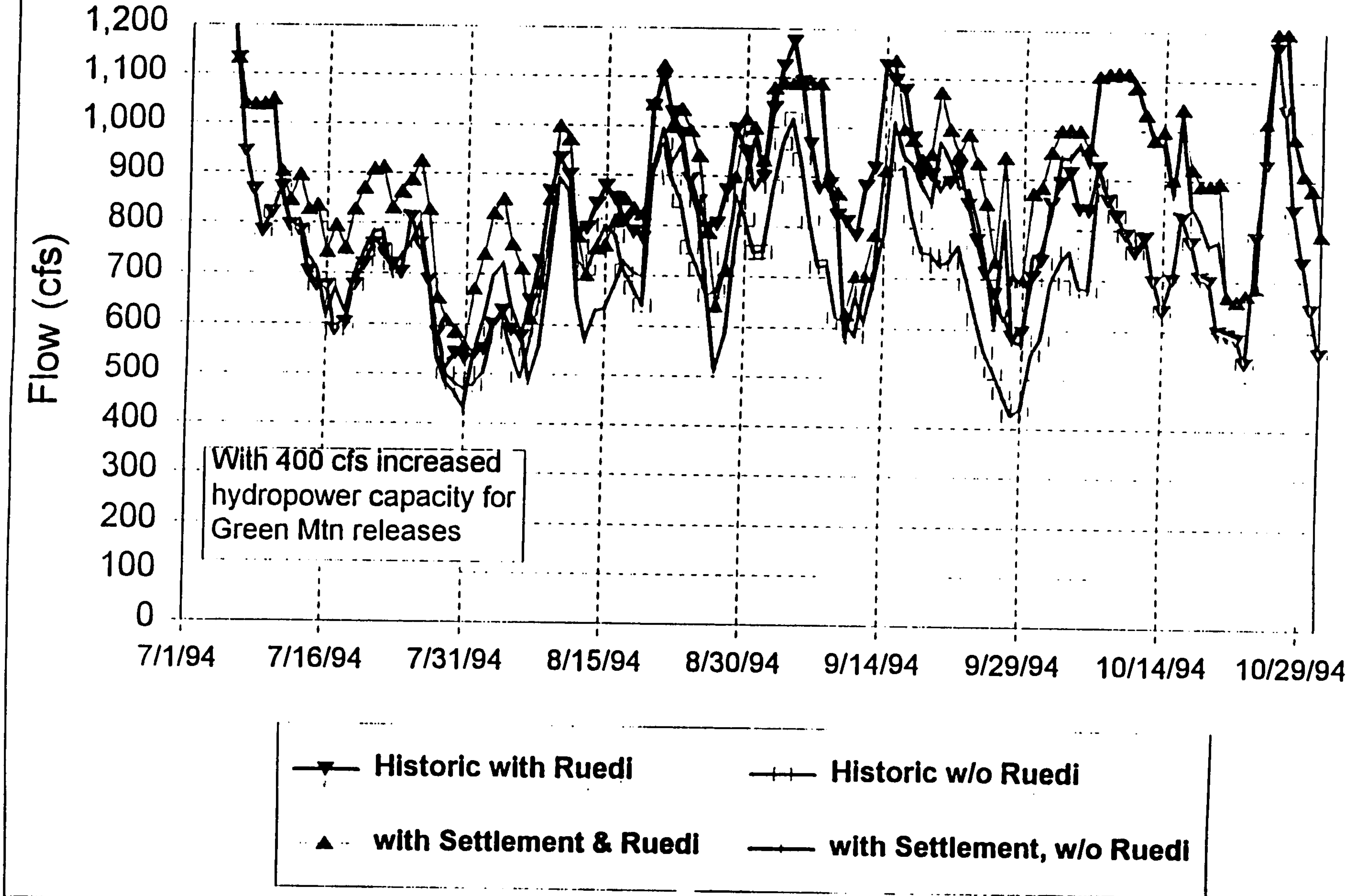


91 AW 347

July 16, 1996

1994 Flow in the 15-Mile Reach

Target flow 1,000 cfs



July 16, 1996

Exhibit E

Orchard Mesa Check Exchange
Water Division No. 5 - Case 91CW247

Applicant	Counsel	Firm and Address
United States of America	Bruce D. Bernard, Esquire Stephen G. Bartell, Esquire	U.S. Department of Justice Environment and Natural Resources Division General Litigation Section 999 18th Street, Suite 945 Denver, Colorado 80202
Grand Valley Water Users Association	Mark Hermundstad, Esquire	Williams, Turner & Holmes, P.C. 200 North 6th Street, #103 P.O. Box 338 Grand Junction, Colorado 81502
Orchard Mesa Irrigation District	Flint B. Ogle, Esquire	Dufford, Waldeck, Milburn & Krohn, L.L.P. 744 Horizon Court, Suite 300 Grand Junction, Colorado 81506
Objector	**Counsel**	**Firm and Address**
City of Aurora, Colorado, acting by and through its Utility Enterprise	John M. Dingess, Esquire	Duncan, Ostrander & Dingess, P.C. 7800 East Union Avenue, #200 Denver, Colorado 80237
Basalt, Town of New Castle, Town of Mid-Valley Metropolitan District Rifle, City of	Loyal E. Leavenworth, Esquire	Leavenworth & Associates, P.C. P.O. Drawer 2030 Glenwood Springs, Colorado 81602

91cw247

Exhibit E

Orchard High Ditch Exhibits
Water Division No. 5 - Case 91CW247

Basalt Water Conservancy District Copper Mountain, Inc. Copper Mountain Consolidated Metropolitan District Mobil Mining & Minerals Company	Scott Balcomb, Esquire Lori Satterfield, Esquire	Delaney & Balcomb, P.C. 818 Colorado Avenue P.O. Drawer 790 Glenwood Springs, Colorado 81602
Carbondale, Town of Debeque, Town of Eagle, Town of Palisade, Town of	Sherry A. Caloia, Esquire	Caloia, Houpt & Light, P.C. 1204 Grand Avenue Glenwood Springs, Colorado 81601
Frisco, Town of Glenwood Springs, City of North Barton Creek, LLC Parachute, Town of Rifle Land Associates, Ltd. Silverthorne, Town of Spruce Valley Ranch Foundation	David W. Robbins, Esquire Mark J. Wagner, Esquire	Hill & Robbins, P.C. 1441 18th Street, #100 Denver, Colorado 80202
