

STAFF SUBMITTALS

Colorado Water Conservation Board's Comprehensive Findings of Fact
Board of Commissioners for the County of Pitkin
Case No. 5-10CW305
July 21, 2011

- I. Considering the specific amounts and activities as claimed in the application and proposed decree, and after deliberation in public meetings held on July 12 and 21, 2011, the Board makes the following findings about the proposed Recreational In-Channel Diversion (RICD):
- a. The Board must consider whether the adjudication and administration of the proposed RICD would materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements. The Board makes the finding that there remains unallocated Colorado River compact apportionment available for consumptive beneficial use within Colorado. The Board also finds that the adjudication and administration of the proposed RICD, for the flow amounts and time periods specified in the proposed decree, will materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements and will have an impact on the manner, cost, and timing of such development. The Board makes the following findings about the proposed RICD for the flow amounts claimed:
- i. There remains unappropriated water that Colorado could place to consumptive beneficial use upstream of the proposed RICD reach but for the proposed RICD water right calling water through this reach. The proposed RICD will impair Colorado's ability to develop and place to consumptive beneficial use Colorado's compact entitlements under the Colorado River compact, the Upper Colorado River Basin compact, and the associated "Law of the River" upstream of the proposed RICD. The effects on upstream compact development are significant because the Applicant seeks to double the number of flow rates allowed by law. For applicants seeking more than 50% of the total average historic volume of stream flows, sections 37-92-305(13)(f)(II)&(III), C.R.S. (2010) require that the RICD be limited to only three time periods and each time period be limited to one flow rate. Additionally, where more than 50% of the total average historic volume of stream flows is sought, applicants may only seek to impose a call if the call will produce at least 85% of the flow rate sought. § 37-92-305(13)(f)(I).

The Applicant has applied for the following flows:

	Period	Flow Rate (cfs)
Upper Structure Unit	April 1 – May 14	240
	May 15 – June 30	1,500
	July 1 – Aug 15	1,000
Lower Structure Unit	May 14 – May 31	1,350
	June 1 - July 14	2,000
	July 15 – Sept 15	380

The Applicant has not complied with the statute because it claims more than 50% of the total average historic volume of stream flows, and it claims six time periods and six flow rates for one RICD. An RICD is defined as "the minimum amount of stream flow as it is diverted, captured, controlled, and placed to beneficial use between specific points defined by control structures". § 37-92-103(10.3), C.R.S. (2010). Based on this statutory definition, the Board considers the RICD sought to be one RICD because only two control structures (located approximately 100 feet apart) are proposed by the Applicant. By seeking six different flow rates over six time periods, the Applicant significantly increases the potential for a call by the proposed RICD. The Applicant may only place a call under the proposed RICD water rights if the call will produce at least 85% of the flow rate sought and when such call will produce flows at the decreed control structures during daylight hours. By claiming different flow rates at each control structure, the Applicant will be able to call for water even when such a call would produce less than 85% of the maximum claimed rate of flow for the proposed RICD as defined in Section 37-92-103(10.3), C.R.S. (2010).

For example, between May 15 and May 31, the Applicant could place a call if it would produce only 76% of the maximum claimed flow rate. During that period, the claimed flow rate for the Upper Structure Unit is 1,500 c.f.s. The Applicant could call for water at the Upper Structure Unit if such a call would produce between 1,500 c.f.s. and 1,275 c.f.s. (85% of 1,500 c.f.s.). During the same time period, the Applicant could place a call at the Lower Structure Unit if such a call would produce between 1,350 c.f.s. and 1,147 c.f.s. In effect, the Applicant could place a call if such a call would produce between 1,500 c.f.s. and 1,147 c.f.s. (76% of 1,500).

The Applicant's proposal clearly contravenes the plain language and the intent of section 37-92-305(13)(f). Because the Applicant is claiming in excess of 50% of the total average historic volume of stream flows and the Applicant fails to limit the proposed RICD as required by law, the Board finds that the proposed RICD will materially impair the ability of the State of Colorado to consumptively use its compact entitlements, upstream of the proposed RICD.

- ii. The Board finds that the distance of the proposed RICD to the State line is considerable, but in light of other concerns, the proposed RICD application significantly impacts Colorado's ability to develop its compact entitlements.
- iii. The proposed RICD is in close proximity to potentially suitable upstream points of diversion and upstream storage (Aspen, Snowmass or diversion to Hunter Tunnel of the Fryingpan-Arkansas Project) that may be utilized by those who would place the water to consumptive beneficial use. The Board finds that these impacts will be exacerbated because the Applicant is seeking flow rates representing a volume of more than 50% of the total average

historical volume of water in the reach and the Applicant is proposing three additional flow rates above those allowed by law, greatly expanding the potential for placing an administrative call. The Board finds that, because of the water rights sought, the proposed RICD will materially impair the ability to divert and place to consumptive beneficial use water upstream of the proposed RICD for currently undecreed uses. Thus, the proposed RICD will materially impair the ability of the State of Colorado to fully develop and place to consumptive beneficial use its compact entitlements.

- iv. Exchange opportunities (such as water released from Ruedi Reservoir exchanged upstream on the Roaring Fork River to Aspen or Snowmass or to Hunter Tunnel of the Fryingpan-Arkansas Project) within the state may be adversely impacted by the existence of the proposed RICD. Therefore, the Board finds that the proposed RICD will materially impair the ability of the State of Colorado to fully develop and place to consumptive beneficial use its compact entitlements. The Roaring Fork basin is over-appropriated, or "water critical" during a portion of the RICD season and the proposed RICD further exacerbates these water shortages. Therefore, the Board finds that the proposed RICD will materially impair Colorado's ability to fully develop and place to consumptive beneficial use its compact entitlements.
- v. In the case of compact curtailment under the "Law of the River", it may be necessary to exchange water through the proposed RICD reach in order for the beneficiaries of post-1922 water rights to realize necessary beneficial use of water yielded from pre-1922 water rights or other water sources not affected by compact administration. Such exchanges would be necessary for Colorado to place to consumptive beneficial use its compact entitlement. To address this factor, the Board finds that the following condition would be an acceptable provision for a proposed decree:

"During any period identified by the Upper Colorado River Commission in a finding issued pursuant to Article VIII(d)(8) of the Upper Colorado River Basin Compact of 1948 for curtailment of Colorado River basin water uses within Colorado, which the State of Colorado has agreed to implement in a manner that impacts water diversions within Water Division 5, this RICD water right will be administered in accordance with the compact curtailment rules adopted by the State of Colorado that are then in effect, if any. If no such compact curtailment rules are then in effect, this RICD will not be administered during the period of any such compact curtailment. The RICD decreed herein shall be administered in accordance with any rules promulgated by the State Engineer related to Colorado River compact compliance. The RICD decreed herein is not intended to materially impair the ability of Colorado to fully develop and place to consumptive beneficial use those waters available by law and interstate compact.

- b. The Board must consider whether the exercise of the proposed RICD would cause material injury to existing instream flow (ISF) water rights. The Board makes the following findings about the proposed RICD regarding the potential of material injury to existing ISF water rights:

- i. As summarized below, there are two ISF water rights held by the CWCB in or directly downstream of the proposed RICD reach. The nature and extent of these ISF water rights do not serve as a basis to recommend denial of the proposed RICD application.

CWCB Case No.	Stream	Amount (cfs)	Approp. Date	Watershed	Counties
5-85CW646	Roaring Fork River	30 (10/1-3/31) 55 (4/1-9/30)	11/8/1985	Roaring Fork	Eagle & Pitkin
5-85CW639	Roaring Fork River	75 (10/1-3/31) 145 (4/1-9/30)	11/8/1985	Roaring Fork	Eagle, Garfield & Pitkin

- ii. Should this RICD be constructed, the Board finds that the proposed RICD could affect the natural environment that the ISF water rights protect during the construction and maintenance process unless the Applicant consults with the Division of Parks and Wildlife (DPW) before and during construction and maintenance of the RICD structures and DPW finds that these actions will not injure the natural environment that the ISF water rights protect.

- c. The Board must determine whether the adjudication and administration of the proposed RICD, in the amounts claimed, would promote maximum utilization of the waters of the State. The Board makes the following findings about the proposed RICD regarding maximum utilization of waters of the State:

- i. The Board finds that there are probable future upstream junior appropriations for direct diversion or storage (Aspen, Snowmass or diversions to Hunter Tunnel of the Fryingpan-Arkansas Project) that may be adversely affected. The Board finds that the proposed RICD will prohibit upstream junior appropriations for direct diversion and storage and, therefore, will materially impair maximum utilization of the waters of the State because the Applicant is seeking flow rates representing a volume of more than 50% of the total average historical volume of water in the reach and the Applicant is proposing three additional flow rates above those allowed by law, greatly expanding the potential for calls by the Applicant under the proposed RICD right that will curtail upstream junior appropriators.
- ii. The Board finds that the proposed RICD appropriation, for the flow amounts sought and the time periods specified, will inhibit maximum utilization by restricting probable future changes, transfers, or exchanges of water rights

from points of diversion or storage downstream of the reach affected by the proposed RICD to points upstream of or within the reach affected by the proposed RICD. Examples of impacted future exchanges are releases from Ruedi Reservoir exchanged upstream to Aspen or Snowmass or the Hunter Tunnel of the Fryingpan-Arkansas Project through the proposed RICD reach. The Board finds that these impacts will be greatly exacerbated because the Applicant is seeking flow rates representing a volume of more than 50% of the total average historical volume of water in the reach and the Applicant is proposing three additional flow rates above those allowed by law. The Board finds that the opportunity to allow future changes, transfers, and exchanges of water from points located downstream of the proposed RICD to points located upstream of the proposed RICD will be unduly impacted.

- iii. The Board finds that the proposed RICD appropriation does not promote maximum utilization of Colorado's water resources because, by claiming flow rates representing a volume of more than 50% of the total average historical volume of water and six flow rates as described above, the Applicant has not attempted to minimize its call upon the river and avoid waste.
- iv. The Board finds that there is a reasonable demand for the recreational activities sought for the time period claimed in the application, but not for the time period claimed in the proposed decree. The Board finds that the application has appropriate limitations on the days per period and the time of year during which the proposed RICD would be exercised; but the proposed decree does not.
- v. The depths and individual flow rates of the proposed RICD do not promote maximum utilization for the flow amounts sought for the individual time periods because the Applicant is seeking flow rates representing a volume of more than 50% of the total average historical volume of water in the reach and the Applicant is proposing three additional flow rates above those allowed by law.
- vi. The frequency and duration of the requested amounts of water for the proposed RICD for the requested periods do not promote maximum utilization of waters of the State.
- vii. The relationship of the requested individual RICD flow rates to the historic appropriated and unappropriated flow rates for each time period requested are not appropriate because the Applicant is seeking flow rates representing a volume of more than 50% of the total average historical volume of water in the reach and the Applicant is proposing three additional flow rates above those allowed by law.
- viii. The application fails to meet elements of the definition of a RICD, as defined in section 37-92-103(10.3). The application has been filed by a county government and the Applicant intends to limit the proposed RICD to the period of April 1 to Labor Day as indicated in a written statement to the Board dated June 27, 2011. However, the Applicant claims multiple flow rates during the same time periods. Further, the proposed RICD does not represent

- the minimum amount for a reasonable recreation experience because the Applicant has failed to meet the statutory limitation of three flow rates.
- ix. The requested RICD does not conserve or efficiently use the available stream flow because the Applicant claims more water than the statute allows, and therefore negatively impacts the maximum utilization of Colorado's water.
 - x. The Applicant has failed to show how the proposed RICD works together with existing and/or future uses within the State of Colorado in order to promote maximum utilization of waters of the State.
 - xi. The Applicant has included descriptions of each recreational opportunity sought at each flow amount sought. The Board finds that the Applicant is seeking flow rates representing a volume of more than 50% of the total average historical volume of water in the reach and the Applicant is proposing three additional flow rates above those allowed by law. Thus, the flow rates sought do not promote maximum utilization as was the legislative intent in the current statutes governing RICDs.
 - xii. The Board finds unappropriated native flows exist in the proposed RICD stream reach during some of the periods claimed; however, the percentage of unappropriated flows claimed by the proposed RICD is excessive and therefore the proposed RICD will not promote maximum utilization of waters of the State.

NOTE: This bill has been prepared for the signature of the appropriate legislative officers and the Governor. To determine whether the Governor has signed the bill or taken other action on it, please consult the legislative status sheet, the legislative history, or the Session Laws.

An Act

SENATE BILL 06-037

BY SENATOR(S) Isgar, Dyer, Entz, Evans, Fitz-Gerald, Kester, Lamborn, Mitchell, Taylor, and Teck;
also REPRESENTATIVE(S) Curry, Borodkin, Buescher, Butcher, Frangas, Gallegos, Kerr A., Merrifield, Rose, and White.

CONCERNING THE ADJUDICATION OF RECREATIONAL IN-CHANNEL
DIVERSIONS.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. 37-92-102 (6) (a), (6) (b), and (6) (c), Colorado Revised Statutes, are amended to read:

37-92-102. Legislative declaration - basic tenets of Colorado water law. (6) (a) Following a public hearing, if requested by any party, ~~the board shall make findings of fact and a final recommendation as to whether the application should be granted, granted with conditions, or denied.~~

(b) ~~In determining whether the board shall recommend that the water court grant, grant with conditions, or deny such application;~~ The board, AFTER DELIBERATION IN A PUBLIC MEETING, shall consider the following factors and make written findings ~~thereon~~ AS TO EACH:

Capital letters indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.

(I) Whether the adjudication and administration of the recreational in-channel diversion would MATERIALLY impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements;

(II) ~~The appropriate reach of stream required for the intended use;~~

(III) ~~Whether there is access for recreational in-channel use;~~

(IV) Whether exercise of the recreational in-channel diversion would cause material injury to instream flow water rights appropriated pursuant to subsections (3) and (4) of this section; AND

(V) Whether adjudication and administration of the recreational in-channel diversion would promote maximum utilization of waters of the state. ~~as referenced in paragraph (a) of subsection (1) of this section; and~~

(VI) ~~Such other factors as may be determined appropriate for evaluation of recreational in-channel diversions and set forth in rules adopted by the board, after public notice and comment.~~

(c) Within ninety days after the filing of statements of opposition, the board shall report its findings to the water court for review pursuant to section 37-92-305 (13). The board may ~~defend such findings through participation~~ FULLY PARTICIPATE in the water court proceedings.

SECTION 2. 37-92-103 (7) and (10.3), Colorado Revised Statutes, are amended, and the said 37-92-103 is further amended BY THE ADDITION OF THE FOLLOWING NEW SUBSECTIONS, to read:

37-92-103. Definitions. As used in this article, unless the context otherwise requires:

(6.3) "CONTROL STRUCTURE" MEANS A STRUCTURE CONSISTING OF DURABLE MAN-MADE OR NATURAL MATERIALS THAT HAS BEEN PLACED WITH THE INTENT TO DIVERT, CAPTURE, POSSESS, AND CONTROL WATER IN ITS NATURAL COURSE FOR AN APPROPRIATOR'S INTENDED AND SPECIFIED RECREATIONAL IN-CHANNEL DIVERSION. THE CONTROL STRUCTURE AND ITS EFFICIENCY SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER, AS THAT

TERM IS DEFINED IN SECTION 12-25-102, C.R.S., OR UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER, AND CONSTRUCTED SO THAT IT WILL OPERATE EFFICIENTLY AND WITHOUT WASTE TO PRODUCE THE INTENDED AND SPECIFIED REASONABLE RECREATION EXPERIENCE. CONCENTRATION OF RIVER FLOW BY A CONTROL STRUCTURE CONSTITUTES CONTROL OF WATER FOR A RECREATIONAL IN-CHANNEL DIVERSION.

(7) "Diversion" or "divert" means removing water from its natural course or location, or controlling water in its natural course or location, by means of a CONTROL STRUCTURE, ditch, canal, flume, reservoir, bypass, pipeline, conduit, well, pump, or other structure or device; except that, ON AND AFTER JANUARY 1, 2001, only a county, municipality, city and county, water district, water and sanitation district, water conservation district, or water conservancy district may FILE AN APPLICATION TO control water in its natural course or location BY MEANS OF A CONTROL STRUCTURE for recreational in-channel diversions. ~~This does not apply to applications filed prior to January 1, 2001.~~

(10.1) "REASONABLE RECREATION EXPERIENCE" MEANS THE USE OF A RECREATIONAL IN-CHANNEL DIVERSION FOR, AND LIMITED TO, NONMOTORIZED BOATING. OTHER RECREATIONAL ACTIVITIES MAY OCCUR BUT MAY NOT SERVE AS EVIDENCE OF A REASONABLE RECREATION EXPERIENCE.

(10.3) "Recreational in-channel diversion" means the minimum AMOUNT OF stream flow as it is diverted, captured, controlled, and placed to beneficial use between specific points defined by ~~physical~~ control structures pursuant to an application filed by a county, municipality, city and county, water district, water and sanitation district, water conservation district, or water conservancy district for a reasonable recreation experience in and on the water FROM APRIL 1 TO LABOR DAY OF EACH YEAR UNLESS THE APPLICANT CAN DEMONSTRATE THAT THERE WILL BE DEMAND FOR THE REASONABLE RECREATION EXPERIENCE ON ADDITIONAL DAYS. THE RECREATIONAL IN-CHANNEL DIVERSION SHALL BE LIMITED TO ONE SPECIFIED FLOW RATE FOR EACH TIME PERIOD CLAIMED BY THE APPLICANT. INDIVIDUAL TIME PERIODS SHALL NOT BE SHORTER THAN FOURTEEN DAYS UNLESS THE APPLICANT CAN DEMONSTRATE A NEED FOR A SHORTER TIME PERIOD. THERE SHALL BE A PRESUMPTION THAT THERE WILL NOT BE MATERIAL INJURY TO A RECREATIONAL IN-CHANNEL DIVERSION WATER RIGHT FROM SUBSEQUENT APPROPRIATIONS OR CHANGES OF WATER RIGHTS

IF THE EFFECT ON THE RECREATIONAL IN-CHANNEL DIVERSION CAUSED BY SUCH APPROPRIATIONS OR CHANGES DOES NOT EXCEED ONE-TENTH OF ONE PERCENT OF THE LOWEST DECREED RATE OF FLOW FOR THE RECREATIONAL IN-CHANNEL DIVERSION AS MEASURED AT THE RECREATIONAL IN-CHANNEL DIVERSION AND THE CUMULATIVE EFFECTS ON THE RECREATIONAL IN-CHANNEL DIVERSION CAUSED BY SUCH APPROPRIATIONS OR CHANGES DO NOT EXCEED TWO PERCENT OF THE LOWEST DECREED RATE OF FLOW FOR THE RECREATIONAL IN-CHANNEL DIVERSION MEASURED AT THE RECREATIONAL IN-CHANNEL DIVERSION. THE OWNER OF A WATER RIGHT FOR A RECREATIONAL IN-CHANNEL DIVERSION MAY NOT CALL FOR WATER THAT HAS BEEN LAWFULLY STORED BY ANOTHER APPROPRIATOR.

SECTION 3. 37-92-305 (13), Colorado Revised Statutes, is amended to read:

37-92-305. Standards with respect to rulings of the referee and decisions of the water judge. (13) (a) The water court shall ~~apply the factors set forth in section 37-92-102 (6).~~ ~~ALL~~ CONSIDER THE findings of fact ~~contained in the recommendation of~~ MADE BY the Colorado water conservation board PURSUANT TO SECTION 37-92-102 (6) (b) REGARDING A RECREATIONAL IN-CHANNEL DIVERSION, WHICH FINDINGS shall be presumptive as to such facts, subject to rebuttal by any party. IN ADDITION, THE WATER COURT SHALL CONSIDER EVIDENCE AND MAKE AFFIRMATIVE FINDINGS THAT THE RECREATIONAL IN-CHANNEL DIVERSION WILL:

(I) NOT MATERIALLY IMPAIR THE ABILITY OF COLORADO TO FULLY DEVELOP AND PLACE TO CONSUMPTIVE BENEFICIAL USE ITS COMPACT ENTITLEMENTS;

(II) PROMOTE MAXIMUM UTILIZATION OF WATERS OF THE STATE;

(III) INCLUDE ONLY THAT REACH OF STREAM THAT IS APPROPRIATE FOR THE INTENDED USE;

(IV) BE ACCESSIBLE TO THE PUBLIC FOR THE RECREATIONAL IN-CHANNEL USE PROPOSED; AND

(V) NOT CAUSE MATERIAL INJURY TO INSTREAM FLOW WATER RIGHTS APPROPRIATED PURSUANT TO SECTION 37-92-102 (3) AND (4).

(b) IN DETERMINING WHETHER THE INTENDED RECREATION EXPERIENCE IS REASONABLE AND THE CLAIMED AMOUNT IS THE APPROPRIATE FLOW FOR ANY PERIOD, THE WATER COURT SHALL CONSIDER ALL OF THE FACTORS THAT BEAR ON THE REASONABLENESS OF THE CLAIM, INCLUDING THE FLOW NEEDED TO ACCOMPLISH THE CLAIMED RECREATIONAL USE, BENEFITS TO THE COMMUNITY, THE INTENT OF THE APPROPRIATOR, STREAM SIZE AND CHARACTERISTICS, AND TOTAL STREAMFLOW AVAILABLE AT THE CONTROL STRUCTURES DURING THE PERIOD OR ANY SUBPERIODS FOR WHICH THE APPLICATION IS MADE.

(c) IF A WATER COURT DETERMINES THAT A PROPOSED RECREATIONAL IN-CHANNEL DIVERSION WOULD MATERIALLY IMPAIR THE ABILITY OF COLORADO TO FULLY DEVELOP AND PLACE TO CONSUMPTIVE BENEFICIAL USE ITS COMPACT ENTITLEMENTS, THE COURT SHALL DENY THE APPLICATION.

(d) IN ADDITION TO DETERMINING THE MINIMUM AMOUNT OF STREAM FLOW TO SERVE THE APPLICANT'S INTENDED AND SPECIFIED REASONABLE RECREATION EXPERIENCE, THE WATER COURT SHALL MAKE A FINDING IN THE DECREE AS TO THE FLOW RATE BELOW WHICH THERE IS NO LONGER ANY BENEFICIAL USE OF THE WATER AT THE CONTROL STRUCTURES FOR THE DECREED PURPOSES.

(e) IF THE OTHER ELEMENTS OF THE APPROPRIATION ARE SATISFIED, THE DECREE SHALL SPECIFY THE TOTAL VOLUME OF WATER REPRESENTED BY THE FLOW RATES DECREED FOR THE RECREATIONAL IN-CHANNEL DIVERSION. FOR PURPOSES OF THIS SUBSECTION (13), THE "TOTAL VOLUME OF WATER REPRESENTED BY THE FLOW RATES DECREED FOR THE RECREATIONAL IN-CHANNEL DIVERSION" MEANS THE SUM OF THE FLOW RATES CLAIMED IN CUBIC FEET PER SECOND FOR EACH DAY ON WHICH A CLAIM IS MADE MULTIPLIED BY 1.98.

(f) IF THE COURT DETERMINES THAT THE TOTAL VOLUME OF WATER REPRESENTED BY THE FLOW RATES DECREED FOR THE RECREATIONAL IN-CHANNEL DIVERSION EXCEEDS FIFTY PERCENT OF THE SUM OF THE TOTAL AVERAGE HISTORICAL VOLUME OF WATER FOR THE STREAM SEGMENT WHERE THE RECREATIONAL IN-CHANNEL DIVERSION IS LOCATED FOR EACH DAY ON WHICH A CLAIM IS MADE, THE DECREE SHALL:

(I) SPECIFY THAT THE STATE ENGINEER SHALL NOT ADMINISTER A

CALL FOR THE RECREATIONAL IN-CHANNEL DIVERSION UNLESS THE CALL WOULD RESULT IN AT LEAST EIGHTY-FIVE PERCENT OF THE DECREED FLOW RATE FOR THE APPLICABLE TIME PERIOD;

(II) LIMIT THE RECREATIONAL IN-CHANNEL DIVERSION TO NO MORE THAN THREE TIME PERIODS; AND

(III) SPECIFY THAT EACH TIME PERIOD IS LIMITED TO ONE FLOW RATE.

SECTION 4. Applicability. This act shall apply only to applications for and the administration of new recreational in-channel diversions filed on or after the effective date of this act and shall not apply to applications for reasonable diligence or to make absolute recreational in-channel diversions that were decreed or applied for prior to the effective date of this act.

SECTION 5. Safety clause. The general assembly hereby finds,

determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

Joan Fitz-Gerald
PRESIDENT OF
THE SENATE

Andrew Romanoff
SPEAKER OF THE HOUSE
OF REPRESENTATIVES

Karen Goldman
SECRETARY OF
THE SENATE

Marilyn Eddins
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

APPROVED _____

Bill Owens
GOVERNOR OF THE STATE OF COLORADO

DEPARTMENT OF NATURAL RESOURCES

Colorado Water Conservation Board

2 CCR 408-3

RECREATIONAL IN-CHANNEL DIVERSION RULES

1. Title

Rules Concerning Recreational In-Channel Diversions, adopted pursuant to section 37-92-102, C.R.S., and hereinafter referred to as the “RICD Rules” or “Rules”.

2. Purpose of Rules

The purpose of these Rules is to set forth the procedures to be followed by: 1) applicants for Recreational In-Channel Diversions (hereinafter referred to as “RICDs”); and 2) the Colorado Water Conservation Board (hereinafter referred to as “CWCB” or “Board”) when making Findings of Fact to a water court regarding RICDs. In addition, the purpose of these Rules is to provide guidance about the type of information that will assist the Board in making its findings to the water court. The Board has incorporated into these Rules, the Statement of Basis and Purpose prepared and adopted at the time of the rulemaking. These Rules will supersede the RICD Rules adopted on November 15, 2005, codified at 2 CCR 408-3, and they are intended to apply to applications that will be reviewed by the Board after the effective date of these Rules. However, they will not apply to applications that were already filed prior to July 1, 2006.

3. Statutory Authority

The General Assembly specifically recognized the appropriation and adjudication of RICDs by local governmental entities, pursuant to sections 37-92-102, 37-92-103, & 37-92-305, C.R.S. The statutory authority for these Rules is found at section 37-60-106(k) and 37-60-108, C.R.S. By promulgating these Rules, the Board assumes no liability related to RICDs and expressly does not waive its sovereign immunity under Article 10, Title 24, C.R.S.

4. Definitions

- a. Applicant. Means a local governmental entity that has filed a water court application for a RICD on or after July 1, 2006.
- b. Application Receipt Date. Means the date that the Board receives a copy of the RICD application.
- c. Application. A water court application filed with the CWCB for consideration under these Rules.
- d. Beneficial Use. Is defined as stated in section 37-92-103(4), C.R.S., which is incorporated herein by reference.
- e. Board. Means the Colorado Water Conservation Board as defined in sections 37-60-101, 103 and 104, C.R.S., which is incorporated herein by reference.
- f. Board’s Office. Means the Colorado Water Conservation Board’s office, located at 1313 Sherman Street, 7th Floor, Denver, CO 80203. The phone number is (303) 866-3441. The facsimile number is (303) 866-4474. The Board’s website is <http://www.cwcb.state.co.us>.

- g. Compact Entitlements. Means all of Colorado's water entitlements pursuant to interstate compacts, equitable apportionments, supreme court rulings designating water apportionments, or any other legally recognized designation of apportionment of interstate waters.
- h. Control Structure. Is defined as stated in section 37-92-103(6.3), C.R.S., which is incorporated herein by reference.
- i. Director. Means the director of the Colorado Water Conservation Board, who is the chief administrative head of the Board, under the direction and supervision of the Board, and who has general supervision and control of all its activities, functions, and employees.
- j. Diversion or Divert. Is defined as stated in section 37-92-103(7), C.R.S., which is incorporated herein by reference.
- k. Findings of Fact. Means the written factual findings of the Board regarding the factors set out in section 37-92-102(6), C.R.S. and filed with the water court.
- l. Instream Flow (hereinafter referred to as "ISF"). Means any water, water rights or interests in water appropriated or acquired by the Board, pursuant to section 37-92-102(3), C.R.S., for the preservation of the natural environment to a reasonable degree. Pursuant to section 37-92-102(3), C.R.S., no other person or entity may appropriate such rights, for any purpose whatsoever.
- m. Local Governmental Entity. Means a Colorado entity authorized to appropriate a RICD and includes a county, municipality, city and county, water district, water and sanitation district, water conservation district, or water conservancy district.
- n. Person. Means an individual, a partnership, a corporation, a municipality, the state of Colorado, the United States, or any other legal entity, public or private.
- o. Reasonable Recreation Experience. Is defined as stated in section 37-92-103(10.1), C.R.S., which is incorporated herein by reference.
- p. Recreational In-Channel Diversion. Is defined as stated in section 37-92-103(10.3), C.R.S., which is incorporated herein by reference.
- q. Staff. Means the Director and other personnel employed by the Board.

5. Optional Pre-Application Process

Prior to submitting an application to the water court or to the Board, the Board encourages the applicant to meet with staff to discuss the proposed RICD application and the procedures to be followed by the Board to review the application. Staff will provide input regarding how the proposed application can meet the intent of the RICD Rules.

6. Submissions Required from an Applicant

Within 30 days after filing an application for a RICD with any water court, an applicant shall submit a copy of the application to the Board office, pursuant to section 37-92-102(5), C.R.S.

7. Required Findings

The Board, after deliberation in a public meeting, is required to make certain written findings relative to each RICD application. § 37-92-102(6), C.R.S. The statutory definition of RICD requires that the applicant claim only the minimum stream flow, that the flow be used for a reasonable recreation experience in and on the water, and that the flow be diverted, captured, controlled, and placed to beneficial use. The required findings on factors are:

- a. Whether the adjudication and administration of the RICD would materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements. The Board, in making this finding, may consider, but is not limited to, the following:
 - i. The amount and location of remaining unappropriated compact entitlement waters in the basin in question and at the RICD point of diversion;
 - ii. The proximity of the RICD to the state line;
 - iii. The proximity of the RICD to suitable upstream points of diversion or storage which may be utilized by those who would place the water to consumptive beneficial use;
 - iv. The existence of suitable downstream points of diversion or storage for consumptive beneficial uses before the water leaves the state;
 - v. Exchange opportunities within the state that may be adversely impacted by the existence of the RICD;
 - vi. Whether the basin is over-appropriated;
 - vii. The effect on other decreed, existing undecreed, or reasonably foreseeable uses of the amount of water claimed;
 - viii. Whether a RICD shields waters from a consumptive use that would otherwise be available under a particular compact;
 - ix. Whether beneficial consumptive water use opportunities upstream from the claimed RICD would further develop Colorado's compact entitlements and would be impaired by applicant's sought for stream flow amounts; and,
 - x. What provisions in the application are proposed for reducing or canceling the RICD.
- b. Whether the exercise of the RICD would cause material injury to existing ISF water rights. The Board, in making this finding, may consider, but is not limited to, the following:
 - i. The nature and extent of the ISF in the proposed reach or any affected downstream reach;
 - ii. The timing and duration of the RICD as such may relate to the specific natural environment for which the ISF was decreed;
 - iii. Whether the RICD, or administration of the RICD, would negatively impact the natural environment for which the ISF was decreed; and,
 - iv. Whether during the construction of the RICD structures, the construction may cause material injury to the ISF or the natural environment for which the ISF was decreed.
- c. Whether the adjudication and administration of the RICD, in the amounts claimed, would promote maximum utilization of the waters of the State. The Board, in making this finding, may consider, but is not limited to, the following:
 - i. Whether there are any probable future upstream junior appropriations for direct diversion or storage;
 - ii. Whether there are any probable future changes, transfers, or exchanges of water rights from points of diversion downstream of the reach affected by the RICD to points upstream of or in the reach affected by the RICD;

- iii. Whether Applicant has demonstrated that it has complied with appropriate federal policies, regulations and laws, or has indicated that it will comply with all appropriate federal policies, regulations and laws;
- iv. Whether a reasonable and efficient means is to be utilized to use, divert, capture and control the water for a RICD so as to minimize its call upon the river and avoid waste;
- v. Whether a reasonable demand exists for the recreational activity in question as determined by levels of current use and/or estimates of future use;
- vi. Whether the application has appropriate limitations upon the time of day, days per month, or seasons during which the RICD would be exercised;
- vii. The depth and flow rate of the proposed RICD;
- viii. With what frequency and duration, and from what sources, the requested amounts of water for the RICD occur;
- ix. The economic effects of the proposed RICD;
- x. The environmental effects of the proposed RICD;
- xi. The relationship of the requested RICD flow rates to the historic appropriated and unappropriated flow rates for each time period requested;
- xii. The effect of the RICD on other potential uses of water;
- xiii. Whether the application as a whole meets the elements of the definition of a RICD, as found in section 37-92-103(10.3);
- xiv. Whether the RICD would conserve and efficiently use the available stream flow, thereby promoting maximum utilization of Colorado's water resources;
- xv. Whether the RICD will make the river basin water critical and the resulting impact on existing water rights and users;
- xvi. Whether the RICD may work together with existing and/or future uses within the State of Colorado to promote maximum utilization;
- xvii. Any provision in the application for reducing or canceling the RICD;
- xviii. A description of each recreational opportunity sought by the applicant at each flow amount sought, and why the flow amount is the minimum amount for each reasonable recreation experience sought;
- xix. The historic frequency and flow rates of imported water and reservoir releases through the proposed RICD reach, and whether such flows will be necessary to meet the flow rates claimed for the proposed RICD; and,
- xx. Whether, and to what extent, unappropriated native flows exist in the proposed RICD stream reach during the periods claimed, and the percentage of unappropriated flows claimed by the RICD.

8. Additional Information

Because section 37-92-102(6)(b), C.R.S. requires the Board to report its findings within 90 days after the closing date for the filing of statements of opposition, an applicant may elect to provide additional information at the time it submits its application to the Board. The following types of information would assist the Board in making its findings:

- a. A description of structures, including design plans for the physical control structures, engineering data and calculations used to design the facilities associated with the application;
- b. Maps showing the location of all physical control structures and access points;

- c. Evidence, including hydraulic and hydrologic calculations, that the physical control structures are capable of diverting, capturing, and controlling water within the stream channel;
- d. Documentation describing and justifying the nature of the recreational experience sought;
- e. Documentation identifying and/or justifying the time of day and season of use sought;
- f. Evidence that the amounts requested in the RICD application are available for appropriation;
- g. Information about the frequency of occurrence of the requested stream flows, including exceedance calculations and duration curves for the claimed stream flows;
- h. Information demonstrating that the amount of water claimed is the minimum amount necessary to achieve the reasonable recreation experience sought;
- i. Information about all necessary permits and the status thereof, including existing or proposed permit terms and conditions;
- j. List of persons notified by the applicant about the RICD; and,
- k. Information about existing or proposed gages on the affected stream that may be utilized to administer the water right being sought.

9. Notice

Within fifteen days of the application receipt date, the staff shall post notice of receipt of the application on the CWCB website. The notice shall include the name of the applicant, the flow amounts claimed, the water division, the name of the stream, the proposed reach of the stream, the location of the structures including the county, and information about how to obtain party status. In addition, the staff shall notify the county commissioners of the county in which the RICD is (or will be) located, and any upstream counties. The Board shall include notice of public deliberations on an RICD on its agenda for a regularly scheduled or specially scheduled Board meeting that is also posted on the CWCB website. At that time or at a subsequently noticed Board meeting the Board will: 1) ratify the Statement of Opposition filed by the Staff; 2) direct the Staff to issue appropriate written findings.

10. Statements of Opposition and Staff Report

The staff intends to file a statement of opposition in every RICD case to assure that the Board has the ability to properly weigh in on the requisite factors to the water court. Circumstances may occur where the Staff would propose not filing a statement of opposition to an RICD case, but the Staff would inform the Board of such a case and obtain Board concurrence or comment in these types of situations. The Staff shall provide a written report and recommendation to the Board based on the information provided by the applicant and any other applicable information. At a Board meeting following the Staff's filing of a statement of opposition, the Board will: 1) ratify the statement of opposition, inform the Staff about the appropriate findings to file with the water court, and direct the Staff to fully participate in the water court proceedings; 2) inform the Staff about the appropriate findings to file with the water court and choose to withdraw the statement of opposition; or 3) ratify the statement of opposition and table the discussion regarding the appropriate findings to file with the water court and whether to participate fully in water court.

11. Public Deliberations

The Board will publicly deliberate about the findings that it will make for each RICD.

12. Submission of Findings to the water court

Pursuant to section 37-92-102(6)(c), C.R.S., the Board shall submit its findings of fact to the water court within 90 days after the final closing date for filing statements of opposition.

However, the Board, for good cause shown on the record, may request that the water court grant additional time to the Board for making and reporting its findings of fact.

Staff's Recommended Amended Comprehensive Findings of Fact
Board of County Commissioners of Pitkin County
Case No. 5-10CW305
January ~~10~~17, 2014

- I. The Colorado Water Conservation Board (Board) submitted Comprehensive Findings of Fact to the Court for Case No. 5-10CW305 after deliberation in public meetings held on July 12 and 21, 2011. Subsequently, the Applicant significantly revised its proposed decree for a Recreational In-Channel Diversion (RICD) water right in the subject case. Considering the specific amounts and activities as claimed in the revised proposed decree dated January 9~~15~~, 2014, and after deliberation in a public meeting held on January 27, 2014, the Board makes the following amended findings about the proposed RICD:

- a. The Board must consider whether the adjudication and administration of the RICD water right would materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements. The Board makes the finding that there remains unallocated Colorado River apportionment available for consumptive beneficial use within Colorado. The Board also finds that the adjudication and administration of the proposed RICD, for the flow amounts and time periods summarized below and specified in the proposed decree, dated January 9, 2014, would not materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements but could have an impact on the manner, cost, and timing of such development:

Period	Flow Rate (cfs)
April 15 – May 17	240
May 18 – June 10	380
June 11 – June 25	1,350
June 26 – Aug. 20	380
Aug. 21 – Labor Day	240

The Board makes the following findings about the proposed RICD for the flow amounts and time periods claimed:

- i. There remains unappropriated water that Colorado could place to consumptive beneficial use upstream of the proposed RICD reach. The RICD could impair Colorado's ability to fully develop and place to consumptive beneficial use Colorado's compact entitlements under the Colorado River compact, the Upper Colorado River Basin compact, and the associated "Law of the River" upstream of the proposed RICD. However, effects on upstream compact development are significantly reduced because the Applicant has limited the flow rates sought by seeking less than 50% of the total average historic volume of stream flows for the RICD reach; therefore, the requirements of section 37-92-305(13)(f), C.R.S. (2013), no longer apply. The proposed decree also provides that Pitkin County cannot call for water under the RICD

water right if such call will not produce at least 60 cfs at the control structures. Additionally, Pitkin County has agreed to only place a call for the RICD water right when such a call will produce flows at the decreed control structures during daylight hours. Furthermore, Pitkin County has included the following terms and conditions to further reduce the RICD's ability to call, as well as reduce the RICD's impact on upstream compact development:

24.~~EE~~. Pitkin County shall not place a call on, and the water right decreed herein shall be administered as subordinate in priority to up to 3,000 acre-feet of depletions between April 15 and Labor Day (the latest date for Labor Day being September 7) ("RICD Season") on the Roaring Fork River and its tributaries that (a) have point(s) of diversion upstream from the Pitkin County River Park Project stream reach, (b) are not senior to the water right decreed herein by virtue of their year of filing, appropriation dates, or both, and (c) are decreed by the Water Judge for Water Division No. 5 based upon applications filed between January 1, 2011 and the fifteenth anniversary of the entry of the decree herein ("Fifteenth Anniversary"). The following procedures shall be used to identify the water rights that are included in this subordination:

- (i) The RICD Season volume of water assigned to a decreed water right for purposes of inclusion in the subordination shall be either (a) the volume of a water right in acre-feet specifically decreed for diversion and storage, refill of such storage, and refill to replace evaporation loss from such storage, during the RICD Season or (b) the RICD Season volume of depletions in acre-feet expressly authorized by the decree for a direct flow water right or, if no depletion volume is expressly authorized by the decree, the RICD Season volume obtained by (i) multiplying the decreed diversion rate in cubic feet per second (cfs) times 1.98 (to convert cfs to acre-feet) times 143 days per RICD Season, or (ii) dividing the decreed diversion rate in gallons per minute (gpm) by 449 (to convert gpm to cfs) and then multiplying the result times 1.98 (to convert cfs to acre-feet) times 143. Water rights decreed as non-consumptive as to the upstream terminus of the Pitkin County River Park Project stream reach shall be included in the subordination and shall be assigned a RICD Season diversion volume of zero.
- (ii) On or before April 15 of each year, Pitkin County shall prepare and file with the Division Engineer a summary of all the water rights decreed in the preceding calendar year that meet the requirements of paragraph 24.~~EE~~. above, all of which will be included in the subordination, as well as a summary of all decreed water rights included in the subordination for all prior years beginning 2011. The summary shall include the identity of each water right by decree number, name, and the annual volume of water assigned to each water

right for purposes of the subordination. Pitkin County shall serve the summary on counsel of record for all opposers herein or any other person or entity requesting a copy of the summary; in addition, such summary shall be provided to all those who are on the Water Division No. 5 SWSP notice network. The opposers and any other person or entity, whether a party to this proceeding or not, shall have 45 days within which to file objections to the summary with the Division Engineer. If no objections are filed, the summary shall be deemed final for purposes of the subordination for that year, except as otherwise provided in subparagraph (3iii) below. If objections are filed and the parties are unable to resolve the objections, any party may file a petition with the Water Judge to hold a hearing to resolve objections.

(iii) After the 3,000 acre-feet per RICD Season limit on the subordination is reached or all applications filed between January 1, 2011 and the Fifteenth Anniversary are decreed or otherwise disposed of, whichever occurs first, no further action by Pitkin County shall be required under subparagraph (2ii) above. For purposes of administration, the priority date for water rights decreed herein shall be the earlier of the date of when the RICD Season limit is reached or the Fifteenth Anniversary. In the event that the 3,000 acre-feet RICD Season limit is reached by virtue of a water right that will exceed the 3,000 acre-feet RICD Season limit if included in its entirety, only that portion of the water right needed to bring the RICD Season limit to 3,000 acre-feet shall be included in the subordination, and the remaining portion of the water right shall be administered as junior to the Pitkin County RICD water right. If any conditional water rights included within the subordination are thereafter canceled by the Water Judge or otherwise abandoned prior to the Fifteenth Anniversary, Pitkin County shall notify the Division Engineer and the opposers of the identity and RICD Season volume of diversions of the additional water rights to be included in the subordination, if any, determined using the criteria in subparagraph (4i) above, as a result of any such cancelation of conditional water rights or abandonment.

(iv) After the Fifteenth Anniversary or when the 3,000 acre-feet RICD Season limit is reached, whichever is earlier as provided herein, and pursuant to section 37-92-103(10.3), C.R.S. (2013), the presumption that there will not be material injury to the Pitkin County RICD water right from subsequent appropriations or changes of water rights by any individual water right appropriations or water right changes shall be determined in accordance with the provisions of section 37-92-103(10.3).

- (v) After the Fifteenth Anniversary or when the 3,000 acre-feet limit RICD Season limit is reached, whichever is earlier as provided herein, Pitkin County shall notify the Water Court, the Division Engineer, and the opposers that no further action by Pitkin County shall be required under subparagraph (2ii) above, and that the priority date for purposes of administration has been established pursuant to subparagraph (3iii) above, subject to the cancellation or abandonment of conditional water rights prior to the Fifteenth Anniversary as allowed by subparagraph (3iii) above.

Given these terms and conditions, the Board finds that the RICD will not materially impair the ability of the State of Colorado to consumptively use its compact entitlements.

- ii. In the case of compact curtailment under the "Law of the River", it may be necessary to exchange water through the proposed RICD reach in order for the beneficiaries of post-compact water rights to realize necessary beneficial use of water yielded from pre-compact water rights or other water sources not affected by compact administration. Such exchanges ~~would~~ could allow benefitted post-compact water rights to continue to divert during a compact curtailment ~~be necessary for Colorado to place to consumptive beneficial use its compact entitlements~~. To address this factor, the Board finds that the following condition is an acceptable provision in the proposed decree:

24.C. During any period identified by the Upper Colorado River Commission in a finding issued pursuant to Article VIII(d)(8) of the Upper Colorado River Basin Compact of 1948 for curtailment of Colorado River basin water uses within Colorado, which the State of Colorado has agreed to implement in a manner that impacts water diversions within Water Division 5, the Pitkin County RICD water right will be administered in accordance with the compact curtailment rules adopted by the State ~~of Colorado~~ Engineer or such other state agency as may, in the future, be empowered to adopt rules or otherwise act to assure compliance with interstate water compacts that are then in effect, if any, including any such rules intended to avoid, delay, or limit the severity of such a compact curtailment. If no such compact curtailment rules are then in effect, Pitkin County shall not exercise the Pitkin County RICD water right during the period of any such Compact curtailment, or during any time period where the State is attempting to avoid, delay or limit the severity of a compact curtailment, unless the State Engineer or Division Engineer determines in writing that the exercise of the Pitkin County RICD water right will not affect Colorado's ability to comply with the Compact. The Pitkin County RICD water right shall be administered in accordance with any rules promulgated by the State ~~Engineer or the CWCB of Colorado~~ related to Colorado River compact compliance. The Pitkin County RICD water right

decreed herein is not intended to materially impair the ability of Colorado to fully develop and place to consumptive beneficial use those waters available by law and interstate compact.

- iii. The Board finds that the distance of the proposed RICD to the State line is considerable, which demonstrates that the location of the RICD will have a reduced impact on Colorado's ability to develop its compact entitlements.
 - iv. The proposed RICD is in close proximity to potentially suitable upstream points of diversion and upstream storage (~~Aspen, Snowmass or the Fryingpan-Arkansas Project~~) that may be utilized by those who would place the water to consumptive beneficial use. However; given the limitations, terms and conditions described in paragraphs I.a.i. and I.a.ii. above, the Board finds that the proposed RICD does not materially impair the ability of the State of Colorado to consumptively use its compact entitlements.
 - v. The existence of suitable downstream points of diversion for consumptive beneficial use before the water leaves the State serves as a factual basis for the Board to determine that the RICD should be granted under this factor. There are numerous potential downstream diversions and potential storage reservoirs that could be used so that the State of Colorado may fully develop and place to consumptive beneficial use its compact entitlements.
 - vi. Exchange opportunities (~~such as water released from Ruedi Reservoir exchanged upstream on the Roaring Fork River to Aspen, Snowmass or to the Fryingpan-Arkansas Project~~) within the State may be adversely impacted by the existence of the proposed RICD. Additionally, the Colorado River basin is over-appropriated, or "water critical" during a portion of the proposed RICD season. However, the Board finds that these impacts will be mitigated by the limitations, terms and conditions described in paragraphs I.a.i. and I.a.ii. above. Therefore, the Board finds that the proposed RICD will not materially impair Colorado's ability to fully develop and place to consumptive beneficial use its compact entitlements.
- b. The Board must consider whether the exercise of the proposed RICD would cause material injury to existing instream flow (ISF) water rights. The Board makes the following findings about the proposed RICD regarding the potential of material injury to existing ISF water rights:
- i. As summarized below, there are two existing ISF water rights held by the CWCB in or directly downstream of the proposed RICD reach. The nature and extent of these ISF water rights do not serve as a basis to deny the proposed RICD application.

CWCB Case No.	Stream	Amount (cfs)	Approp. Date	Counties
5-85CW646	Roaring Fork	30 (10/1-3/31)	11/8/1985	Eagle & Pitkin

	River	55 (4/1-9/30)		
5-85CW639	Roaring Fork River	75 (10/1-3/31)	11/8/1985	Eagle, Garfield & Pitkin
		145 (4/1-9/30)		

- ii. In addition to the ISF rights above, the CWCB and Pitkin County adjudicated a change of Pitkin County's Stapleton Brothers' Ditch water right in Case No. 10CW184, allowing a portion of the water right to be used for instream flow purposes. The stream segments in which the Stapleton Brothers' Ditch may be used for ISF purposes include the RICD reach. As a result, the Stapleton Brothers' Ditch water right may be used up to the amounts identified below, in addition to the minimum ISF amounts:

	May	June	July	Aug.	Sept.	Oct.
Maximum Flow Rate (cfs)	0.89	0.59	0.64	0.50	0.40	0.15

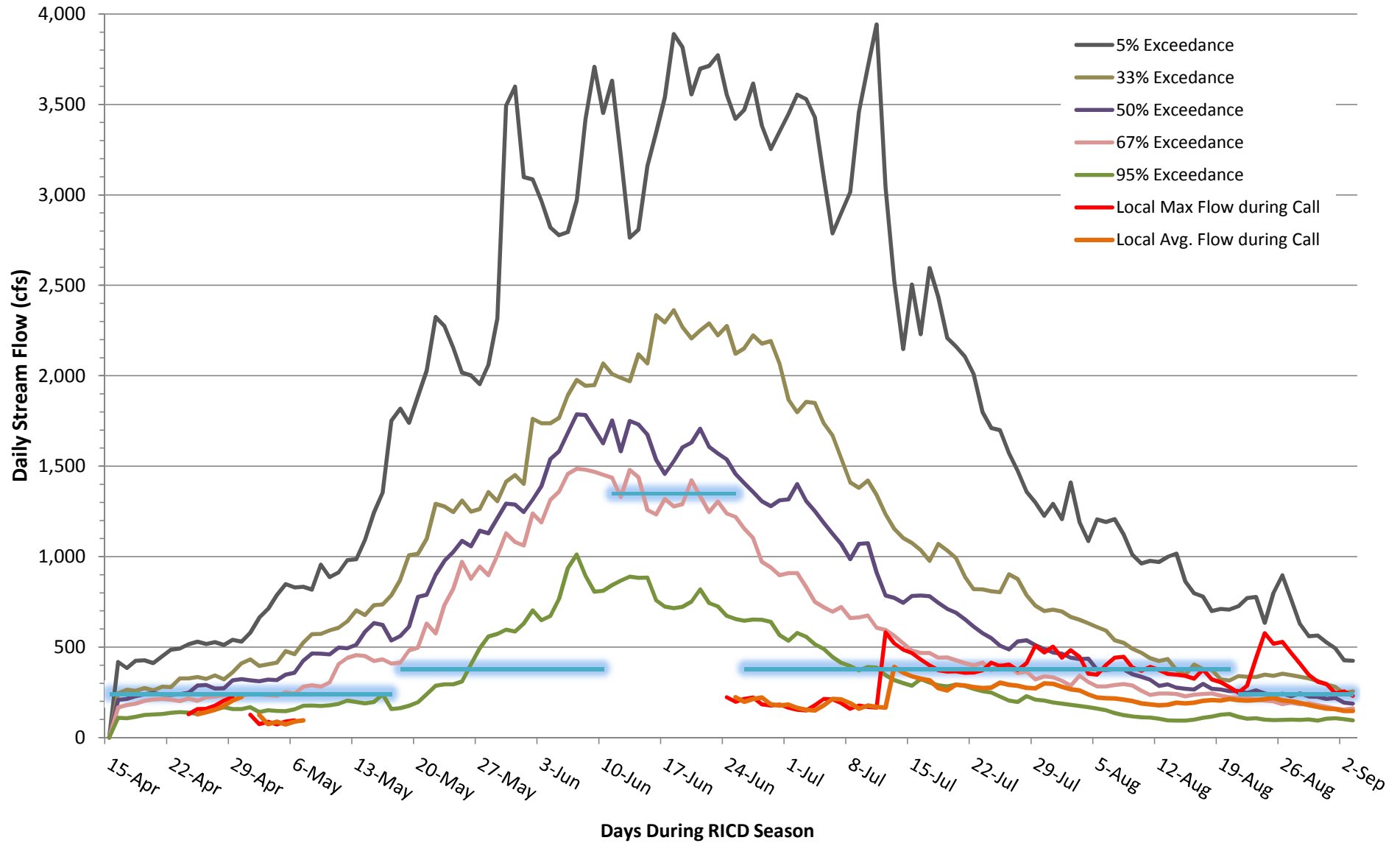
- iii. Should the proposed RICD be constructed, the Board finds that the proposed RICD will not affect the natural environment that the ISF water rights protect during the construction and maintenance process because the Applicant will consult with the Colorado Division of Parks and Wildlife (CPW) before and during construction and maintenance of the RICD structures to ensure that CPW finds that these actions will not injure the natural environment that the ISF water rights protect.
- c. The Board must determine whether the adjudication and administration of the proposed RICD, in the amounts claimed, would promote maximum utilization of the waters of the State. The Board makes the following findings about the proposed RICD regarding maximum utilization of waters of the State:
- i. The Board finds that there are probable future upstream junior appropriations for direct diversion or storage (~~Aspen, Snowmass, or the Fryingpan-Arkansas Project~~) that may be adversely affected by the proposed RICD. However, the Board finds that these impacts will be significantly reduced by the limitations, terms and conditions described in paragraphs I.a.i. and I.a.ii. above. Given these terms and conditions, the Board finds that there should be adequate opportunity to allow upstream junior appropriations for direct diversion and storage and the proposed RICD will promote maximum utilization of the waters of the State.
- ii. The Board finds that the proposed RICD appropriation for the flow amounts sought and the time periods specified, will promote maximum utilization. The proposed RICD may impact future changes, transfers, or exchanges of water rights from points of diversion or storage downstream of the RICD to points upstream of the RICD. ~~For example, future exchanges of releases from Ruedi Reservoir upstream to Aspen, Snowmass or to the Fryingpan-Arkansas Project~~

- ~~through the proposed RICD reach will be impacted by the proposed RICD.~~
- However, the Board finds that these impacts will be significantly reduced by the limitations, terms and conditions described in paragraphs I.a.i. and I.a.ii. above. Given these terms and conditions, the Board finds that there is adequate opportunity to allow future changes, transfers, and exchanges of water from points located downstream of the proposed RICD to points located within or upstream of the proposed RICD.
- iii. The Board finds that the proposed RICD appropriation promotes maximum utilization of Colorado's water resources because the Applicant has proposed a reasonable means to use, divert, capture and control the water for the RICD so as to minimize the call upon the river and avoid waste as described in paragraphs I.a.i. and I.a.ii. above.
 - iv. The Board finds that there is a reasonable demand for the recreational activities sought for the time periods and flow rates claimed in the proposed decree dated January 9, 2014 and summarized above.
 - v. The Board finds that the proposed decree, dated January 9, 2013, has appropriate limitations upon the time of day and the time of year during which the proposed RICD would be exercised; thus promoting maximum utilization of waters of the State.
 - vi. The Board finds that the depths and individual flow rates of the proposed RICD promote maximum utilization for the flow amounts sought for the individual time periods.
 - vii. The Board finds that the frequency and duration of the requested amounts of water for the proposed RICD for the requested periods promote maximum utilization of waters of the State.
 - viii. The Board finds that the relationship of the requested individual RICD flow rates to the historic appropriated and unappropriated flow rates for each time period requested demonstrate that the proposed RICD will promote maximum utilization of Colorado's water resources.
 - ix. The Board finds that the application meets the elements of the definition of a RICD, as defined in section 37-92-103(10.3). The application has been filed by a county government, the Applicant has shown that the water will be beneficially used at the maximum flow rates claimed, and has provided evidence that there is a demand for a reasonable recreational experience.
 - x. The Board finds that the proposed RICD conserves and efficiently uses the available stream flow, and therefore promotes maximum utilization of Colorado's water resources.
 - xi. The Board finds that the RICD will work together with existing and/or future uses within the State of Colorado to promote maximum utilization of waters of the State.
 - xii. The Applicant has included descriptions of each recreational opportunity sought at each flow amount sought. The Board finds that the Applicant is seeking flow rates that are the minimum amount necessary to provide for the reasonable recreational experiences sought.

Staff's Recommended Amended Comprehensive Findings of Fact
Board of County Commissioners of Pitkin County
Case No. 5-10CW305
January 10, 2014

- xiii. The Board finds that unappropriated native flows exist in the proposed RICD stream reach during the periods claimed, and the percentage of unappropriated flows claimed by the proposed RICD indicate that the proposed RICD will promote maximum utilization of waters of the State.

Figure 1.
Roaring Fork Stream Flow
at Proposed Pitkin County River Park
1980-2010



APPLICANT'S SUBMITTALS

DISTRICT COURT, WATER DIVISION NO. 5, COLORADO 109 - 8th Street, Suite 104 Glenwood Springs, CO 81601-3361 (970) 947-3861 CONCERNING THE APPLICATION FOR WATER RIGHTS OF BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY, COLORADO IN PITKIN COUNTY Timothy J. Beaton, #10403 Patricia M. DeChristopher, #36951 Anne D. Bensard, #45316 Moses, Wittemyer, Harrison and Woodruff, P.C. P. O. Box 1440 Boulder, Colorado 80306-1440 Telephone: (303) 443-8782 Facsimile: (303) 443-8796 tbeaton@mwhw.com; pdechristopher@mwhw.com; abensard@mwhw.com	SERVED ONLY: December 1, 2013 5:13 PM FILING ID: E22C4775F6524 CASE NUMBER: 2010CW305 ▲ COURT USE ONLY ▲ Case Number: 10CW305
STATEMENT OF PITKIN COUNTY TO THE COLORADO WATER CONSERVATION BOARD	

INTRODUCTION

The Board of County Commissioners of Pitkin County (“Pitkin County”) filed its Application for Surface Water Right Appropriations for Recreational In-Channel Diversion, Case No. 10CW305, in Water Division No. 5 on December 30, 2010. Pitkin County intends to construct the Pitkin County River Park Project (“River Park”) on the Roaring Fork River upstream of the Town of Basalt and the confluence of the Roaring Fork and Fryingpan Rivers. The River Park was designed by Jason P. Carey, P.E., of RiverRestoration.org, a Colorado-based company that has designed whitewater features across Colorado and the West. The River Park has been designed for “park and play” whitewater recreation, where boaters can “put in,” play for several hours at either or both of the two whitewater features, and then “take out” at the same location. Pitkin County seeks to protect the reliability of stream flows at the River Park through a recreational in-channel diversion (“RICD”) water right in order to attract boaters with consistent recreational experiences at the River Park.

The RICD water right will allow flow rates of 240 cfs, 380 cfs, or 1,350 cfs, depending on the date, to be used at the River Park. The three different flow rates will create varying recreational experiences at different time periods between April 15 and Labor Day (the “RICD

Season”). All three flow rates, however, are part of a single water right that will increase the reliability of water available to the two whitewater structures at the River Park. Because the two structures have not yet been constructed, Pitkin County seeks a conditional RICD water right.^a

Pitkin County submits this Statement to summarize its claims for a RICD water right in the context of the Colorado Water Conservation Board’s (“CWCB”) fact-finding review pursuant to C.R.S. § 37-92-102(6). As discussed below, Pitkin County believes its proposed RICD water right warrants favorable findings of fact from the CWCB.

PROCEDURAL SETTING

Unlike other Water Court applications, RICD applications are subject to fact-finding review by the CWCB. C.R.S. § 37-92-102(6). The scope of the CWCB’s fact-finding review is defined by statute:

The board, after deliberation in a public meeting, shall consider the following factors and make written findings as to each:

- (I) Whether the adjudication and administration of the recreational in-channel diversion would materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements;
- (II) and (III) (Deleted by amendment....) [^b]
- (IV) Whether exercise of the recreational in-channel diversion would cause material injury to instream flow water rights appropriated pursuant to subsections (3) and (4) of this section; and
- (V) Whether adjudication and administration of the recreational in-channel diversion would promote maximum utilization of waters of the state.

C.R.S. § 37-92-102(6)(b); *see also Colo. Water Conservation Board v. Upper Gunnison River Water Conservancy Dist.*, 109 P.3d 585 (Colo. 2005). The CWCB adopted rules to offer guidance for the Board’s consideration of RICD applications. 2 C.C.R. 408-3 (“CWCB Rules”).

^a Pitkin County’s application claimed two conditional RICD water right appropriations for the River Park, one for each of the two in-channel diversion and control structures that will divert, capture, possess, and/or control the flow of the Roaring Fork River in its natural course to create reasonable recreation experiences in and on the water for all non-motorized boating and related recreational uses. Pitkin County has withdrawn the claim for one of the two RICD conditional water rights without prejudice.

^b Senate Bill 06-037 deleted “the appropriate reach of stream required for the intended use” and “whether there is access for recreational use” as factors for consideration by the CWCB.

Pitkin County previously presented its application to the CWCB in July 2011. Since that time, Pitkin County has reduced the number of claimed water rights for the River Park to one conditional RICD water right to address objectors' concerns. In addition to reducing the number of water rights claimed, Pitkin County has changed how the flow rates are structured. This change reduces the overall volume of water associated with the RICD water right to be less than 50% of the total average historical volume of stream flow in the reach of the Roaring Fork River in which the River Park will be located. However, the design of the two structures to be constructed has not changed. As a result, the intended types of recreational experiences have not changed.

To assist in the Board's consideration of its application, Pitkin County is submitting the following documents with this statement for review by the CWCB staff and Board:

- Application, Case No. 10CW305, Water Division No. 5;
- *Design Engineering Report*, prepared by Jason P. Carey, P.E.;
- *Preliminary Design Drawings*, prepared by Jason P. Carey, P.E.;
- *Letter RE: Pitkin County Recreational In-Channel Diversions Case No. 10CW305*, prepared by Jason P. Carey, P.E., dated April 5, 2012;
- *Engineering Report for January 2014 CWCB Board Meeting*, prepared by Louis T. Rozaklis, dated December 1, 2013;
- *Draft CWCB Findings and Recommendations*, prepared by Pitkin County; and
- *Draft Proposed Decree*, dated December 1, 2013, prepared by Pitkin County.

After the CWCB Board makes its findings of fact and recommendations to the Water Court, Pitkin County must proceed with its Water Court application to obtain a decree. A 10-day trial is scheduled to begin on November 3, 2014. Pitkin County must satisfy all statutory requirements for the RICD water right, including but not limited to demonstrating to the Water Court and opposers that it can and will develop the RICD water right, that a need for the RICD water right exists, and that the RICD water right is appropriate for the Roaring Fork River.

PITKIN COUNTY'S RICD PROPOSAL

Pitkin County has designed two control structure units to create two distinct recreational experiences at the River Park. To ensure the availability of stream flows necessary to achieve the intended recreational experiences, Pitkin County has claimed a RICD water right to be associated with both structure units. The RICD water right consists of flow rates for different levels of recreational use, as summarized in the table below:

Period	Flow Rate (cfs)	Experience Level^c
April 15 – May 17	240	Blue, Upper Unit
May 18 – June 10	380	Green, Lower Unit
June 11 – June 25	1,350	Blue, Lower Unit
June 26 – Aug. 20	380	Green, Lower Unit
Aug. 21 – Labor Day	240	Blue, Upper Unit

Each type of whitewater feature utilizes different skills and provides a different recreational experience to navigate and play in than other types of features. For example, the Upper Structure Unit creates a whitewater feature referred to as a wave-hole feature that occurs at flows from 1,000 cfs to 1,350 cfs, which differs from the hole feature that occurs at flows between 240 cfs and 1,350 cfs. The structures have also been designed to create additional recreational experiences at flow rates higher than those claimed under the RICD water right. Whitewater features created by the Upper Structure Unit will generally require additional skill than the features created at the Lower Structure Unit, in part due to the limited recovery pool for boaters who are “washed out” of the Upper Structure Unit. In comparison, the Lower Structure Unit provides a larger recovery pool. A more detailed description of the control structure units and recreational experiences sought by Pitkin County is found in Jason Carey’s Design Engineering Report.

The RICD flow rates claimed by Pitkin County are based on the design of the underlying control structure units and the range of natural stream flows expected on this reach of the Roaring Fork River. The RICD flow rates were identified by studying and modeling the hydraulics of the water surface at various flows to quantify the “hydraulic jump” expected at certain flow rates. This analysis is provided in Jason Carey’s Design Engineering Report at pages 9 through 11. As a result of this analysis, Pitkin County’s proposed RICD water right claims only the minimum stream flow necessary for the intended recreational experiences at each control structure unit.

ISSUES FOR BOARD CONSIDERATION

As described above in the Procedural Setting section, the CWCB Board is required to consider three factors when evaluating a RICD water right. These three factors comprise the issues for Board consideration:

1. Whether the adjudication and administration of the recreational in-channel diversion would materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements;

^c For convenience, the level of recreational experience is described by analogy to green (beginner), blue (intermediate), black (advanced), and double black (expert) runs on a ski hill.

2. Whether exercise of the recreational in-channel diversion would cause material injury to instream flow water rights;
3. Whether adjudication and administration of the recreational in-channel diversion would promote maximum utilization of the waters of the State.

Pitkin County's position on each of these issues is set forth below.

ANALYSIS

The CWCB Board is required to make written findings of fact regarding the three factors identified in C.R.S. § 37-92-102(6)(b), which will be reviewed by the Water Court as Pitkin County proceeds with its Water Court application. For the reasons discussed below, Pitkin County requests favorable written findings of fact from the CWCB Board for all three factors. Draft findings of fact are submitted with this Statement for the Board's consideration.

Factor 1: Whether the adjudication and administration of the recreational in-channel diversion would materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements

To evaluate this factor, the Board must consider whether, if unappropriated compact entitlements remain to be developed, Pitkin County's proposed RICD water right would *materially impair* the development of those resources. The CWCB Rules instruct the Board to consider how the proposed RICD water right may impact compact entitlements, looking to criteria such as the proximity of the RICD to the State line, the availability of unappropriated water, and the possibility that water would be shielded from consumptive use by virtue of the RICD. *CWCB Rule 7.a.*

a. Compact Entitlements

The compacts relevant to Pitkin County's RICD water right are the Colorado River Compact and the Upper Colorado River Compact. The extent to which unappropriated compact entitlements exist in the Roaring Fork River basin and Colorado River basin is not known at this time; the CWCB has dedicated significant resources in the form of the State Water Supply Initiative, the State Water Availability Study, and the State Water Plan to answer questions regarding the amounts and locations of unappropriated entitlements under the Colorado River and Upper Colorado River Compacts and the resulting impact to existing water rights. Colorado's remaining developable entitlement under the Compacts is estimated to range from approximately 0.5 to 1.4 million acre-feet per year. *Rozaklis Report* at 3-4.

Pitkin County intends to comply with any Compact curtailment rules adopted by Colorado, as such rules apply to all water rights in the Colorado River basin. Pitkin County has further agreed that if Colorado water rights are curtailed under a Compact and no rules are in

effect, the RICD water right shall operate only if the State Engineer or Division Engineer determines that the RICD water right will not affect Colorado's ability to comply with the Compact. *Proposed Decree* at ¶ 27.C.

b. Availability of Water for Appropriation and Consumptive Use

The River Park will be located on the upper Roaring Fork River upstream of Basalt, leaving a significant reach of the Roaring Fork River and the Colorado River for future development of Colorado compact entitlements. Because Pitkin County's RICD water right is located almost 200 river miles from the State line, with sizable intervening agricultural and industrial uses, water may be beneficially used for consumptive purposes before the water leaves the State. *Rozaklis Report* at 4. As a non-consumptive water right in the upper reach of the Colorado River basin, Pitkin County's RICD water right will not impact downstream consumptive uses that seek to utilize Colorado's compact entitlements. Unappropriated water will also continue to be available for development in the Roaring Fork River basin, including upstream of the River Park, after development of the RICD water right.

On the Roaring Fork River downstream of the confluence of the Roaring Fork and Fryingpan Rivers, out-of-priority depletions have been or can be satisfied directly (without exchange) by Ruedi Reservoir releases. Due to the non-consumptive nature and upstream location of the RICD water right, no water rights downstream of the confluence will be impacted by the RICD water right. Because depletions related to these downstream water rights can be directly replaced by releases from Ruedi Reservoir to satisfy downstream calls, ample opportunity for development of Colorado compact entitlements remains downstream of the RICD reach.

On the Roaring Fork River upstream of the River Park, a senior call by the water rights at Cameo ("Cameo Call") is often the controlling call. As a result, junior water rights often require Ruedi Reservoir releases to be exchanged up to the location of depletions. There is no reason that the addition of a RICD water right to the existing downstream senior Cameo Call would significantly impact development on the upper Roaring Fork River. With regard to junior exchanges through the River Park, Pitkin County's RICD water right is subject to the limits included in the Proposed Decree that will allow junior exchanges to operate, as discussed in Factor 3. This greatly reduces potential impact on future junior exchanges and development upstream. For these reasons, the RICD water right will have minimal impacts on upstream development on the Roaring Fork.

Due to the location of Pitkin County's RICD water right and the availability of unappropriated water in the upper Roaring Fork River basin, it is the position of Pitkin County's expert that its RICD water right will not materially impair development of Colorado compact entitlements. Therefore, Pitkin County requests that the CWCB Board find that Pitkin County's RICD water right will not materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements.

Factor 2: Whether exercise of the recreational in-channel diversion would cause material injury to instream flow water rights

The second factor under C.R.S. § 37-92-102(6) addresses whether Pitkin County's RICD water right will cause material injury to instream flow water rights appropriated by the CWCB. One existing minimum instream flow water right overlaps the RICD reach:

Stream	Amount	Priority Date	Case No.
Roaring Fork River	30 cfs (10/1 – 3/31) 55 cfs (4/1 – 9/30)	Nov. 8, 1985	85CW646

In addition to the minimum instream flow water right, CWCB and Pitkin County adjudicated a change of Pitkin County's Stapleton Brothers' Ditch water right in Case No. 10CW184, allowing a portion of the water right to be used for instream flow purposes. The stream segments in which the Stapleton Brothers' Ditch may be used for instream flow purposes include the RICD reach. As a result, the Stapleton Brothers' Ditch water right may be used up to the amounts identified below, in addition to the minimum instream flow amount:

	May 1-15	May 16-31	June	July	Aug.	Sept.
Maximum Flow Rate (cfs)	0.89	0.89	0.59	0.64	0.50	0.40

Additional instream flow water rights exist upstream and downstream of the River Park on the Roaring Fork River and its tributaries. These instream flow water rights will be protected from injury by the RICD water right as a result of the priority system and the non-consumptive nature of the water right.

As with all water rights, the instream flow rights and the RICD water right operate within the priority system. The CWCB's existing instream flow water rights will be senior to Pitkin County's RICD water right, which will have a 2010 priority date. Consequently, the instream flow rights must be satisfied before the RICD water right can be exercised.

Pitkin County has also agreed that it cannot call for water if the call will not produce at least 60 cfs at the control structure units. *Proposed Decree* at ¶12.D.ii. Below this flow rate, there is no longer any beneficial use of the RICD water right at the control structure units. This minimum flow rate is greater than the combination of the 55 cfs minimum instream flow water right and the Stapleton Brothers' Ditch water right changed to instream flow uses. Therefore, whenever adequate flows exist to permit the RICD water right to be exercised, all instream flow rights will be satisfied.

Furthermore, the RICD water right will not affect the development of future instream flow rights upstream of the River Park. Because they are non-consumptive, upstream instream flow rights should not be curtailed to deliver additional water to the RICD water right. Likewise, the RICD water right will be non-consumptive and will not affect the ability of downstream instream flow water rights to be developed and exercised. Instream flow rights and the RICD water right can operate simultaneously, allowing for the development of additional instream flow rights on the Roaring Fork River.

Finally, Pitkin County has placed a high priority on protection of the Roaring Fork River environment. The design of the River Park structures relied heavily on Colorado Parks and Wildlife recommendations to minimize ongoing impacts associated with the structures and to enhance the natural environment where possible. As an example, each structure was designed to maintain historical flow velocities as closely as possible to avoid interference with historical fish passage patterns through the River Park. In addition, to minimize short-term localized impacts, Pitkin County will use best management practices in the construction of the River Park in compliance with the terms of its United States Army Corps of Engineers Section 404 Permit, which is attached as **Exhibit A**. Lastly, Pitkin County consulted with the State of Colorado Department of Health and Environment Water Quality Control Division (“WQCD”) in order to obtain the required Section 401 Permit. The WQCD conducted an antidegradation review and found that only temporary impacts to water quality should occur as the result of Pitkin County’s planned construction in issuing the Section 401 Permit. For these reasons, Pitkin County believes the construction and existence of its River Park structures will not injure the natural environment that the CWCB instream flows are intended to protect.

For the foregoing reasons, Pitkin County requests that the CWCB Board find that the RICD water right will not cause material injury to the CWCB’s appropriated instream flow water right.

Factor 3: Whether adjudication and administration of the recreational in-channel diversion would promote maximum utilization of the waters of the state

The maximum utilization doctrine is intended to make water available for as many decreed uses as available supply allows. *Centennial Water and Sanitation Dist. v. City and County of Broomfield*, 256 P.3d 677, 684 (Colo. 2011); *Pagosa Area Water and Sanitation District v. Trout Unlimited*, 170 P.3d 307, 313 (Colo. 2007) (citing C.R.S. § 37-92-102(1)(a)). In evaluating this factor, the CWCB Rules instruct the Board to consider whether the claimed RICD is structured to achieve a reasonable recreational experience while minimizing negative impacts to other water rights.

a. Reasonable Recreational Experience

Pitkin County has designed the River Park to provide recreational experiences that are consistent with and reasonable for the nature of the Upper Roaring Fork River basin.

Whitewater recreation has been, and continues to be, an important recreational, community, and economic priority in Colorado's mountain communities, including Pitkin County. For example, commercial whitewater rafting, only one of many activities at whitewater parks, generated a positive economic impact of more than \$150 million across Colorado in 2010. **Exhibit B**, Colorado River Outfitters Association, *Commercial River Use in the State of Colorado, 1988-2010*, p. 5. With only 0.5% of the market share, the Upper Roaring Fork River basin saw an economic impact of approximately \$700,000. **Exhibit B**, p. 7, 9. The River Park presents an opportunity for Pitkin County to strengthen the Upper Roaring Fork River basin as a whitewater recreation destination, thereby increasing the economic benefit to local communities from whitewater activities and participants. Ensuring consistent water supply through the RICD water right is a critical component of developing the River Park.

The local community's support for a whitewater park was recognized in the Roaring Fork River Stewardship Master Plan for the Town of Basalt ("Basalt River Plan").^d The Basalt River Plan was developed in the early 2000s by the River Stewardship Roundtable to protect and improve the river environment in light of flooding and washouts from heavy spring flows in 1995. The goals of the Basalt River Plan include intergovernmental coordination among local governments, such as Pitkin County; incorporation of community values, such as recreational, social, and cultural values; and assuring improvement to the river environment. The Basalt River Plan specifically contemplates the creation of a kayak course as well as improvement of recreational opportunities and facilities. *Basalt River Plan, I. Recreational Amenities*.

In furtherance of the goals in the Basalt River Plan, Pitkin County and the Town of Basalt commissioned a report by McLaughlin Whitewater Design Group to explore options for a river park that would create a community destination for kayaking, canoeing, tubing, rafting, and associated park activities. **Exhibit C**, McLaughlin Whitewater Design Group, *Basalt River Park Conceptual Design Report*, March 2008. The report identified numerous benefits associated with the location of the river park in the area downstream of the Upper Bypass Bridge and adjacent to Fisherman's Park. First, development of the river park would integrate river stabilization efforts by the Colorado Department of Transportation and the Town of Basalt for the area located downstream of the Upper Bypass Bridge. Next, because the area near Fisherman's Park is underutilized and rarely fished, the construction of a river park would encourage more recreation through improved river access. This location would also avoid displacing anglers in the highly regarded fisheries located near the confluence of the Roaring Fork and the Fryingpan Rivers. Finally, land for the proposed park is owned by Pitkin County, avoiding the need to purchase or condemn privately owned land for park construction. The River Park satisfies the dual goals of improving river environment and stability and increasing local recreational opportunities.

Some opposers, including the CWCB, have suggested that Pitkin County's RICD water right does not further maximum utilization because the cities of Carbondale and Aspen have pursued RICD decrees on the Roaring Fork River. This argument overlooks the differences

^d Available at http://www.basalttriverinfo.com/master_plan.htm.

among the RICD water rights sought by the three governmental entities. The RICD water right obtained by the City of Aspen in Case No. 00CW284 allows water to be diverted out of the Roaring Fork River for an off-channel recreational park. Aspen's whitewater course is best classified as a "navigational" course, which offers a different recreational experience than the "freestyle" experience of Pitkin County's River Park. The Carbondale whitewater course, to be located downstream of the confluence of the Roaring Fork and Fryingpan Rivers, offers a third type of recreational experience, as the hydrologic conditions of the stream reach are different than those at Pitkin County's River Park. Finally, the Carbondale RICD water right has not yet been decreed and the control structures have not been built. It is unreasonable to prevent Pitkin County from appropriating a RICD water right because a downstream municipality may develop its whitewater course in the future.

b. Maximum Utilization

While providing economic benefits to local communities through the River Park, consistent with the Basalt River Plan, Pitkin County will not unnecessarily impact other water users. The priority date and non-consumptive nature of the RICD water right will protect the majority of other water rights from negative impacts. Water rights senior to the RICD water right's 2010 priority date, including conditional water rights, will not be affected by the RICD water right. Moreover, no downstream water rights can be called out by the RICD water right.

Only upstream water rights junior to a 2010 priority date may be subject to a call from the RICD water right. However, based on historical stream flow data, the RICD water right is expected to be satisfied for 78% of the days of the RICD season during more than half of the years. In one out of every four years, stream flows are expected to be sufficient to satisfy the RICD water right on every day of the RICD season. *Rozaklis Report* at 2. In other words, stream flows are expected to exceed the RICD water right flow rates the majority of the time.

Provisions of the Proposed Decree will further prevent the RICD water right from being exercised in such a way as to prevent the development of future water rights. Pitkin County has agreed to a daylight-only call, meaning that upstream junior water rights, if otherwise in priority, will be able to divert at times when they will not deplete the RICD water right during daylight hours. The RICD water right will not impact in any way upstream junior water rights during the non-RICD season, which extends for 6 ½ months from Labor Day through April 14. Finally, the RICD will not call unless it will produce 60 cfs at the control structures. With these limits in place, the RICD water right will not materially impact other water rights and will further maximum utilization of waters of the State.

Additionally, C.R.S. § 37-92-103(10.3) provides an allowance for future development, creating a presumption that future appropriations or changes of water rights that are less than 0.1% of the lowest RICD flow rate, or cumulatively less than 2% of the lowest RICD flow rate, will not cause injury to the RICD water right. Applied to the Pitkin County RICD water right,

future appropriations or changes of water rights up to 0.24 cfs at the structures, or cumulatively up to 4.8 cfs, are presumed to not cause injury to the RICD water right.

Finally, Pitkin County is in the process of negotiating with several opposers regarding a “carve-out” provision in the proposed decree that would subordinate the RICD water right to a pre-determined amount of junior water rights to be appropriated through the RICD reach. Although negotiations are not yet complete, the pending settlement concept would address concerns of local water users and the Colorado River Water Conservation District regarding the potential for future water development.

The RICD water right presents an opportunity to develop Pitkin County’s recreation-based economy by ensuring consistent stream flows are available at the River Park. Senior and downstream water rights will not be impacted by the RICD water right. Other water rights will be protected through the priority system and limits included in the Proposed Decree. There will also be water available for development by new junior water rights. The value of the RICD water right to the local community greatly outweighs these minimal effects. For these reasons, Pitkin County requests that the CWCB Board find that the RICD water right will promote maximum utilization of the waters of the State.

WITNESS LIST

The following individuals may present on behalf of Pitkin County at the Board meeting:

1. Louis T. Rozaklis, P.E., AMEC Earth & Environmental, 1002 Walnut Street, Suite 200, Boulder, CO, 80302, (303) 443-7839. Mr. Rozaklis has been retained by Pitkin County as a water rights consultant. Mr. Rozaklis may present regarding water availability and whether the RICD water right would materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements, whether exercise of the RICD water right would cause material injury to instream flow water rights, and whether the RICD water right would promote maximum utilization of the waters of the State.
2. Timothy J. Beaton, Esq., Moses, Wittemyer, Harrison and Woodruff, P.C., 1002 Walnut Street, Suite 300, Boulder, CO, 80302, (303) 443-8782. Mr. Beaton has been retained by Pitkin County as its water rights attorney. Mr. Beaton may present regarding Pitkin County’s RICD water right proposal and whether the RICD water right would materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements, whether exercise of the RICD water right would cause material injury to instream flow water rights, and whether the RICD water right would promote maximum utilization of the waters of the State.
3. Jason Carey, P.E., RiverRestoration.org, P.O. Box 2123, Glenwood Springs, CO 81602, (970) 947-9568. Mr. Carey was retained by Pitkin County to design the whitewater

structures that will serve as control structures for the Pitkin County River Park. He may present regarding the proposed design, the stream reach, and recreational experiences associated with the RICD water right.

Pitkin County reserves the ability to modify this list based on the statements submitted by other parties.

EXHIBIT LIST

The exhibits to be presented at the hearing include all documents submitted with this Statement, identified below.

- A. United States Army Corps of Engineers Section 404 Permit issued to Pitkin County, January 3, 2011.
- B. Colorado River Outfitters Association, *Commercial River Use in the State of Colorado, 1988-2010*.
- C. *Basalt River Park Conceptual Design Report*, prepared by McLaughlin Whitewater Design Group, March 2008.
- D. Application for Surface Water Right Appropriations for Recreational In-Channel Diversion, Case No. 10CW305, Water Division No. 5, December 30, 2010.
- E. *Report in Support of the Pitkin County River Park Recreational In-Channel Diversions*, prepared by James F. Pearce, February 2011.
- F. *Supplemental Report in Support of the Pitkin County River Park Recreational In-Channel Diversions*, prepared by James F. Pearce, May 2011.
- G. *Second Supplemental Report in Support of the Pitkin County River Park Recreational In-Channel Diversions*, prepared by James F. Pearce, December 2011.
- H. Letter from James F. Pearce to Patricia DeChristopher re: correction of hydrologic analysis, Case No. 10CW305, July 9, 2012.
- I. *Design Engineering Report*, prepared by Jason P. Carey, P.E., February 2011.
- J. *Preliminary Design Drawings*, prepared by Jason P. Carey, P.E., June 29, 2011.
- K. *Letter re: Pitkin County Recreational In-Channel Diversions Case No. 10CW305*, prepared by Jason P. Carey, P.E., April 5, 2012.
- L. *Engineering Report for January 2014 CWCB Board Meeting*, prepared by Louis T. Rozaklis, December 1, 2013.
- M. *Draft CWCB Findings and Recommendations*, December 1, 2013 prepared by Pitkin County.
- N. *Draft Proposed Decree*, December 1, 2013, prepared by Pitkin County.

Pitkin County reserves the right to present other exhibits at the meeting.

CONCLUSION

In summary, Pitkin County has designed the River Park and associated RICD water right to protect recreational experiences that complement the nature of the Upper Roaring Fork River basin. The RICD water right claimed by Pitkin County has been carefully developed to minimize impacts to other water rights while allowing for sufficient water to maintain the intended recreational experiences of the River Park within the confines of existing statutory restrictions. For the reasons detailed above, Pitkin County requests that the CWCB Board adopt the findings of fact for the RICD water right submitted in draft form with this Statement.

Respectfully submitted this 1st day of December, 2013.

MOSES, WITTEMYER, HARRISON AND
WOODRUFF, P.C.

/s/ Patricia M. DeChristopher

Timothy J. Beaton, # 10403

Patricia M. DeChristopher, #36951

Anne D. Bensard, #45316

*Attorney for Applicant, Board of County
Commissioners of Pitkin County, Colorado*

***E-FILED PURSUANT TO C.R.C.P. 121 Duly signed original on file at the law offices of
Moses, Wittemyer, Harrison and Woodruff, P.C***

CERTIFICATE OF SERVICE
(Case No. 10CW305)

I HEREBY CERTIFY that the foregoing **STATEMENT OF PITKIN COUNTY TO THE COLORADO WATER CONSERVATION BOARD** was served electronically through ICCES this 1st day of December, 2013, on all parties of record in this matter.

/s/ Patricia M. DeChristopher
Patricia M. DeChristopher

EXHIBIT A



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

JAN 03 2014

SERVED ONLY: December 1, 2013 5:13 PM.
FILING ID: E22C4775F6524
CASE NUMBER: 2810CW903

DEPARTMENT OF THE ARMY PERMIT

Colorado/Gunnison Basin
Regulatory Office

Permittee: County of Pitkin
Attn: Mr. John Ely
530 E. Main Street, Suite 302
Aspen, Colorado 81611

Permit Number: SPK-2010-639

Issuing Office: U.S. Army Engineer District, Sacramento
Corps of Engineers
1325 "J" Street
Sacramento, California 95814-2922

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below. A notice of appeal options is enclosed.

Project Description:

The applicant is proposing to modify approximately a 450-foot reach of the Roaring Fork River for the purpose of creating a kayaking, tubing, rafting, and fishing recreation area. The modifications to the Roaring Fork River include constructing a structural foundation for and installing two whitewater structure features incorporating some precast concrete parts, five geomorphic or grade control structures, several sets of habitat boulders, modified point bars and riffles, bank stabilization, terraced banks, enhanced take-out eddy at Fisherman's Park, and re-vegetated areas with native riparian shrubs.