Colorado Division of Wildlife Colorado State Engineer Colorado Water Conservation Board Division Engineer, Water Division No. 5	Gale A. Norton, Attorney General Stephen K. Erkenbrack, Chief Deputy Attorney General Timothy M. Tymkovich, Solicitor General Jennifer L. Gimbel, Deputy Attorney General Wendy Weiss, First Assistant Attorney General	Natural Resources Section 1525 Sherman, 5th Floor Denver, Colorado 80203

RCW247

Exhibit E

Orchard Mesa Check Exchange
Water Division No. 1 - Case 91CW247

Colorado River Water Conservation District	David C. Hallford, Esquire	201 Centennial Street, #204 (81601) P.O. Box 1120 Glenwood Springs, Colorado 81602
Colorado Springs, City of	Mark T. Pifher, Esquire Wm Kelly Dude, Esquire	Dude, Pifher & Lebel, P.C. 104 South CascadeAvenue, Suite 204 Colorado Springs, Colorado 80903
Cyprus Climax Metals Company	Brian M. Nazarenus, Esquire	Gorsuch, Kirgis, L.L.C. 1401 17th Street, #1100 Denver, Colorado 80202
Exxon Company, U.S.A. Board of County Commissioners of Summit County, Colorado Vail Associates, Inc. Vail Valley Consolidated Water District Upper Eagle Regional Water Authority	Glenn E. Porzak, Esquire Steven Bushong, Esquire	Porzak, Browning & Johnson, L.L.P. 1300 Walnut Street, Suite 100 Boulder, Colorado 80302
Grand County Water & Sanitation District No. 1 Middle Park Water Conservancy District	Stanley W. Cazier, Esquire	Baker, Cazier & McGowan 62495 U.S. Highway 40, E P.O. Box 500 Granby, Colorado 80446
Grand Valley Irrigation Company	Frederick G. Aldrich, Esquire John T. Howe, Esquire	Hoskin, Farina, Aldrich & Kampf, P.C. 200 Grand Avenue, Suite 400 P.O. Box 40 Grand Junction, Colorado 81502
Pueblo, Colorado, Board of Water Works of	William F. Mattoon, Esquire William A. Paddock, Esquire Peter C. Fleming, Esquire	Peterson, Fonda, Farley, Mattoon Crockenberg & Garcia, P.C. 650 Thatcher Building P.O. Box 35 Pueblo, Colorado 81002 Carlson, Hammond & Paddock, L.L.C. 1700 Lincoln Street, Suite 3900 Denver, Colorado 80203