All work is to be completed in accordance with the attached plans.

Project Location:

The site is located on the Roaring Fork River between Two Rivers Road and Highway 82 downstream of Fisherman's Park, near the Town of Basalt, in Section 17, Township 8 South, Range 86 West, Latitude 39.3623°, Longitude - 107.029°, Pitkin County, Colorado, and can be seen on the Basalt Colorado USGS Topographic Quadrangle.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 7, 2015**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you

may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions: To ensure that the activity has minimal individual and cumulative impacts, the following special conditions are required:

1. The permittee is responsible for all work authorized herein and shall ensure that all contractors are aware of the terms and conditions of this authorization. A copy of this authorization must be present at the project site during all phases of construction.
2. The project limits shall be clearly identified in the field (e.g. survey markers, fencing, etc.) prior to any work in wetland or other waters of the U.S. to ensure avoidance of impacts beyond project footprints. The identification shall be maintained until construction is complete. No heavy equipment or work (e.g. filling, clearing, etc.) is permitted in wetland areas or stream areas outside of the project area.
3. Best Management Practices regarding the storage and containment of all fluids used during construction shall be observed. Equipment and materials shall not be stored in locations where accidental spills may result in adverse effects on the aquatic environment. Equipment operated below the ordinary high water elevation of the channel shall be clean of fuel residue, lubricant leaks, and invasive aquatic species prior to entry into the river. Inspection of equipment and cleaning, as needed will be accomplished prior to each day's equipment use.
4. All dewatering and construction activities within the stream channel must occur during low flow periods and periods consistent with Colorado Division of Wildlife recommendations to minimize adverse effects to river fishery. Permittee shall consult with the Colorado Division of Wildlife to ascertain allowable periods of river intrusion and methods to minimize aquatic impacts from intrusion.
5. The use of grout or uncured cement of any type is not allowed in contact with water.
6. You shall restore vegetative stabilization to any disturbed open soil areas in the project reach by replanting with native vegetation. You shall insure the success of such revegetation via future monitoring and repairs as needed.
7. You shall provide the Corps of Engineers and the Colorado Division of Wildlife evidence of completion of the mitigation proposal for Fisherman's Park impacts (as described in pages 9 and 10 of your permit application) upon completion of project construction work.

8. You shall submit an as-built plan of the completed activity within 90 days following the completion of work. In addition, you shall observe the permitted structures for signs of problems with the structural integrity after all high-flows exceeding the 2-year flow event, and provide maintenance and repair as needed to assure stability of the aquatic environment in the vicinity of the work. If your whitewater river park shows an adverse change, the Corps of Engineers has the right to require you to initiate appropriate corrective measures. Any structure modifications or additions to the white water river park will require prior coordination with and approval by the Corps of Engineers.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
 - () Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
 - (x) Section 404 of the Clean Water Act (33 U.S.C. 1344).
 - () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
 - a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
 - b. This permit does not grant any property rights or exclusive privileges.
 - c. This permit does not authorize any injury to the property or rights of others.
 - d. This permit does not authorize interference with any existing or proposed Federal projects.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
 - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
 - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
 - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - d. Design or construction deficiencies associated with the permitted work.
 - e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant.

Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Signature [Signature]
Printed Name JOHN M. ELLIOTT
Title PITKIN COUNTY ATTY.
Permittee

12/30/10
Date

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Susan B. Nall
Susan Bachini Nall
(For the District Engineer)

1-3-11
Date

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

Signature _____
Printed Name _____
Title _____
Contact Information _____
Transferee

Date

May 2010
404 Permit Application
Supplemental Information

Project: Pitkin County Whitewater Park Facility
Location: Roaring Fork River, Basalt, CO

I. PURPOSE

The PURPOSE of the Pitkin County Whitewater Park project is to:
enhance recreation values of the Roaring Fork River in Pitkin County downstream of Highway 82.

II. NEED

Multiple reports have been prepared to address the need for recreational improvements and stability of the Fork River through the Town of Basalt. The reports have included citizen, Town staff and consultant input. The most recent documents, that encompass the need for this project are: 1) *Roaring Fork River - Basalt River Stewardship Master Plan (Feb., 2002)*, and 2) *Roaring Fork River - Preliminary Stabilization Design of Reach II (March, 2005)*. 3) *Basalt River Park Conceptual Design Report (March, 2008)*.

Meetings with the community and stakeholder groups have concluded the local desire to create a river park. This Project addresses the need to create an in-town river recreation enhancement for multiple users. The Project facilitates seasonal whitewater and fishing recreation; and all year passive recreation use.

Flood flows that occurred in 1995 significantly eroded the left bank that compromised Two Rivers Road. Large boulders have been dumped on the fill slope to provide stabilization on the outside bend of the Roaring Fork River. The recreation enhancements are ideally situated in a location where existing degradations exist and additional benefits can be achieved. This project includes improved stabilization of the road fill slope. The photographs below show the flooding damage that occurred in 1995.



The photograph above is an aerial view of the flooding that occurred in 1995. The inset photograph is a close-up of the eroding bank and collapsed Two Rivers Road.

Project goals include:

- To enhance whitewater recreation,
- To facilitate bank fishing,
- To accommodate all river recreation users,
- To increase passive recreation opportunities,
- To introduce and educate the public with the river environment,
- To inspire river stewardship in the community,
- To enhance visual aesthetics,
- To improve bank stability
- To construct features in balance with geomorphic processes.

The goals of enhancing recreation and protecting the environment are co-dependant when it is recognized that: 1) the quality of river recreation is based on the quality of the environment and, 2) that continued protection of the river environment requires stewards whom are intimate with the functions of the river.

III. LOCATION

The Project location is on the Roaring Fork River south of downtown Basalt, CO adjacent to Two Rivers Road. The project area can be accessed by driving north 0.3 miles from the intersection of Highway 82 and Two Rivers Road in Basalt, CO. The Colorado state plane coordinates (NAD83) are 2567686 E, 1560753 N (upstream extents); 2567475 E, 1561153 N (downstream extents); located at 39°21'44.30'' North Latitude, 107°01'44.40'' West longitude.

IV. GEOGRAPHIC BOUNDARIES OF AREA SERVED

The proposed Whitewater Park will create a community destination for kayaking, tubing and rafting, as well as pedestrians and anglers. The Park is likely to be popular by residents in Basalt, El Jebel, Aspen, Carbondale and communities throughout Pitkin County. Most use is expected to occur during the summer months when the river has medium to high flows and the summer temperatures are more favorable. The terraced banks, decks, and parking area would create a passive recreation location during all times of the year. It is likely the features would be used to support local whitewater and fishing competitions, clinics, and club sport practices.

It is anticipated that during high water months of May and June the Whitewater Park would be a regional draw for kayakers; extending out to neighboring communities in Garfield, Eagle, Lake and Gunnison counties.

It is anticipated that during the low water months the Whitewater Park will be popular for anglers. The Whitewater Park is likely to be a fishing destination during these low water months because of the enhanced bank access and the deep pool habitat increases the holding capacity for trout. Float fishing would be accommodated by the structures with whitewater characteristics similar to the rest of the reach. Use conflict is not likely to occur between anglers and whitewater enthusiasts; during high and medium flows, downstream reaches on the Roaring Fork and Frying Pan are more desired by anglers. Downstream reaches have increased flows and have better fish habitat. The Gold Medal Fisheries designation on the Frying Pan and downstream reaches on the Roaring Fork draws anglers Nation wide.

Organized events have potential to draw people throughout the region. The character of the Roaring Fork River in the area could facilitate multiple river recreation events, such as freestyle kayaking, down river races, and fishing competitions.

V. IMPACTED WATER BODIES AND WETLANDS

The Roaring Fork River would be the sole stream, lake or wetland affected by this project. All discharges of materials are within the main channel of the Roaring Fork River where extensive previous disturbances exist. No wetland soils were identified at the site. Large cotton wood stands and other riparian shrubs exist on the lateral cobble bar and floodplain on river left (looking downstream). All vegetation will be protected in

place, or replaced with equivalent native cover.

VI. ENVIRONMENTAL SETTING

Historically this reach of the Roaring Fork River was able to meander and move across a 1000 foot wide valley floor. Development over the past 50 years has degraded this reach by encroachment, road and highway development, reduction of the riparian zone, irrigation headgates, and altered hydrology. The Project site on the Roaring Fork River has significant physical habitat degradations, it is now confined between the old Hwy 82 (now Two Rivers Road) and the new Hwy 82. The right bank is a road fill slope consisting of natural boulder riprap and no vegetation has established. The left bank is a narrow floodplain encroached by development, however good cover of cottonwood stands and riparian under story still exist on the floodplain. Upstream of the Project reach is the Hwy 82 Upper Bypass Bridge and downstream is the Emma Bridge.

Upstream of the proposed Project site the Hwy 82 Upper Bypass Bridge has piers that are not in-line with flow; the piers create large bedload deposits that have resulted to an island and unstable channel. Significant aggradation has occurred at the upstream face of Bridge. The Roaring Fork River bed material is coarse cobble and boulder substrate that have been transported from glacial deposits. The channel alluvium is poorly consolidated. The character of this reach forms an alluvial outwash plain that is confined by development. The flow of the Roaring Fork through the poorly consolidated alluvium results in unstable conditions that are uncharacteristic of the overall river profile. Contributing factors to the instability of the river in the Basalt area include: the absence of natural geologic control formations, the inherent instability of alluvial deposits, and the shallow gradient which tends to exacerbate horizontal instability (Roaring Fork Stewardship Master Plan, 2008).

The current planform shows a sinuous low-flow channel with a number of lateral bars. The lateral bars probably do not form into significant point bars because the channel is aggrading an interior floodplain confined by terrace banks. The steepness of the channel coupled with the terraced banks separate the floodplains to the interior lateral bars at approximately the 2-year recurrence interval, and the first terrace connection at approximately the 10-year recurrence interval.

A geomorphic assesment was conducted using aerial photographs dating back to 1952 (<http://www.basaltriverinfo.net/maps.htm>); coupled with data provided by Elliot (*Bed Material Entrainment Potential on the Roaring Fork River, Basalt, Colorado*, Elliot,USGS, 2002). Two Rivers Road (formerly Highway 82) was apparently constructed on terrace alluvium. The left lateral bar located at the proposed whitewater structures exists in some form since the 1952 aeriels with the river always trending right, near the toe of the road embankment. The riffle at the downstream end of the lateral bar (Station 15+30) appears consistently stable throughout the historic aerial photograph record.

The 1990 aerial shows dramatic channel planform shifts and increased sinuosity.

Probably during the flood years of 1983, 1984 and 1985, a period of aggradation occurred, the reach was refreshed with smaller sediment sizes and the thalweg shifted through older deposits. The head of the lateral bar eroded and a small bar developed at the toe of the road slope near Station 18+50, as seen in the 1990 aerial.

The floods of 1993 and 1995 resulted in dramatic planform changes. The lateral bar increased to the greatest size in the photograph record; the opposite road embankment eroded significantly, likely inciting the downstream avulsion at Station 11+00. The lateral bar at 22+00 increased significantly, inciting the erosion of the left bank at station 21+00. Bar building and increased sinuosity may have been the result of additional sediment generated from the newly installed Highway 82 Bridge piers. The material currently eroded from left bank near 21+00 is easily transported past the confined channel and hardened right toe to the riffle at 15+30. Dense riparian vegetation has colonized the lateral bars at 18+50 and 22+00 since the 1995 floods, adding to stability of the bars and the formation of the interior floodplain. The Project proposes to include additional stabilization measures to these areas to prevent lateral migration. Proposed measures include buried boulders that are normal to river flow for inset stability of the lateral bars. Proposed stabilization of the fill slope includes deep set boulders for toe stability, organized large boulder riprap on the bank, and the hydraulic jump will dissipate energy and direct the thalweg to the center of the channel with lower eddy velocities at the banks.

Although this section of the reach is encroached, it is this increased gradient that allows for bedload material to transport. Downstream of Emma Bridge and the confluence of the Frying Pan, the channel is naturally confined by geologic controls and is slightly incised lending to increased stream power that naturally transports bedload and provides channel stability.

Upstream of the Project site there is a non-compliant FEMA levee. The Town of Basalt is currently working on a Letter of Map Revision (LOMR). The Whitewater Park will be included in the LOMR process. The Whitewater Park proposed changes to the Base Flood Elevations would not affect any current or planned insurable structure.

The fish habitat in this reach is characterized by a braiding channel with slow moving riffles. There are few eddies that provide pocket water. At the immediate Project site the channel is a glide-run that is confined by large boulder riprap from the Two Rivers Road fill slope on river right, and a lateral bar on river left (facing downstream). The in-stream habitat is limited by the upstream bed instability, and the localized fast flowing current from encroachment.

Various population studies in the Roaring Fork River show that whirling disease has reduced wild rainbow and brook trout populations in the Roaring Fork between 1988 and 2002. Brown trout, which are less susceptible to the disease, have become the dominant species in the Roaring Fork over this same time period (River Stewardship Master Plan, 2008).

Gold Medal designations on the Roaring Fork include the area from the confluence of the Fryingpan River down to the confluence with the Colorado River, and on the Fryingpan from the Ruedi Dam to the confluence with the Roaring Fork. The Roaring Fork is also designated Wild Trout Waters from Aspen to Woody Creek. These designated waters are outside of the Project reach.

In addition, the water quality is impacted by non-point source pollution, urban runoff and upstream water development. The environmental functions provided by the Roaring Fork River are mainly sediment transportation, fish habitat, flood attenuation, riparian regeneration, and wildlife corridor.

Proposed channel modifications for the Whitewater Park would contribute to bank stability and in-channel habitat improvement on this reach. The riprap would be organized into terraces with increased toe stability of the fill slope. The in-stream habitat would be diversified with slower eddy velocities and deep pool habitat. The Whitewater Park site is located where sediment transport conditions are in balance with geomorphic processes and the proposed modifications would be in equilibrium with sediment transport conditions.

VII. CULTURAL RESOURCES

No cultural resources are anticipated to be impacted by the project. If cultural resources in the project area are discovered during construction and cannot be avoided, construction activities would be suspended in that area until the properties can be evaluated for eligible listing on the National Register of Historic Places in consultation with Colorado State Historical Preservation Office.

VIII. DESCRIPTION OF IMPACTS

Discharge of Materials

The materials discharged into the Roaring Fork River shall be native boulders and cobble, washed gravels, and pre-cast concrete. Boulders shall be placed for toe stability and terraced on the north bank, as well as buried for structural stability of the lateral bars. Cobble material shall be placed for fill material of the structures. Washed gravels shall be placed for bedding of boulder structures. Pre-cast concrete shall be placed for the whitewater features. Pre-cast concrete is the preferred method in order to maintain voids for interstitial spaces, and meet stability requirements without the use of grouting native boulders.

Total Materials Discharged

The total length of River affected is approximately 450 feet over an area of approximately 0.64 acres. The total volume of fill material to be placed below the ordinary high water line is approximately 2167 cubic yards of boulders, 810 cubic yards of cobbles, 404 cubic yards of washed gravel, and 72 cubic yards of pre-cast concrete.

Functions of Stream or Wetlands Lost Due to Project

The existing physical habitat and water quality of the Roaring Fork River through Basalt is currently impacted by human development. Limiting water quality factors include a modified hydrograph from upstream water development, non-point source pollution from highways and non-point source pollution from adjacent development. Limiting physical habitat includes encroachment and road and bridge development. It is not expected that the project would have any functional impact on water quality. It is expected that the project would provide localized in-channel habitat improvements.

This reach of the Roaring Fork River is managed by DOW for cold water fisheries; brown trout is the dominant fish. Construction would pose temporary impacts that would be localized to a small area and cause minimal impacts to trout population. No long-term impacts to aquatic resources would result from this project.

The hydraulic structures are located at station 18+25 and 17+05; located in the encroached section. No significant fluvial geomorphic changes are expected due to the proposed enhancements. Flow velocities would only see localized changes, which are dissipated in the hydraulic jumps. The current substrate profile is gravel with cobble on the lateral bar, with coarser deposits of large cobble and large boulders in the channel and fill slope. The structures are designed to be in balance with deposit and transport of sediments on the bar. The structures are designed to have a downstream pool with flow velocities that would continue to circulate the eddies and allow for sediment transport. The structures are perforated and not grouted and allow for fish passage and interstitial spaces for aquatic invertebrate habitat.

Removing the existing riprap and importing native boulders into terraced banks would improve the stability of the road fill slope. All bank terracing and access steps will be installed on the existing riprap north bank. The riprap is currently unconsolidated native boulders. The project incorporates stabilizing the fill slope with terraces and organized native boulders..

Construction equipment may access the channel on the south floodplain. Large cottonwood stands would be protected in place, and all riprain shrubs would be transplanted on site. After construction is complete, the access road would be restored to original conditions and cover of riparian shrubs and grasses.

These structures would locally change the character of the channel with a hydraulic jump and larger eddies. However, the structure would maintain pre-existing reach conditions with regard to gradient, velocity and channel roughness. The project would preserve the functional riverine and aquatic processes.

Temporary Impacts

The project may have temporary construction impacts with track equipment driving on and excavating the bed material to install the structures, terracing, and during diversion

activities. Equipment shall be allowed to operate in the wet channels. Diversion and construction activity may have isolated increases in turbidity. A diversion channel around the island will be utilized to isolate a majority of the work in the main channel from flows.

Best Management practices that isolate in-channel work from flowing water would be installed prior to construction activities; digging, placement and transporting of boulders. Equipment operating in or adjacent to any wet channels shall be free of any fluid leaks and in excellent operating condition. Biodegradable hydraulic fluids shall be utilized in all equipment in the wet channels. No equipment shall be left unattended at any time in any wet channel or below the Ordinary High Water Line. Any and all fueling and oiling of equipment shall be in a designated upland location, with adequate BMPs to contain any potential spill, and shall not be allowed in or adjacent to any channel. Oil booms shall be installed at the downstream end of the Project limits and functioning at all times equipment is operating in the active channel or below the ordinary high water line.

A Spill Cleanup Plan shall be posted and available at all times on site for all work areas prior to any construction activities and shall include coordination with local emergency response agencies. A release of any chemical, oil, petroleum product, sewage, etc., which may enter waters of the State of Colorado (which include surface water, ground water and dry gullies or storm sewers leading to surface water) shall be reported to the Colorado Department of Public Health and Environment immediately (25-8-601 CRS).

No discharge of wet cement or cement laden turbid waters would be allowed in the flowing channel. All isolated waters shall be pumped and filtered before discharging into the main channel.

Equipment accessing the channel shall place Best Management Practices such as silt fences and hay bails at the toe of the channel access locations. Equipment shall be staged on upland areas and be out of the wet channel when not working. Access to the channel shall be constructed on open areas with few riparian shrubs. Riparian shrubs that are not invasive shall be transplanted, or planted equivalent cover on site. There will be incidental removal of native shrubs during the construction of channel access.

The selected Contractor will be qualified by the Engineer. The qualified Contractor will have experience working in the waterway and correctly installing and maintaining Best Management Practices. An Engineer will be on site to monitor Best Management Practice performance. The Engineer will be on site to provide clarifications to the Contractor, and ensure construction activities are in conformance to the permits, plans and specifications.

Cumulative Impacts

No permanent nor significant negative impacts to aquatic life are anticipated as a result of the project. The area has been impacted by encroachment, bridges, and road construction

including extensive rip rap. The proposed project is within the magnitude of these existing disturbances.

Overall improvements in aesthetics with bank terracing are expected. The pools downstream of the structures may incidentally improve rearing, holding and overwinter habitat for brown trout. Habitat boulder clusters would be installed which may provide fish object cover and resting areas.

Use of the pre cast structure construction method allows for design of a more stable structure to be constructed in the river. It is anticipated that the pre cast structures would greatly reduce the potential for structure failure and associated maintenance.

The water surface upstream of the structure would be raised slightly, increasing pool depths and insignificantly slowing velocities. Floodplain impacts are insignificant and are addressed in a report prepared for Town of Basalt Engineering Department. Whitewater and fishing destinations can benefit the river environment by fostering new river stewards. The recreational users of the river recognize its natural resource value and continue to protect the river under the demands of industry, development and population expansion.

Mitigation

Overall the project area is enhanced for the benefit of river recreation. The values lost by temporary construction impacts on the stream bed are transferred to the long-term gain in recreation and community heritage value. Recreation would be concentrated in existing impacted areas.

The functions of the reach are insignificantly changed with respect to velocity breaks, back waters, and sediment transport. The project area aquatic functions have been previously degraded by hydromodification and channel morphology. The project would create no significant changes to aquatic functions. The Roaring Fork River watershed would benefit from the introduction of public to the river environment, and natural resource informational signage would be posted for users.

All vegetation removed during construction activities will be replaced with an equivalent cover of native vegetation.

The Colorado Division of Wildlife manages an adjacent property popularly named “Fisherman's Park” for angler use. CDOW has voiced concerned that angler experience at the adjacent park will be degraded do to increased activity. The peak season of Kayaking and the peak season of angling are offset by about six weeks due to turbid waters at peak runoff. However, overlap in use is expected during shoulder seasons. This Project proposes to offset degradations at the adjacent Fisherman's Park with the following six measures:

- 1) Improvement of the take out eddy at Fisherman's Park boat ramp. The hydraulics

- of the existing eddy are difficult and filled with cobbles. This Project included construction of boulder eddy structures and excavation of a pool in order to enhance local hydraulics that facilitate take-out and put-in of raft and dory type boats. This will be a direct improvement to angler use at Fisherman's Park.
- 2) Dedication of Stapleton Ditch Water Rights to the In-Stream Flow associated with the reach. Pitkin County will dedicate 4.3 cfs of senior water rights to the administration of the Colorado Water Conservation Board for the ISF program. This priority water will increase availability and duration of habitat flows and be a direct improvement to angler use at Fisherman's Park.
 - 3) Dedication of a Recreational In-Channel Diversion (RICD). A RICD will be a junior water right but will directly benefit angler boating in the reach as well as incidentally benefit the riparian habitat and benthic macro-invertebrate habitats by protecting the higher higher flows these habitats depend upon.
 - 4) Bank fishing access enhancements. Currently bank fishing is non-existent in the reach. The steep slopes of 300 feet of bank will be laid back and two sets of steps will access a rock bench 2.5 feet above the Roaring Fork river. Half of the year this bank will be utilized by whitewater enthusiasts or passive recreation. However, during September through March, the bench is expected to be highly utilized for bank fishing and benefit young anglers when fishing is good.
 - 5) The currently denuded bank along this Project will be planted with large shade trees and native shrubs that enhance riparian and macro-invertebrate habitat. The large trees will help shade and cool the waters of the Roaring Fork providing an incidental benefit to anglers through improved habitat.
 - 6) The grade control structures will enhance pool habitat, which is limited in the reach, by creating scour and backwater. The diversified habitat will incidentally benefit aquatic habitat and angler's for half of the year when whitewater recreation is not practiced.

Adequate parking will be provided at the whitewater park for all average daily use with over twelve spaces created. Special event parking may impact Fisherman's park, however, events are expected during peak runoff when the fishing quality is poor due to highly turbid waters. It is not feasible to install toilets or additional structures within the whitewater park project limits. Town of Basalt maintains the facilities at Fisherman's park and estimates that the facilities are adequate for current use and could function with a 50 percent to 100 percent increase in use. If use of the facilities at Fisherman's park becomes strained, the Town and County will partner to expand facilities at Fisherman's Park in the future. Combined, the above six measures are expected to offset any degradations to the anglers experience at Fisherman's Park as a result of this project.

IX. CONSTRUCTION PERIOD

The channel depths at the project require that in-channel construction be timed with the lowest flow periods. The Colorado Division of Wildlife recommended construction period for work in the flowing river be limited to August 15 through October 31; however, any work proceeding after October 15 must provide a written schedule and notice to the CDOW. The construction period may temporarily conflict with wade angler

use; however, boating is not expected due to low flows.

X. COORDINATION

No T&E species have critical habitat in or adjacent to the reach. The project is not anticipated to negatively impact sensitive species in downstream reaches.

Colorado Division of Wildlife representatives were met onsite. The general design criteria and environmental concerns about recreational structures. In summary, these are: maintain fish passage of all life stages at both high and low-flow discharges, maintain or mimic pre-existing channel conditions (gradient, velocity, depth, and channel roughness), maintain sediment transport conditions, maintain natural aesthetic quality, re-vegetate with native riparian plantings, use the least environmentally damaging alternative and avoid concrete grout, and mitigate angler conflicts at Fisherman's Park. The Pitkin County Whitewater Park has been designed utilizing these concerns as guidelines to develop the most environmentally sensitive alternative.

Town of Basalt held public meetings which were generally supportive of the project. Comments generally requested improved boat ramps which are not feasible in the project area, but may be feasible in other locations downstream.

Pitkin County Healthy Rivers and Streams Board was presented to, main concerns were aesthetics of precast structures (which will be submerged at average low flows), bank aesthetics and attempting to collect local native stock for revegetation.

Roaring Fork Conservancy was met onsite, main concerns voiced were to limit angler conflicts, provide angler foot paths in the island bar and to limit structures and urbanization of the bank as viewed from the river channel.

Colorado Department of Transportation was contacted to discuss potential backwater affect on the Highway 82 Bridge and it was shown through hydraulic modeling that no reduction in flood conveyance is expected as a result of the project.

XI. AUTHORIZATIONS REQUIRED

A Section 404 Clean Water Act permit issued by the Army Corps of Engineers would be required for “discharging materials into the waters of the US”.

Colorado Department of Public Health and Environment (CDPHE) would be notified by application of this 404 permit. CDPHE requires review for 401 Water Quality standards to ensure the river water quality would be protected during construction. The project area is located in the CDPHE region 12, stream segments 3a, classified as Aquatic Life Cold 1, Recreation E, Water Supply, and Agriculture.

Coordination with the local floodplain administrator on how the project complies with the National Flood Insurance Program to show no increase in base flood elevations will be required.

There are no other undisclosed activities associated with this project that are expected to require Corps of Engineers oversight.

XII. STAKEHOLDERS AND LANDOWNERS

All structures are located within limits of Pitkin County, and Town of Basalt properties or easements. CDOW manages the Cold Water Fishery in the reach. Other adjacent landowners may be contacted for construction staging and access.

Colorado Division of Wildlife
Kendall Bakich
970-947-2924
Kendall.Bakich@state.co.us

Town of Basalt
Larry Thompson, Engineer
Engineering Department
970-927-4701 x229
lthompson@basalt.net

Roaring Fork Conservancy
Rick Lofaro
(970) 927-1290
rick@roaringfork.org

Pitkin County
John Ely
970-920-5190
john.ely@co.pitkin.co.us

Colorado Department of Transportation
Stuart Gardner
970-683-6354
Stuart.Gardner@dot.state.co.us

LOT J BASALT COMMERCIAL PK HOLDINGS
PO BOX 469
BASALT, CO 81621

BASALT RIVER LOFTS CONDO ASSOC
1129 EMMA RD #A
BASALT, CO 81621

ROARING RIVER ASSOCIATES INC
PO BOX 1730
BASALT, CO 81621

Villas at Elk Run
Elk Lane
Basalt, CO 81621
Email: villasatelkrun@yahoo.com

XIV. PRE CONSTRUCTION PHOTOGRAPH LOG



Photo No 1. Existing Denuded Bank



Photo No. 2 Looking upstream towards location of downstream structure.



Photo No.3 Looking upstream towards location of upstream structure.



Photo No.4 Looking North along location of diversion channel.

XV. IDENTIFICATION OF ALTERNATIVES

Three alternatives have been evaluated for the Pitkin County Whitewater Park: Alternative 1 Whitewater Park at Fisherman's Park, Alternative 2 Whitewater Park with Grouted Boulders, and Alternative 3 Whitewater Park with Precast Wave Structures. Appendix B provides a detailed analysis.

Alternatives were evaluated for how they fulfilled the purpose and need of the Town, and were analyzed for potential magnitude of adverse impacts.

Alternative 1 Whitewater Park at Fisherman's Park is not the preferred alternative. Fisherman's Park is located downstream of the Upper By Pass Bridge. This section of the River is aggrading, there is an island bar, and the bridge is not in line with flow. A feature constructed here may require periodic dredging maintenance because of the Bridge piers and existing sediment transport conditions. Furthermore, good riparian vegetation exists on both the north and south banks.

The location downstream of Fisherman's Park was recommended by RiverRestoration.org for Alternatives 2 and 3. The recommendation was based on the north bank fill slope riprap, stable sediment transport conditions, and degraded channel habitat from encroachment. Alternatives 2 and 3 both have opportunities to improve in-channel habitat, fill slope stability, and aesthetics.

Alternative 2 Whitewater Park with Grouted Boulder Structures was not desirable because grouted boulder structures may have long-term impacts to the functions of the Roaring Fork River by limiting interstitial spaces for benthic macro invertebrate habitat and may disrupt transport of sediment. Furthermore, Grouted Boulder Structures do not provide the stability the Precast Structures provide, and incidentally may require more maintenance form dilapidated structure in the future.

Alternative 3 Whitewater Park with Precast Wave Structures maintains interstitial spaces for macroinvertebrates and to maintain fish passage. Precast Wave Structures are designed to have greater structural stability than Grouted Boulders. Precast Wave Structures have gaps that maintain existing sediment transport conditions.

Alternatives 3 fits within the vision of Pitkin County and the Town of Basalt to enhance river recreation opportunities while being the most most practicable, least damaging alternative. Alternative 3 is the selected alternative.

XVI. REFERENCES

Elliot, John, *Bed Material Entrainment Potential on the Roaring Fork River, Basalt, Colorado*, USGS Water-Resources Investigations Report 02-4223, 2002.

Basalt River Park, Conceptual Design Report, MWDG Project No. 07-19-01; March, 2008. McLaughlin Whitewater Design Group

Roaring Fork River Stabilization Preliminary Design of Reach II; McLaughlin Rincon, Ltd, McLaughlin Engineering Group, March, 2005.

APPENDIX A

Attached are seven drawing plates representing the final design of the project as listed in Table 1.

Table 1. Drawing Index

PLATE NO.	TITLE
GENERAL	
G1	VICINITY MAP, DRAWING INDEX, LEGEND
CIVIL	
C1	PLAN VIEW
C2	PLAN VIEW WHITEWATER STRUCTURES
C3	PLAN VIEW GEOMORPHIC STRUCTURES
C4	VIEW SECTIONS
C5	CONSTRUCTION BMP TYPICAL PLAN
C6	CARE OF WATER DETAILS
C7	NON-POINT SOURCE POLLUTION CONTROL DETAILS
C8	TYPICAL CONSTRUCTION DETAILS

APPENDIX B

Alternatives Analysis

Alternative Name:	Alternative 1: Whitewater Park at Fisherman's Park
Potential Use Description:	Site located at existing River Park with parking and bathrooms. Users of the park would be kayakers, rafters, fisherman, tubers, swimmers, and pedestrians. Improved boat ramp would increase rafting and drift boat use at the site. Whitewater parks are popular to user groups such as: kayak clubs, fly-fish clinics, high school kayak teams, and swift water rescue training.
Measures:	• Dredge material and mobilize to over bank area • Fill and grade over bank area to an elevation above mean annual water surface • Install wave structure and foundation • Install wing structures and bank terracing • Install park trails, clearings, and seating areas • Install boat ramp (destroyed by 1995 flood)
Stakeholder Issues:	• Location requires periodic maintenance • CLOMR may be required for the grade control structure • Site development would degrade vigorous riparian corridor
Environmental Impacts:	Bridges and encroachment are existing disturbances to the channel. The proposed construction disturbance would be similar to bridge construction conditions; however, additional channel work into the native bed would be required. All temporary impacts associated with construction activities would be minimized with Best Management Practices. • Narrow riparian corridor with good vegetation cover would be degraded by hardened banks. • Narrow riparian corridor may be denuded with concentrated use and random trampling. • Over banks with riparian grasses below annual mean water surface would be filled with dredge material • Periodic maintenance requires equipment driving on the channel bed and banks which may cause temporary impacts associated with dredging activities.
Social Impacts:	Social issues would improve by creating a central location where the citizens of Basalt can identify with the river. This project would mainly benefit water craft users. Bank fisher persons would also benefit from designated access at bank enhancements. General users would also benefit by being able to access and experience the riparian environment within City limits. Educational signage and introducing public to the river environment inspires new river stewards within the

	community of Basalt and visitors.
Economic Impacts:	Requires periodic maintenance funds to dredge channel. The total economic impact of whitewater recreation set a record high for the state of Colorado with \$153,078,709M in 2007 (Colorado River Outfitters Association, 2008). Whitewater park destinations have been recognized as economic boons at other towns throughout Colorado. The Town of Basalt has a great opportunity to enhance River Recreation for multiple users. A whitewater park venue could facilitate local and statewide events. Commercial whitewater rafting is very popular on the Colorado River in Glenwood Springs, reported an economic impact of \$17,862,861 in 2007 (CROA, 2008). Whitewater rafting and float fishing is very popular on the Roaring Fork. The economic impact for commercial rafting on the Roaring Fork was \$800,123 in 2007 (CROA, 2008). Private boating use is popular on many nearby sections in the Roaring Fork, Crystal and Frying Pan Rivers. A River Park would attract visitors to Basalt and provide a destination for locals living in surrounding communities.

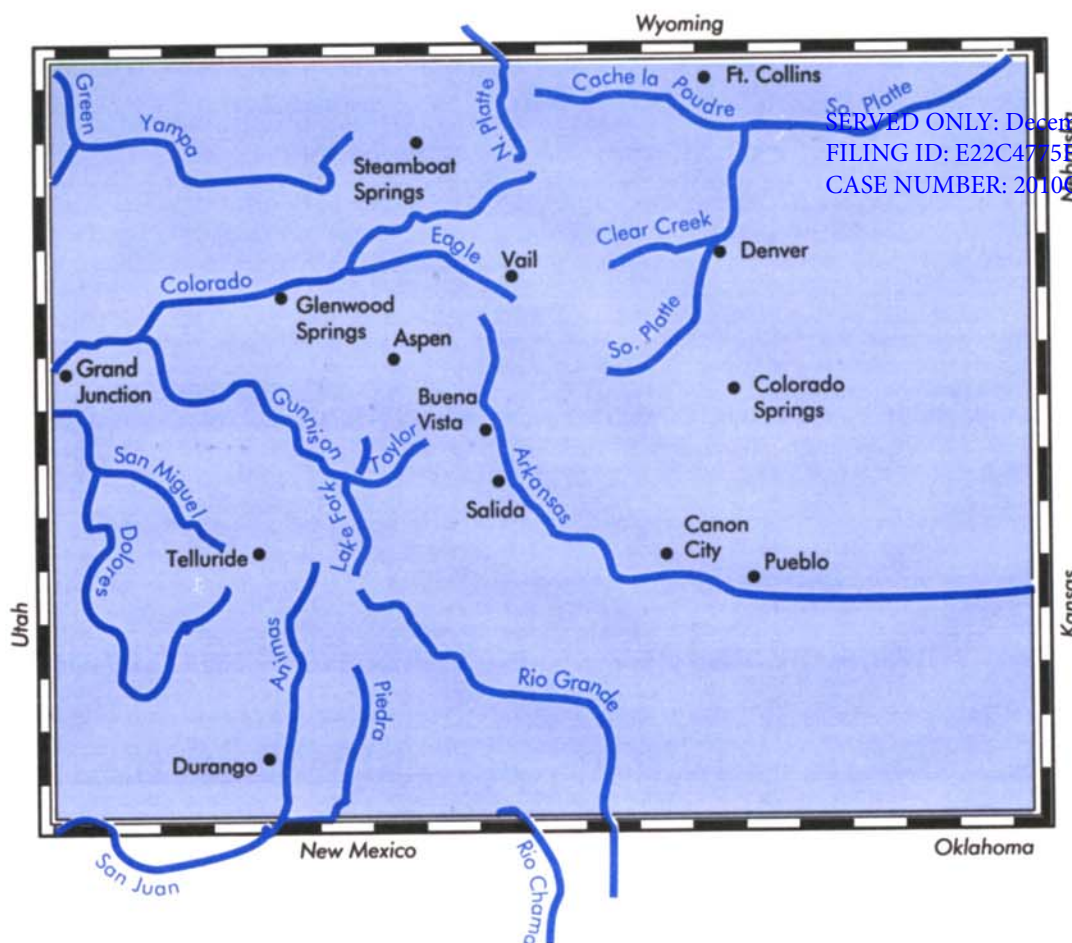
Alternative Name:	Alternative 2, Whitewater Kayak and Recreation Park with Grouted Boulders
Potential Use Description:	Users of the park would be kayakers, rafters, fisherman, tubers, swimmers, and pedestrians. Whitewater parks are popular to user groups such as: kayak clubs, fly-fish clinics, high school kayak teams, and swift water rescue training.
Measures:	• Install structural foundation • Install grouted boulder wave feature • Install wing structures • Terrace banks for viewing and access • Install Cantilevered deck • Protect in place large cottonwood trees • Install educational signage • Remove invasive vegetation/ transplant native • Revegetate with native riparian shrubs • Provide drift boat passage • Narrow Two River Road • Install Diagonal Parking
Stakeholder Issues:	• Grouted Boulder Structures may require periodic maintenance. • Grouted Boulder Structures may impede fish passage and reduce interstitial spaces for macroinvertebrate habitat. • NFIP may be required for the grade control structure

Environmental Impacts:	Bridges, encroachment, and riprapped bank are existing disturbances to the channel. The proposed construction disturbance would be similar to bridge construction conditions; however, additional channel work into the native bed would be required. All temporary impacts associated with construction activities would be minimized with Best Management Practices. • Periodic maintenance requires equipment driving on the channel bed and banks which may cause temporary impacts associated with repairing Grouted Boulder Structure. • Grouted Boulder Structures may impede fish passage. • Grouted Boulder Structures do not provide interstitial spaces and reduce macroinvertebrate habitat.
Social Impacts:	Same as Alternative 1
Economic Impacts:	May require periodic maintenance funds in the event of dilapidated grouted boulder structure during high water years.

Alternative Name:	Alternative 3: Whitewater Kayak and Recreation Park with Precast Wave Structures
Potential Use Description:	Users of the park would be kayakers, rafters, fisherman, tubers, swimmers, and pedestrians. Whitewater parks are popular to user groups such as: kayak clubs, fly-fish clinics, high school kayak teams, and swift water rescue training.
Measures:	• Install structural foundation • Install Precast whitewater feature • Install wing structures • Terrace banks for viewing and access • Install Cantilevered deck • Protect in place large cottonwood trees • Install educational signage • Remove invasive vegetation/ transplant native • Revegetate with native riparian shrubs • Install shade trees • Provide drift boat passage • Narrow Two River Road • Install Diagonal Parking • Enhance take-out eddy at Fisherman's Park
Stakeholder Issues:	• General acceptance among stakeholders • NFIP coordination may be required for the grade control

	structure
Environmental Impacts:	Bridges, encroachment, and riprapped bank are existing disturbances to the channel. The proposed construction disturbance would be similar to bridge construction conditions; however, additional channel work into the native bed would be required. All temporary impacts associated with construction activities would be minimized with Best Management Practices.
Social Impacts:	Same as Alternative 1 and 2
Economic Impacts:	Minimal in stream maintenance

EXHIBIT B



Commercial River Use in the State of **COLORADO**

1988-2010

Colorado
River Outfitters Association
(CROA)

EXECUTIVE SUMMARY

COMMERCIAL RIVER USE IN COLORADO

2010 Year End Report

From 2009 to 2010, river use in the State of Colorado climbed 16,500 user days or 3.4% to 507,000 user days. Use in this mature industry has fluctuated between 460,000 and 540,000 since 1997. Total use in Colorado is down 7% from the peak of 544,000 user days in 2007.

This increase is another small sign of improvement in the overall economy as rafting guests seem to be partially motivated by success in their stock market portfolios. Discounting and “Deals” were also ubiquitous in the industry, creating a demand by the budget traveler.

The Colorado and Arkansas Rivers saw the biggest increases. These two rivers contribute not only the largest percentage of use in the state, but are also rivers that have excess capacity for increased use. Many other rivers in the state have limits to increased use and therefore river use has stabilized.

Increased use combined with an inflation rate of 1.5% in the United States in 2010 increased the economic impact of commercial rafting by 4.9% or \$7 million dollars to a total of \$150 million. This amount has only been surpassed once which was in 2007. The economic impact in 2010 has nearly doubled from a dip in 2002 when use plunged due to drought and massive wildfires on the heels of 9/11.

The outlook for 2011 is bright as consumer spending increases and excellent snowpack across the state portends adequate flows in the rivers when the snowmelt begins this spring.

The Colorado River Outfitters Association (CROA) compiled this study. Copies are available by contacting Joe Greiner at rapids@inaraft.com. It can also be downloaded from the web at <http://croa.org/site/media.html>. Members of CROA adhere to a Code of Ethics and offer quality trips on all of Colorado's rivers.