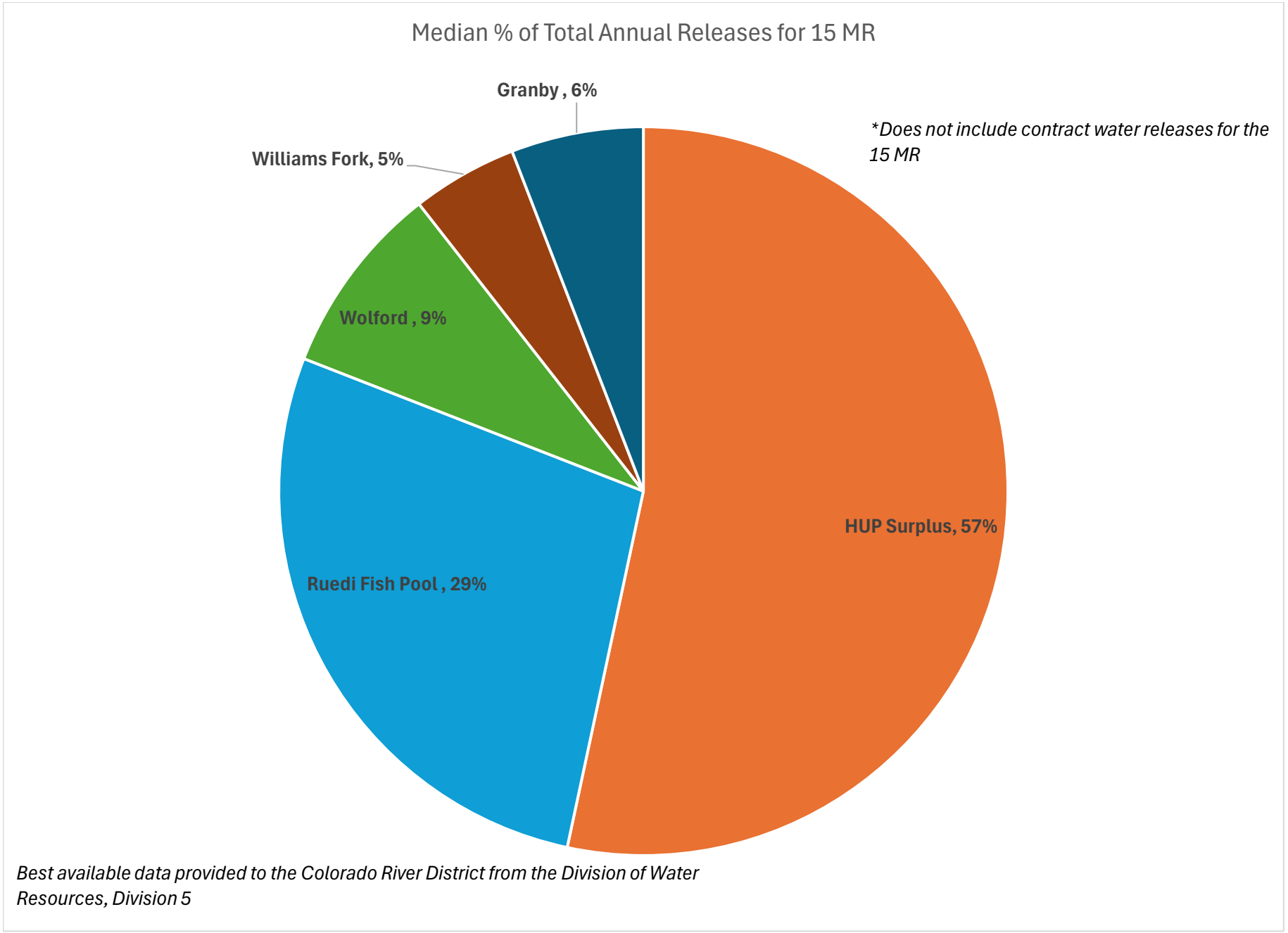
91CW247

Exhibit E

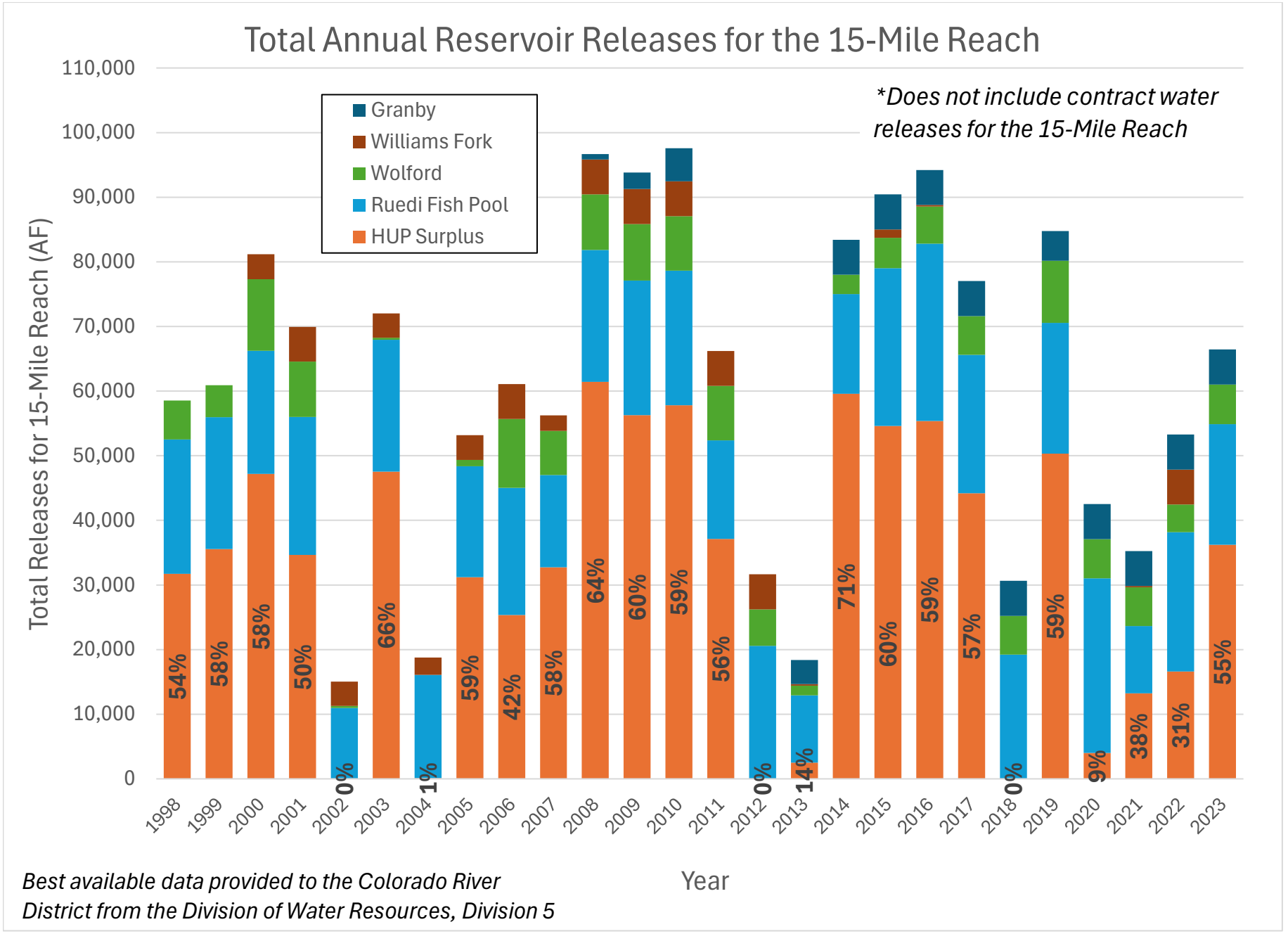
Orchard Mesa Check Exchange
Water Division No. 1 - Case 91CW247

Public Service Company of Colorado	William A. Hillhouse II, Esquire Kenneth L. Salazar, Esquire	Parcel, Mauro, Hultin & Spaanstra, P.C. 1801 California Street, Suite 3600 Denver, Colorado 80202
Ralston Resorts, Inc.	Gary L. Greer, Esquire	Sherman & Howard, L.L.C. 633 Seventeenth Street, Suite 3000 Denver, Colorado 80202
Union Oil Company of California (UNOCAL)	Charles N. Woodruff, Esquire James R. Montgomery, Esquire	Moses, Wittemyer, Harrison & Woodruff, P.C. 1002 Walnut, #300 (80302) P.O. Box 1440 Boulder, Colorado 80306

91cw247



Best available data provided to the Colorado River District from the Division of Water Resources, Division 5



Best available data provided to the Colorado River District from the Division of Water Resources, Division 5

GVE #5

production. During that time, maintenance of the turbines was reportedly achieved by shutting down one turbine while keeping the other turbine online.

Based on DWR records which date back to the mid-1970s, and Historic Users Pool ("HUP") Annual Reports, which records span 1998-2014, the Shoshone Power Plant operated consistently with minor shutdowns (most often related to planned maintenance) until approximately 2002 when PSCo voluntarily reduced its call from 1,408 cfs to 1,000 cfs to allow upstream junior water rights to divert or store water from June 13, 2002 through June 26, 2002. This informal "Shoshone Call Relaxation" was again implemented in 2003, when PSCo voluntarily reduced the Shoshone Water Rights call to 704 cfs in the winter and spring despite the fact that there was physically available flow to divert at a greater rate for a portion of this period and there was demand for the power at the full capacity of the plant.[2] A formal call reduction agreement between PSCo and the Board of Water Commissioners for the City and County of Denver ("Denver Water") was signed in 2007.

In addition to the negotiated and voluntary call reduction agreements described above, the frequency of days during which the Shoshone Power Plant was not operational and unable to exercise the Shoshone Water Rights significantly increased after 2003, mostly due to natural phenomena or unforeseen circumstances beyond the control of PSCo and for which it worked diligently to make repairs necessary to get the plant back online and continue to meet the power demand. These major outages include but are not limited to the following events:

- 2004: PSCo conducted a major automation of the power plant's operations, which required the plant to be offline between mid-March and mid-July.
- 2007-2008: A major penstock rupture on June 20, 2007 resulted in the plant being offline until April 25, 2008. Operational issues following the penstock failure and repair persisted through water year 2008.
- 2010: Unscheduled maintenance was required due to a generator fire in late 2009.
- 2012: The plant operated with only one turbine to reduce the head at the Shoshone Dam to reduce seepage and other issues at the dam.
- 2013: Denver Water call relaxation agreement was in effect.
- 2020: The plant was shut down during the spring of 2020 due to a flood that required the replacement of the turbine exciters. The Grizzly Creek Fire started on August 10, 2020 and closed Glenwood Canyon for 13 days. The Shoshone Power Plant was offline following

[2] The 2003 informal "Shoshone Call Relaxation" was conducted in accordance with the March 21, 2003 "Agreement Concerning Proposed Operation of the Shoshone Power Call" between the River District and the City and County of Denver, acting by and through its Board of Water Commissioners.

the highway closure because powerlines destroyed during the fire had to be repaired or replaced.

- 2021: The plant was partially or fully offline for much of 2021 for reasons that included a large debris flow between the Shoshone Dam and the Shoshone Power Plant. Rock debris was stuck in the diversion tunnel.

- 2022: The plant shut down due to specialized turbine and casing inspections.

- 2023-2024: The plant shut down due to hazardous rockfall at the Shoshone Power Plant site and safety concerns for on-site staff and facilities. During the extended outage, the runner in Turbine A was sent off-site for significant repairs and refurbishment.

As shown in Table 2 below, reported days of full outages were much more frequent after 2004, indicating that the post-2003 period is not representative of the long-term historical use of the Shoshone Water Rights and the consistent operation of the plant due largely to extreme circumstances beyond the control of the plant operators.

Table 2: Summary of Days of Full Outage at the Shoshone Power Plant[3]

Period	Total Days of Full Outage	Average Annual Days of Full Outage
1975-2003 (29 years)	89	3
2004-2022 (19 years)	1,493[4]	77

Available Data Sources

There are two readily available data sources associated with the administration, diversion, and deliveries attributable to the Shoshone Water Rights: (1) records available from the DWR's Colorado Decision Support System ("CDSS") database which are characterized as "diversion records," and (2) administrative flow calculations quantified at the Dotsero Gage, where the Shoshone Water Rights are administered, as made available by the DWR through the Division Engineer's Office for Colorado Water Division 5. The CDSS records and administrative flow data are described in more detail below.

CDSS Records

Daily records for the Shoshone Power Plant from 1975 to present are available from the CDSS database. However, records for some periods are missing or appear to be repeated for many days

[3] Full daily outage based on days with reported zero or no data in CDSS records.

[4] Value based upon CDSS records. PSCo data suggests that there may have been up to approximately 30 days, primarily in November 2013, when the plant was operational to some degree. However, CDSS records report zero.

GVE #6

LUKE D. GINGERICH, PE

Water Resource Engineer & Owner/Operator Bluebird Organic Fruit Company

Luke is a leader in water and agriculture on the western slope of Colorado. Luke has over 20 years of experience in water resources engineering, water rights, hydraulics, water conservation and agricultural development.

Luke leads a group of water professionals at J-U-B Engineers, Inc. located in Palisade, working with clients in the Yampa, Colorado, Gunnison, SW, Rio Grande and Arkansas river basins on project development, engineering, planning, facilitation and construction management of agricultural, environmental, and municipal water projects.

Luke has served as an engineering consultant with the Grand Valley Water Users Association and Orchard Mesa Irrigation District in the Grand Valley since 2014 on myriad projects related to water use, conservation, infrastructure design, operations, and long-term planning.

Included amongst Luke's clients are local, state, and federal agencies, water conservation and conservancy districts, irrigation districts and canal companies, conservation organizations, NGOs, and multiple private water rights holders across Colorado. Luke has successfully guided many clients through the decision-making process as it applies to the development, design, construction, management and operations of water resource and agricultural infrastructure.