COMMERCIAL USER DAYS IN THE STATE OF COLORADO 1988 - 2010

River	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Animas	12,000	13,000	10,000	18,000	22,000	26,000	28,600	30,200	23,000	37,000	36,000	45,000	29,000
Animas - Upper	510	510	690	730	810	887	369	368	0	400	920	989	700
Arkansas	109,883	119,045	157,380	157,862	181,716	185,123	201,040	199,109	228,153	235,931	250,098	243,709	250,861
Blue	2,138	1,400	1,928	2,288	2,173	4,129	416	9,338	5,854	5,361	1,300	2,100	2,347
Clear Creek		600	650	800	900	3,700	4,400	5,900	7,543	11,889	12,908	16,887	13,616
Colorado - Glenwood	15,000	21,300	26,938	32,435	39,149	31,256	46,579	26,150	32,764	43,146	59,822	60,191	57,265
Colorado - Upper	21,500	21,000	26,593	33,032	30,877	33,571	34,405	31,020	36,757	36,758	40,309	40,000	42,933
Colorado - Horsethief/Ruby	2,540	2,660	3,560	3,870	5,013	4,954	4,614	5,387	3,654	4,875	4,171	4,410	4,508
Colorado - Westwater	7,041	6,468	6,351	6,841	7,473	8,780	9,456	8,108	7,977	6,614	7,452	7,208	6,859
Dolores	1,595	1,111	10	968	1,258	1,707	1,493	3,257	0	2,333	2,406	439	921
Eagle - Upper	1,956	2,246	5,466	7,055	5,935	10,285	6,482	18,735	11,906	11,738	6,361	7,290	3,830
Eagle - Lower		1,108	1,642	2,182	949	952	700	2,862	2,038	2,825	2,226	2,500	2,167
Green/Yampa	14,885	15,204	16,836	17,700	19,313	20,513	19,870	22,936	20,097	20,408	22,454	19,818	22,569
Gunnison Gorge	1,942	3,056	2,760	3,618	2,921	3,304	3,996	1,804	3,377	3,289	3,155	3,169	3,928
Gunnison - Upper	957	1,038	835	2,201	1,808	1,946	1,485	1,123	1,365	1,774	1,420	1,720	1,400
Gunnison - Escalante		24	115	241	286	213	179	275	2,083	2,340	899	1,011	1,884
Gunnison - Lake Fork	293	394	178	426	292	276	446	1,476	1,081	1,850	1,315	1,848	1,310
North Platte	1,289	297	481	620	97	864	157	1,277	1,351	1,232	804	882	165
Piedra		14	71	55	35	37	67	76	17	31	294	305	50
Poudre	7,148	8,581	11,779	14,345	19,355	21,415	24,949	30,845	33,235	31,981	32,721	32,446	29,012
Rio Grande	2,800	2,800	2,800	2,800	2,800	2,800	2,000	2,900	2,800	3,000	2,800	3,100	1,950
Roaring Fork - Upper	1,500	1,500	1,500	1,500	1,500	1,500	2,000	4,000	4,500	5,074	4,500	5,000	4,500
Roaring Fork - Lower	3,000	3,000	1,500	1,500	1,500	2,000	2,500	5,000	1,100	1,200	1,500	2,000	1,500
San Juan - Pagosa	300	400	600	800	800	800	1,400	1,600	1,200	2,680	3,460	3,400	2,200
San Miguel	50	60	125	365	1,518	2,181	1,642	3,321	1,157	2,000	2,500	3,442	1,379
South Platte				5,000	5,000	700	101	816	1,112	3,137	3,650	1,306	2,035
Taylor		5,843	5,683	9,008	8,400	11,910	12,877	12,859	15,655	13,612	15,367	15,367	13,989
Total User Days	208,327	232,659	286,471	326,242	363,878	381,803	412,223	430,742	449,776	492,478	520,812	525,537	502,878
% Change From Previous Year		11.7%	23.1%	13.9%	11.5%	4.9%	8.0%	4.5%	4.4%	9.5%	5.8%	0.9%	-4.3%
User Day Change From Previous Year		24,332	53,812	39,771	37,636	17,925	30,420	18,519	19,034	42,702	28,334	4,725	-22,659

Sources: National Park Service
US Forest Service
Bureau of Land Management
Local Outfitters
Colorado State Parks

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COMMERCIAL USER DAYS IN THE STATE OF COLORADO 1988 - 2010

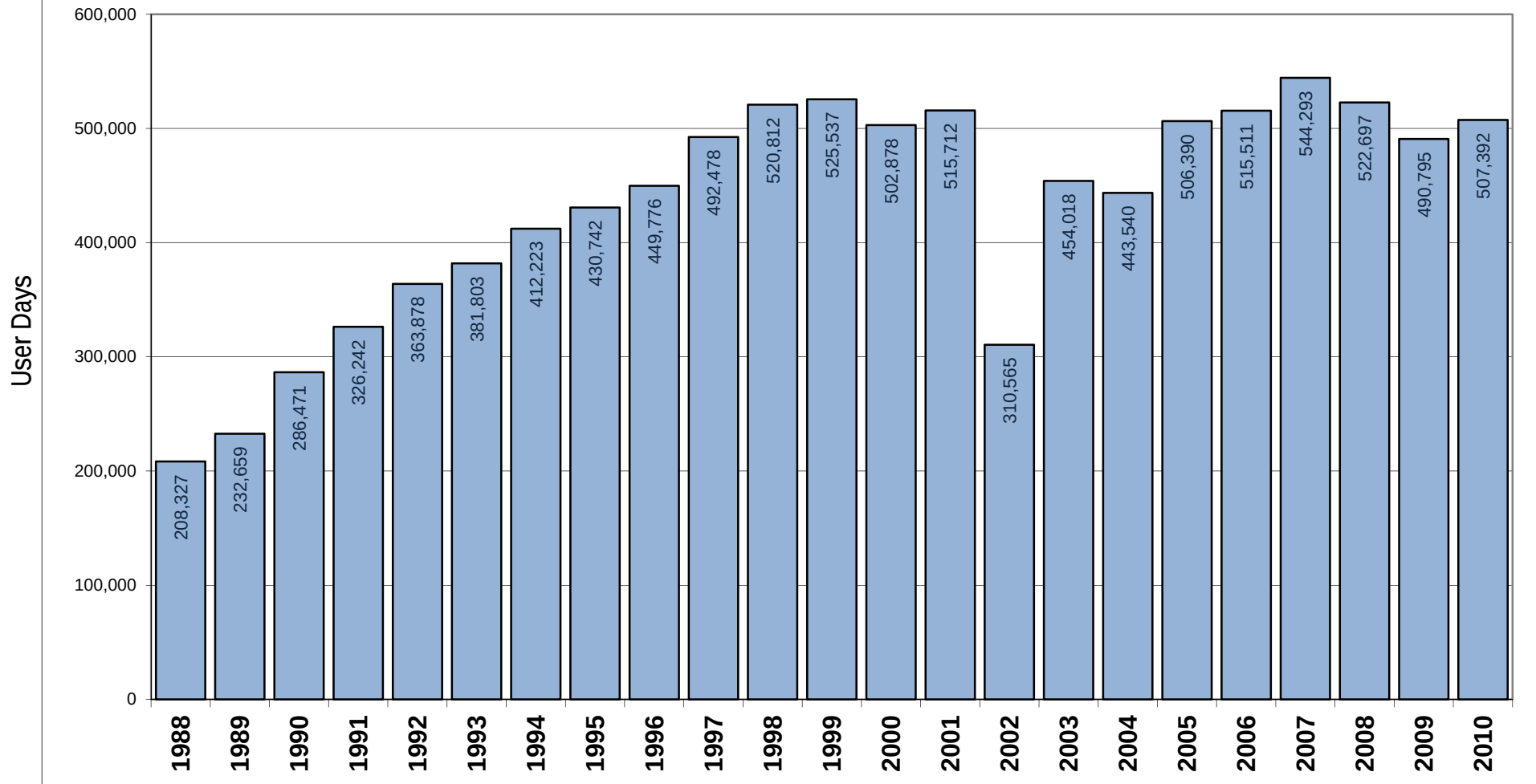
River	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Animas	42,000	12,000	34,500	35,470	52,700	42,500	44,322	42,250	41,921	41,000
Animas - Upper	721	300	690	658	872	167	598	533	500	411
Arkansas	252,213	139,178	214,555	203,840	228,091	237,160	239,887	214,234	205,876	211,150
Blue	14	0	264	788	1,212	760	2,038	2,906	3,089	1,181
Clear Creek	20,798	7,498	24,495	20,115	32,357	36,889	49,190	52,340	49,626	51,301
Colorado - Glenwood	55,829	42,581	56,876	58,751	57,712	62,652	65,502	52,738	52,737	61,673
Colorado - Upper	34,381	37,801	32,188	33,224	29,449	36,280	37,068	34,769	33,077	41,504
Colorado - Horsethief/Ruby	4,188	2,324	3,222	3,383	3,318	2,810	2,761	3,283	3,090	2,667
Colorado - Westwater	6,858	6,626	7,352	7,548	7,043	7,233	7,632	7,624	6,833	7,621
Dolores	0	0	214	174	936	81	195	868	536	112
Eagle (Below Edwards)	3,702	0	1,239	858	3,630	4,621	4,390	4,390	1,374	1,095
Eagle - Upper (Dowd Chutes)	594	446	1,153	820	1,419	1,441	1,369	1,369	1,369	1,710
Green/Yampa	21,147	18,158	13,379	12,919	13,435	12,961	15,242	21,325	12,194	14,741
Gunnison Gorge	3,401	3,292	2,328	3,010	3,016	3,800	2,826	4,342	3,956	1,390
Gunnison - Upper	2,690	1,334	1,590	1,982	2,112	2,212	2,500	2,669	2,669	2,669
Gunnison - Escalante	1,887	1,044	2,113	2,988	3,363	2,265	3,272	2,106	2,549	2,794
Gunnison - Lake Fork	1,543	0	160	177	195	165	126	369	203	149
North Platte	137	0	312	191	566	511	372	851	712	482
Piedra	650	0	210	454	725	400	500	547	547	190
Poudre	34,192	26,004	34,164	31,042	36,088	34,533	37,824	37,566	36,991	37,392
Rio Grande	3,300	92	1,300	2,800	3,060	2,900	3,100	3,200	2,464	2,016
Roaring Fork - Upper	2,500	0	2,000	1,500	2,215	2,609	2,834	6,187	4,248	2,404
Roaring Fork - Lower	1,000	0	500	500	10	79	100	2,500	1,263	1,363
San Juan - Pagosa	2,000	138	1,586	2,550	2,500	1,900	1,900	2,280	4,107	3,900
San Miguel	3,625	120	1,959	2,212	4,493	2,800	2,943	5,969	3,782	1,762
South Platte	2,055	453	935	836	901	655	690	1,150	750	383
Taylor	14,287	11,176	14,734	14,750	14,972	15,127	15,112	14,332	14,332	14,332
Total User Days	515,712	310,565	454,018	443,540	506,390	515,511	544,293	522,697	490,795	507,392
% Change From Previous Year	2.6%	-39.8%	46.2%	-2.3%	14.2%	1.8%	5.6%	-4.0%	-6.1%	3.4%
User Day Change From Previous Year	12,834	-205,147	143,453	-10,478	62,850	9,121	28,782	-21,596	-31,902	16,597

Sources: National Park Service
US Forest Service
Bureau of Land Management
Local Outfitters
Colorado State Parks

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COMMERCIAL USER DAYS IN COLORADO 1988-2010



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ECONOMIC IMPACT OF COMMERCIAL RIVER RAFTING IN COLORADO

YEAR	TOTAL USER DAYS	INFLATION RATE (CPI)	EXPENDITURES- INFLATION ADJUSTED	DIRECT EXPENDETURES	ECONOMIC IMPACT	% CHANGE
1988	208,327		\$63.80	\$14,166,236	\$36,265,564	
1989	232,659	4.6%	\$66.73	\$15,526,325	\$39,747,392	9.6%
1990	286,471	6.1%	\$70.81	\$20,283,592	\$51,925,995	30.6%
1991	326,242	3.1%	\$73.00	\$23,815,666	\$60,968,105	17.4%
1992	363,878	2.9%	\$75.12	\$27,333,424	\$69,973,565	14.8%
1993	381,803	2.7%	\$77.15	\$29,454,253	\$75,402,888	7.8%
1994	412,223	2.7%	\$79.23	\$32,659,636	\$83,608,668	10.9%
1995	430,742	2.5%	\$81.21	\$34,980,032	\$89,548,883	7.1%
1996	449,776	3.3%	\$83.89	\$37,731,110	\$96,591,643	7.9%
1997	492,478	1.7%	\$85.31	\$42,015,651	\$107,560,066	11.4%
1998	520,812	1.7%	\$86.77	\$45,188,320	\$115,682,100	7.6%
1999	525,537	2.7%	\$89.11	\$46,829,439	\$119,883,364	3.6%
2000	502,878	3.4%	\$92.14	\$46,333,898	\$118,614,778	-1.1%
2001	515,712	1.9%	\$93.89	\$48,419,201	\$123,953,154	4.5%
2002	310,565	2.2%	\$95.95	\$29,799,830	\$76,287,565	-38.5%
2003	454,018	1.9%	\$97.78	\$44,392,391	\$113,644,520	49.0%
2004	443,540	3.3%	\$101.00	\$44,799,026	\$114,685,507	0.9%
2005	506,390	3.4%	\$104.44	\$52,886,088	\$135,388,385	18.1%
2006	515,511	2.0%	\$106.53	\$54,915,435	\$140,583,514	3.8%
2007	544,293	4.1%	\$110.89	\$60,358,713	\$154,518,305	9.9%
2008	522,697	0.1%	\$111.00	\$58,021,815	\$148,535,846	-3.9%
2009	490,795	2.7%	\$114.00	\$55,951,518	\$143,235,886	-3.6%
2010	507,392	1.5%	\$115.71	\$58,711,260	\$150,300,826	4.9%

% Change from 1988 - 1993 = 51.9%

% Change from 1994 - 1999 = 30.3%

% Change from 2000 - 2005 = 12.4%

% Change from 2006 - 2010 = 6.5%

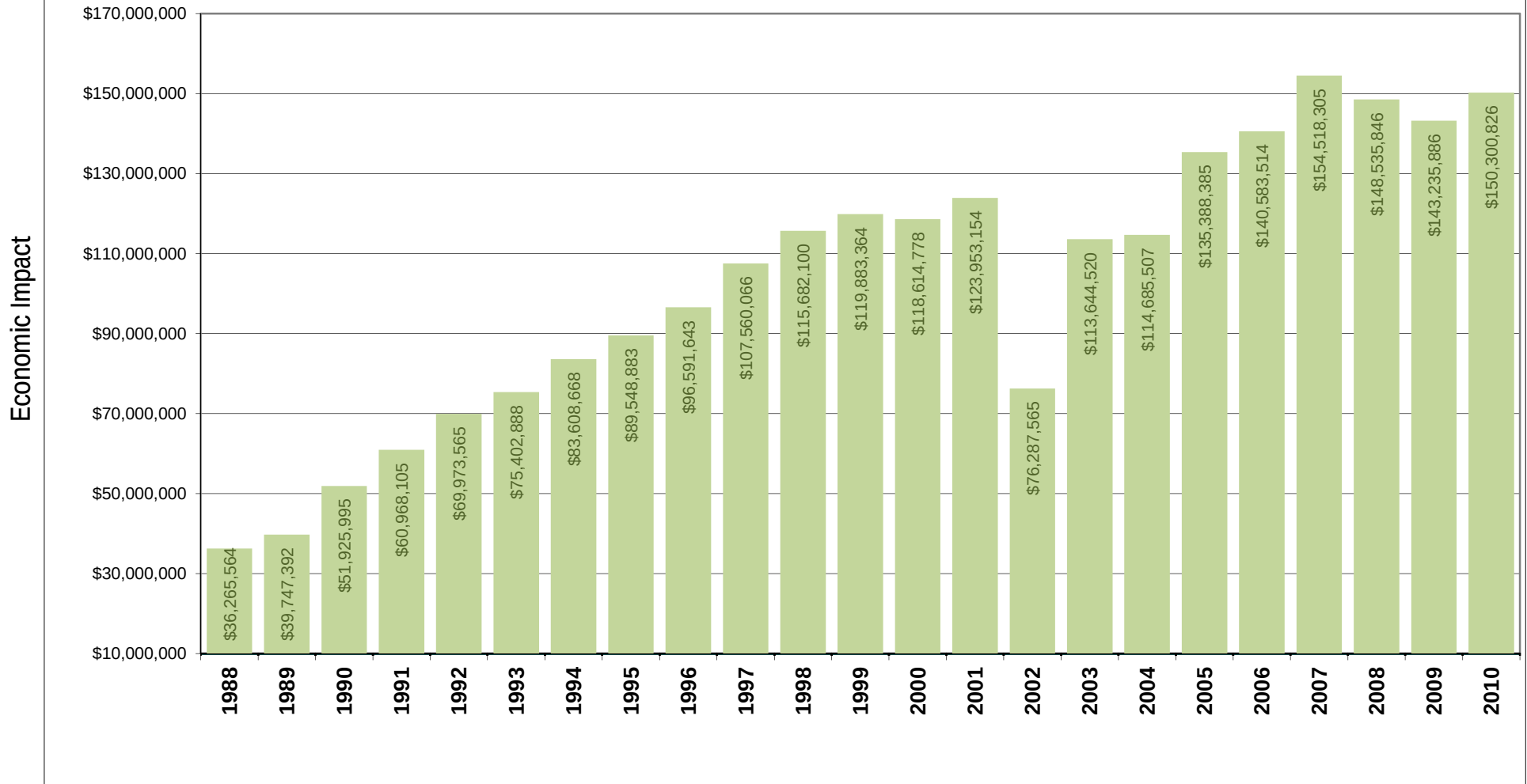
See glossary for above economic impact formulas and sources

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ECONOMIC IMPACT OF COMMERCIAL RIVER RAFTING IN COLORADO 1988-2010



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2010 ECONOMIC IMPACT BY RIVER

RIVER	USER DAYS	DIRECT EXPENDITURES	ECONOMIC IMPACT
Animas	41,000	\$4,744,185	\$12,145,114
Animas - Upper	411	\$47,558	\$121,747
Arkansas	211,150	\$24,432,554	\$62,547,339
Blue	1181	\$136,656	\$349,839
Clear Creek	51,301	\$5,936,133	\$15,196,500
Colorado - Glenwood	61673	\$7,136,296	\$18,268,918
Colorado - Upper	41,504	\$4,802,504	\$12,294,410
Colorado - Horsethief/Ruby	2667	\$308,603	\$790,025
Colorado - Westwater	7,621	\$881,840	\$2,257,510
Dolores	112	\$12,960	\$33,177
Eagle - Upper	1,095	\$126,704	\$324,363
Eagle - Lower	1710	\$197,867	\$506,540
Green/Yampa	14,741	\$1,705,708	\$4,366,613
Gunnison Gorge	1390	\$160,839	\$411,749
Gunnison - Upper	2,669	\$308,835	\$790,617
Gunnison - Escalante	2794	\$323,299	\$827,645
Gunnison - Lake Fork	149	\$17,241	\$44,137
North Platte	482	\$55,773	\$142,779
Piedra	190	\$21,985	\$56,282
Poudre	37392	\$4,326,697	\$11,076,344
Rio Grande	2,016	\$233,275	\$597,184
Roaring Fork - Upper	2404	\$278,171	\$712,118
Roaring Fork - Lower	1,363	\$157,715	\$403,751
San Juan - Pagosa	3900	\$451,276	\$1,155,267
San Miguel	1,762	\$203,884	\$521,944
South Platte	383	\$44,318	\$113,453
Taylor	14,332	\$1,658,382	\$4,245,458
Totals	507,392	\$58,711,260	\$150,300,826

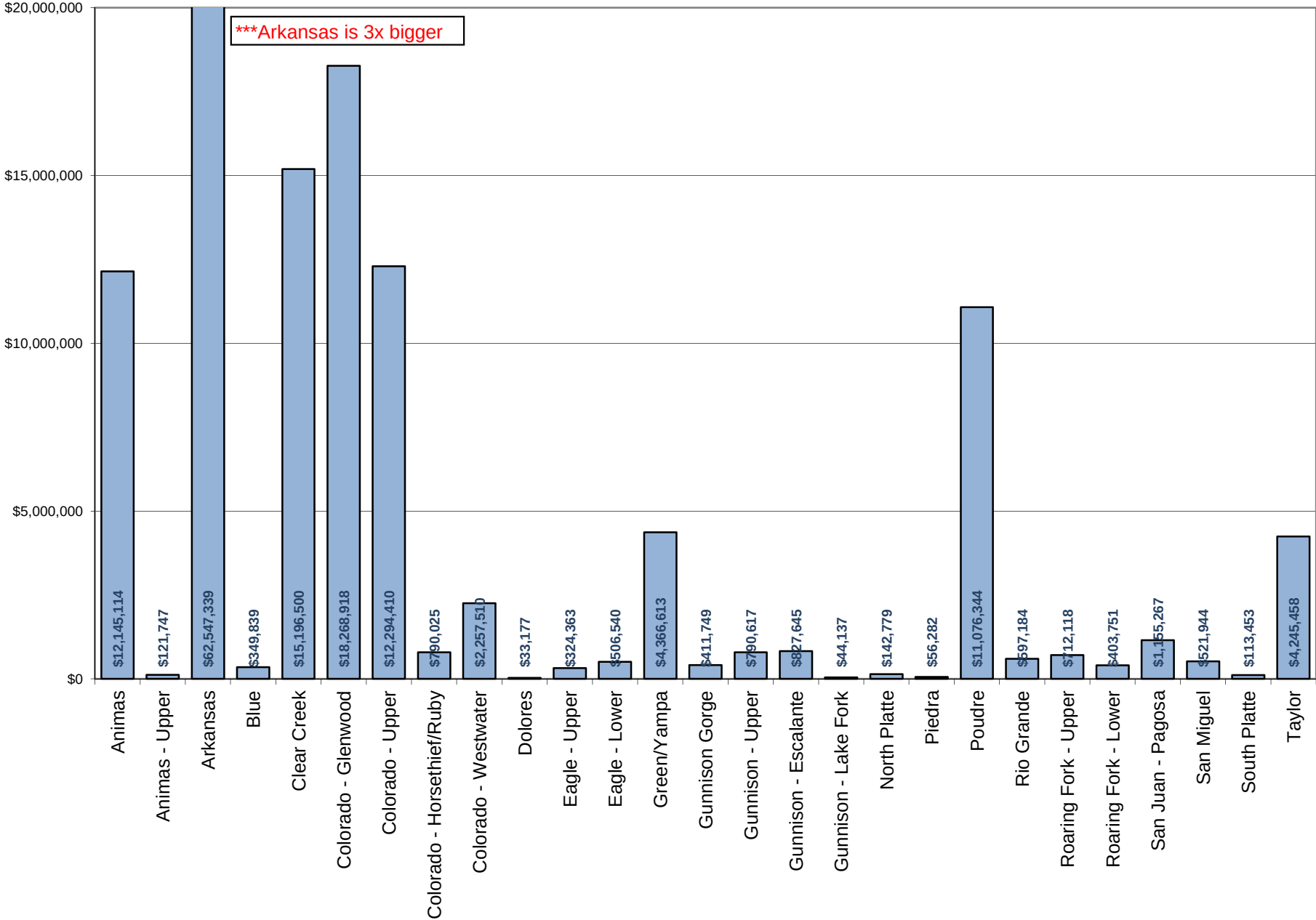
See glossary for above economic impact formulas and sources

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ECONOMIC IMPACT OF COMMERCIAL RIVER RAFTING IN COLORADO - 2010



INDIVIDUAL RIVER COMMERCIAL RAFTING STATISTICS - 3 YR RANGE

RIVER	2008 USER DAYS	2009 USER DAYS	2010 USER DAYS	% CHANGE '08 - '09	% CHANGE '09 - 10	2008 % MARKET SHARE	2009 % MARKET SHARE	2010 % MARKET SHARE
Animas	42,250	41,921	41,000	-0.8%	-2.2%	8.1%	8.5%	8.1%
Animas - Upper	533	500	411	-6.2%	-17.8%	0.1%	0.1%	0.1%
Arkansas	214,234	205,876	211,150	-3.9%	2.6%	41.0%	41.9%	41.6%
Blue	2,906	3,089	1,181	6.3%	-61.8%	0.6%	0.6%	0.2%
Clear Creek	52,340	49,626	51,301	-5.2%	3.4%	10.0%	10.1%	10.1%
Colorado - Glenwood	52,738	52,737	61,673	0.0%	16.9%	10.1%	10.7%	12.2%
Colorado - Upper	34,769	33,077	41,504	-4.9%	25.5%	6.7%	6.7%	8.2%
Colorado - Horsethief/Ruby	3,283	3,090	2,667	-5.9%	-13.7%	0.6%	0.6%	0.5%
Colorado - Westwater	7,624	6,833	7,621	-10.4%	11.5%	1.5%	1.4%	1.5%
Dolores	868	536	112	-38.2%	-79.1%	0.2%	0.1%	0.0%
Eagle - Upper	4,390	1,374	1,095	-68.7%	-20.3%	0.8%	0.3%	0.2%
Eagle - Lower	1,369	1,369	1,710	0.0%	24.9%	0.3%	0.3%	0.3%
Green/Yampa	21,325	12,194	14,741	-42.8%	20.9%	4.1%	2.5%	2.9%
Gunnison Gorge	4,342	3,956	1,390	-8.9%	-64.9%	0.8%	0.8%	0.3%
Gunnison - Upper	2,669	2,669	2,669	0.0%	0.0%	0.5%	0.5%	0.5%
Gunnison - Escalante	2,106	2,549	2,794	21.0%	9.6%	0.4%	0.5%	0.6%
Gunnison - Lake Fork	369	203	149	-45.0%	-26.6%	0.1%	0.0%	0.0%
North Platte	851	712	482	-16.3%	-32.3%	0.2%	0.1%	0.1%
Piedra	547	547	190	0.0%	-65.3%	0.1%	0.1%	0.0%
Poudre	37,566	36,991	37,392	-1.5%	1.1%	7.2%	7.5%	7.4%
Rio Grande	3,200	2,464	2,016	-23.0%	-18.2%	0.6%	0.5%	0.4%
Roaring Fork - Upper	6,187	4,248	2,404	-31.3%	-43.4%	1.2%	0.9%	0.5%
Roaring Fork - Lower	2,500	1,263	1,363	-49.5%	7.9%	0.5%	0.3%	0.3%
San Juan - Pagosa	2,280	4,107	3,900	80.1%	-5.0%	0.4%	0.8%	0.8%
San Miguel	5,969	3,782	1,762	-36.6%	-53.4%	1.1%	0.8%	0.3%
South Platte	1,150	750	383	-34.8%	-48.9%	0.2%	0.2%	0.1%
Taylor	14,332	14,332	14,332	0.0%	0.0%	2.7%	2.9%	2.8%
Totals	522,697	490,795	507,392	-6.1%	3.4%	100.0%	100.0%	100.0%

Sources: National Park Service
US Forest Service
Bureau of Land Management
Local Outfitters
Colorado State Parks

For Colorado River Outfitters Assoc.
Wilderness Aware Rafting
PO Box 1550
Buena Vista, CO 81211
719-395-2112 / www.inaraft.com

Revised: 1/31/2011

GLOSSARY

User Day: A user day is defined as a paying guest on a river for any part of a day.

Direct Expenditures: The total cash outlay for rafting, food, lodging, souvenirs, etc. spent in the local area by one river rafting customer in one day. Taken from a survey conducted in 1991 and published in 1993 titled "The Use and User Characteristics, Management Preferences, and Satisfaction of Boaters and Anglers on the Arkansas Headwaters Recreation Area (Colorado)"

Report to the Bureau of Land Management
Canon City District Office
PO Box 2200
Canon City, CO 81215

by:
Joseph W Roggenbuck
William T Borrie
Daniel R Williams
Department of Forestry
Virginia Tech
Blacksburg, VA 24061-0324

Economic Multiplier: The number of times a dollar is spent (2.56 times) in the local area before being spent outside that area. Colorado Tourism Board.

Inflation Rate (CPI): Consumer Price Index for all items, all urban consumers. Customary source for measuring the inflation rate nationwide.

<http://www.bls.gov/news.release/cpi.nr0.htm>

Economic Impact: Direct Expenditures x User Days x Economic Multiplier

2010 CROA Membership

Name	Address	City	State	Zip	Contact Person	Phone	EmailAddress
A Wanderlust Adventures	3500 Bingham Hill Rd	Ft Collins	CO	80521	Bob Klein	(970) 484-1995	info@awanderlustadventure.com
Adventure Bound River Expeditions	2392 H Road	Grand Junction	CO	81505	Tom Kleinschnitz	(970) 245-5428	info@AdventureBoundUSA.com
All American Adventures	PO Box 1176	Idaho Springs	CO	80452	Jed Ward	(720) 259-7238	jed@raftdenver.com
American Adventure Expeditions	12844 E Hwy 24/285	Buena Vista	CO	81211	Michael Kissack	(719) 395-2409	mikekissack@americanadventure.com
Arkansas River Tours	PO Box 337	Cotopaxi	CO	81223	Bob Hamel	(719) 942-4362	bob@arkansasrivertours.com
Arkansas Valley Adventures	PO Box 4310	Buena Vista	CO	81211	Duke Bradford	(719) 486-2827	duke@coloradorafting.net
Aspen Whitewater Rafting	PO Box 11763	Aspen	CO	81611	James Ingram	(970) 920-3511	jim@aspenwhitewater.com
Blazing Adventures	PO Box 5068	Snowmass Village	Co	81615	Bob Harris	(970) 923-4544	bob@blazingadventures.com
Bucking Rainbow Outfitters	PO Box 774832	Steamboat Sprgs	CO	80477	John Duty III	(970) 879-8747	john@buckingrainbow.com
Buffalo Joe's Whitewater Rafting	PO Box 1526	Buena Vista	CO	81211	Jahvee & Coby Vidakovich	(719) 395-8757	coby@buffalojoe.com
Clear Creek Rafting Company	PO Box 3178	Idaho Springs	CO	80452	John Rice	(303) 567-1000	john@clearcreekrafting.com
Colorado Discover Ability	PO Box 1924	Grand Junction	CO	81502	Martin Wiesiolek	(970) 257-1222	rafting@coloradodiscoverability.com
Colorado River & Trail Expeditions	5058 S. 300 West	Salt Lake City	UT	84107	Vicki Mackay	(801) 261-1789	crate@crateinc.com
Colorado River Guides, Inc	PO Box 391	Yampa	CO	80483	Paul or Brenda Worley	(970) 638-9742	wetraft@raftcolorado.com
Echo Canyon River Expeditions	45000 US Hwy 50 N	Canon City	CO	81212	Andy Neinas	(719) 275-3154	Andy@raftecho.com
Gateway Canyons	2454 Patterson Road, Ste 200	Grand Junction	CO	81505	Luke Reece	(970) 245-6292	lreece@gtwycanyons.com
Geo Tours Whitewater Raft Trips	PO Box 483	Morrison	CO	80465	Bruce Becker	(303) 756-6070	bruce@georrafting.com
Glenwood Canyon Rafting, Inc	PO Box 1566	Glenwood Springs	CO	81601	Gary Hansen	(970) 384-0445	goraft@raftingglenwoodsprings.com
Gunnison Fish & Raft	PO Box 7122	Gunnison	CO	81230	Albert Mismash	(970) 641-9420	albert@floatfish.com
Gunnison River Expeditions	14494 F Road	Delta	CO	81416	Alan DeGrange	(970) 874-8184	gre@sopris.net
Highside Adventure Tours, Inc.	183 Meadow Dr.	Dillon	CO	80438	John Cantamessa	(970) 668-1228	info@raftingcolorado.com
Independent Whitewater	333 Maxwell St	Salida	CO	81201	Scott Ledwith	(719) 539-7737	twodogs@salida.net
KODI Rafting	PO Box 4275	Frisco	CO	80443	Christian "Campy" Campton	(970) 668-1548	info@whitewatercolorado.com
Kokopelli Rafting Adventures	10829 CRE 165	Salida	CO	81201	John Seiner	(719) 539-3729	info@kokopellirafting.com
Liquid Descent	1700 Westbridge	Fort Collins	CO	80526	Alan Blado	(970) 372-2870	alan@liquiddescent.com
Mild to Wild Rafting (AAM's)	53 Rio Vista Circle	Durango	CO	81301	Alex & Molly Mickel	(970) 247-4789	info@mild2wildrafting.com
Mile Hi Rafting, LLC	PO Box 1744	Idaho Springs	CO	80452	Suzen Raymond	(303) 567-0717	info@milehirafting.com
Mountain Man Tours, Inc.	408 Starlight Circle	Creede	CO	81130	Delen Coln	(719) 658-2663	mntman@amigo.net
Mountain Waters Rafting	PO Box 2681	Durango	CO	81302	Casey Lynch	(970) 259-4191	Casey@durangorrafting.com
Noah's Ark Whitewater Rafting Co.	PO Box 850	Buena Vista	CO	81211	Micah Salazar	(719) 395-2158	micah@noahsark.com
Nova Guides	PO Box 2018	Vail	CO	81658	Greg Caretto	(719) 486-2656	greg@novaguides.com
OARS Canyonlands	PO Box 12	Angels Camp	CA	95222	Lannie Yeager	(435) 789-4316	info@donhatchrivertrips.com
Paddle Colorado	PO Box 19606	Boulder	CO	80308	Don Badtram	(720) 771-0022	
Pagosa Rafting Outfitter Inc. / Wilderness Journey	PO Box 222	Pagosa Springs	CO	81147	Wayne Walls	(970) 731-4081	walls@pagosa.net
Performance Tours Rafting	115 Gregg Drive	Buena Vista	CO	81211	Kevin Foley	(719) 395-6097	raft@performancetours.com
Raft Masters	2315 E Main St	Canon City	CO	81212	Dennis Weid	(719) 275-6645	fun@raftmasters.com
Raven Adventure Trips, Inc.	2315 E. Main Street	Canon City	CO	81212	Will Colon	(719) 275-2890	info@ravenraft.com
Rimrock Adventures	PO Box 608	Fruita	CO	81521	Travis Baier	(970) 858-9555	info@rradventures.com
River Runners	24070 CR 301	Buena Vista	CO	81211	Jon Donaldson	(719) 395-2466	jon@whitewater.net
Rock Gardens, Inc.	1308 County Road 129	Glenwood Springs	CO	81601	Kevin Schneider	(970) 945-6737	kevin@rockgardens.com
Rocky Mountain Adventures, Inc.	PO Box 1989	Fort Collins	CO	80522	David Costlow	(970) 493-4005	dcostlow@shoprma.com
Royal Gorge Rafting	45045 Hwy 50 W	Canon City	CO	81212	James Whiteside	(719) 275-7238	info@royalgorgerafting.net
Sage Outdoor Adventures	483 La Plata Peak	Twin Lakes	CO	81251	Darryl Bangert	(719) 476-3700	darrylbangert@msn.com
Scenic River Tours	703 W Tomichi Ave	Gunnison	CO	81230	Ches Russell	(970) 641-3131	info@scenicrivertours.com
Three Rivers Resort & Outfitting	PO Box 339	Almont	CO	81210	Mark Schumaker	(970) 641-1303	email@3riversresort.com
Timberline Tours	PO Box 131	Vail	CO	81658	Greg Kelchner	(970) 328-6161	gkelchner@hotmail.com
Vessels For Honor Rafting	27077 Hwy 50 Ste 4	Texas Creek	CO	81223	Dwight Grant	(719) 276-2227	vfhrafting@earthlink.net
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2010 Report Providers

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USFS- Glenwood Canyon	PO Box 720	Eagle	CO	81631	Janie Pardo	(970) 328-6388	jpardo@fs.fed.us
BLM Kremmling	PO Box 68	Kremmling	CO	80459	Andy Windsor	(970) 724-3025	andy_windsor@co.blm.gov
BLM Grand Junction	2815 H Road	Grand Junction	CO	81506	Mike Jones	(970) 244-3044	mike_d_jones@co.blm.gov
BLM Moab	82 E. Dogwood Ste G	Moab	UT	84532	Jennifer Jones	(435) 259-2136	jljones@blm.gov
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BLM Glenwood Field Office	2300 River Frontage Rd	Silt	CO	81652	Greg Wolfgang	(970) 947-2866	gregory_wolfgang@blm.gov
Dinosaur National Monument	4545 Hwy 40	Dinosaur	CO	81610	Ginger Raborn	(970) 374-3020	Virginia_Raborn@nps.gov
BLM Montrose	2505 S. Townsend	Montrose	CO	81401	Edd Franz	(970) 240-5309	edd_franz@blm.gov
BLM Gunnison	216 N. Colorado	Gunnison	CO	81230	Sally Thode	(970) 641-0471	Sally_Thode@blm.gov
USFS - N. Platte	South Hwy 130, PO Box 249	Saratoga	WY	82331	Penny Walters	(307) 326-2532	pmwalters@fs.fed.us
USFS - Ft Collins	2150 Centre Ave Bldg E	Ft. Collins	CO	80526	Jon Halverson	(970) 295-6723	jhalverson@fs.fed.us
Clear Creek Rafting	PO Box 3178	Idaho Springs	CO	80452	John Rice	(303) 567-1000	john@clearcreekrafting.com
Pagosa Rafting Outfitters, Inc.	PO Box 222	Pagosa Springs	CO	81147	Wayne Walls	(970) 731-4081	walls@pagosa.net
Scenic River Tours	703 W Tomichi Ave	Gunnison	CO	81230	Ches Russell	(970) 641-3131	info@scenicrivertours.com
Divide Ranger District	PO Box 270	Creede	CO	81130	Jody Fairchild	(719) 658-2556	jfiarchild@fs.fed.us
Rock Gardens, Inc.	1308 Road 129	Glenwood Springs	CO	81601	Ken Murphy	(970) 945-6737	ken@glenwoodcanyonresort.com
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Three Rivers Resort	PO Box 339	Almont	CO	81210	Mark Schumaker	(970) 641-1303	email@3riversresort.com
Mountain Waters Rafting	PO Box 2681	Durango	CO	81302	Casey Lynch	(970) 259-4191	casey@durangorafting.com

EXHIBIT C

BASALT RIVER PARK **CONCEPTUAL DESIGN REPORT**

SERVED ONLY: December 1, 2013 5:13 PM
FILING ID: E22C4775F6524
CASE NUMBER: 2010CW305

Prepared for:

PITKIN COUNTY

AND THE

TOWN OF BASALT



Prepared by:



March 2008

MWDG Project No. 07-19-01



March 17, 2008

Mr. John Ely
Pitkin County
Courthouse Plaza
530 East Main Street, 3rd Floor
Aspen, Colorado 81611

Mr. Bill Efting
Town of Basalt
101 Midland Avenue
Basalt, Colorado 81621

Dear Gentlemen:

A copy of the ***Basalt River Park Conceptual Design Report*** is enclosed. The objective of the report is to explore recreational enhancement opportunities on the Roaring Fork River in the vicinity of Fisherman's Park.

The reach evaluated extends from 300' upstream of the Upper Bypass Bridge to 500 feet downstream of the bridge. The proposed concept integrates with the Town's River Master Plan and Preliminary Stabilization Design, and can enhance dredging and maintenance efforts planned by the Colorado Department of Transportation. The proposed concept includes parking improvements and trails for increased river access, whitewater components suitable for typical flows in the Roaring Fork River, and enhanced fish habitat including deep pools, jetties and riparian plantings.

This report is the first step towards reworking this underutilized reach into an amenity for Town and County residents. We thank you once again for the opportunity to conduct this study and offer our recommendation to Pitkin County and the Town of Basalt.

Very truly yours,
McLaughlin Whitewater Design Group

A handwritten signature in blue ink, appearing to read "Aaron K. Asquith".

Aaron K. Asquith, P.E.

A handwritten signature in black ink, appearing to read "Risa Shimoda".

Risa Shimoda

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Letter of Transmittal

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APPENDICES

Appendix A. Reach Hydrology

Appendix B. Hydraulic Modeling Results

Appendix C. River Park Concept Drawing



I. BACKGROUND

The Town of Basalt has completed a River Stewardship Master Plan and a Preliminary Stabilization Design for the Roaring Fork River. In addition, the Town has completed a preliminary design for diversion, river and levee improvements at the Upper Bypass Bridge.

A group of project stakeholders, including Pitkin County, the Town of Basalt, the Division of Wildlife and local paddlers would like to explore options for a river park that integrates with proposed river improvements 300' upstream to 500' downstream of the Upper Bypass Bridge. These proposed improvements can be implemented with dredging and river work planned by the Colorado Department of Transportation (CDOT).

The purpose of this report is to present a concept for a river park adjacent to the Upper Bypass Bridge and Fisherman's Park. Included are the following:

- A. Summary of Stakeholder Input
- B. Summary of Hydrology Findings
- C. Discussion of potential white water feature quality, difficulty and user/spectator access
- D. Discussion of conformance with the River Master Plan and Stabilization Preliminary Design
- E. Discussion of affects on Fishing Recreation
- F. Discussion of impacts to the 100-yr floodplain
- G. A list of anticipated permit requirements
- H. A Conceptual Illustration

II. STAKEHOLDER INPUT

A meeting with project stakeholders was held in the Town of Basalt on June 15th, 2007. The purpose of the meeting was to develop a vision for a river park adjacent to Fisherman's Park and the Highway 82 Upper Bypass Bridge. A summary of input and the vision for the park after the meeting is as follows:

1. The Town and Pitkin County would like to improve the river within Town limits or nearby to create a community destination for kayaking, canoeing, tubing and rafting as well as hikers/pedestrians and anglers.
2. White water improvements should be more suited to beginning and emergent paddlers and provide small drops with the goal of being fun for multiple users.
3. River improvements, including parking, access, trails and fishing recreation improvements are a priority, separate from the white water improvements.
4. Currently this portion of the river is underutilized and is rarely fished.
5. The Town is currently exploring the extension of parking along Two Rivers Road which may dovetail into the proposed park project.
6. River Park improvements should be easily coordinated with CDOT's proposed dredging plans as well as meet goals of the River Stewardship Master Plan and Preliminary Stabilization Design if possible.
7. The land for the proposed park is owned by Pitkin County, which should allow decisions regarding it's use to be fairly straightforward.

III. SITE HYDROLOGY

A. Gage Records

Through discussions with Town staff and project stakeholders, it was determined that the nearest stream gage on the Roaring Fork River is located near Emma just upstream of the Hooks Lane Bridge. This gage is located downstream of the confluence with the Frying Pan River while the proposed River Park is located upstream of the confluence. As a result, mean daily flow records at the Emma gage as well as flow records for the Frying Pan River (just downstream of Ruedi Reservoir) were required to determine project design flows. Through subtraction of Frying Pan flows from Roaring Fork flows over the same period of record, hydrology specific to the proposed River Park site was developed. Because a new recording gage was installed near Emma in 1998, the period of record obtained from the USGS includes water years 1999-2007. Gage information and obtained flow tables are provided in Appendix A.

Review of the flow records indicates a range of average daily flows from 129 cfs to 1,820 cfs over the last 8 years. In addition, the records clearly indicate higher flows from the end of April through the middle of July.

B. Design Flow Selection

Project goals for the water flow through the River Park include:

1. Increased water depth including fast moving sections, deep pools and backwater areas for fishing.
2. Whitewater features that can be passed by tubes, canoes, kayaks, and rafts over the longest season possible.
3. Whitewater features that can provide good hydraulics during lower flows for training youth and emerging paddlers.
4. Whitewater features that can provide regional draw for freestyle kayakers during spring and summer runoff flows (high flows).