Additionally, Luke owns and operates, along with his spouse, Bluebird Organic Fruit Company in Palisade. Bluebird is a commercial organic peach orchard growing, packing and marketing over 125,000 lbs of fresh market stone fruits each season.

Professional Registrations

- Professional Engineer:
  Colorado, 45350
  New Mexico, 22940
  Utah, 9226507-2202

Education

- BS, Civil Engineering
  Colorado State University
  2006

Experience

- Area Manager
  J-U-B ENGINEERS, Inc.
  2016-Present
- Olsson Associates
  2014-2016
- USDA-NRCS
  2009-2014
- US Peace Corps
  Honduras, Central America
  2007-2008
- Natural Resources Consulting Engineers
  2005-2007

SELECT RELEVANT EXPERIENCE

- Colorado River Basin: **Grand Valley Water Users Association; Grand Junction, CO.** *Engineering consultant* leading infrastructure design, water conservation, river operations and long-term planning efforts. Projects include the development of multiple years of System Conservation Pilot Projects, water quality analysis, water supply modeling and creation of a System Optimization Review and Water Management Plan among other tasks over more than 12 years for direct contractual involvement with the Association.
- Colorado River Basin: **Orchard Mesa Irrigation District; Palisade, CO.** *Engineering consultant* leading infrastructure, water conservation, and long-term planning efforts. Projects include water quality analysis, supply modeling, infrastructure capacity modeling and infrastructure design among other tasks over more than 12 years for direct contractual involvement with the District.

- Uncompahgre and Gunnison River Basins: Drought Contingency Plan; Uncompahgre Valley Water Users Association (UVWUA); Montrose, CO. *Engineering consultant* who led project development for a Drought Contingency Plan for the UVWUA who manage the Uncompahgre Project in western Colorado. The plan covers two watersheds, over 100,000 acres of irrigated land, and multiple water supply projects.
- Colorado and Gunnison River Basins: Water Protection Strategy and Plan Development, Colorado West Land Trust; Grand Junction, CO. *Technical consultant* for the development of a water protection plan for over 22,000 acres of irrigated lands under conservation easement on the western slope of Colorado. The plan included water rights and water availability analyses as well as the development of innovative agricultural conservation programs for areas of specific concern, including high-value agricultural production, high environmental significance, and uniquely positioned water supplies, among other categorizations.
- Gunnison River Basin: Gunnison Basin "Local Expert", Gunnison Basin Roundtable; Gunnison River Basin, CO. *Local Expert* for the Gunnison Basin during the most recent iteration of the Basin Implementation Plans and Colorado Water Plan Update. Work included facilitation, technical analysis, and infrastructure planning around emerging issues related to water supply and project implementation.
- Yampa River Basin: Maybell Diversion Restoration and Headgate Modernization Project; Maybell Irrigation District and The Nature Conservancy; Moffat County, CO *Project Manager / Engineer of Record* who led the design, permitting and construction management for the reconstruction and modernization of the Maybell Diversion. The project included a full environmental assessment, design of new natural stone in-channel grade control structures, automated diversion structure, fish passage, boat passage, SCADA system, and access roads for a river spanning structure in the Lower Yampa River.
- Arkansas River Basin: Canal Infrastructure Assessment; Bessemer Irrigating Ditch Company; Pueblo, CO *Project Manager* for an assessment of 9 miles of urbanized canal infrastructure. The assessment included evaluation of existing infrastructure, inventory, and mapping of problem locations and recommendations for improvements.
- Southwest River Basin: Lower Arickaree and Garrett Ridge Piping Project; Montezuma Valley Irrigation Company, Cortez, CO. *Engineering Consultant* leading project development and project management converting approximately 15,200 feet of open, unlined irrigation ditch to enclosed HDPE pipelines, ranging from 30 to 18-inches, metered turnouts, inlet screening structures.

  Rio Grande River Basin: Alamosa Riverfront Project; Rio Grande Headwaters Restoration Project; Alamosa, CO. *Engineering Consultant* leading a consultant team through project scope, funding strategies and Quality Assurance Quality Control. The Alamosa Riverfront Project is a multi-faceted project to create aquatic and riparian habitat, recreational river access, and resilient agricultural infrastructure along the Rio Grande in Alamosa.