Current design practice for whitewater features includes selection of flows powerful enough to create well formed river hydraulics at two distinct flow rates. From a design perspective, targeting two flows allows optimization within the range between the lower and higher flows selected. Following review of flow records during the period selected, the design flows recommended for the formation of whitewater features in the River Park are 200 cfs and 1,000 cfs. Based on usage at existing white water parks, it's likely that the course will draw local users when river flows are in excess of 200 cfs and a regional audience at river flows of 1,000 cfs and above. In review of low flow records, the following operational schedule for white water features is anticipated:

	TIME PERIOD
	<u>1999-2007 Record</u>
Hydraulics with local draw (200 cfs)	April 5 th – November 15 th
Hydraulics with regional draw (1,000 cfs+)	May 23 rd – July 1 st

Table 1: Estimated Operational Season

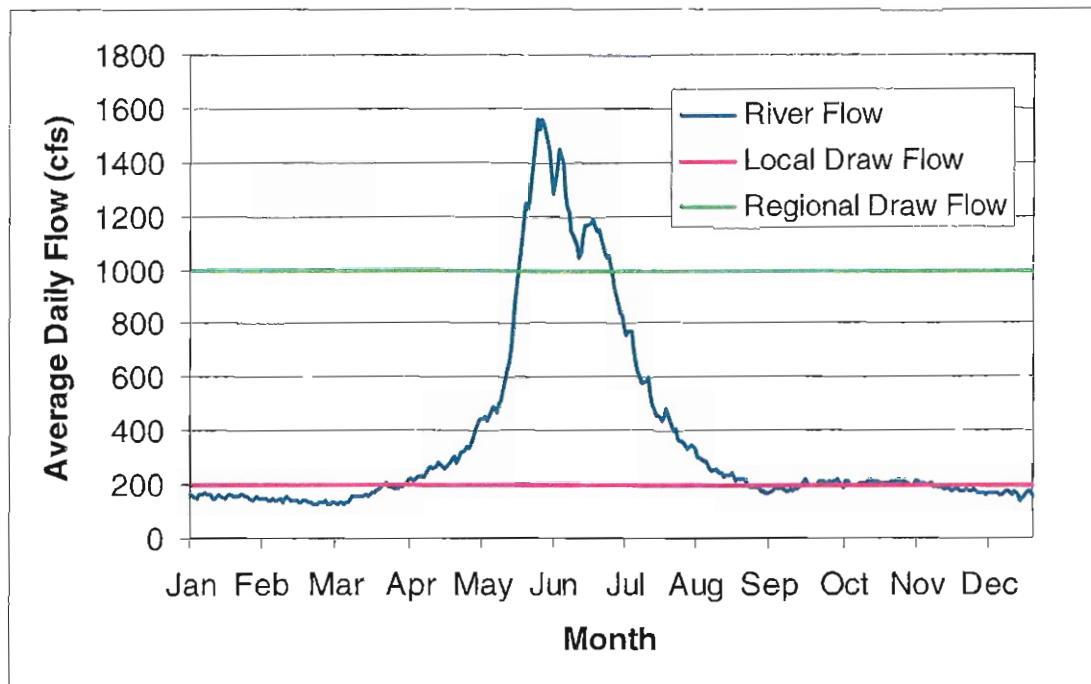


Figure 1: River Flows vs. Design Flows

It should be noted that outside the operational season for white water recreation, the River Park will still provide increased flow depths in the river, deep slow moving pools for fishing, river access and a trail for hiking along the river.

IV. DESCRIPTION OF CONCEPT

Drawing 1 – Basalt River Park, in Appendix C, depicts the proposed concept developed for this project. Concept development was based on project goals and discussions with Town staff, local stakeholders, the *River Stewardship Master Plan (Feb., 2002)*, and the *Preliminary Stabilization Design (March, 2005)*.

A. Current Conditions

The reach contains the Home Supply Ditch diversion, the Highway 82 Upper Bypass Bridge, and Fisherman's Park. Over time, bed material from upstream of the reach has dropped out, been interlaced with fine sediment and vegetated with willows and trees. As a result, the river has realigned and the irrigation head gates for the Home Supply Ditch have been relocated. As bed material drops out and is stabilized through vegetation, the shifting in the river results in generally wide and shallow flow. Photo 1 shows the area just downstream of the Upper Bypass Bridge during flooding in 1995. This area has an access point from Two Rivers Road. Currently, the shallow flow and wet conditions make it undesirable for a park.

Problems with the Upper Bypass Bridge have been well documented in previous studies. Aggradation at the upstream bridge face has caused the river to shift south and erode the existing berm protecting the south side of Basalt. In addition, the piers constructed under the bridge allow flow to pass through the bridge sideways. These conditions can create a pinning hazard to river users on the upstream side of piers and exacerbate debris entrapment. Photo 2 shows the upstream face of the Upper Bypass Bridge.



Photo 1: Aerial View of River Park Area during 1995 Flood

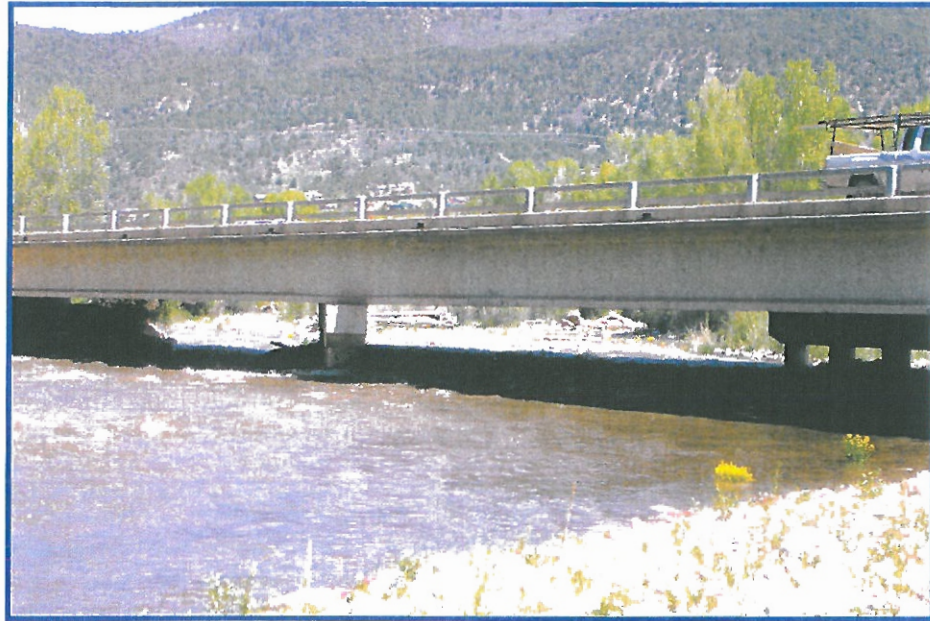


Photo 2: Upstream Face – Upper Bypass Bridge

The concept presented herein addresses the requirements needed to promote river access and use within the study reach.

B. Proposed Concept

The proposed concept considered redevelopment of the area 300 feet upstream to 500 feet downstream of the Highway 82 Upper Bypass Bridge into a River Park. The concept is intended to increase river access and use to multiple groups, including; kayakers, rafters, tubers, hikers and fishermen. In addition, the concept accounts for proposed dredging by CDOT.

Upstream of the Upper Bypass Bridge

Proposed improvements upstream of the Upper Bypass Bridge were considered; however, they were not selected for the proposed concept. While this reach of the river maintains adequate flow and drop, work in this area provided numerous obstacles. These included:

1. Property upstream of the bridge is privately owned and would require land acquisition for park construction.
 2. The project would require relocation of the Home Supply Ditch headgates and therefore, require project expenditures not focused on park improvements.
-

3. The existing piers are a hazard to boaters and promotion of river use in an unsafe area is unacceptable.
4. Direct access and parking in this area would be difficult adjacent to busy State Highway 82.

For these main reasons, the focus of this conceptual design report was shifted to the reach downstream of the bridge.

Downstream of the Upper Bypass Bridge

Proposed improvements downstream of the Upper Bypass Bridge include two whitewater features, dredging, over bank grading, path construction, an optional parking lot and access road improvements. The proposed whitewater features will each create a 2 foot hydraulic drop that is optimized at the project design flows of 200 and 1,000 cfs, respectively. A phased approach for park construction would complete the upstream feature first, with the downstream feature considered at a later date. The proposed whitewater features shall be constructed of large diameter river boulders founded on a grouted cobble mass for structural stability.

It is our understanding that fisheries concerns for the reach and the desire to maintain a natural appearance will limit the use of grout on the structure. The design therefore includes a balancing of the needs of fish, construction stability and safety. To accomplish this - a deep, structural foundation with cutoff wall will be constructed utilizing a cobble/grout mass to provide stability for the structure. The surface of the structure will be comprised of large, loose boulders, or boulders with the minimum amount of grout required to retain boulders at the proposed locations. With a minimal grout approach such as this, extremely high flows may occasionally dislodge a boulder and require maintenance. It is likely that this would coincide with bed aggradation during flooding and maintenance dredging could be accomplished at the same time.

Buried riprap in the over banks will reduce the potential for the river to cut around the features. This riprap will be constructed of a soil and rock mixture placed, then covered with topsoil and vegetated with grass or native plants. In addition, dredged material will be relocated to over bank areas to raise the park above the mean annual peak flows in the river. Raising the over banks above the mean annual water surface will allow redevelopment of this underutilized, marshy area into a true riverside park. Plantings, seating and the access to the river's edge will provide a destination for observing river activity and access for fishing and hiking.

Proposed Vegetation and Trails

Riverside parks generally adopt a well manicured appearance. In the case of the proposed Basalt River Park; however, a more natural environment will require little maintenance and blend with surrounding areas upstream and downstream. Currently, the proposed park area is blanketed with willow stands, riparian trees and shrubs. The

bank material, primarily consisting of cobbles and sands, allows water to flow through freely and in addition, strong groundwater flow from up gradient areas maintains a moist environment conducive to riparian plant growth. Following dredging of the river bottom and fill in the over banks, it is anticipated that native plant species will immediately begin to re-establish. In addition, the planting of some willows and trees throughout the park will increase diversity and provide areas of shade on the banks and in the water.

To prevent overgrowth of vegetation into the trails and ensure continued access through the park, it is important to create a clearly defined path that can be maintained or that requires no maintenance. A slightly wider than normal path that opens into wider areas at the locations of the white water features will be needed to exclude the aggressive willows in the area. Development of path surfacing options that effectively exclude plant material yet produce a desired result will be paramount as the project progresses through preliminary and final design.

C. Anticipated White Water Quality and Access

As previously stated, when flows in the Roaring Fork are above 200 cfs, the proposed white water features will provide a local draw, suited for beginner and student paddlers. Project stakeholders indicated the desire to create fun play spots than can be enjoyed by multiple users since they are not interested in attracting advanced kayaking freestyle boaters. Through most of the boating season, it is anticipated that this will be achieved. During the higher runoff months of May and June, however, the power of the river is significantly increased. During these months, it is anticipated that the fun and easy hydraulics will be transformed into more powerful features. While this will make hydraulics more exciting and cause a greater draw from regional boaters, the proposed concept, as depicted in Figure 2, will form subsurface currents to push swimmers, tubers and flipped kayaks downstream where water is shallower and slower and self-rescue is more easily achieved.

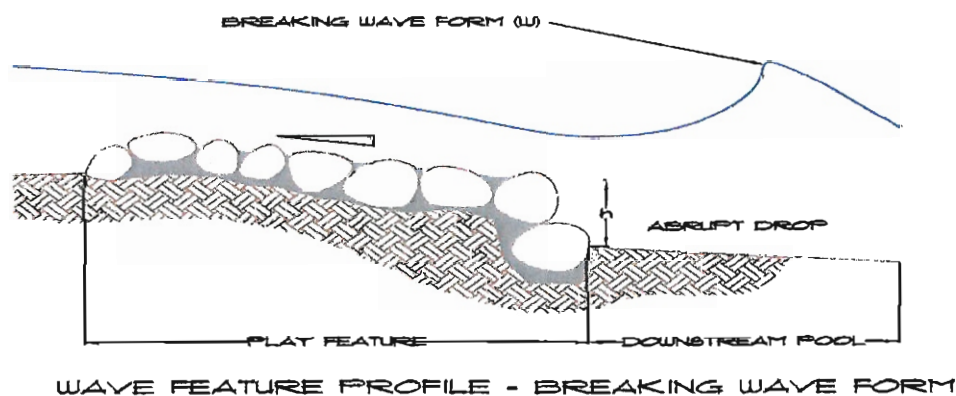


Figure 2 : Typical Profile of Abrupt
Drop Whitewater Feature

Through reconstruction of the boat ramp (destroyed during flooding in 1995) access to the river will also be significantly improved by the proposed concept. In addition, the concept includes optional additional parking in the raised over bank area. The continuous path through the park, boater put-ins and take-outs, and terraced boulder bank edges (at the locations of deep pools) will provide many locations for pedestrian observation of river activities and fishing deep holes above or below the features.

D. Impacts to Fishing Recreation

It is well known that fishing on the Roaring Fork River, especially downstream of the confluence with the Frying Pan, is highly regarded. The reach considered in this report is seldom fished.

The proposed project takes steps to enhance fishing opportunities on the river. Overall the proposed park will improve the quality of fishing by creating slower, deeper water, and shading of banks and water at select locations. The most significant impact; however, will stem from the increased access to the river bank in the reach. In addition, it is understood that there are significant concerns about fish impacts from sediment release during river construction activity. By working cooperatively with CDOT, two river goals are obtained with a single impact. While it is understood that no impacts would be better, the reduction of flood hazards through dredging at the Upper Bypass Bridge is critical to the residents of the Town. This proposed park provides the opportunity to reclaim benefits after dredging that otherwise wouldn't exist.

E. Conformance to Current Planning

Multiple reports have been prepared to address the instability of the Roaring Fork River through the Town of Basalt. The reports have included citizen, Town Staff and consultant input. The most recent documents, currently being used for planning by the Town include: 1) *Roaring Fork River - Basalt River Stewardship Master Plan* (Feb., 2002), and 2) *Roaring Fork River - Preliminary Stabilization Design of Reach II* (March, 2005). The following table compares the proposed concept to goals and designed components of these two documents.

Criteria/Component	<i>River Stewardship Master Plan (Feb., 2002)</i>	<i>Preliminary Stabilization Design (March, 2005)</i>	<i>Proposed Concept (March, 2008)</i>
Bed Aggradation at Upper Bypass Bridge	Recommends improvement to maintain river velocity and bed load transport, although specific solutions are not presented.	Recommends a steep channel to continuously move bed material and reduce the requirement for periodic dredging.	Provides improved river velocity and bed load transport from existing conditions - relies on periodic dredging to maintain river capacity.
Open Space and Parks	Recommends a river front open space and park system through the Town of Basalt.	Recommends and provides areas and trail alignments for a continuous river front open space and park system through the Town.	Specifically develops the portion of river front open space near the Upper Bypass Bridge into a river front park.
Fisheries	Recommends the enhancement of aquatic and wildlife habitat along riparian areas.	Recommends creation of a main channel with deeper flow, backwater pools, and encouraging native plant growth to provide shade areas.	Provides a main channel with deeper flows through this currently under-fished reach; provides deep pools for resting fish; anticipates significant vegetation with native species; and river mixing provided at white water features entrains oxygen and scours fine sediment from interstitial spaces.
River Access	Recommends increased river access to enhance the community experience with the river and encourages trails and recreational opportunities.	Recommends an extensive river access and trail system from the Upper Bypass Bridge downstream past Levinson Park.	Provides parking and access improvements and encourages trail use, river recreation and fishing in an otherwise unused stretch of river.
River Impacts	Recommends minimizing adverse impacts and maintaining the natural integrity of the river's resources.	Recommends project phasing to allow impacts to short reaches that can re-established prior to the next project phase.	Coordinates river park construction with proposed CDOT dredging operations to minimize the time and area of impacts.
Project Phasing	Recommends phased implementation and celebration of components as completed to encourage public support.	Recommends project phasing based on risk to Town citizens - the priority for phased construction of improvements is at the Upper Bypass Bridge.	Provides an initial first phase (or pilot) project for work in the river. Following construction, improvements will be immediately usable and benefits to the community will be obvious.
White Water Recreation	Recommends improvement of white water hydraulic conditions at the Midland Avenue bridge and generally encourages public, multiple use of the river.	Recommends recreation improvements if they are constructed in compliance with a greater overall plan.	Provides white water recreation components that serve multiple uses including river access, improved fishing habitat and recreation facilities.

Table 2: Comparison with Current Plans

F. Anticipated Permit Requirements

Anticipated permit requirements for park construction include:

- USACE Section 404 Individual Permit
- State of Colorado 401 Water Quality Certification
- CDOT Right of Way Permit
- Pitkin County Grading Permit

In addition, if an increase in 100-yr water surface elevations is necessary, the project will require the CLOMR/LOMR process through FEMA. Permit applications will require public process and approval due to the proposed project size. It is recommended that the USACE 404 permit application and a Conditional Letter of Map Revision be completed as the conclusion of a preliminary design phase for the park, following a more detailed investigation.

V. HYDRAULIC MODELING

A. Existing Conditions Model

This reach of the Roaring Fork River has been extensively studied since the severe flooding that took place in 1995. The most current HEC-RAS hydraulic model of existing river conditions, that has been adopted by the Town, was completed for a 2000 Floodplain Information Report. Additional existing conditions cross sections were added to the model at locations corresponding with proposed improvements. Additional cross sections were developed from a topographical survey of the river completed by CDOT in 2007 and Town of Basalt base mapping. The existing conditions 100-year modeling output with added cross sections, included in Appendix B, is used as the basis for evaluating 100-year floodplain impacts from the proposed improvements.

B. Floodplain Impacts

For the proposed concept, initial crest geometries and structure geometries were determined using hand calculations. The existing conditions hydraulic model was modified to represent the physical changes from the proposed concept. The concept was then refined to achieve desired hydraulic results. Proposed water surface elevation tables for the concept are included in Appendix B. The following graph depicts the change in proposed 100-yr water surface elevations and river bottom as a result of river park construction.

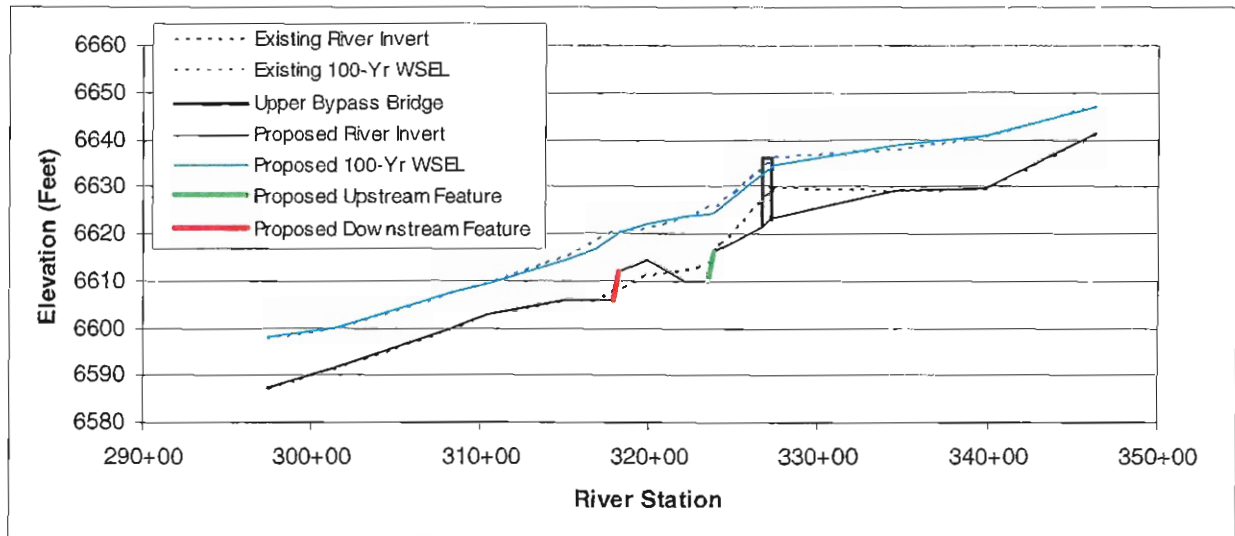


Figure 3: Reach Profile

As can be seen from Figure 3, the proposed project causes a decrease of up to 2 feet in 100-yr water surface elevations at the upstream face of the Upper Bypass Bridge. It should be noted that proposed river bottom elevations upstream of the Upper Bypass Bridge are estimated based on the 2005 Stabilization Preliminary Design. As of the date of this report, CDOT has not provided plans for proposed dredging in this area. CDOT plans, when available, will need to be incorporated into a later design phase for

the park. In addition, a minor increase of up to 0.6 feet occurs between the proposed upstream and downstream features. This area, where the majority of the park improvements is proposed to occur, does not house any current or planned residences. As a result, the combination of the upstream decrease (which lowers the risk of berm overtopping and south side flooding) and the downstream increase (which does not affect existing or proposed structures) provides a net positive impact to flood hazards in the reach.

C. Scour Analysis

In preparation of the *Stabilization Preliminary Design*, scour calculations were completed for proposed structures using the Bureau of Reclamation's "Guide for Computing Degradation and Local Scour", by Ernest Pemberton and Joseph Lara. The results of this analysis indicated that scour depths at structures on the Roaring Fork through the Town of Basalt can reach depths between 9 to 17 feet deep during a 100-yr flood event. In addition, bed transport equations predict that boulders as large as 24" in diameter can be tumbled downstream by the aggressive forces associated with the moving water in the river. Because bedrock is generally very deep in this reach it is anticipated that any proposed structures will require a deep foundation to maintain stability during extreme flood events. As a result, careful consideration will need to be given to foundation design during future phases of work such as preliminary and final design.

VI. SUMMARY

River parks can have very positive effects on the local economy and add quality of life benefits to residents. They add value to surrounding real estate, increase tourism, and stimulate business development. Whitewater features can also have a positive impact on aquatic life, particularly in this reach of the Roaring Fork, where the bed material is highly mobile.

This reach of the Roaring Fork, however, is highly unstable and various encroachments have exacerbated this instability. Furthermore, this particular site is complicated by the Upper Bypass Bridge and the potential for the river to split during floods and run south of the highway through the Town. Therefore, the planning and design of a whitewater park must, first and foremost, integrate into proposed improvements identified in the preliminary design and master planning of this reach.

The results of this effort demonstrate that a whitewater park could not only integrate into stabilization efforts of the Roaring Fork, but could effectively act as the stabilization efforts proposed in the previously accepted planning documents. The upstream feature would improve the exit conditions from the bridge for flood flows, debris and cobble. A proposed portage path would allow access around the proposed features for river users. The path could be used for maintenance by CDOT or the Town as well.

The river park can act as a demonstration project for river stabilization improvements that have been proposed to increase the capacity of the bridge and eliminate flooding to the “South Side” of Basalt. This recommended phased implementation would allow time to evaluate project performance – which is difficult to do with computer modeling.

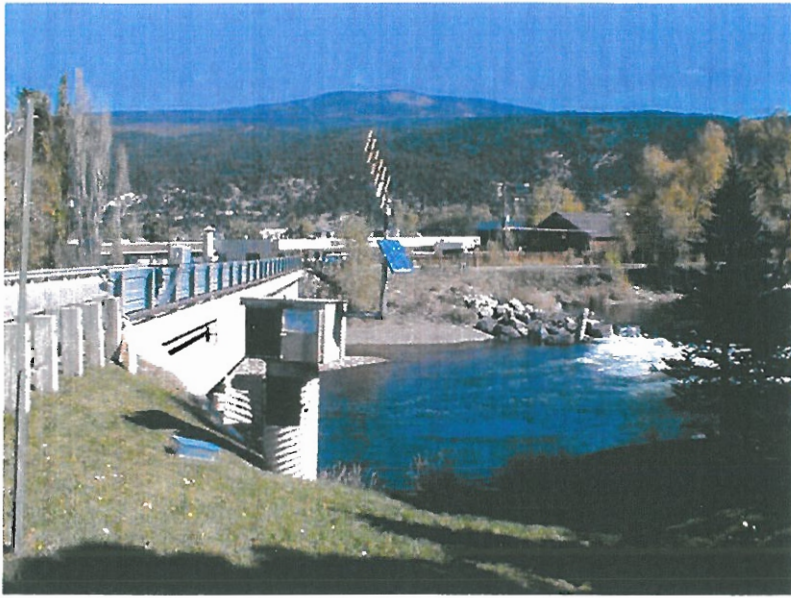
If desired, the County could apply for a Recreational-In-Channel Diversion (RICD) water right. This could aid in limiting upstream water transfers and maintain flows in the whitewater park and this reach of the Roaring Fork River.

Finally, the park would be a great recreational amenity, providing a boating attraction that would be desirable during high and low flows. Low flow utility would be a great attribute when most rivers' recreational value has diminished for the season, and summer air temperatures are conducive to beginner, family and instructional use.



Photo 3: Most users of Whitewater Parks are Spectators.

APPENDIX A
REACH HYDROLOGY



STATION.--09081000 ROARING FORK RIVER NEAR EMMA, CO

LOCATION.--Lat 39°22'24", long 107°05'00", in SW¹/₄NW¹/₄ sec.11, T.8 S., R.87 W.,
Eagle County, Hydrologic Unit 14010004, on left bank 10 ft upstream
from
bridge on Hooks Lane, 1.2 mi downstream from Sopris Creek, and 1.2
mi
northwest of Emma.

DRAINAGE AREA.--853 mi², approximately.

PERIOD OF RECORD.--August 1908 to September 1909, March 1998 to current year.

For a complete listing of historical data available for this site, see

http://waterdata.usgs.gov/co/nwis/inventory/? site_no=09081000

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage.

Elevation of gage is 6,470 ft above NGVD of 1929, from topographic map.

Prior to Mar. 1998, nonrecording gage at different datum.

REMARKS.-- Diversions for irrigation of about 16,000 acres above station.

Transmountain diversions to Arkansas River basin through Busk-Ivanhoe tunnel

since 1925 and through Twin Lakes tunnel since 1935. Transmountain diversion

from headwaters of Fryingpan River through Charles H. Boustead Tunnel to

Arkansas River basin began May 16, 1972. Natural flow of stream affected by

storage in Ruedi Reservoir on Fryingpan River (station 09080190)
since May
1968.

SERVED ONLY: December 1, 2013 5:13 PM
FILING ID: E22C4775F6524
CASE NUMBER: 2010CW305



STATION.--09080400 FRYINGPAN RIVER NEAR RUEDI, CO

LOCATION.--Lat 39°21'56", long 106°49'30", in SE¼SE¼ sec.12, T.8 S.,
R.85 W.,

Pitkin County, Hydrologic Unit 14010004, on right bank 0.4 mi
downstream from
Rocky Fork Creek and Ruedi Dam, 1.5 mi west of former site of Ruedi,
and 12.5
mi east of Basalt.

DRAINAGE AREA.--238 mi².

PERIOD OF RECORD.--October 1964 to current year. Statistical summary
computed for

1969 to current year. For a complete listing of historical data
available for
this site, see

http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09080400

GAGE.--Water-stage recorder with satellite telemetry and concrete
control. Datum

of gage is 7,473.25 ft above NGVD of 1929, (levels by U.S. Bureau of
Reclamation). Prior to Nov. 7, 1970, at site 2.0 mi downstream at
different
datum.

REMARKS.-- Diversions for irrigation of hay meadows upstream from
station.

Transmountain diversions upstream from station to Arkansas River
basin

through Busk-Ivanhoe Tunnel since June 1925 and Charles H. Boustead
Tunnel
since May 16, 1972. Flow regulated by Ruedi Reservoir (station
09080190)
since May 18, 1968.

Roaring Fork River at Emma

00060, Discharge, cubic feet per second,

Day of month	Mean of daily mean values for each day for 8 - 9 years of record in, cfs (Calculation Period 1997-10-01 -> 2006-09-30)											
	Period-of-record for statistical calculation restricted by user											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	251	244	236	283	480	1,820	1,260	558	434	404	333	267
2	248	239	223	292	519	1,780	1,210	545	433	413	321	270
3	245	242	225	296	546	1,740	1,160	530	434	409	322	275
4	253	239	228	308	573	1,660	1,100	537	426	413	313	266
5	243	238	230	335	601	1,570	1,060	544	421	413	314	260
6	237	233	226	342	608	1,490	1,050	545	421	413	303	257
7	246	230	229	335	608	1,520	982	532	429	398	300	255
8	248	239	230	337	607	1,570	920	506	428	392	300	250
9	253	229	226	343	591	1,630	925	499	432	403	298	256
10	257	230	230	350	600	1,580	921	507	436	394	287	257
11	250	237	228	351	639	1,470	846	516	435	379	285	257
12	254	227	251	355	637	1,420	803	503	429	383	285	259
13	242	241	252	368	621	1,400	763	493	416	386	286	257
14	239	244	252	384	662	1,320	756	484	402	384	298	252
15	247	241	255	393	667	1,300	755	496	399	386	291	248
16	255	229	254	385	708	1,260	757	493	402	383	282	258
17	250	232	257	390	784	1,220	764	482	390	376	286	261
18	240	229	258	404	805	1,230	702	474	408	377	285	264
19	247	227	253	398	869	1,290	666	469	407	380	280	254
20	257	225	260	395	972	1,330	649	504	415	377	275	265
21	251	229	265	390	1,090	1,340	619	507	416	374	278	263
22	249	230	270	394	1,170	1,350	616	507	421	364	282	249
23	245	227	277	410	1,320	1,370	599	494	402	358	274	233
24	246	228	287	427	1,410	1,380	623	487	397	351	267	235
25	255	224	296	440	1,470	1,380	676	478	401	343	274	260
26	256	225	301	420	1,440	1,390	683	463	401	345	277	265
27	248	227	306	429	1,460	1,360	651	468	396	340	269	264
28	248	231	295	454	1,550	1,300	615	459	408	337	266	252
29	241	228	290	462	1,720	1,290	604	449	409	339	266	247
30	232		286	471	1,810	1,300	560	441	410	335	272	257
31	238		283		1,780		552	434		336		251

Frying Pan River

00060, Discharge, cubic feet per second,

Day of month	Mean of daily mean values for each day for 9 - 9 years of record in, cfs (Calculation Period 1997-10-01 -> 2006-09-30)											
	Period-of-record for statistical calculation restricted by user											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	89	91	97	98	145	259	244	190	240	196	116	88
2	89	90	97	98	170	236	231	190	241	201	110	88
3	88	90	97	104	172	221	225	194	249	200	108	89
4	88	90	97	109	168	214	224	195	244	200	108	88
5	87	90	97	120	163	212	222	196	244	200	107	88
6	87	91	97	121	162	202	219	200	252	192	103	86
7	86	92	97	119	159	192	193	199	256	192	98	86
8	87	92	97	120	151	188	162	198	251	195	88	86
9	87	91	97	118	150	178	155	204	244	190	82	86
10	87	91	97	117	148	180	151	214	246	178	78	86
11	89	91	97	117	149	183	150	225	246	175	75	85
12	91	92	97	121	150	185	153	227	238	180	79	85
13	90	91	97	125	154	179	149	232	228	184	84	85
14	90	90	97	126	155	174	157	231	220	183	90	85
15	90	91	97	124	154	169	172	233	218	179	86	86
16	90	90	97	124	151	169	172	239	216	174	88	85
17	91	90	98	124	153	168	158	236	211	168	88	85
18	91	90	98	125	154	164	160	230	219	167	89	85
19	91	90	98	126	159	160	165	236	219	165	89	87
20	90	91	98	125	178	164	164	267	215	165	89	89
21	90	91	97	126	193	172	157	266	205	162	89	89
22	90	91	98	126	206	172	163	263	199	154	89	89
23	91	91	98	126	218	180	161	264	193	145	89	89
24	91	92	98	128	226	215	168	270	194	141	89	89
25	91	95	98	133	223	236	194	257	197	136	89	89
26	92	97	98	135	211	238	221	242	200	136	88	89
27	92	97	98	135	203	236	214	244	198	131	88	89
28	91	97	99	136	207	236	210	246	196	127	89	88
29	91	92	99	134	233	239	195	246	196	127	88	88
30	91		98	130	250	245	188	244	196	125	88	88
31	91		98		253		188	240		123		89

Roaring Fork River at Upper Bypass Bridge

Roaring Fork Flows at Emma less Flows on Frying Pan, cfs

Period-of-record for statistical calculation restricted by user

Day of month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	162	153	139	185	335	1561	1016	368	194	208	217	179
2	159	149	126	194	349	1544	979	355	192	212	211	182
3	157	152	128	192	374	1519	935	336	185	209	214	186
4	165	149	131	199	405	1446	876	342	182	213	205	178
5	156	148	133	215	438	1358	838	348	177	213	207	172
6	150	142	129	221	446	1288	831	345	169	221	200	171
7	160	138	132	216	449	1328	789	333	173	206	202	169
8	161	147	133	217	456	1382	758	308	177	197	212	164
9	166	138	129	225	441	1452	770	295	188	213	216	170
10	170	139	133	233	452	1400	770	293	190	216	209	171
11	161	146	131	234	490	1287	696	291	189	204	210	172
12	163	135	154	234	487	1235	650	276	191	203	206	174
13	152	150	155	243	467	1221	614	261	188	202	202	172
14	149	154	155	258	507	1146	599	253	182	201	208	167
15	157	150	158	269	513	1131	583	263	181	207	205	162
16	165	139	157	261	557	1091	585	254	186	209	194	173
17	159	142	159	266	631	1052	606	246	179	208	198	176
18	149	139	160	279	651	1066	542	244	189	210	196	179
19	156	137	155	272	710	1130	501	233	188	215	191	167
20	167	134	162	270	794	1166	485	237	200	212	186	176
21	161	138	168	264	897	1168	462	241	211	212	189	174
22	159	139	172	268	964	1178	453	244	222	210	193	160
23	154	136	179	284	1102	1190	438	230	209	213	185	144
24	155	136	189	299	1184	1165	455	217	203	210	178	146
25	164	129	198	307	1247	1144	482	221	204	207	185	171
26	164	128	203	285	1229	1152	462	221	201	209	189	176
27	156	130	208	294	1257	1124	437	224	198	209	181	175
28	157	134	196	318	1343	1064	405	213	212	210	177	164
29	150	136	191	328	1487	1051	409	203	213	212	178	159
30	141		188	341	1560	1055	372	197	214	210	184	169
31	147		185		1527		364	194		213		162

APPENDIX B

HYDRAULIC MODELING RESULTS

Existing Conditions with Added Cross Sections

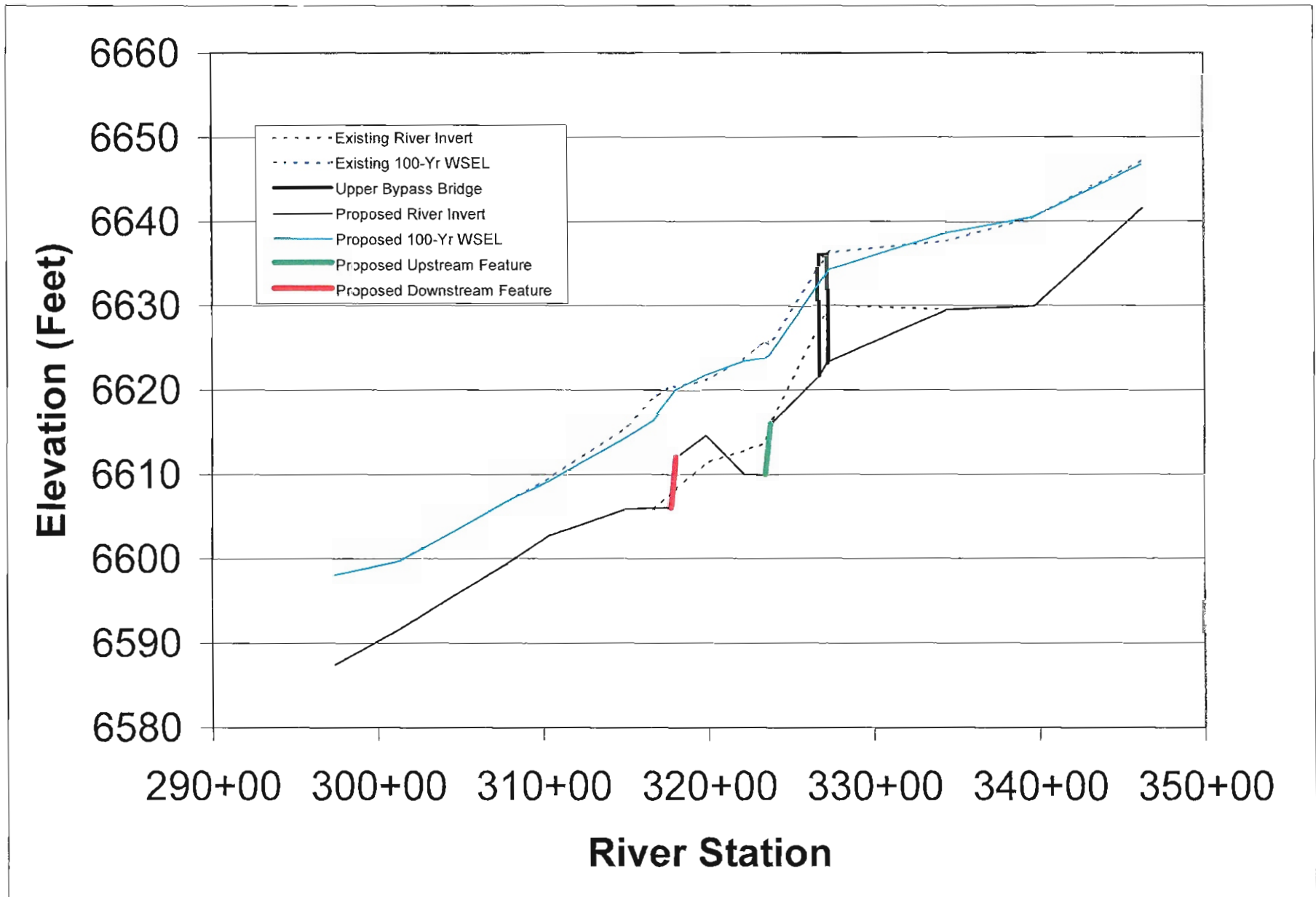
HEC-RAS Plan: Floodplain River: RIVER-1 Reach: Reach-1 Profile: 100 Year

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude #	Chl
Reach-1	98	100 Year	9400	6641.49	6647.21	6647.21	6648.43	0.008982	9.27	1208.06	646.39	0.87	
Reach-1	96	100 Year	9400	6629.9	6640.47		6640.65	0.000555	3.67	3716.19	1212.96	0.24	
Reach-1	95	100 Year	9400	6629.5	6637.68	6637.67	6639.63	0.012187	11.2	839.51	217.2	1	
Reach-1	94	100 Year	9400	6630	6636.27	6634.33	6636.98	0.002998	6.73	1396.35	594.45	0.53	
Reach-1	92	Bridge											
Reach-1	90	100 Year	9400	6630	6633.45	6633.45	6634.93	0.011055	10.19	1037.38	422.16	0.97	
Reach-1	88.6	100 Year	9400	6616.33	6625.45	6625.45	6627.72	0.011226	12.1	782.61	180.05	1	
Reach-1	88.55	100 Year	9400	6613.8	6625.77		6626.38	0.001886	6.25	1503.31	238.28	0.44	
Reach-1	88.52	100 Year	9400	6612.8	6623.63	6623.63	6625.72	0.011828	11.61	809.87	197.37	1.01	
Reach-1	88.5	100 Year	9400	6611.32	6621.11		6622.28	0.006236	8.7	1085.11	260.05	0.74	
Reach-1	88	100 Year	9400	6608.3	6620.38		6621.12	0.005495	6.93	1356.49	412.06	0.67	
Reach-1	87.5	100 Year	9400	6607.8	6620.44		6620.93	0.002798	5.63	1670.07	419.44	0.5	
Reach-1	87	100 Year	9400	6605.9	6618.98	6618.98	6620.26	0.014054	9.08	1034.84	419.06	1.02	
Reach-1	86.5	100 Year	9400	6605.85	6615.47	6615.47	6617.36	0.00932	11.19	920.48	288.76	0.92	
Reach-1	86.4	100 Year	9400	6602.72	6609.48	6609.48	6611.23	0.008668	10.92	978.49	299.71	0.89	
Reach-1	85.6	100 Year	9400	6599.8	6607.09	6607.09	6608.79	0.009746	11.52	1049.53	328.45	0.95	
Reach-1	83.6	100 Year	9400	6591.7	6599.66		6600.53	0.005341	8.14	1304.7	305.75	0.69	
Reach-1	83	100 Year	9400	6587.43	6597.99	6596.02	6598.49	0.004461	6.4	1891.52	531.83	0.39	

Proposed Conditions

HEC-RAS Plan: Floodplain River: RIVER-1 Reach: Reach-1 Profile: 100 Year

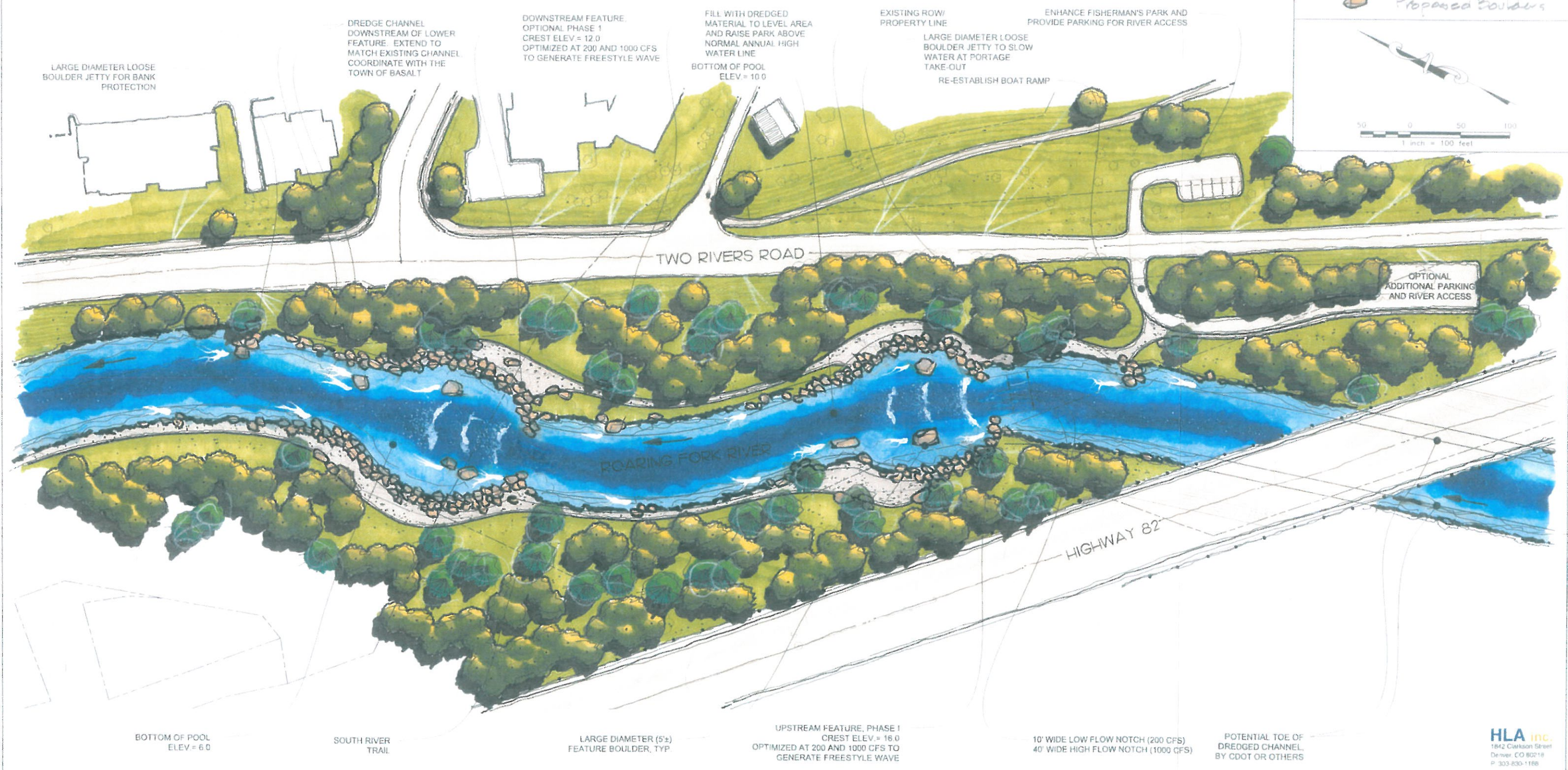
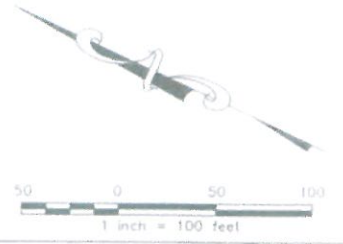
Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude #	Chl
Reach-1	98	100 Year	9400	6641.49	6646.79	6647.21	6648.55	0.014743	10.94	993.5	613.39	1.09	
Reach-1	96	100 Year	9400	6629.9	6640.51	6635.43	6640.68	0.000541	3.63	3761.21	1213.38	0.24	
Reach-1	95	100 Year	9400	6629.5	6638.65		6639.84	0.006834	8.75	1074.13	262.27	0.76	
Reach-1	94	100 Year	9400	6630	6634.33	6634.33	6636.09	0.01143	10.64	883.7	457.54	0.99	
Reach-1	92	Bridge											
Reach-1	90	100 Year	9400	6630	6632.77	6633.45	6635.2	0.023962	12.95	800.1	369.23	1.37	
Reach-1	88.6	100 Year	9400	6616	6624.17	6625.13	6627.83	0.025563	15.35	612.84	172.05	1.43	
Reach-1	88.55	100 Year	9400	6610	6623.8	6618.89	6624.59	0.002721	7.14	1317.05	222.86	0.52	
Reach-1	88.52	100 Year	9400	6610	6623.39		6624.21	0.003044	7.28	1291.98	229.86	0.54	
Reach-1	88.5	100 Year	9400	6614.6	6621.75	6621.27	6623.1	0.00779	9.35	1017.12	288.02	0.83	
Reach-1	88	100 Year	9400	6612	6619.97	6619.97	6621.28	0.014054	9.16	1026.4	409.51	1.02	
Reach-1	87.5	100 Year	9400	6606	6611.43	6614	6619.87	0.048026	23.32	403.12	100.49	2.05	
Reach-1	87	100 Year	9400	6606	6616.34	6612.93	6617.32	0.002354	7.95	1183.05	153.28	0.5	
Reach-1	86.5	100 Year	9400	6605.85	6614.27	6614.27	6616.45	0.010717	11.88	804.44	212.09	0.98	
Reach-1	86.4	100 Year	9400	6602.72	6609.1	6609.48	6611.29	0.01168	12.12	865.77	295.3	1.02	
Reach-1	85.6	100 Year	9400	6599.8	6607.07	6607.09	6608.8	0.009916	11.59	1042.8	327.66	0.96	
Reach-1	83.6	100 Year	9400	6591.7	6599.66	6598.51	6600.53	0.005341	8.14	1304.7	305.75	0.69	
Reach-1	83	100 Year	9400	6587.43	6597.99	6596.02	6598.49	0.004461	6.4	1891.52	531.83	0.39	



APPENDIX C
RIVER PARK CONCEPT DRAWING

LEGEND

-  Proposed River Banks
-  Proposed Hydraulic
-  Proposed Trail
-  Proposed & Extra Trees
-  Proposed Boulder



Number	Revision Description	By	Date

PITKIN COUNTY,
COLORADO

BASALT
RIVER PARK

CONCEPTUAL
DESIGN

McLaughlin Water
Engineers, Ltd.
1842 Clarkson Street
Denver, CO 80218
P. 303-830-1188

DESIGN: MWS
DETAIL: BSA
CHECK: REM
DATE: MARCH, 2008

PROJECT NUMBER: 07-12-01
Drawing Number: 1

PITKIN COUNTY, COLORADO / RIVERPARK DWG / MARCH 13, 2008 / DRC: 07-12-01

EXHIBIT D

SERVED ONLY: December 1, 2013 5:13 PM

FILING ID: E22C4775F6524

EFIL CASE NUMBER: 2010CW305

CO Garfield County District Court 9th JD

Filing Date: Dec 30 2010 3:59PM MST

Filing ID: 35131615

Review Clerk: Kathy Hall

DISTRICT COURT, WATER DIVISION NO. 5,
COLORADO

109 - 8th Street, Suite 104
Glenwood Springs, CO 81601-3361
(970) 947-3861

CONCERNING THE APPLICATION FOR WATER
RIGHTS OF BOARD OF COUNTY
COMMISSIONERS OF PITKIN COUNTY,
COLORADO

IN PITKIN COUNTY

Timothy J. Beaton, #10403
Aaron S. Ladd, #41165
Moses, Wittemyer, Harrison and Woodruff, P.C.
P. O. Box 1440
Boulder, Colorado 80306-1440
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tbeaton@mwhw.com; aladd@mwhw.com

▲ COURT USE ONLY ▲

Case Number: 10CW 305

APPLICATION FOR SURFACE WATER RIGHT APPROPRIATIONS FOR RECREATIONAL IN-CHANNEL DIVERSION

1. Name, address and telephone number of applicants:

Board of County Commissioners of Pitkin County
c/o John M. Ely, Pitkin County Attorney
530 East Main Street, Third Floor
Aspen, Colorado 81611
(970) 920-5190

2. Introduction: This application seeks two conditional recreational in-channel diversion ("RICD") water right appropriations for the Pitkin County River Park Project, which consists of two in-channel diversion and control structures that divert, capture, possess, and/or control the flow of the Roaring Fork River in its natural course to create reasonable recreation experiences in and on the water for all non-motorized boating and related recreational uses as described more fully below.