GVE #7

860 SAN LUIS COURT • FRUITA, CO 81521
PHONE: 970-260-2794 • E-MAIL: DPAYNE@UTEWATER.ORG

DAVID PAYNE

SUMMARY OF QUALIFICATIONS

- Class A Water Works Operator; State of Colorado, Certificate 4947
- AWWA Basic & Advanced Public Utilities & Waterworks Management Institute
- Certified in David H. Paul Membrane Treatment Technologies, AWWA Utility Management, and Sonoran Institute & Babbitt Center Growing Water Smart

EDUCATION

Colorado Mesa University (Mesa State College) Grand Junction, Colorado

Bachelor of Science Degree - Biological and Agricultural Sciences

- Presidential Scholar
- Deans List

PROFESSIONAL EXPERIENCE

2008 to Present **Ute Water Conservancy District**

Assistant General Manager – Water Treatment & Source Water Supply Portfolio

- Perform all job responsibilities associated with the Assistant General Manager position including; capital construction project management, utilization of source water portfolio, making human resource decisions, facilitating the fiscal budget, and providing input on District wide decision making.
- Perform all managerial responsibilities associated with the operation of a 34 million gallon per day (MGD) conventional drinking water treatment facility and a State of Colorado certified laboratory.
- Perform all managerial responsibilities associated with the operation of a 225 kW hydroelectric facility.
- Perform all necessary duties as needed in the operation of the above mentioned facilities including; chemical feed system calculations and operation, SCADA calibrations and operation, equipment maintenance, chemical and equipment ordering.
- Assist in developing the District's long-range capital improvement plan to meet future demand, maintain infrastructure integrity and compliance with future regulatory issues.
- Develop and maintain an annual and long-range budget for all aspects of the treatment process including personnel, operational and capital expenses.
- Complete and facilitate reporting associated with the District's source water and supply portfolio, including all Colorado River Division 5 reporting to the Colorado Division of Water Resources.
- Oversee all reporting to the Colorado Department of Public Health & Environment and EPA.
- Maintain a comprehensive water quality database of the District's source waters and develop a strategic implementation plan for utilization of direct diversion and storage source water supplies.
- Administrator of two collaborative water quality programs in the Grand Valley made up of, and funded by, several Grand Valley irrigation, wastewater, drainage, and drinking water entities. (GVWQP & GVF)
- Prepare and present PowerPoint presentations concerning District operations and regulatory issues at board meetings, training seminars and professional conferences at the local, state, and national levels.
- Attending professional informational and training conferences as a representative of the District.

1998 to 2008 **Clifton Water District**

Water Treatment Plant Manager/Laboratory Director

- Perform all supervisory responsibilities for the operation of a 12 million gallon per day (MGD) conventional drinking water treatment facility, a 3.2 MGD nanofiltration and low pressure reverse osmosis (RO) membrane treatment facility, and a State of Colorado certified laboratory.
- Develop an annual budget for all aspects of the treatment process including operational and capital expenses. Assist with the District's long range capital improvement plan.
- Maintaining monthly reports and work schedule for the operation of the facilities.
- Complete all monthly and quarterly compliance monitoring and reporting to CDPHE and EPA.
- Perform the duties of the CDPHE Operator in Responsible Charge (ORC).

1993 to 1998 **Clifton Water District**

Treatment Plant Foreman

- Same as Water Treatment Plant Manager duties without supervisory duties.

1986 to 1993 **Grand Junction Hilton Hotel**

Purchasing Agent

- Maintain food and beverage, maintenance, and housekeeping inventories for a 273 room Hilton Hotel with large banquet facilities and two restaurants.
- Responsible for all ordering and receiving of food and beverage, maintenance, and housekeeping supplies necessary to operate the facility and its functions.
- Produce all reports associated with food and beverage costs and monthly audit inventories.

PROFESSIONAL MEMBERSHIPS & APPOINTMENTS

American Water Works Association – 2020 Large Outstanding Water Treatment Plant Award

Colorado Water Congress/NWRA – Vice President - Board of Directors

Colorado Ground Water Commission – Western Slope Municipal & Industrial Users Representative

Colorado Mesa University Ruth Powell Hutchins Water Center – Advisory Council

AWARDS RECEIVED

Rocky Mountain Section American Water Works Association 1995 Ralph Leidholdt Operator of the Year Award

American Water Works Association Partnership for Safe Water – Phase III Directors Award

- Ute Water Conservancy District – 20 Year Phase III Director's Award
- Clifton Water District – 2007 Recipient

INTERESTS AND ACTIVITIES

Outdoor activities - hiking, hunting, fishing, camping

Challenger Baseball – Coaching as part of a Little League baseball program for kids with disabilities

Brent Uilenberg

Professional Career History:

Water Resource Consultant – January 2020 to Present

Bureau of Reclamation – September 1982 through December 2017

Smith and Kangas Engineering – June 1981 through August 1982

Professional Registration:

Professional Engineer, State of Colorado Registration – License placed on retirement status 2017

Specialized Experience:

Orchard Mesa Check Water Right Stipulation and Agreement - negotiation team member supporting U.S. Department of Justice throughout application and negotiation process