3. Name of structures: The Pitkin County River Park Project is comprised of two control structure units: (1) the Pitkin County River Park Project Upper Control Structures ("Upper Structure Unit") and (2) the Pitkin County River Park Project Lower Control Structures ("Lower Structure Unit").
4. Description of conditional water right appropriations:
 - A. Location of structures: The Pitkin County River Park Project will be located on the Roaring Fork River downstream of the Highway 82 Upper Bypass Bridge, upstream of the confluence of the Fryingpan and Roaring Fork Rivers, within the channel of the Roaring Fork River in Sections 17 and 18, Township 8 South, Range 86 West of the 6th P.M., Pitkin County, Colorado. The Pitkin County River Park Project will consist of two structure units within the Roaring Fork River. This application seeks two RICD water right appropriations, one for each of the two structure units, each of which will, by design, control, concentrate and direct the stream flows between the upper and lower extent of that structure units, independent of the other structure units, for the beneficial uses described below. A map depicting the upstream and downstream extent of the Pitkin County River Park Project, within which both structure units will be constructed, is attached as **Exhibit A**. Each of the two structure units will be constructed in the channel of the Roaring Fork River between the following two points:
 - i. The Pitkin County River Park Project Upstream Extent will be located in the SW¼ of the NW¼ of Section 17, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 320 feet from the west section line and 1480 feet from the north section line of said Section 17.
 - ii. The Pitkin County River Park Project Downstream Extent will be located in the NE¼ of the NE¼ of Section 18, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 265 feet from the east section line and 560 feet from the north section line of said Section 18.

The precise location of the two structure units and related water right appropriations, upon construction, may be located within this stretch of the Roaring Fork River. Provided that the structure unit locations remain within the stream reach described above, the actual locations will be described in the decree entered herein, identified by upper and lower control structures for each of the two structure units, or, if such decree is entered before construction of any or all of the structures, in subsequent applications for diligence or to make absolute the water rights claimed herein.

- B. Source: Roaring Fork River, tributary to the Colorado River.
- C. Appropriation:
- i. Date of appropriation: July 13, 2007.
 - ii. How appropriation was initiated: Engineering, field work, planning, considerations and decisions of the Board of County Commissioners, and posting notice of the appropriations.
 - iii. Date water first applied to beneficial use: Not applicable.
- D. Amounts claimed: Applicant claims two RICD water right appropriations for the following time periods and amounts, **CONDITIONAL**, as follows:
- i. **Upstream Structure Units**: Between April 1 and Labor Day of each year, this RICD water right appropriation will not exceed 1,500 cfs.
 - ii. **Downstream Structure Units**: Between April 1 and Labor Day of each year, this RICD water right appropriation will not exceed 2,000 cfs.
 - iii. Pitkin County hereby reserves the right to refine time periods and flow rates associated with either or both of the RICD water right appropriations claimed in this application. The RICD water right appropriations will not extend beyond the time periods listed above nor exceed the flow rates listed above for each RICD water right appropriations. Because any refinement in time periods and flow rates would constitute a reduction in the claims, the above constitutes notice to all interested parties.
 - iv. The above amounts are claimed as conditional. However, Pitkin County reserves the right to seek these amounts as absolute to the extent that the Pitkin County River Park Project or individual Structure units are constructed and flows are placed to beneficial use prior to the date of entry of a decree in this case.
- E. Beneficial use: Recreational uses including all beneficial uses associated with RICD water rights as permitted under Colorado Law as may be later changed or amended, including but not limited to non-motorized boating including kayaking, canoeing, rafting, tubing, floating, and paddling.

5. Name and address of owner of land upon which any new diversion structure or modification to any existing diversion structure is or will be constructed:

Town of Basalt
Tom Smith, County Attorney
600 E. Hopkins
Aspen, CO 81611
970-925-2600

Tom Kinney, Town of Basalt Water Rights Counsel
201 Main Street #301
Carbondale, CO 81623-2216
970-963-3900

Fredrick S. Arbaney Trust
Josephine Arbaney, Trustee
252 Cottonwood Drive
Basalt, CO 81621

Applicant
c/o John M. Ely, Pitkin County Attorney
530 East Main Street, Third Floor
Aspen, Colorado 81611
(970) 920-5190

WHEREFORE, Applicants respectfully request this Court enter a decree granting the two conditional recreational in-channel diversion water right appropriations claimed in this application for the Pitkin County River Park and granting such other relief as may be appropriate.

Board of County Commissioners of
Pitkin County, Colorado
Case No. 10CW 305
Page 5

Respectfully submitted this 30th day of December, 2010.

MOSES, WITTEMYER, HARRISON AND
WOODRUFF, P.C.

A handwritten signature in black ink, appearing to read "Timothy J. Beaton", is written over a horizontal line.

Timothy J. Beaton, #10403
Aaron S. Ladd, #41165

ATTORNEYS FOR APPLICANT, BOARD
OF COUNTY COMMISSIONERS OF
PITKIN COUNTY, COLORADO

*E-FILED PURSUANT TO C.R.C.P. 121 Duly signed original on file at the law offices of
Moses, Wittemyer, Harrison and Woodruff, P.C.*

Board of County Commissioners of Pitkin County, Colorado
Case No. 10CW 305
Page 6

VERIFICATION

STATE OF COLORADO

COUNTY OF PITKIN

)
) SS.
)

James F. Pearce, being first duly sworn upon oath, deposes and says that he is the water rights consultant, for applicant herein, that he has read the foregoing Application for Surface Water Right Appropriations for Recreational In-Channel Diversion, knows the contents thereof, and that the same is true to the best of his knowledge and belief.

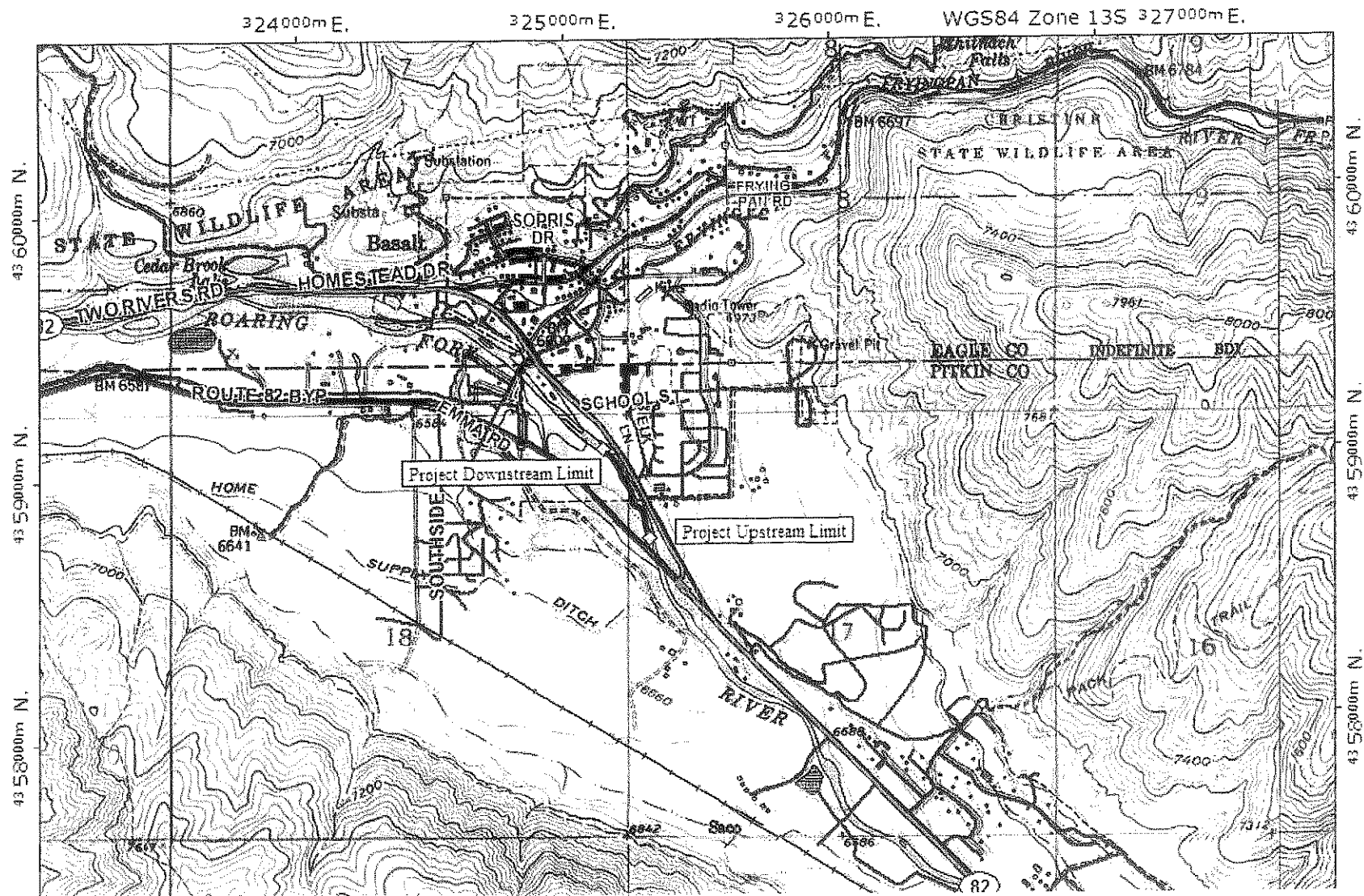
James F. Pearce
James F. Pearce

SUBSCRIBED AND SWORN to before me this 30th day of December, 2010.
Witness my hand and official seal.

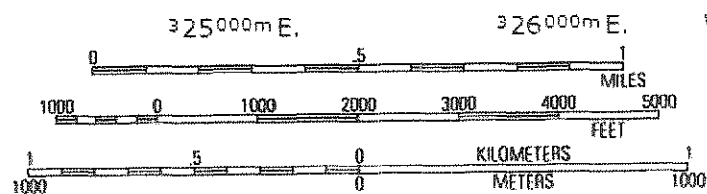
My commission expires: 05/16/2014 My Commission Expires 05/16/2014



Carl
Notary Public



323000m E. 324000m E.
 Exhibit A - Location of Pitkin
 County River Park RICD
 Water Rights
 12/29/2010



TN MN
 10 1/2°
 12/29/10

EXHIBIT E

SERVED ONLY: December 1, 2013 5:13 PM
FILING ID: E22C4775F6524
CASE NUMBER: 2010CW305

**Report in Support of the Pitkin County River Park
Recreational In-Channel Diversions
Water Rights Application
Case No. 10CW305, Water Division No. 5**

February 2011

Prepared for:

Pitkin County Board of County Commissioners

Prepared by:

Mr. James F. Pearce
Canyon Water Resources, LLC
685 Canyon Creek Driver
Glenwood Springs, CO 81601

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1 Introduction

This report provides supporting information for the Pitkin County River Park recreational in-channel diversions in the Roaring Fork River at Basalt. In particular, the report responds to the Colorado Water Conservation Board's Rules 7 and 8 regarding recreational in-channel diversions (RICDs). This report may be supplemented as the Application for the RICDs proceed.

On June 7, 2006, Pitkin County held their first public meeting discussing a RICD and in July of 2007 co-sponsored a study with the Town of Basalt to develop a Conceptual Design Report for a river park on the Roaring Fork River above Basalt. In 2008, River Restoration, Inc. was awarded a contract to design a whitewater facility to meet a range of recreational experiences associated the Pitkin County River Park (River Restoration, 2011). River Restoration's Design Report provides a description of the recreational experiences, the hydraulics and design of the structures, and the flow rates for the RICDs.

This report takes the information regarding the design of the RICDs, hydrologic, and water use data to address the CWCB RICD Rules 7 and 8. For the most part, the sections of this report "stand alone" and address specific requests for information in the CWCB rules. Section 2 describes the timing and amount of the RICD water rights. Section 3 presents information the stream flows at the proposed park and other key locations. Section 4 contains five sub-sections and covers administration, water use, provides the historical call records, instream flows, and the Compact Entitlement. Section 6 summarize the conclusions and Section 7 provides the references used throughout this report.

The figures and tables for each section follow the text of the section. Attached to this report are Appendices showing the estimated historical daily stream flow at the Pitkin County River Park and summarizing certain conditional water rights.

2 Pitkin County Recreational In-Channel Diversion Amount and Timing

The Board of County Commissioners of Pitkin County, Colorado has filed an application with the Division 5 Water Court to appropriate Recreational In-Channel Diversions in the Roaring Fork River (Case No. 10-CW-305, Water Division No. 5). The application seeks entry of a decree for the purpose of maintaining flows at levels to achieve specific reasonable recreational whitewater boating and other recreational experiences.

The category of whitewater boating experience sought by Pitkin County is freestyle whitewater (River Restoration, 2011). There are three main categories of whitewater sport: slalom, extreme and freestyle. Each category has equipment modified for that use. Freestyle whitewater appeals to a broader population than the other categories.

Freestyle whitewater can be practiced at a single whitewater feature and repeated multiple times by navigating upstream after being washed downstream. A freestyle whitewater feature is created where there is a “hydraulic jump,” which is a natural phenomenon resulting in an abrupt rise of the water surface. A hydraulic jump in the river channel is what creates a wave, a hole or a wave-hole (River Restoration, 2011).

Pitkin County is proposing two features located just upstream of the confluence with the Fryingpan River in Pitkin County.¹ Each feature is designed to appeal to different skill levels at differing flows. Similar to ski runs, freestyle whitewater features are associated with skill levels from beginner to advanced (i.e., green, blue, and black, double black).

This report refers to the upstream most structure as the Upper Structure and the downstream most structure as the Lower Structure. The Application for the Pitkin County River Park RICDs request water rights with the following flow rates and for the following periods:

Table 2-1: Proposed Pitkin County River Park RICD Water Rights Amounts and Timing

Structure	Period	Flow Rate (cfs)	Experience
The Upper Structure Unit	April 1 – May 14	240	Blue
	July 1 – August 15	1,000	Black
	May 15 – June 30	1,500	Double Black
The Lower Structure Unit	July 15 – Sept. 15	380	Green
	May 14 – May 31	1,350	Blue
	June 1 - July 14	2,000	Black

¹ The Pitkin County River Park is located approximately 150 miles upstream of the Colorado-Utah State Line and approximately 24 miles upstream of the confluence of the Roaring Fork and Colorado Rivers.

3 Stream Flows

This section provides information on stream flows as necessary to evaluate the Pitkin County RICDs. The primary data are the estimated daily stream flows for the Roaring Fork River at the Pitkin County River Park. The estimated daily stream flows are for the dates April 1 – September 15 and the period 1980 – 2010. The historical flows help illustrate the appropriateness of the timing and rates of the proposed RICD water rights.

Also, this section includes monthly average flows for the Colorado River near Cameo and the Colorado River near the Colorado-Utah State Line. The flow at Cameo serves as a first check on “mainstem” administration and provides a general indication of water supplies in the Colorado River Basin upstream of the confluence of the Gunnison River. The Colorado River near the Colorado-Utah State Line serves as a reference for the proportion of Roaring Fork River Basin flows as compared to the flow of the Colorado River leaving the State.

Figure 3-1 illustrates the locations of the stream gauges used in this analysis and shows the extent of the Roaring Fork River basin above Basalt (the River Park is located just downstream of the “ROAFRYCO” stream gauge). The data used in this analysis includes daily stream flow measurements recorded by the United States Geologic Survey or State of Colorado Department of Natural Resources; water use/diversion records from the State of Colorado CDSS databases; and stream gauge and diversion structure locations from the CDSS Geographical Information System data files.

3.1 Daily Stream Flows for the Roaring Fork River above Basalt

This section discusses the estimated historical daily stream flows for the Roaring Fork River at the Pitkin County River Park. The estimated daily flows include dates from April 1 through September 15 for the period 1980 – 2010. The historical data provide information regarding the timing of the flows associated with the proposed RICD water rights.

Table 3-1 shows the monthly average historical flow rate at the Pitkin County River Park (Appendix A provides the daily values). From April 1 to September 15 the flow of the Roaring Fork River above Basalt rises and then falls with the annual run-off. The river begins ramping up in mid-May and typically “peaks” in June with daily highs generally in the 1,000 to 3,500 cfs range. By the first part of July the run-off slows and the river’s flow decreases through July and August. By the middle of September the run-off is over and river flows return to essentially “baseflow” levels typically between 150 to 450 cfs.

Figure 3-2 is a chart summarizing certain statistics associated with the historical daily flows at the proposed Pitkin County River Park. The chart indicates the 5th and 95th percentile values, the median, and the 33rd and 67th percentiles. The chart does not represent any one year of flow, but provides information on how often a given day (x-axis) will have at least a certain flow rate (y-axis). This chart is used again in Section 5 to illustrate how the historical daily flows compare to the proposed flow rates for the Pitkin County River Park RICDs.

The estimates of the historical daily flows were developed from multiple sources of data and by three different methods. Since 2007, the Colorado Department of Natural Resources has operated and maintained a stream gauge on the Roaring Fork River above Basalt. The so-called “ROAFRYCO” gauge is ideally situated with respect to measuring flows at the proposed River Park. So, for the years 2007 – 2010, this analysis uses the average daily flow measured and recorded at ROAFRYCO.

For the years 1998 – 2006, stream flows above Basalt were derived using a daily stream flow accounting model. The model uses nearby stream gauges to estimate the daily flow at the River Park. Figure 3-3 provides the locations of diversion structures, irrigated areas, and other features associated with the daily accounting model. The model accounts un-gauged inflows and diversions and return flows for certain significant structures to estimate the daily flow at the River Park.

The primary stream gauges² used in the accounting model only have records back to 1998. So, for 1980 – 1997, daily stream flows at the Park were estimated by multiple regression analysis using the modeled and measured stream flows at the park (1998 – 2010) correlated with long-term Roaring Fork River basin stream gauges Roaring Fork River at Aspen and Crystal River near Avalanche. The regressions exhibit acceptable statistics and provide the daily estimates for 1980 – 1997.

This analysis considered additional information when estimating the stream flow at the RICDs. The additional information includes diversion records for Home Supply, Forker, Grace and Shehi, RCF, Harris and Reed, Northside Pioneer, and Robinson Ditches. Stream flow records for the Roaring Fork River at Aspen, the Roaring Fork near Emma, the Crystal River near Avalanche, West Sopris Creek, the Fryingpan-Pan River below Ruedi Reservoir, and Cattle Creek stream gauges were used in estimating the stream flows at the RICDs. Finally, stream flow accounting tables and correlations provide additional details related to this analysis.

² Roaring Fork River near Emma and Fryingpan River below Ruedi Reservoir.

3.2 Stream Flow for the Colorado River near Cameo and near the Colorado-Utah State Line

This sub-section presents stream flow data for the Colorado River near Cameo and the Colorado River near the State Line. The Cameo gauge is important because stream flows at this location are key to administering the senior agricultural water rights in the Grand Valley (i.e., the so-called Cameo rights). Data from the State line gauge provide a way to compare flows leaving the State to the flows in the Roaring Fork River basin above Basalt.

The Colorado River above Grand Junction (Table 3-2) generally “peaks” in late May or June with the average monthly flows in wet years exceeding 10,000 cfs (up to 20,000+ cfs in the wettest years). In July and through the end of the irrigation season, flows decrease with the end of run-off and monthly average flow drops to approximately 5,700 and then to approximately 2,500 cfs in September and October. In the drier years and when Cameo flows are less than about 2,260³ cfs, the Grand Valley senior rights may initiate a call⁴. Table 3-2 provides the monthly average stream flow for the Colorado River near Cameo for the period January 1980 – September 2009.

Table 3-3 provides the monthly average stream flow for the Colorado River near the Colorado-Utah State Line for the period January 1980 – February 2010. The rise and fall of the Colorado River at the State Line follows the same general timing as indicated by the Cameo stream gauge records. For the drier years, peak monthly flows occasionally reached 10,000 cubic feet per second and in the extremely dry year of 2002 topped out at approximately 2,700 cfs in May and June. In the wetter years the peak flows reached into the 20,000 to 40,000 cfs range.

Supplemental information related to this section is the average daily flows recorded by the USGS for the Cameo and State Line locations and other stream flow and water use information.

³ The total flow rate of the “Grand Valley” senior water rights totals 2,260 cfs (see CDSS link). Operation of the Orchard Mesa Check may limit diversions to less than the total flow rate.

⁴ Section 4.2 discusses administration of the Colorado River above the Grand Junction and the Roaring Fork River.

Figure 3-1: Roaring Fork River Basin

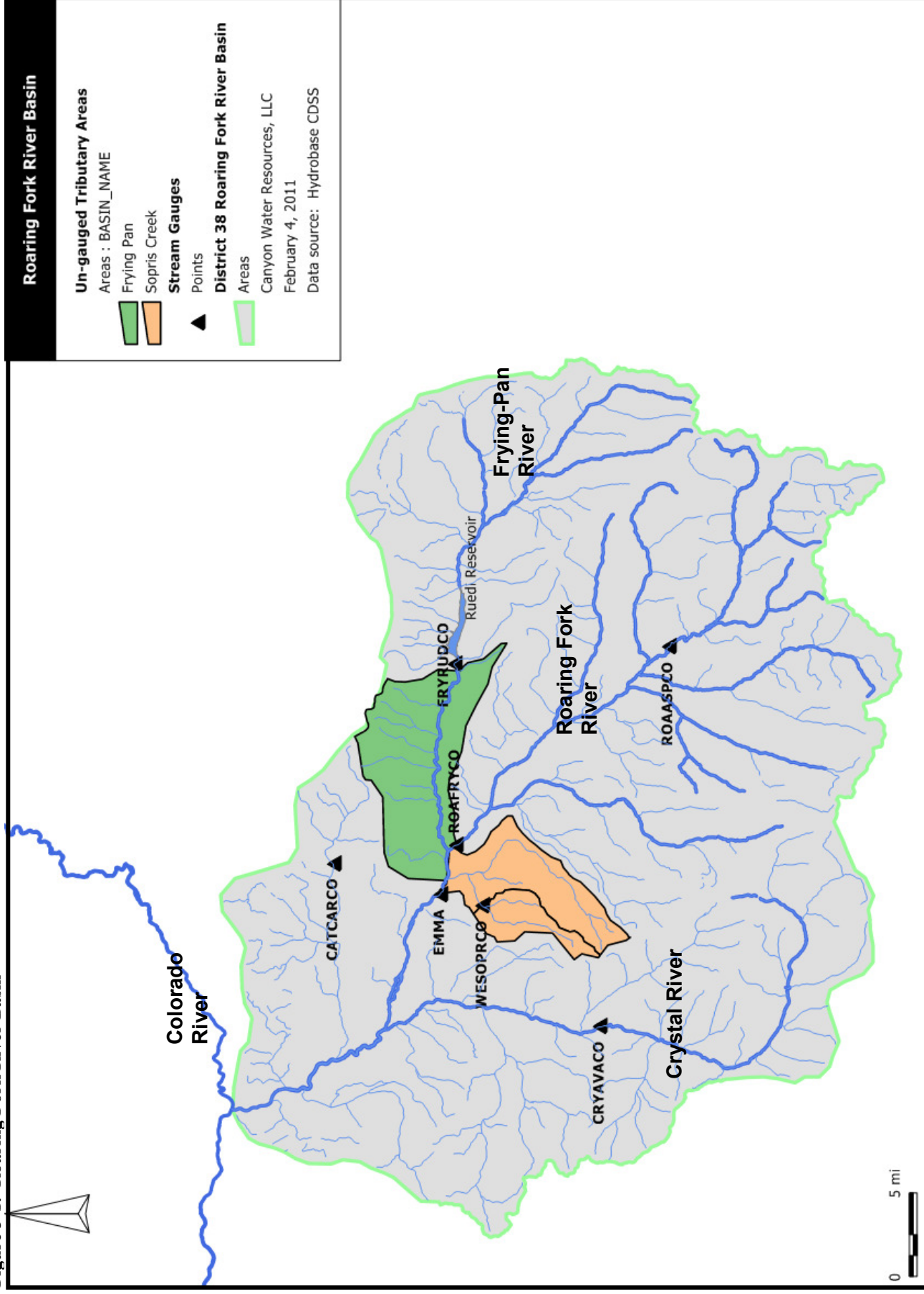


Figure 3-2: Statistical Summary of Daily Stream Flows at the Pitkin County River Park

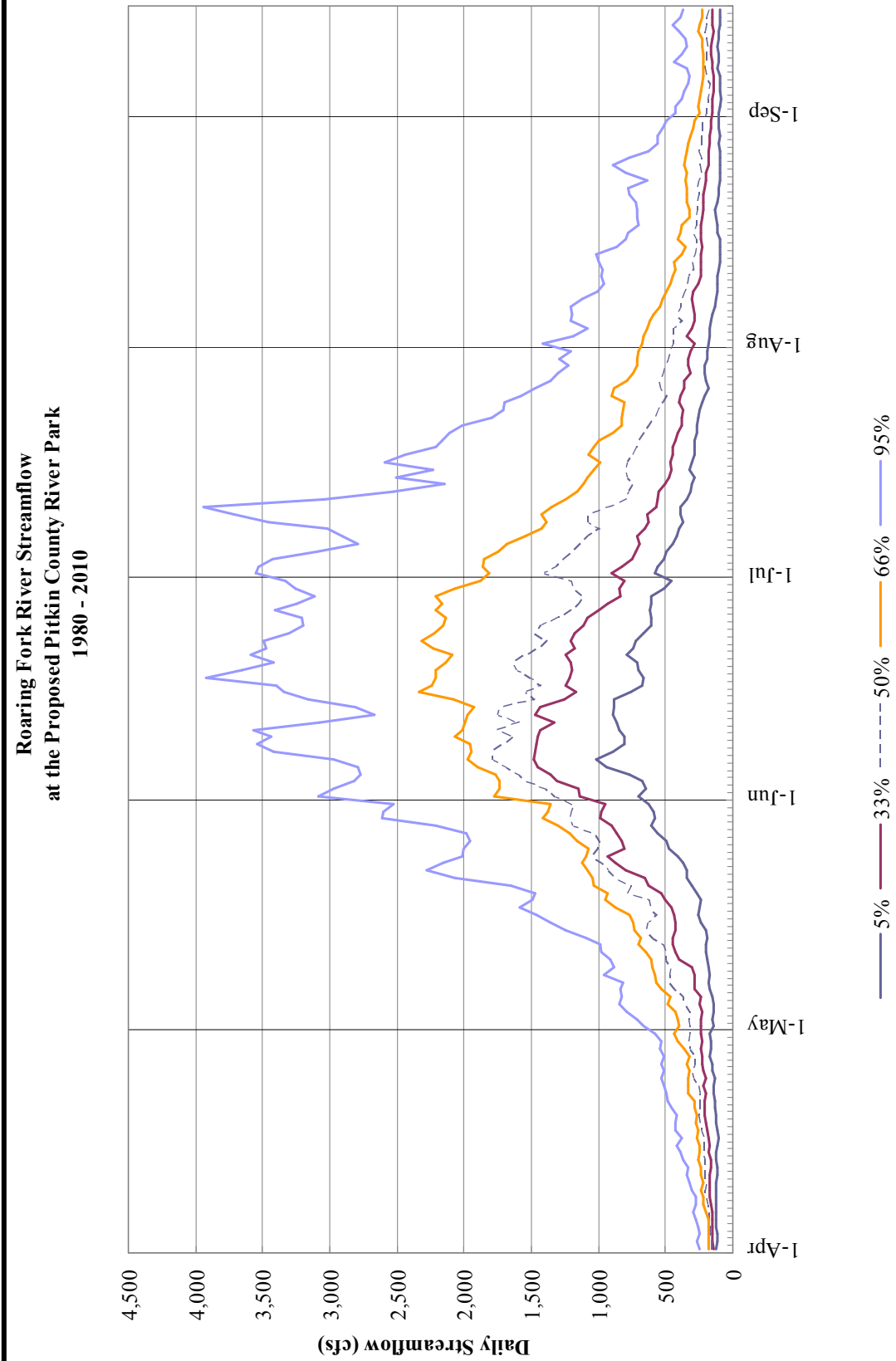


Figure 3-3: Roaring Fork River near Basalt

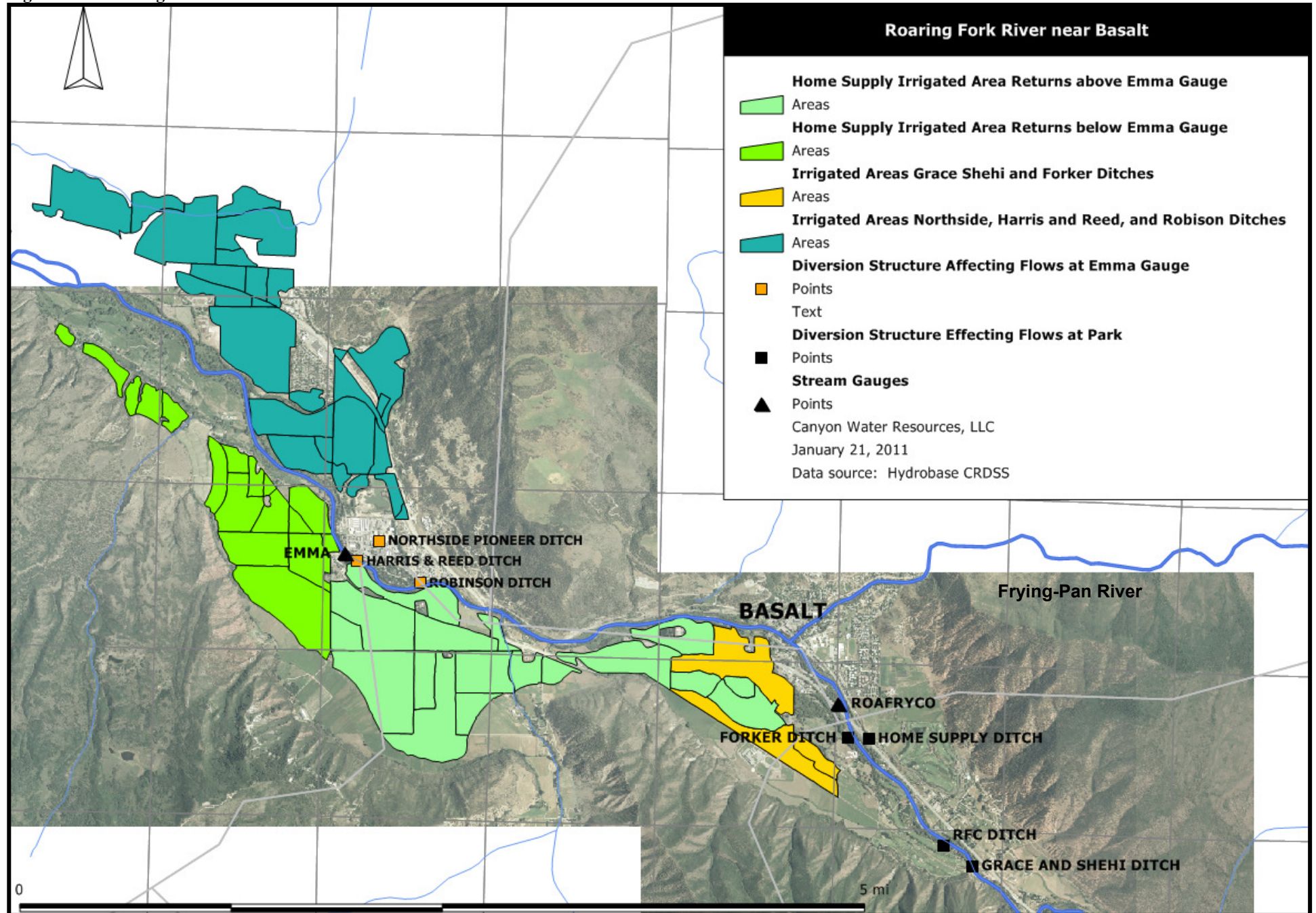


Table 3-1: Average Monthly Flow at the Pitkin County River Park

Discharge, cubic feet per second,

	Apr	May	Jun	Jul	Aug	15-Sep
1980	217	602	2,704	1,284	304	162
1981	215	423	1,103	396	137	142
1982	250	561	1,817	1,352	540	330
1983	134	485	2,511	2,246	817	249
1984	188	1,490	2,790	2,609	795	334
1985	370	1,077	2,773	1,477	406	223
1986	343	793	2,293	1,550	659	387
1987	311	943	1,768	673	300	171
1988	202	557	1,352	468	216	166
1989	323	662	1,079	502	260	141
1990	195	419	1,369	526	191	114
1991	161	698	1,714	858	276	248
1992	242	807	947	562	364	193
1993	204	967	2,461	1,623	628	343
1994	230	743	1,392	394	206	149
1995	185	450	2,683	4,108	1,340	403
1996	215	891	1,815	963	306	188
1997	263	843	2,694	1,321	692	301
1998	285	780	1,194	1,065	416	246
1999	126	688	2,018	1,151	513	293
2000	249	902	1,061	374	192	174
2001	169	761	1,018	382	285	167
2002	190	218	379	144	59	42
2003	174	808	1,413	355	109	163
2004	246	527	939	443	148	108
2005	211	704	1,510	1,000	388	194
2006	403	1,056	1,388	530	235	136
2007	285	890	1,297	468	223	172
2008	261	1,104	2,816	1,388	495	261
2009	305	1,455	1,680	937	255	143
2010	310	592	1,706	483	247	113
Mean of Monthly Discharge (cfs)	241	771	1,732	1,020	387	208

Table 3-2: Stream Flow Colorado River near Cameo

YEAR	Monthly mean in cfs (Calculation Period: 1980-01-01 -> 2009-09-30)												(acre-feet)
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1980	1,804	1,959	2,028	3,168	10,420	14,870	5,363	2,381	2,052	1,876	1,783	1,637	2,976,800
1981	1,369	1,185	1,193	1,880	3,259	5,499	2,403	1,745	1,861	1,892	1,627	1,426	1,528,700
1982	1,529	1,355	1,581	2,282	6,857	11,540	6,674	3,392	2,980	2,802	2,475	1,898	2,736,900
1983	1,696	1,700	1,797	2,214	8,783	23,780	16,280	6,538	2,755	2,494	2,533	2,393	4,402,000
1984	2,230	2,195	2,709	4,148	20,290	25,830	15,450	6,571	4,271	3,732	3,253	3,002	5,651,900
1985	2,621	2,476	2,834	6,377	16,440	17,160	7,190	3,555	2,541	3,205	2,928	2,417	4,207,800
1986	2,375	2,775	3,365	6,883	12,700	16,990	8,401	3,543	3,238	3,427	2,991	2,501	4,174,300
1987	2,158	2,222	2,362	3,730	8,229	7,653	3,077	2,484	2,140	2,046	2,094	1,789	2,412,300
1988	1,668	1,691	1,905	3,118	6,337	7,794	3,005	2,140	2,041	1,733	1,709	1,535	2,092,100
1989	1,475	1,467	1,843	3,239	5,287	5,337	2,816	2,377	1,953	1,903	1,574	1,370	1,848,600
1990	1,202	1,290	1,352	1,882	3,085	6,581	2,998	2,055	1,936	1,883	1,634	1,253	1,638,100
1991	1,385	1,323	1,392	2,060	6,449	9,885	3,958	2,412	2,365	2,002	1,970	1,583	2,219,200
1992	1,392	1,443	1,629	2,642	5,874	4,681	2,891	2,473	2,242	1,865	1,984	1,488	1,846,400
1993	1,389	1,387	1,893	2,993	13,680	15,320	7,941	3,283	2,596	2,432	2,162	1,891	3,436,900
1994	1,849	1,762	2,053	2,845	6,203	6,209	2,394	2,290	2,186	2,046	1,673	1,594	1,997,200
1995	1,521	1,564	1,937	2,321	5,611	19,500	17,060	5,683	3,152	2,778	2,601	2,246	3,980,300
1996	2,058	2,389	2,790	5,568	12,570	13,830	5,543	2,507	2,399	2,503	2,315	2,005	3,407,300
1997	2,035	1,918	2,748	4,058	13,830	21,610	7,080	5,044	3,618	3,461	2,554	2,381	4,243,500
1998	2,320	2,357	2,774	3,848	10,540	8,963	5,493	3,322	2,586	2,656	2,482	1,967	2,974,800
1999	1,879	1,786	1,801	2,169	5,665	12,800	6,021	3,523	3,084	2,960	2,167	1,757	2,751,800
2000	1,817	1,815	1,889	2,975	7,986	7,225	2,919	2,604	2,406	2,159	1,866	1,644	2,250,700
2001	1,485	1,431	1,502	2,319	6,301	5,445	2,747	2,702	2,469	2,058	1,721	1,293	1,898,800
2002	1,329	1,215	1,357	2,214	2,683	2,606	1,699	1,520	1,296	1,341	1,455	1,132	1,197,400
2003	1,081	1,073	1,200	1,723	6,855	8,491	2,774	2,285	2,376	2,335	1,630	1,433	2,006,400
2004	1,273	1,267	1,645	2,164	4,571	4,431	2,427	1,949	2,038	2,239	1,889	1,412	1,647,400
2005	1,580	1,333	1,450	2,907	8,059	10,440	5,562	2,866	2,701	2,662	2,369	1,850	2,641,300
2006	1,697	1,627	2,042	4,603	9,854	7,812	3,542	2,677	2,705	2,813	2,129	1,683	2,605,400
2007	1,443	1,762	2,502	3,104	7,200	7,461	3,316	2,536	2,665	2,469	1,785	1,803	2,295,400
2008	1,540	1,791	1,889	3,106	10,950	17,170	8,647	3,417	3,025	2,665	1,967	1,742	3,493,700
2009	1,674	1,636	1,777	3,320	12,960	13,380	6,652	3,053	2,493				
Mean of Monthly Discharge	1,700	1,710	1,970	3,200	8,650	11,300	5,740	3,100	2,540	2,430	2,110	1,800	Annual Average (acre-feet) 2,752,500