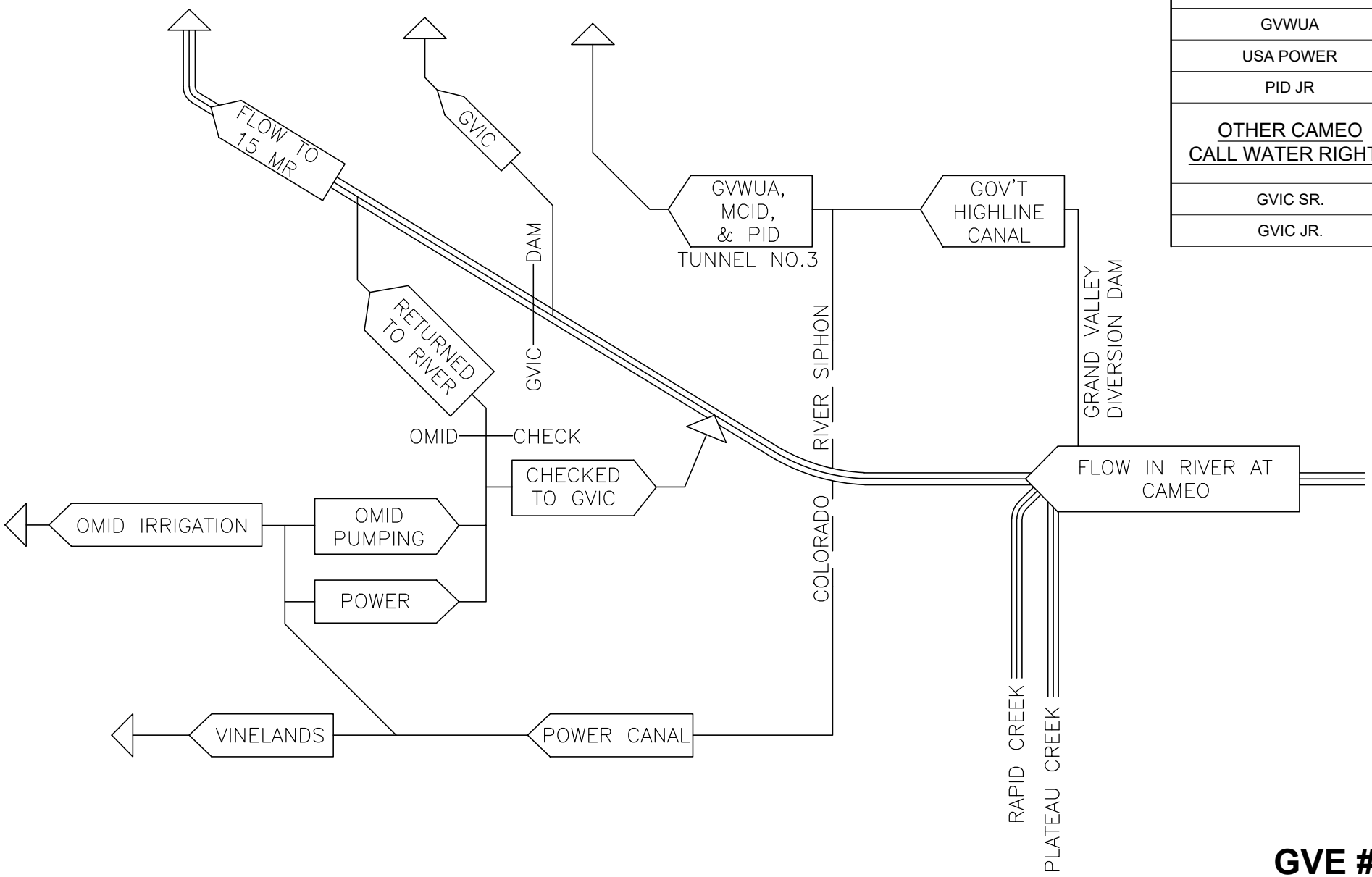
Upper Colorado River Recovery Implementation Program – Bureau of Reclamation Management Committee representative from original program authorization to December 2017

Green Mountain Reservoir Managing Entity Process – active participant in water administration and management process established as part of Orchard Mesa Check Water Right Stipulation and Agreement 1996 through 2017

Education:

B.S. Civil Engineering – South Dakota State University 1981

CAMEO CALL – OPERATIONAL SCHEMATIC



GVP WATER RIGHTS
PID SR.
OMID VINELANDS
MCID
OMID
GVWUA
USA POWER
PID JR
OTHER CAMEO CALL WATER RIGHTS
GVIC SR.
GVIC JR.

GVE #10