Table 3-3: Colorado River near Colorado-Utah State Line

YEAR	Monthly mean in cfs (Calculation Period: 1980-01-01 -> 2010-02-30)												Annual Total (acre-feet)
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1980	3,996	4,139	4,169	6,551	20,300	22,290	7,143	3,073	3,535	3,775	4,572	4,297	5,299,500
1981	3,844	3,123	2,681	2,727	4,600	6,516	2,954	2,278	3,322	4,017	3,528	3,131	2,577,400
1982	2,981	3,831	4,256	4,836	12,340	16,370	8,769	5,125	5,735	5,749	5,226	4,579	4,814,300
1983	4,363	4,210	4,384	4,574	17,540	41,400	25,650	10,190	4,991	5,167	5,235	5,262	8,022,000
1984	4,982	5,501	6,268	9,017	37,960	43,120	22,520	9,675	6,767	7,065	6,490	5,655	9,955,900
1985	6,129	5,996	7,401	15,600	28,570	25,280	9,789	5,013	5,119	7,210	6,353	5,993	7,749,800
1986	5,458	5,950	7,486	13,070	22,370	24,070	14,200	5,612	6,601	7,672	6,925	5,894	7,560,000
1987	5,116	5,517	6,174	9,163	15,520	11,080	5,023	4,225	3,892	4,267	4,650	3,766	4,729,600
1988	3,080	3,924	4,635	5,788	8,551	9,108	3,684	2,887	3,752	3,156	3,296	2,875	3,302,300
1989	2,593	2,861	3,998	5,731	6,651	6,234	3,064	3,281	2,862	3,274	2,851	2,240	2,753,500
1990	2,169	2,112	2,229	2,503	4,078	7,131	3,235	2,336	2,998	3,150	3,013	2,226	2,243,100
1991	2,272	2,851	2,714	3,729	10,610	14,320	5,289	3,592	4,379	3,887	4,355	3,666	3,720,300
1992	3,057	2,993	3,122	4,988	10,170	7,415	4,236	3,577	3,497	3,223	3,511	2,610	3,161,300
1993	2,535	3,215	5,384	7,737	27,350	25,390	10,970	5,097	4,604	4,568	4,768	4,320	6,391,400
1994	3,795	3,234	3,626	4,419	9,912	7,857	2,893	2,761	3,342	3,822	3,383	3,194	3,151,600
1995	2,725	2,724	4,149	5,540	15,040	33,590	29,650	8,360	4,731	5,689	5,945	5,239	7,443,800
1996	4,495	4,593	5,263	9,181	18,460	17,620	7,816	3,225	4,375	4,622	4,991	4,359	5,369,500
1997	4,587	4,794	7,157	9,932	22,500	29,980	10,260	7,490	7,174	7,356	6,025	5,365	7,397,800
1998	5,049	4,682	5,534	7,764	18,470	12,450	7,132	4,330	4,248	4,877	4,608	3,486	4,985,200
1999	3,404	3,214	3,221	3,387	9,775	15,190	8,085	6,824	6,041	5,618	4,094	3,466	4,363,100
2000	3,059	2,895	3,242	5,245	10,940	8,640	3,589	3,368	3,640	3,394	3,268	2,867	3,266,800
2001	2,597	2,567	2,834	3,372	9,017	6,310	3,047	3,521	3,505	3,277	3,074	2,505	2,752,700
2002	2,399	2,233	2,347	2,734	2,640	2,431	1,675	1,597	2,094	2,455	2,603	1,980	1,640,300
2003	1,876	1,822	2,030	2,341	9,043	10,100	3,066	2,660	3,637	3,223	2,822	2,391	2,715,600
2004	2,159	2,115	2,809	3,900	6,615	5,309	2,942	2,474	3,417	3,933	3,394	2,655	2,517,100
2005	3,117	3,050	3,585	7,511	16,110	15,750	7,121	4,035	4,194	4,688	3,928	3,308	4,609,100
2006	3,165	3,012	3,453	7,975	13,140	9,289	4,836	4,182	4,595	5,801	4,326	4,269	4,105,100
2007	3,864	3,460	4,709	5,048	10,200	8,872	3,786	3,662	4,488	4,617	3,913	3,725	3,640,600
2008	3,636	4,394	3,758	8,474	22,020	25,970	10,850	4,871	4,926	4,514	3,734	3,206	6,054,400
2009	3,229	3,191	3,493	6,154	20,390	17,910	8,503	4,066	3,673	3,959	3,254	2,675	4,856,500
2010	2,502	2,536											
Mean of Monthly Discharge (cfs)	3,490	3,570	4,200	6,300	14,700	16,200	8,060	4,450	4,340	4,600	4,270	3,710	Annual Average (acre-feet) 4,705,000

4 River Administration, Call Records, Potential Exchanges and Water Use, and Compact Entitlement

This section provides information regarding river administration and the Pitkin County RICDs. Section 4.1 discusses the administration of the Pitkin County RICD and explains the statutory limitations on the RICDs. Section 4.2 describes historical administration of the Roaring Fork River and provides a “basin-wide” framework to understand the administration affecting District 38. Section 4.3 discusses examples of potential beneficial consumptive uses that will serve development and explains how the RICD water rights will not impair development of consumptive uses. Section 4.4 covers the CWCB instream flows as requested in Rules 7 and 8. Finally, Section 4.5 discusses the Compact Entitlement as requested by the Rules.

The data referenced in this section include the Division 5 call records for the period of record 1987 – 2010, the water rights tabulation for District 38 and the Colorado River downstream of Glenwood Springs, portion of the Legislation for RICD, and information regarding water supplies and services in the Roaring Fork River above Basalt.

4.1 Administration of the Pitkin County RICD

The Pitkin County RICDs are non-consumptive and will be junior in-priority to all rights applied for in 2009. The only water uses that the RICDs may potentially affect are un-decreed water uses upstream of the proposed park. Consequently, the Pitkin County RICDs will not materially injure any existing water rights including exchanges through the reach.

Even at that, there are other limitations on RICD water rights. The RICD statute limits RICDs to the “kayak season” (April 1 through Labor Day) and there are volumetric and other timing constraints. The following excerpts from the RICD legislation (§37-92-305 (13), C.R.S.) describe other limitations on a RICD water right:

“(e) If the other elements of the appropriation are satisfied, the decree shall specify the total volume of water represented by the flow rates decreed for the recreational in-channel diversion. For purposes of this subsection (13), the "total volume of water represented by the flow rates decreed for the recreational in-channel diversion" means the sum of the flow rates claimed in cubic feet per second for each day on which a claim is made multiplied by 1.98.

(f) If the court determines that the total volume of water represented by the flow rates decreed for the recreational in-channel diversion exceeds fifty percent of the sum of the total average historical volume of water for the stream segment where

the recreational in-channel diversion is located for each day on which a claim is made, the decree shall:

(I) Specify that the state engineer shall not administer a call for the recreational in-channel diversion unless the call would result in at least eighty-five percent of the decreed flow rate for the applicable time period;

(II) Limit the recreational in-channel diversion to no more than three time periods; and

(III) Specify that each time period is limited to one flow rate.”

The flow rates and timing claimed by the Pitkin County River Park RICDs are in the category limited by paragraph (f) and the Pitkin County Application conforms to the resulting statutory constraints.

4.2 River Calls Affecting the Roaring Fork River

The call records indicate three general administrative scenarios for water rights on the Roaring Fork River. First, the “Cameo” call may curtail junior priorities in the Roaring Fork basin when the senior agricultural rights in the Grand Valley (near Grand Junction) do not have an adequate water supply. When the large storage reservoirs are in part filling with their available inflow and in part, by-passing flows to satisfy a downstream senior right, then a “by-pass” call may affect the Roaring Fork River. Finally, if a water right on the Roaring Fork River places a call, then junior water rights on the Roaring Fork River and tributaries above the calling right are curtailed.

The call records for the mainstem calls (Table 4-1) indicate that the senior Grand Valley rights may call out junior diversions on the Roaring Fork River during the early and late portions of the irrigation season. For the years 1987 – 2010 (24 years), there were 15 years with a call and 9 years without a Cameo call. As one may expect, 2002 had the most days on call, 122 days, with 88 consecutive days from July 9 to October 4, 2002. The combined flow rate of the senior Grand Valley water rights is 2,260 cfs⁵ (CDSS, Colorado River Model Users Manuel). By-pass calls result in curtailment of junior priorities above Cameo.

In 2002, a so-called “by-pass” call affected Division 38 (Table 4-2). A by-pass call results when the larger headwaters storage reservoirs (e.g., Green Mountain, Dillon and Ruedi) are in part filling with their available inflow and in part, by-passing inflow to satisfy a downstream senior right. As I understand it, the administration of the river under a by-pass call is based on the priority of the by-passing structure and the location of the structure to which flow is being by-passed.

⁵ Certain operations associated with the Orchard Mesa Check may reduce diversions to rates less than 2,260 cfs.

To my understanding, there are very rarely “local” calls affecting the mainstem of the Roaring Fork River above Glenwood Springs (personal communication with Bill Blakesly, Water Commissioner, District 38). In other words, rights on the mainstem of the Roaring Fork River generally have sufficient supplies. Table 4-3 shows the only recorded Roaring Fork River “mainstem” calls and they are calls for the CWCB in-stream flow in the reach from the confluence of Difficult Creek to the confluence of Maroon Creek above Aspen.

4.3 Effect of the Pitkin County River Park RICD on Water Uses

The CWCB Rules request information regarding the proximity of the RICD to “suitable points of diversion or storage for consumptive beneficial uses” (Rule 7.a.iii. and 7.a.iv.). This section provides examples of “suitable points of diversion” by evaluating the Division 5 water rights tabulation and giving examples of other available water supplies.

This analysis identifies conditional water rights located above Basalt as examples of suitable points of diversion or storage for beneficial uses. In round numbers there are approximately 280 conditional water rights amounting to 21,000 acre-feet of storage and 320 cubic feet per second of diversion rights in the Roaring Fork River basin above Basalt (Figure 4-1 and Appendix B.1).

Other potential upstream consumptive uses may be met through exchanges of Ruedi Reservoir supplies. Ruedi Reservoir water supplies may be leased through the Basalt Water Conservancy District (BWCD), from the Bureau of Reclamation, or potentially other entities or sources to provide augmentation water supplies for exchanges. For example, the BWCD’s pending applications in Case Numbers 01CW305 and 02CW077 are intended to supply consumptive uses in the area above Basalt (Appendix C provides a map of the BWCD service area).

There are many examples of suitable points of diversion for consumptive beneficial uses downstream of Basalt. Figure 4-3 shows the locations of conditional rights associated with structures diverting from the Roaring Fork (Basalt to Glenwood Springs) and the Colorado River (Glenwood Springs to the State Line). Associating the tabulation with those structures indicates approximately 150 water rights with direct diversions totaling thousands of cubic feet per second of flow and the storage totaling several hundred thousand acre-feet of volume (Appendix B.2).

These examples are only a sub-set of the water supply alternatives that may potentially develop water supplies associated with the Roaring Fork River. The City of Aspen has significant water supplies (absolute and conditional) to serve municipal demands in their service area. Special districts and entities such as Starwood Metropolitan District and Snowmass Water and Sanitation District presumably have water right portfolios to cover their existing and planned future developments, as well.

4.4 Instream Flows in the Reach of the Pitkin County RICDs

There is a CWCB instream flow water right that includes the reach of the proposed Pitkin County River Park RICDs. The ISF extends from the confluence of Maroon Creek and the Roaring Fork River to the confluence of the Fryingpan Pan River. The decreed flow rates are 55 cfs April 1 through September 30 and 30 cfs from October 1 through March 31. The rights were adjudicated in 1985 in Case Number 85CW646.

In addition, there are ISF water rights upstream of the proposed RICDs in the Roaring Fork River and others in tributaries to the Roaring Fork. All of the CWCB ISF water rights are senior to the Pitkin County River Park RICDs. The proposed RICDs could not materially injure ISF rights because of the relative priorities.

In fact, the flows associated with the RICDs may benefit and enhance the fishery and the natural environment by providing assurance that flows following the peaking hydrograph that are greater than the ISF minimum flows are maintained in the future.

4.5 Compact Entitlement

The status regarding Colorado's Compact Entitlement in the Colorado River Basin in Colorado is under investigation by the Bureau of Reclamation, the CWCB, the Colorado River Water Conservation District, and probably other water users and interests (Kuhn, 2006 and Bureau of Reclamation, various dates). The CWCB is dedicating significant resources to the State Water Supply Initiative, the State Water Availability Study, and data collection and process development efforts to answer questions regarding remaining compact entitlement amounts and locations.

The CWCB Rule 7. i. states, *"The amount and location of remaining unappropriated compact entitlement waters in the basin in question and at the RICD point of diversion"*. Development of this information seems well beyond the scope of what is necessary to characterize and describe the Pitkin County River Park RICDs. To my knowledge there are no State or Bureau of Reclamation sources that describe and quantify Colorado's unappropriated compact entitlement waters.

Regardless, the Pitkin County RICDs do not preclude development of consumptive uses in any Colorado River Basin stream. The RICD is non-consumptive of Colorado's water supplies, the water right will have priority of 2010 and will be junior to all applications filed in 2009, and the park is located sufficiently far upstream of the Colorado State Line to permit beneficial consumptive uses before the water supplies leave the State. The Pitkin County River Park RICDs will not materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements.

Table 4-1: Division 5 Mainsteam Calls Affecting District 38, 1987 - 2010

Year	Start	End	No. Days	Water Right	Appro. Date	Admin. No.	Amount
1987	8/20/1987	8/22/1987	3	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	9/11/1987	10/23/1987	43	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
1988	7/19/1988	10/21/1988	95	GRAND VALLEY PROJECT	1908-02-27	30895.21241	1020.0000 CFS
	8/16/1988	9/13/1988	29	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
1989	7/19/1989	8/28/1989	41	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	8/28/1989	10/31/1989	65	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
1990	7/30/1990	8/9/1990	11	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	8/9/1990	10/9/1990	62	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
	10/9/1990	10/22/1990	14	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
1991	9/2/1991	9/13/1991	12	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	9/30/1991	10/25/1991	26	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
1992	7/30/1992	8/19/1992	21	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	8/19/1992	9/8/1992	21	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
	9/8/1992	9/11/1992	4	GRAND VALLEY PROJECT	1908-02-27	30895.21241	1020.0000 CFS
	9/11/1992	9/18/1992	8	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
	9/18/1992	10/26/1992	39	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
1993	No Call		0				
1994	7/15/1994	7/29/1994	15	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	7/29/1994	8/5/1994	8	GRAND VALLEY PROJECT	1908-02-27	30895.21241	1020.0000 CFS
	8/5/1994	9/30/1994	57	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
1995	No Call		0				
1996	8/13/1996	9/18/1996	37	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
1997	No Call		0				
1998	No Call		0				
1999	No Call		0				
2000	7/29/2000	8/9/2000	12	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	8/9/2000	8/19/2000	11	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
	8/19/2000	8/28/2000	10	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	9/8/2000	9/13/2000	6	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	9/13/2000	9/23/2000	11	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
	10/3/2000	10/16/2000	14	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
2001	4/25/2001	4/27/2001	3	GRAND VALLEY PROJECT	1935-08-01	31258.00000	160961.0000 AF
	8/28/2001	9/18/2001	22	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	9/26/2001	9/28/2001	3	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	9/28/2001	10/16/2001	19	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
2002	4/24/2002	4/28/2002	5	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	5/1/2002	5/2/2002	2	GRAND VALLEY CANAL	1957-07-29	39291.00000	102369.0000 AF
	5/2/2002	5/3/2002	2	GRAND VALLEY CANAL	1946-06-24	35238.00000	788.0000 CFS
	5/3/2002	5/7/2002	5	GRAND VALLEY CANAL	1935-08-01	31258.00000	160961.0000 AF
	6/24/2002	6/27/2002	4	GRAND VALLEY CANAL	1935-08-01	31258.00000	160961.0000 AF

	6/27/2002	7/3/2002	7	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	7/3/2002	7/6/2002	4	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
	7/6/2002	7/8/2002	3	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	7/8/2002	7/9/2002	2	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	7/9/2002	10/4/2002	88	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
2003	7/31/2003	8/11/2003	12	GRAND VALLEY CANAL	1935-08-01	31258.00000	160961.0000 AF
	8/11/2003	8/13/2003	3	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	8/13/2003	8/18/2003	6	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
	8/18/2003	8/19/2003	2	GRAND VALLEY PROJECT	1921-07-04	30870.26117	330.0000 CFS
	9/3/2003	9/8/2003	6	GRAND VALLEY PROJECT	1935-08-01	31258.00000	160961.0000 AF
	9/22/2003	11/4/2003	44	GRAND VALLEY PROJECT	1908-02-27	30895.21241	1020.0000 CFS
2004	4/28/2004	5/1/2004	4	GRAND VALLEY PROJECT	1987-12-14	50386.00000	59993.0000 AF
	7/12/2004	7/13/2004	2	GRAND VALLEY CANAL	1957-07-29	39291.00000	102369.0000 AF
	7/13/2004	7/15/2004	3	GRAND VALLEY CANAL	1935-08-01	31258.00000	160961.0000 AF
	7/15/2004	7/16/2004	2	GRAND VALLEY CANAL	1935-11-10	31359.00000	93637.0000 AF
	7/16/2004	7/17/2004	2	GRAND VALLEY CANAL	1946-06-24	35238.00000	788.0000 CFS
	8/2/2004	8/9/2004	8	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	8/9/2004	8/21/2004	13	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
	8/21/2004	8/24/2004	4	GRAND VALLEY CANAL	1935-08-01	31258.00000	160961.0000 AF
	8/24/2004	8/30/2004	7	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	8/30/2004	9/21/2004	23	GRAND VALLEY PROJECT	1908-02-27	22729.21241	730.0000 CFS
	9/21/2004	9/29/2004	9	GRAND VALLEY CANAL	1935-08-01	31258.00000	160961.0000 AF
	10/6/2004	10/15/2004	10	GRAND VALLEY CANAL	1935-08-01	31258.00000	160961.0000 AF
	10/16/2004	10/20/2004	5	GRAND VALLEY CANAL	1935-08-01	31258.00000	160961.0000 AF
2005	No Call		0				
2006	No Call		0				
2007	8/13/2007	8/17/2007	5	GRAND VALLEY CANAL	1935-08-01	31258.00000	160961.0000 AF
	8/17/2007	8/24/2007	8	GRAND VALLEY CANAL	1946-06-24	35238.00000	788.0000 CFS
	8/31/2007	9/4/2007	5	GRAND VALLEY CANAL	1935-08-01	31258.00000	160961.0000 AF
	9/4/2007	9/19/2007	16	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS
	9/19/2007	9/25/2007	7	GRAND VALLEY CANAL	1935-08-01	31258.00000	160961.0000 AF
	10/12/2007	10/17/2007	6	GRAND VALLEY CANAL	1935-08-01	31258.00000	160961.0000 AF
2008	No Call		0				
2009	No Call		0				
2010	9/3/2010	9/10/2010	8	GRAND VALLEY CANAL	1914-04-26	30895.23491	119.4700 CFS

Table 4-2: By-pass Calls Affecting District 38:

Year	Start	End	No. Days	Water Right	Appro. Date	Admin. No.	Amount
2002	5/3/2002	5/7/2002	5	GREEN MOUNTAIN RESERVOIR	1914-04-26	30895.23438	119.47 CFS
	6/24/2002	6/26/2002	3	GREEN MOUNTAIN RESERVOIR	1914-04-26	30895.23438	119.47 CFS
	7/6/2002	7/8/2002	3	GREEN MOUNTAIN RESERVOIR	1914-04-26	30895.23438	119.47 CFS
	5/2/2002	5/3/2002	2	DILLON RESERVOIR	1914-04-26	30895.23438	119.47 CFS
	5/1/2002	5/2/2002	2	RUEDI RESERVOIR	1914-04-26	30895.23438	119.47 CFS

Table 4-3: District 38 Calls Affecting the Roaring Fork River

Year	Start	End	No. Days	Water Right	Appro. Date	Admin. No.	Amount
2008	9/2/2008	9/12/2008	11	MIN FLOW ROARING FORK 3	1976-01-14	46034.00000	32.0000 CFS
	9/13/2008	10/7/2008	25	MIN FLOW ROARING FORK 3	1976-01-14	46034.00000	32.0000 CFS
	10/12/2008	10/13/2008	2	MIN FLOW ROARING FORK 3	1976-01-14	46034.00000	32.0000 CFS
	11/18/2008	12/14/2008	27	MIN FLOW ROARING FORK 3	1976-01-14	46034.00000	32.0000 CFS
2010	9/20/2010	9/23/2010	4	MIN FLOW ROARING FORK 3	1976-01-14	46034.00000	32.0000 CFS
	9/27/2010	9/29/2010	3	MIN FLOW ROARING FORK 3	1976-01-14	46034.00000	32.0000 CFS
	10/14/2010	10/27/2010	14	MIN FLOW ROARING FORK 3	1976-01-14	46034.00000	32.0000 CFS
	10/29/2010	Active		MIN FLOW ROARING FORK 3	1976-01-14	46034.00000	32.0000 CFS

Figure 4-1: Conditional Water Rights Upstream of the Pitkin County River Park RICDs

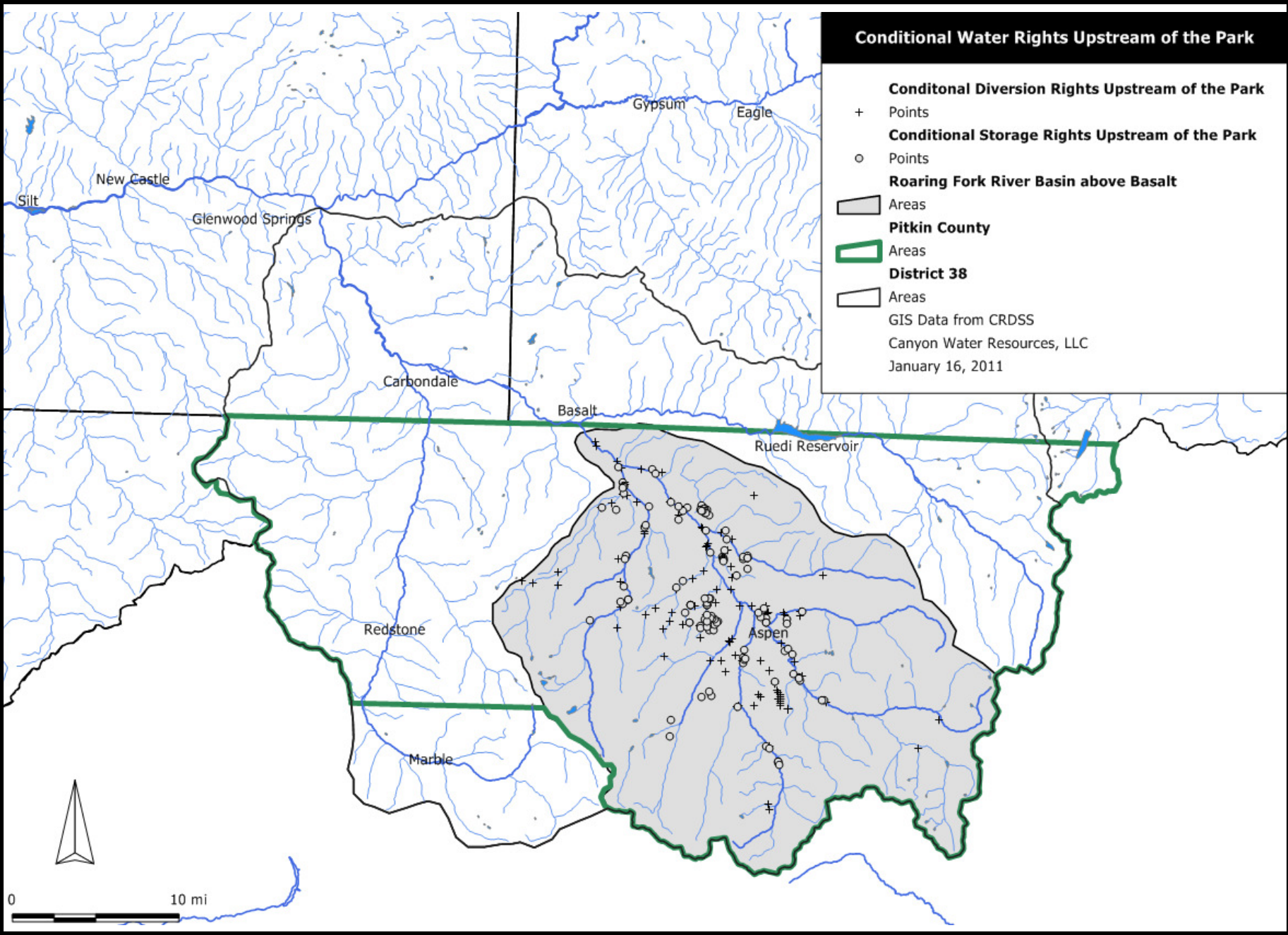
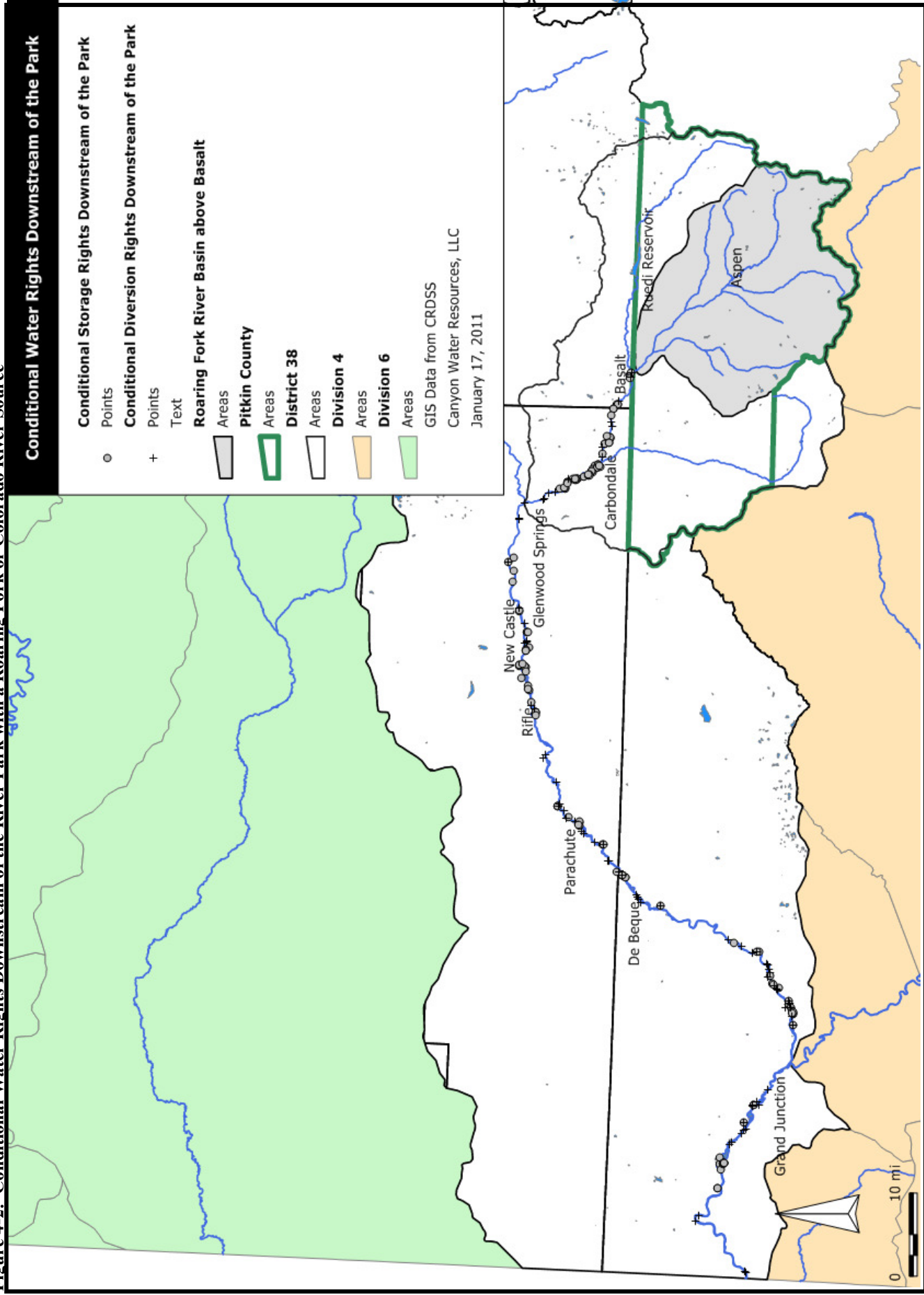


Figure 4-2: Conditional Water Rights Downstream of the River Park with a Roaring Fork or Colorado River Source



5 Daily Flow Statistics and the Proposed RICDs Flow Amount and Timing

This section provides charts combining the daily flow statistics at the Pitkin County River Park with the proposed RICD water rights claims. On the charts, the colored bars illustrate the RICD water right claim for each structure, flow rate, and time period. The top of the bar represents the RICD claim and the lower extent of the bar is 85% of the claimed RICD flow. The daily flows for the 5th, 33rd, 50th (median), 66th percentile statistics are shown as the “hydrograph” traces. Figure 5-1 and 5-2 provide the charts for the Upper Structure Unit and Figure 5-2 for the Lower Structure Unit, respectively.

Keep in mind that the traces shown on the charts do not represent the stream flow for any one year. Instead, the traces provide information on how often a given day (x-axis) will have at least a certain flow rate (y-axis). The charts illustrate the RICD water right and give an indication of the timing and flows when the rights may effect water rights with junior priorities. If the RICD call would produce at least 85% of the claimed RICD flow rate then, the State Engineer shall curtail junior diversions and junior exchanges upstream of the RICD that deplete the reach.

Figure 5-1: Stream flow Statistics and the Proposed Upper Structure Unit RICDs

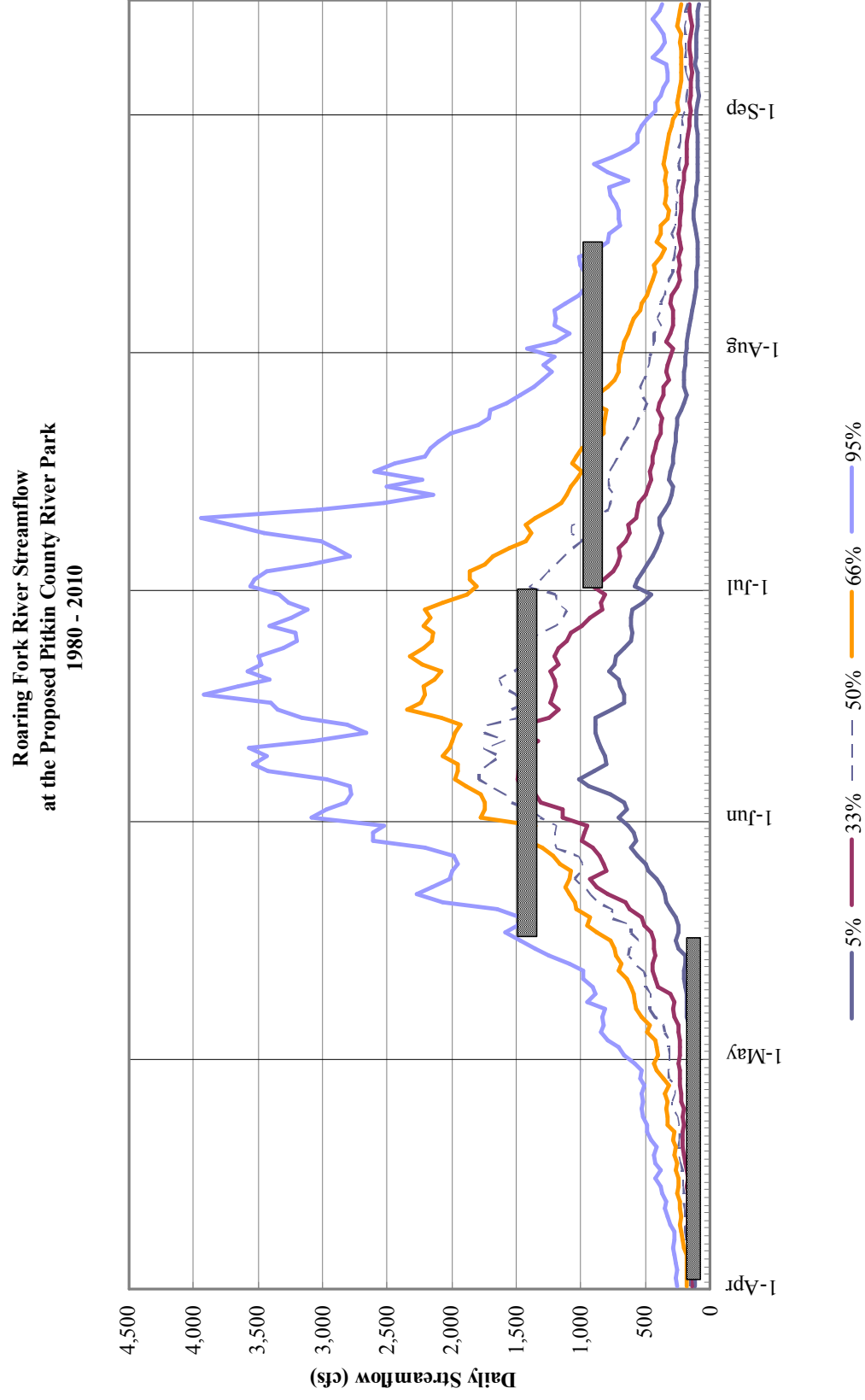
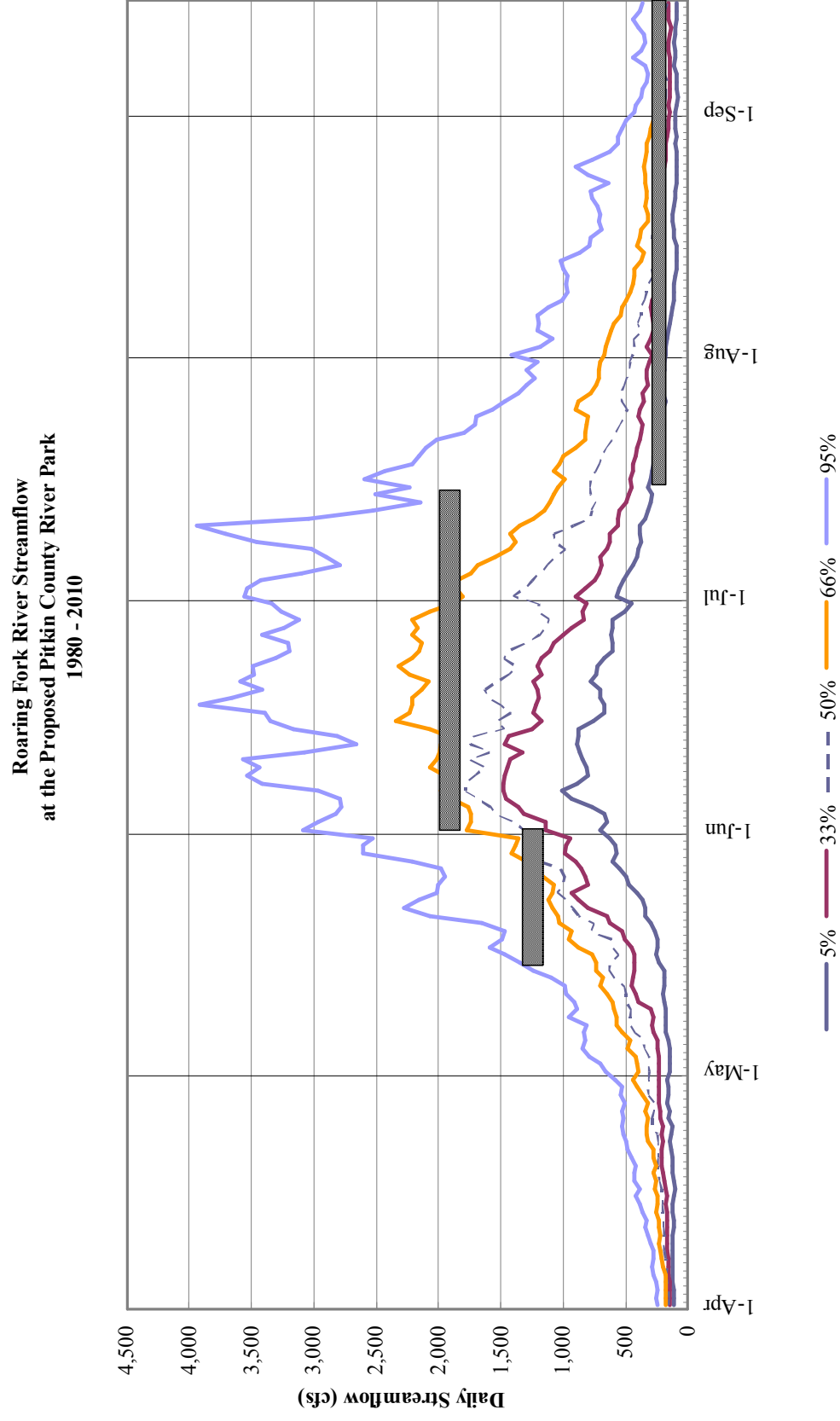


Figure 5-2: Stream Flow Statistics and the Lower Structure Unit RICDs



6 Conclusions

The CWCB Recreational In-Channel Diversion Rules requires the CWCB to make findings relative to the Pitkin County River Park RICDs. This report provides information responding to certain parts of Rules 7 and 8 and the Design Report (River Restoration, 2011) provides additional responses in the areas regarding the reasonable recreation experience and the design of the River Park.

The required findings and Pitkin County's responses follow:

“Whether the adjudication and administration of the recreational in-channel diversion would materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements.”

The adjudication and administration of the Pitkin County River Park RICDs will not materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements.

“Whether exercise of the recreational in-channel diversion would cause material injury to instream flow water rights appropriated pursuant to subsections (3) and (4) of this section.”

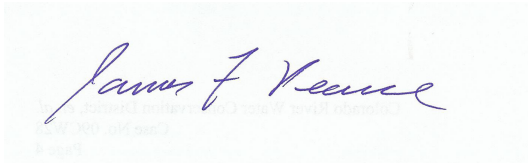
The exercise of the Pitkin County River Park RICDs will not cause material injury to instream flow water rights appropriated pursuant to the relevant sections of the statute.

“Whether adjudication and administration of the recreational in-channel diversion would promote maximum utilization of waters of the state.”

The adjudication and administration of the Pitkin County River Park RICDs will promote maximum utilization of the waters of the State by assuring the minimum flows needed for a reasonable recreational experience for a range of freestyle whitewater skills while not precluding development of beneficial consumptive uses.

7 Signature Page

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February 7, 2011

James F. Pearce
Manager, Canyon Water Resources, LLC

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EXHIBIT F

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FILING ID: E22C4775F6524

CASE NUMBER: 2010CW305

**Supplemental Information in Support of the Pitkin County River Park
Recreational In-Channel Diversions Water Rights Application
Case No. 10CW305, Water Division 5**

May 2011

Prepared for:

Board of County Commissioners of Pitkin County

Prepared by:

Mr. James F. Pearce
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685 Canyon Creek Driver
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Introduction

This supplemental report provides information regarding the proposed Pitkin County River Park Recreational In-Channel Diversion (RICD) water rights. The report addresses areas of inquiry raised by the CWCB staff during discussions with Pitkin County's representatives in February 2011.

The CWCB staff requested additional information and data presentations to help explain the impact of the proposed RICD water rights on administration and water development in the Roaring Fork River valley. Because the RICD water rights are non-consumptive, they have no effect on any water uses downstream of the Lower Structure Unit. Also, because the water rights operate in the prior appropriation system, the RICD water rights have no effect on water rights with a priority date senior to the RICD water rights. Therefore, this supplemental report focuses on administration and how the RICD water rights may impact development of consumptive uses located upstream and with priorities junior to the Pitkin County River Park RICD water rights.

Discussion

There are two RICD water rights each associated with its own control structures (Upper Structure Unit and the Lower Structure Unit). For each Unit, the hydraulic engineering analysis describes three unique flow rates indicating varying recreational experiences (River Restoration, 2011).

Proposed Pitkin County River Park RICD Water Rights Amounts and Timing

Structure	Period	Flow Rate (cfs)	Experience
The Upper Structure Unit	April 1 – May 14	240	Blue
	May 15 – June 30	1,500	Double Black
	July 1 – August 15	1,000	Black
The Lower Structure Unit	May 14 – May 31	1,350	Blue
	June 1 - July 14	2,000	Black
	July 15 – Sept. 15	380	Green

1 – Statutory Limitations

The RICD legislation (§37-92-305 (13), C.R.S.) sets forth the following RICD water rights restrictions under paragraphs (e) and (f):

(e) If the other elements of the appropriation are satisfied, the decree shall specify the total volume of water represented by the flow rates decreed for the recreational in-channel diversion. For the purposes of the subsection (13), the “total volume of water represented by the flow rates decreed for the recreational in-channel diversion” means the sum of the flow rates claimed in cubic feet per second for each day on which a claim is made multiplied by 1.98.

(f) If the court determines that the total volume of water represented by the flow rates decreed for the recreational in-channel diversion exceeds fifty percent of the sum of the total average historical volume of water for the stream segment where the recreational in-channel diversion is located for each day on which a claim is made, the decree shall:

- (I) Specify that the state engineer shall not administer a call for the recreational in-channel diversion unless the call would result in at least eighty-five percent of the decreed flow rate for the applicable time period;*
- (II) Limit the recreational in-channel diversion to no more than three time periods; and*
- (III) Specify that each time period is limited to one flow rate.”*

Paragraph (e) of the RICD statute requires the determination of the “*total volume of water represented by the flow rates decreed for the recreational in-channel diversion,*” and defines that as, “*the sum of the flow rates claimed in cubic feet per second for each day on which a claim is made multiplied by 1.98* (RICD total volume).

Paragraph (f) requires that an applicant compare the RICD total volume to “*fifty percent of the sum of the total average historical volume of water for the stream segment where the recreational in-channel diversion is located for each day on which a claim is made.*” (fifty percent average historical volume). When the RICD total volume exceeds the fifty percent average historical volume paragraph (f) imposes three restrictions on the RICD water rights: (1) the state engineer shall not administer a call for the recreational in-channel diversion unless the call would result in at least eighty-five percent of the decreed flow rate for the applicable time period; (2) limits the RICD water right to no more than three time periods, and (3) limits each time period to one flow rate.

Attachments A and B provide the comparison of the RICD total volumes and the fifty percent average historical volumes for each day for the Upper Structure Unit and Lower Structure Unit RICD water rights. The following table summarizes the comparisons:

Comparison of the RICD Total Volumes and the Fifty Percent Average Historical Volumes

Structure	Period	Number of Days	RICD Flow Rate (cfs)	RICD Total Volume (af)	Fifty Percent Average Historical Volume (af)
The Upper Structure Unit	April 1 – May 14	44	240	20,909	13,744
	May 15 – June 30	47	1,500	139,590	68,494
	July 1 – Aug 15	46	1,000	91,080	38,228
			Total	251,579	120,466
The Lower Structure Unit	May 14 – May 31	18	1,350	48,114	17,685
	June 1 - July 14	44	2,000	174,240	69,288
	July 15 – Sept 15	63	380	47,401	25,452
			Total	269,755	112,425

This table indicates that the RICD total volumes exceed fifty percent of the historical average flows and consequently, the Pitkin County River Park RICD water rights are limited by paragraph (f).

The RICD legislation makes administration of the Pitkin County River Park RICD water rights unusual. When the RICD total volume historical volume exceeds the fifty percent historical average flows, the Division Engineer shall not administer a call for the RICD water rights unless the call would result in at least eighty-five percent of the decreed flow rate. In other words, the RICD legislation imposes a lower administrative threshold.

To illustrate the lower threshold consider the Lower Structure Unit RICD flow rate of 2,000 cfs for the period June 1 – July 14. First, 85% of 2,000 cfs is 1,750 cfs. If the daily flow at the Pitkin County River Park (as measured at the Roaring Fork River above Basalt stream gage located immediately upstream of the Park) was 1,749 cfs and curtailment of diversions by junior water rights resulted in 1 cfs or more, then the Division Engineer would administer a call. If curtailment resulted in less than 1 cfs, then the Division Engineer would not administer a call. This example demonstrates the exercise of the lower administrative threshold.

As with any water right, if the natural stream flow exceeds the RICD water right's flow rate (without the Pitkin County River Park RICD call), then the RICD water right would be satisfied and could not call.

To illustrate the operation of the upper threshold consider the 2,000 cfs flow rate and assume the daily flow is 1,750 cfs. The Division Engineer would administer a call and junior diversions would be curtailed until the flow rate at the Park either increased to values greater than 2,000 cfs, or decreased to values less than 1,750 cfs (the lower threshold).

With RICD water right administration in mind, the following evaluations compare the estimated historical daily flows at the Pitkin County River Park to the RICD water rights to determine the days when the RICD water rights would potentially be in-priority.

Section 2 – Analysis of the Pitkin County River Park RICD Water Rights

This section compares the Pitkin County River Park RICD water rights to the estimated historical flow in the Roaring Fork River at the River Park to determine when river flows were within the upper and lower thresholds of each proposed water right on a daily basis. These analyses will indicate how the RICD water rights may potentially affect administration of upstream water rights decreed junior to the RICD water rights.¹ Figures 1 and 2 illustrate and provide examples of the comparison.

Figures 1 and 2 show the Upper and Lower RICD water rights timing and quantity, respectively, along with the hydrographs for an example wet season (1986) and an example dry season (2002). The timing and quantities of the RICD water rights are generally depicted by the shaded boxes. The trace of the estimated daily flow (hydrograph) year 1986 is shown as the upper line and year 2002 as the lower line.² When the daily value on the hydrograph “lands” in a shaded box, the estimated historical flow was less than or equal to the RICD water right and greater than or equal to 85% of the RICD water right. In other words, the RICD water right can place a call under that condition.

On **Figure 1**, the shaded boxes indicate the Upper Structure Unit RICD water right represented by flow rates of 240 cfs, 1,000 cfs, and 1,500 cfs. As you know, 2002 was a low flow season. The trace of the hydrograph shows that in 2002 the estimated flow of the Roaring Fork River at the Pitkin County River Park did not exceed approximately 800 cfs. In other words, the stream flow was low enough that neither the Upper Structure Unit’s 1,500 cfs nor 1,000 cfs flow rates would have potentially placed a valid call. For the 2002 hydrology, the only potential valid calls for the Upper Structure Unit would have been for its 240 cfs flow rate in the early portion of the RICD season.

Figure 2 illustrates the Lower Structure Unit water right represented by flow rates of 1,350, 2,000, and 380 cfs. The 2002 hydrograph indicates that flows in 2002 were always less than any of the Lower Structure Unit RICD flow rates. Consequently, the Lower Unit RICD water rights would not have been in in-priority in the 2002 low flow season. In 2002, the Pitkin County River Park RICD water rights would not have placed a call on 160 out of 168 days during the RICD season from April 1 to September 15.

The same analysis, but using the wet season hydrograph (1986) on Figures 1 and 2, indicates that the Pitkin County River Park RICD water rights would have potentially been in-priority on 26 days in 1986. So for the wet season example, upstream junior

¹ Other administrative calls may impact administration of the Roaring Fork River upstream of the confluence with the Frying-Pan River (i.e., CWCB instream flow or Grand Valley “Cameo” water rights).

² The median daily value of flow for the period 1980 – 2010 is indicated by the dashed black line.

water rights would not be impacted by the RICD water rights on 142 of the 168 days during the RICD season.

Tables 1 – 6 (located at the end of the report text) expand the analysis of the estimated historical daily flow by comparing the Pitkin County River Park RICD water rights for April 1 – September 15 and years 1980 – 2010.³ Tables 1 – 3 correspond to the Upper Structure Unit 240, 1,500, and 1,000 cfs flow rates, respectively. Tables 4 – 6 correspond to the Lower Structure Unit 1,350, 2,000, and 350 cfs flow rates, respectively.

For each water right flow rate, the cells (containing the daily values for stream flow) are shaded whenever the estimated historical flows were less than or equal to the RICD water right flow rate and greater than or equal to 85% of the RICD water right flow rate. At those flows, the RICD water right would have been in-priority and able to place a call. The shaded days on Table 1 - 6 represent the historical hydrologic conditions when a RICD water right could potentially call out diversions by upstream water rights decreed junior to the RICD.

Table 1 corresponds to the 240 cfs flow rate at the Upper Structure Unit. The top row indicates the years 1980 – 2010 and the left hand column indicates the dates April 1 through May 14 (the time period associated with the 240 cfs flow rate). Each cell contains the estimated daily flow for the corresponding date and year. Shaded cells represent days when the estimated historical flow was between 240 cfs and 204 cfs (i.e., 85% of 240). The bottom row (labeled “count”) indicates the number of days in each year the historical daily flow was within that range such that the RICD water right could have placed a call.

At the bottom of Table 1 is a summary of the information regarding the 240 cfs flow rate. The time period for the flow is from April 1 to May 14 and includes 44 days. For the period of record (31 years) there are 1,364 total days associated with the 240 cfs flow rate. The flow during April 1 – May 14 is between 240 and 204 cfs on 162 days of the total 1,364 days or 12% of the total days.

The following table summarizes the historical period 1980 – 2010 showing the number of days when the estimated flow of the Roaring Fork River was such that a Pitkin County RICD water right would be been able to place a call and, as a result, may have potentially affected river administration.

³ Tables 2 and 4 include additional information. The cells that are shaded and outlined by a box indicate 25 days when the historical flow rate was between 1,350 and 1,275 cfs during the dates May 15 to May 30. These flow rates and dates represent the slight “overlap” between the Upper Structure Unit 1,500 cfs water right and the Lower Structure Unit 1,350 cfs water right during the last two weeks in May.

Number of Days when Roaring Fork River Administration Potentially Affected by Pitkin County River Park RICD Water Rights

	Upper Structure Unit Water Right Flow Rates (cfs)			Lower Structure Unit Water Right Flow Rates (cfs)			April 1 - Sept 15 Accounting for "overlap" in 1,500 and 1,350 cfs water rights
	240 cfs April 1 - May 14	1,500 cfs, May 15 - Jun 30	1,000 cfs, Jul 1 - Aug 15	1,350 cfs, May 14 - May 31	2,000 cfs, June 1 - July 14	380 cfs, July 15 - Sept 15	
1980	1	2	2	0	3	4	12
1981	6	4	0	0	4	2	16
1982	1	6	4	0	12	1	24
1983	2	6	0	2	8	0	20
1984	8	2	3	1	2	8	24
1985	1	5	2	2	11	2	22
1986	4	0	5	6	8	3	26
1987	0	8	2	4	5	6	24
1988	13	5	1	0	5	4	28
1989	7	8	1	1	0	7	24
1990	8	2	3	0	3	2	18
1991	3	5	5	7	4	5	28
1992	4	0	2	2	0	12	20
1993	1	7	8	7	8	7	35
1994	3	9	0	1	2	7	22
1995	16	3	1	0	3	2	25
1996	8	5	5	5	9	4	36
1997	10	4	9	7	2	7	36
1998	4	9	4	1	3	10	31
1999	5	12	7	4	6	12	46
2000	12	6	0	2	2	4	25
2001	2	11	0	5	0	6	21
2002	8	0	0	0	0	0	8
2003	7	10	0	2	0	0	17
2004	7	2	0	0	0	4	13
2005	7	8	5	2	7	8	36
2006	4	4	0	3	6	7	21
2007	0	12	0	4	4	7	32
2008	4	4	6	4	5	9	28
2009	2	10	3	2	15	5	35
2010	2	3	3	2	1	7	17
total							770
							average = 24 days out of 168 days

The maximum number of days that the RICD water rights would have placed a call was 46 days in 1999, with the minimum being 8 days in 2002. Generally, drier seasons have fewer days when the RICD water rights may potentially call and the average and wet seasons have more days with RICD water right administration. The average for the 1980 – 2010 period is 24 days per season.

Considering the average 24 days per year, water rights upstream and junior to the Pitkin County River Park RICD water rights would not be impacted by the water rights on 86% of the days during the RICD season. If not limited by other administrative or physical water supply constraints, new junior rights will have many days to divert (on average 144 out of 168 days). It seems apparent that even with the RICD water rights, new junior water rights will have ample opportunities to divert in-priority water supplies.

Conclusions

This supplemental report addresses areas of inquiry raised by the CWCB staff and provides additional information and data presentations that explain the impact of the proposed RICD water rights on administration and water development in the Roaring Fork River valley.

- Because the RICD water rights are non-consumptive, they have no effect on any water uses downstream of the Lower Structure Unit.
- Because the RICD water rights operate in the prior appropriation system, the RICD water rights have no effect on any uses decreed senior to the RICD water rights.
- The RICD water rights may impact development of consumptive uses located upstream and with priorities junior to the Pitkin County River Park RICD water rights.
- Considering the Roaring Fork River historical flows (1980 – 2010) at the Pitkin County River Park and RICD water rights as limited under paragraph (f) of the RICD statutes, the Upper and Lower Structure Units water rights combined could have called on junior water rights an average of 24 days over the 168 day RICD season (April 1 – September 15).
- The historical data indicates that generally, the RICD water rights may be potentially in-priority less often in the drier years and more often in the wetter years. The maximum number of days in the historical period was 46 out of 168 days (in 1999) and the minimum number was 8 out of 168 day(in 2002). The average was 24 out of 168 days.
- Considering the average 24 days per year, water rights upstream and junior to the Pitkin County River Park RICDs would not be impacted by the water rights on 86% of the days during the RICD season. If not limited by other administrative or physical water supply constraints, new junior rights will have many days other to divert (on average 144 out of 168 days). Obviously, the junior water rights would not be affected outside the RICD season.
- Even with the RICD water rights, new junior water rights will have ample opportunities to divert water supplies in-priority.

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Signature Page

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Manager, Canyon Water Resources, LLC

Date: May 9, 2011

Figure 1:

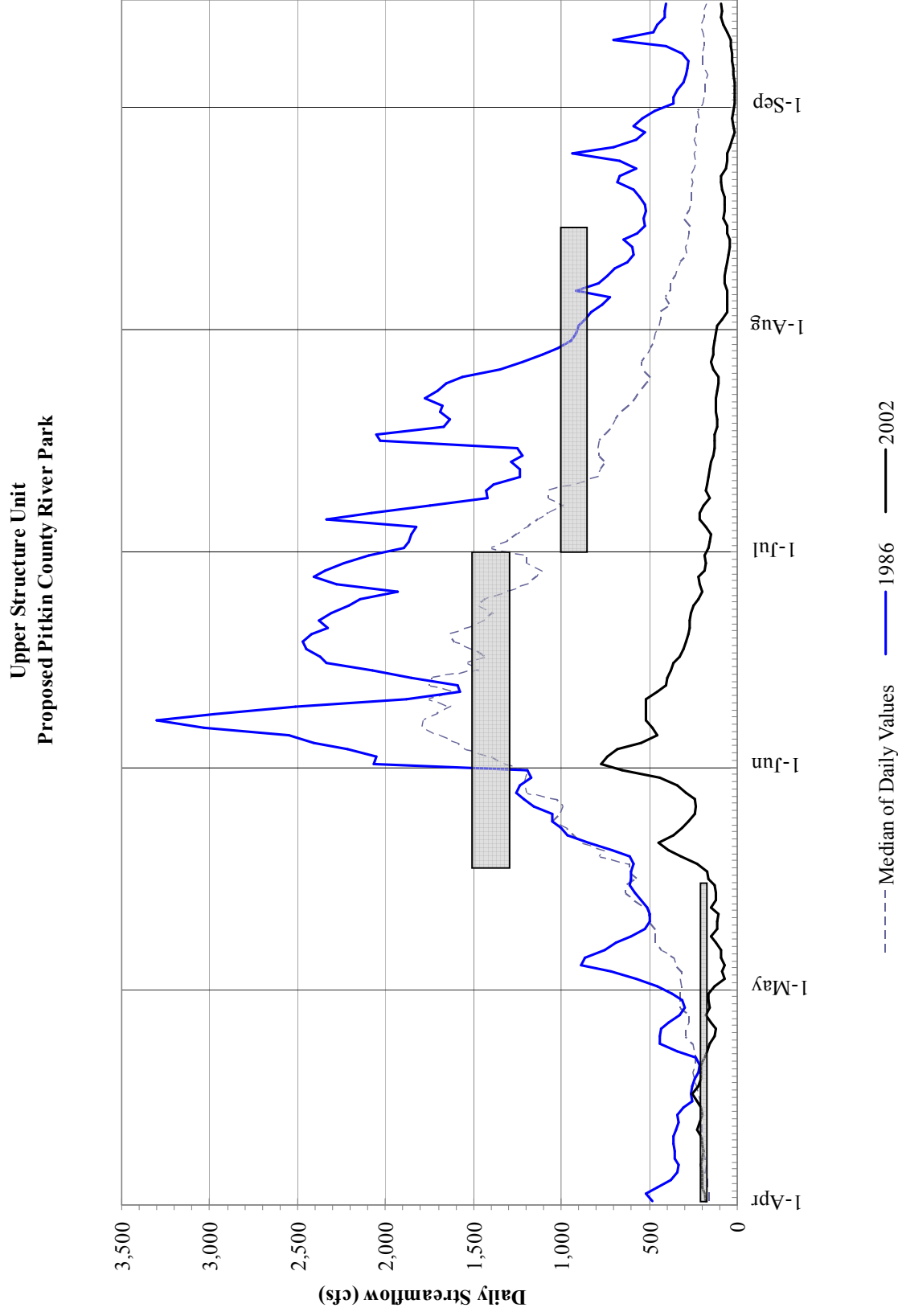


Figure 2:

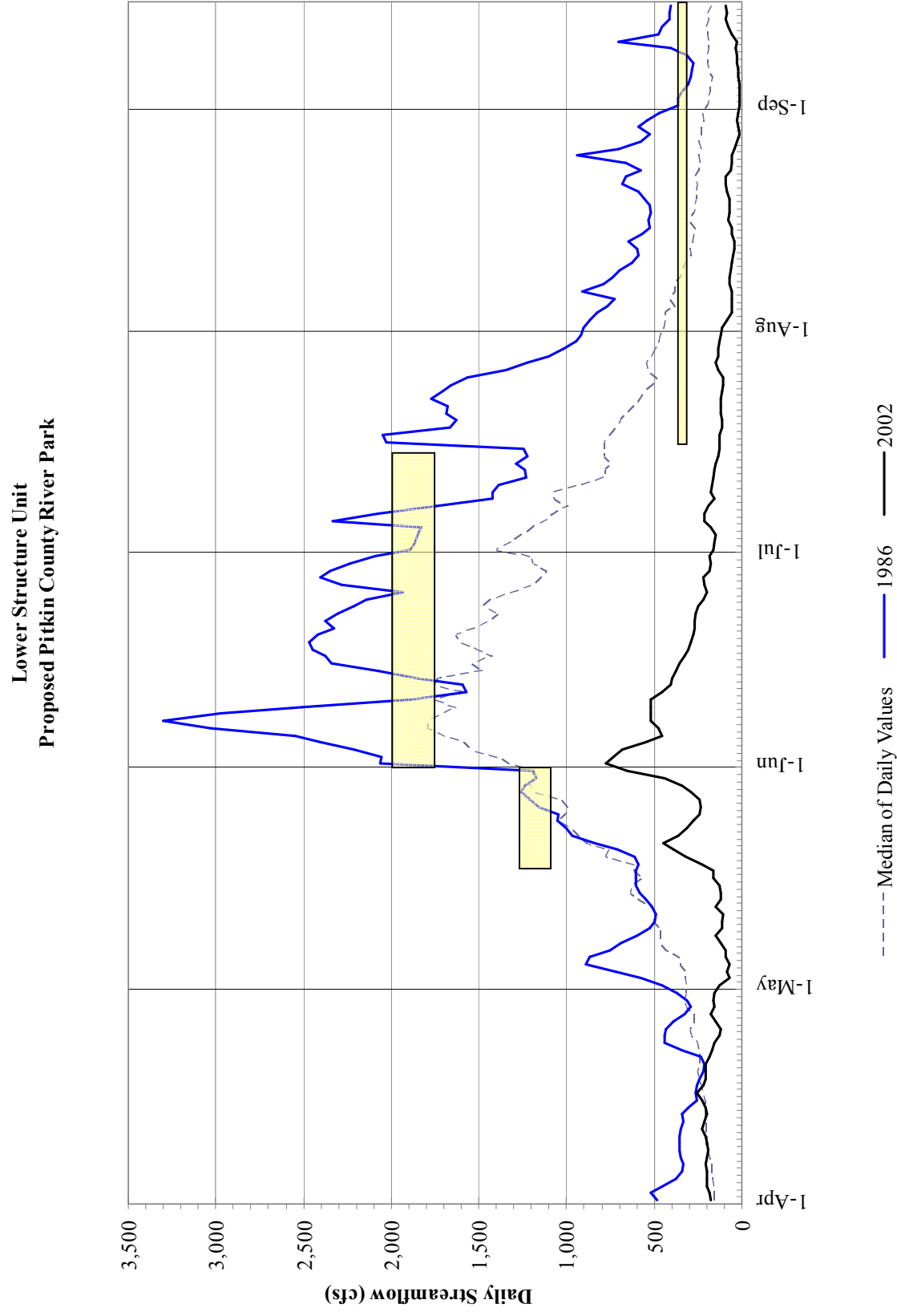


Table 1

Upper Structure Unit RICD Water Right
240 cfs flow rate, April 1 - May 14

Explanation

Values indicate daily flow rate in cubic feet per second.

Shaded cells indicate days when the estimated flow of the Roaring Fork River was between 240 and 245 cfs.

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
1-Apr	100	119	156	130	144	173	482	156	138	190	145	142	142	172	146	151	176	250	250	184	120	145	176	127	188	126	226	215	143	179	159	173
2-Apr	98	119	159	128	139	177	521	159	142	180	150	150	143	180	153	155	200	238	282	186	109	152	186	136	202	132	241	220	150	174	138	177
3-Apr	98	119	153	135	143	163	453	163	145	179	160	151	147	172	150	155	209	238	263	160	104	160	197	138	208	143	234	230	159	191	130	176
4-Apr	100	118	154	128	137	198	378	170	151	170	173	153	157	174	161	164	197	245	267	140	139	167	198	134	213	162	252	234	144	191	130	177
5-Apr	120	118	155	126	147	186	340	166	153	168	176	174	166	190	154	181	186	238	272	142	183	172	199	125	262	177	274	263	151	176	132	183
6-Apr	115	121	151	128	156	198	333	169	159	178	172	202	166	190	146	188	192	229	268	119	212	165	203	132	272	149	306	274	156	170	145	186
7-Apr	114	124	147	128	161	222	352	174	186	205	179	216	177	178	151	214	216	223	263	117	218	155	201	126	257	161	269	276	156	187	131	190
8-Apr	108	125	141	128	175	254	358	182	216	246	192	211	181	170	147	233	247	221	256	133	218	154	190	119	255	188	269	283	147	225	136	197
9-Apr	105	128	143	130	186	286	359	190	198	265	200	181	199	174	147	233	247	221	247	122	232	145	202	123	306	177	301	285	153	250	163	205
10-Apr	105	141	142	130	174	301	359	189	186	250	188	179	221	185	146	216	310	217	240	111	237	146	207	132	319	165	329	288	156	241	204	207
11-Apr	101	158	156	132	179	351	346	194	197	247	190	171	250	182	144	197	305	210	264	92	228	165	230	145	275	147	342	267	140	275	234	210
12-Apr	97	164	224	131	166	385	335	194	225	233	192	162	255	188	145	199	284	201	301	97	215	151	215	140	273	139	335	254	135	265	272	212
13-Apr	95	165	254	129	166	439	344	185	264	235	191	152	290	189	149	223	271	203	315	112	228	134	201	163	253	155	393	252	145	247	295	221
14-Apr	94	174	295	127	166	484	306	184	284	258	188	152	324	180	164	238	245	202	295	125	244	127	207	201	254	170	445	235	174	260	245	227
15-Apr	127	155	328	95	148	509	284	164	245	244	168	114	272	140	130	188	182	167	272	105	245	124	228	208	257	199	511	235	231	276	278	219
16-Apr	144	162	325	96	172	555	266	196	246	274	191	117	268	141	146	180	179	190	278	86	213	131	254	188	265	224	442	245	270	301	312	228
17-Apr	159	182	303	99	217	569	259	258	247	303	208	130	244	141	182	181	180	237	272	99	216	146	218	188	281	258	455	272	229	276	398	239
18-Apr	188	216	306	104	260	609	240	327	218	336	198	146	274	151	219	174	186	291	275	100	260	160	203	198	289	290	475	263	220	252	385	252
19-Apr	232	259	298	110	256	592	222	348	211	380	205	146	241	151	254	178	175	323	245	90	252	188	205	181	277	302	419	261	263	246	409	255
20-Apr	265	257	282	114	237	490	214	323	209	424	205	151	216	146	302	174	166	356	215	93	219	215	207	175	272	316	381	269	318	259	480	257
21-Apr	347	222	288	119	210	459	237	276	235	512	233	159	201	152	383	168	189	398	215	121	225	189	185	172	247	279	387	305	339	294	538	266
22-Apr	395	222	274	120	201	411	341	289	219	536	261	167	198	236	449	163	156	360	231	128	259	192	171	191	231	239	407	327	347	355	648	279
23-Apr	408	222	288	120	213	358	440	372	209	536	261	167	198	236	449	160	170	327	247	122	309	170	155	216	216	233	495	312	403	406	561	290
24-Apr	363	264	296	131	237	343	443	461	197	578	259	167	188	246	465	155	194	318	335	105	333	156	129	203	203	288	573	331	466	476	488	303
25-Apr	325	316	306	152	246	337	433	511	184	566	231	176	205	244	420	155	223	284	438	158	290	158	122	193	208	299	523	305	439	494	422	302
26-Apr	351	382	314	170	226	316	369	565	176	542	212	184	228	247	344	164	244	271	374	136	284	159	147	203	187	267	504	287	392	514	383	296
27-Apr	376	399	314	198	213	313	326	632	179	455	195	168	272	267	303	188	249	266	338	114	322	183	176	233	182	255	544	285	367	479	357	294
28-Apr	425	391	349	190	196	381	295	680	188	376	183	161	366	334	271	179	237	319	337	127	411	220	155	258	205	256	635	320	398	446	361	311
29-Apr	468	435	386	189	185	487	310	712	201	323	183	151	472	395	255	194	223	339	340	128	472	256	164	245	224	232	573	415	458	468	411	332
30-Apr	478	481	433	193	179	528	367	743	246	292	175	148	585	402	296	213	215	316	348	220	483	277	160	239	288	207	539	563	573	569	363	357
1-May	396	544	457	165	161	588	455	758	307	248	156	125	659	322	206	183	206	288	362	211	388	311	126	239	253	200	576	643	583	664	344	359
2-May	373	587	577	157	173	680	574	716	250	235	158	144	654	320	198	216	225	264	372	282	397	405	74	219	255	159	564	775	476	704	334	372
3-May	368	797	649	157	171	852	720	570	225	224	164	148	655	362	202	230	279	248	410	261	512	405	87	217	272	145	599	779	414	681	313	391
4-May	387	612	712	163	169	1053	866	479	221	222	167	150	652	426	203	211	353	285	516	273	648	348	73	251	314	141	629	809	397	661	327	410
5-May	419	497	737	187	178	1090	866	448	242	220	172	148	693	440	268	237	461	352	595	236	792	358	89	241	349	164	671	675	412	591	339	425
6-May	472	435	552	238	191	1039	752	481	282	266	207	160	729	358	395	240	563	473	613	207	915	317	95	201	424	194	633	599	526	607	360	436
7-May	543	376	465	223	177	1044	692	579	243	370	282	183	748	329	491	231	609	572	579	199	862	289	124	177	488	247	623	528	678	773	335	454
8-May	574	334	429	281	183	1121	600	684	234	506	271	239	771	298	511	221	676	601	548	214	892	278	146	166	548	271	612	463	985	927	335	481
9-May	558	296	438	378	228	1107	528	797	217	682	257	390	817	272	533	208	759	670	566	271	706	305	111	148	593	221	597	460	832	941	337	491
10-May	528	270	450	440	356	1184	497	880	229	788	275	551	887	262	513	216	751	705	610	407	653	334	113	157	608	269	526	447	914	911	430	515
11-May	510	277	440	480	516	1063	494	941	263	789	317	673	556	325	568	259	792	750	739	385	869	347	105	149	643	325	491	485	796	1020	429	542
12-May	487	248	433	379	704	873	513	1020	374	727	256	604	570	462	716	338	951	769	713	334	859	456	146	132	612	281	485	640	820	1220	452	567
13-May	413	224	416	357	950	740	549	1060	530	599	231	585	591	678	766	296	1126	835	720	339	606	623	120	154	500	257	527	869	888	1300	449	590
14-May	373	220	354	312	1293	644	582	1207	681	572	257	732	678	842	718	285	1218	936	754	446	525	837	118	172	423	229	633	1020	775	1270		

**Upper Structure Unit RICD Water Right
1,500 cfs flow rate, May 15 - Jun 30**

Shaded cells indicate days when the estimated flow of the Roaring Fork River was between 1,500 and 1,275 cfs.

Cells indicate days when historical flow rate is between 1,350 and 1,275 cfs and consequently, Lower Structure Unit 1,350 cfs water rights is also potentially in-priority																																
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
15-May	349	239	318	302	1719	623	608	1378	782	485	279	748	713	975	724	407	1250	1029	642	488	827	125	257	378	241	688	1090	738	1330	433	665	
16-May	380	239	305	282	1719	649	608	1492	876	435	299	537	746	1146	766	559	1433	1134	552	536	496	101	161	302	375	287	787	1170	707	1440	409	704
17-May	483	234	296	265	1625	685	602	1468	956	399	247	657	767	1196	881	612	1548	1169	561	538	634	1089	167	452	406	399	873	1160	782	1650	414	743
18-May	419	232	326	250	1562	767	588	1330	1052	429	289	637	862	1158	937	535	1425	1213	613	613	507	1009	226	560	405	378	946	1160	1010	484	763	
19-May	439	258	356	252	1428	795	612	1193	925	562	273	870	930	1148	930	531	1515	1271	778	654	439	979	319	602	496	455	1330	1330	2650	497	835	
20-May	498	280	373	257	1627	752	708	1151	702	323	978	1074	1265	1001	609	1476	1355	879	789	417	1031	391	578	659	631	1156	1480	1670	2400	443	894	
21-May	616	297	421	267	2048	765	842	1030	548	877	381	1156	1098	1410	928	658	1238	1289	1000	868	432	1024	445	576	703	900	1436	1670	2400	2550	546	966
22-May	860	278	538	332	2354	805	964	1009	472	919	544	1233	1089	1448	922	808	1228	1345	981	934	551	806	360	650	719	1270	1682	1400	2320	2230	740	1026
23-May	1102	275	622	425	2916	932	1000	1041	443	1055	678	1167	969	1280	953	882	1215	1155	739	1187	942	823	315	892	638	1498	2237	1120	1640	2070	780	1064
24-May	1046	300	650	535	3164	1066	1054	1098	518	1088	845	992	985	1299	952	812	1080	1111	815	1416	1511	972	278	1088	598	1671	1784	927	350	2250	931	1102
25-May	894	339	663	693	3311	1206	1049	1062	615	1008	803	920	913	1312	1000	784	958	1042	1051	1051	1051	1051	240	1330	680	1770	1903	782	1290	2100	705	1103
26-May	805	391	659	851	3209	1318	1158	1020	681	827	811	1083	993	1623	969	667	886	890	967	1195	1432	1152	233	1277	598	1776	1996	718	1310	1910	744	1103
27-May	789	500	876	1022	2928	1476	1212	929	798	868	765	1225	1164	1839	965	639	739	647	1129	1252	1217	1132	239	1600	611	1669	2127	735	1370	1910	965	1138
28-May	828	789	935	1214	2754	1658	1257	864	858	1014	850	1279	967	2010	1																	

Upper Structure Unit Water Rights (cfs)	Date Begin	Date End	No. Days	Period Total Days	No. Days when Historical Flow (1980 - 2010) was Less than or Equal to RICD and Greater than or Equal to 85% of the RICD	No. Days in Range as a Percentage of the Period Total Days
1,500	15-May	30-Jun	47	1457	172	12%

Table 3

Upper Structure Unit RICD Water Right

1,000 cfs flow rate, Jul 1 - Aug 15

Explanation Values indicate daily flow rate in cubic feet per second

Shaded cells indicate days when the estimated flow of the Roaring Fork River was between 1,000 cfs and 850 cfs.

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average	
1-Jul	2546	603	2503	3028	4935	1742	1892	1401	935	857	910	1373	967	2997	668	4081	1612	2677	1684	2005	553	634	164	701	804	1708	662	766	2820	1800	1010	1649	
2-Jul	2483	748	2306	2949	4527	1858	1866	1307	832	789	852	1283	1283	477	2909	625	4109	1549	2432	1592	2054	541	574	154	685	681	1615	668	726	2400	1750	995	1571
3-Jul	2330	611	2063	3034	4289	1894	1860	1251	779	750	812	1219	729	2907	594	3824	1413	2297	1522	1991	502	528	150	629	650	1591	707	655	2090	1810	1000	1496	
4-Jul	2135	526	1972	2774	3633	1956	1827	1186	733	720	854	1134	711	2475	568	3414	1384	2216	1460	1737	466	514	178	599	609	1434	675	612	2100	1660	880	1398	
5-Jul	1888	481	1787	2712	3519	1957	2396	1127	696	685	777	1061	742	1834	526	2862	1423	2070	1433	1672	409	481	214	579	584	1362	617	600	2090	1550	794	1318	
6-Jul	1716	458	1589	2812	3158	1908	2079	1069	673	678	811	1005	769	1543	491	2990	1322	1809	1462	1623	377	449	211	546	583	1306	722	584	1960	1450	712	1254	
7-Jul	1646	440	1412	3092	2939	1635	1744	979	613	646	704	986	770	1641	460	3321	1263	1757	1354	1577	349	457	190	518	574	1274	661	540	2060	1340	653	1226	
8-Jul	1638	444	1384	3798	3120	1767	1421	867	552	628	753	1070	995	1925	429	3345	1171	1684	1232	1584	314	443	159	495	535	1193	710	524	1880	1230	627	1256	
9-Jul	1568	451	1456	3917	3560	1771	1425	844	498	569	804	1091	816	1840	418	5296	1075	1528	1244	1590	360	455	177	451	510	1168	837	493	1720	1170	639	1280	
10-Jul	1517	503	1343	3665	4221	1545	1387	721	479	552	698	913	658	1807	405	5924	1014	1279	1468	1444	368	526	169	423	469	1112	801	451	1600	1100	568	1268	
11-Jul	1453	409	1355	2954	3130	1540	1232	609	492	541	609	785	595	2066	396	5781	990	1235	1312	1307	298	464	165	392	466	1043	702	425	1520	1070	560	1156	
12-Jul	1410	451	1345	2435	2614	1501	1238	599	446	563	549	772	632	2104	389	6027	923	1146	1180	1154	266	426	153	369	439	1046	686	434	1400	1040	532	1106	
13-Jul	1459	441	1370	2160	2134	1636	1285	569	425	522	504	745	607	2068	363	5676	861	1128	1104	1013	249	460	149	352	406	1057	633	437	1320	986	466	1051	
14-Jul	1244	404	1317	2094	2915	1406	1224	543	455	481	478	783	541	1849	347	4973	823	1076	1021	1031	247	472	137	327	391	1100	579	380	1230	922	427	1007	
15-Jul	1175	370	1206	1968	2491	1269	1246	525	434	443	456	799	500	1782	304	4223	785	1038	955	944	349	493	126	306	370	1047	510	361	1150	858	407	936	
16-Jul	1328	383	1351	2264	2927	1490	2029	545	436	413	459	942	515	1855	304	5600	977	1148	865	927	615	467	129	303	399	948	478	336	1110	781	378	1056	
17-Jul	1261	440	1279	2167	2705	1475	2052	573	428	384	438	1081	466	1697	299	5329	1071	1114	836	935	744	395	125	280	638	950	442	312	1060	745	351	1035	
18-Jul	1156	443	1208	2022	2396	1431	1668	551	382	364	451	1005	443	1566	294	4328	1034	1116	792	865	593	350	116	270	496	864	422	323	1050	711	326	937	
19-Jul	1129	359	1130	2041	2283	1386	1631	476	365	344	454	870	427	1389	343	4066	1017	1028	756	855	478	327	116	260	446	763	414	364	995	690	302	887	
20-Jul	1032	320	1087	1944	2268	1505	1688	451	335	327	397	889	430	1334	366	4922	879	1052	708	886	415	307	122	263	411	713	456	390	956	654	270	896	
21-Jul	912	286	1033	2031	1989	1564	1677	438	317	315	358	789	435	1147	359	3595	760	992	765	820	333	278	118	245	330	686	426	509	1090	577	379	815	
22-Jul	869	268	1016	1755	1823	1722	1774	457	298	316	358	802	410	1248	358	4445	820	978	682	807	374	292	124	253	377	661	506	417	978	613	355	854	
23-Jul	848	258	1077	1716	1633	1607	1707	439	289	328	321	771	403	1042	372	3331	724	1206	732	810	327	264	117	240	320	681	400	481	1100	549	318	786	
24-Jul	765	247	1083	1498	1744	1497	1656	401	277	414	309	663	414	1045	414	3114	688	1065	844	781	308	234	110	219	353	804	361	441	1200	508	275	765	
25-Jul	723	260	1011	1377	1578	1247	1565	378	266	393	427	694	443	909	396	3321	658	904	1000	807	293	242	109	167	315	968	362	430	1010	487	244	741	
26-Jul	697	343	967	1448	1500	1018	1347	399	267	404	356	628	423	925	341	3434	625	817	891	877	270	253	133	139	287	902	367	503	949	531	221	718	
27-Jul	654	352	1015	1280	1437	958	1222	437	286	373	305	585	391	940	291	3150	608	788	804	787	268	273	147	195	290	764	365	453	888	538	203	679	
28-Jul	604	277	1046	1218	1382	862	1106	464	265	411	278	518	352	906	275	2936	580	800	788	800	742	230	147	195	290	764	365	453	888	538	203	645	
29-Jul	562	242	1168	1080	1282	811	1020	429	349	508	268	476	339	876	267	2930	644	839	1026	701	242	197	133	213	243	578	310	423	848	489	273	638	
30-Jul	543	225	993	1241	1343	805	943	390	470	264	448	333	857	263	2969	603	817	792	709	230	185	126	203	229	518	311	345	754	486	321	616		
31-Jul	528	218	869	1151	1264	758	919	428	503	370	273	428	314	838	268	2940	553	817	719	739	211	191	120	184	220	508	341	307	699	464	286	598	
1-Aug	494	190	857	1469	1152	752	901	358	411	441	250	388	286	951	269	2790	491	839	759	729	182	215	116	179	210	503	374	275	670	470	274	595	
2-Aug	482	177	803	1185	1192	812	866	396	343	483	300	433	278	908	301	2333	481	719	731	726	176	229	85	174	206	496	368	260	654	430	401	562	
3-Aug	479	165	745	1139	1033	773	828	336	318	445	255	436	274	814	276	2194	490	685	645	685	182	238	56	171	172	497	307	266	634	403	397	527	
4-Aug	449	161	679	1463	948	662	767	302	303	353	223	496	272	763	257	2248	492	726	612	646	181	282	56	160	182	578	278	266	617	375	320	520	
5-Aug	409	151	629	1450	933	585	725	286	282	314	212	404	347	810	232	2358	435	837	610	641	178	249	57	151	188	678	279	258	591	356	415	518	
6-Aug	378	129	585	1411	1003	536	914	278	270	282	198	377	401	759	220	2212	398	932	563	758	179	291	59	142	191	538	297	323	653	345	363	516	
7-Aug	361	122	598	1295	949	524	790	366	260	253	182	397	441	675	207	1938	378	950	544	668	169	389	69	125	185	493	285	324	693	351	309	493	
8-Aug	350	119	566	1175	846	491	739	440	241	238	169	334	447	722	199	1909	359	731	508	594	160	343	71	115	172	474	248	321	796	334	298	468	
9-Aug	336	115	573	1153	773	477	695	323	223	225	176	293	387	731	218	1516	345	624	469	566	132	381	62	108	162	456	239	275	724	320	257	430	
10-Aug	312	119	564	985	721	438	628	319	195	231	171	281	369	689	232	1368	332	989	429	601	149	358	56	102	143	489	235	236	718	307	229	419	
11-Aug	285	161	521	863	658	423	588	280	183	259	169	270	391	809	210	1441	319	1078	399	651	141	346	49	76	132	475	243	222	666	273	212	413	
12-Aug	262	182	516	852	641	434	597	270	175	317	176																						

Table 4

Lower Structure Unit RICD Water Right

1,350 cfs flow rate, May 14 - May 31

Explanation Values indicate daily flow rate in cubic feet per second.

Shaded cells indicate days when the estimated flow of the Roaring Fork River was less than 1,350 and 1,417 cfs.

Cells indicate days when historical flow rate is between 1,350 and 1,275 cfs and consequently, Upper Structure Unit 1,500 cfs water rights is also potentially in-priority

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
14-May	373	220	354	312	1293	644	582	1207	681	572	257	732	678	842	718	285	1218	936	754	446	525	837	118	172	423	229	633	1020	775	1270	427	630
15-May	349	239	318	302	1645	623	608	1378	782	485	299	748	713	975	724	407	1250	1029	642	488	496	827	125	257	378	241	688	1090	736	1330	433	665
16-May	380	239	305	282	1719	649	606	1492	876	435	279	537	746	1146	766	559	1433	1134	552	536	496	1011	161	302	375	287	787	1170	707	1440	409	704
17-May	483	242	299	265	1625	685	602	1468	956	399	247	457	767	1196	881	612	1548	1169	561	538	634	1089	167	452	406	399	873	1160	782	1650	414	743
18-May	419	234	322	250	1562	767	588	1330	1052	425	269	631	852	1158	937	535	1425	1213	613	613	507	1009	226	560	405	378	946	1160	1010	1760	484	763
19-May	439	258	366	252	1428	795	612	1193	925	562	273	870	930	1148	930	531	1515	1271	778	654	439	979	319	602	496	455	1053	1330	1330	2650	497	835
20-May	498	280	373	257	1627	752	708	1151	702	720	323	978	1074	1265	1001	609	1476	1355	879	789	417	1031	578	578	659	631	1159	1460	1670	2440	453	894
21-May	616	297	421	267	2048	765	842	1030	548	877	381	1156	1198	1410	928	658	1238	1299	1000	888	432	1024	445	576	703	900	1436	1400	2100	2550	546	966
22-May	860	278	538	332	2354	805	964	1009	472	919	544	1233	1069	1448	922	808	1228	1345	981	934	551	806	360	650	719	1270	1682	1440	2320	2230	740	1026
23-May	1102	275	622	425	2916	932	1000	1041	443	1055	678	1167	969	1280	953	882	1215	1155	739	1187	942	823	315	892	638	1498	2237	1120	1640	2070	780	1064
24-May	1046	300	650	535	3164	1066	1054	1098	518	1088	845	992	965	1299	952	812	1080	1111	815	1416	1511	972	278	1088	598	1671	1784	927	1350	2250	931	1102
25-May	894	339	653	693	3311	1206	1049	1062	615	1008	803	920	913	1312	1000	784	958	1042	805	1420	1641	1051	240	1348	610	1770	1903	782	1250	2100	705	1103
26-May	805	391	659	851	3209	1318	1158	1020	681	827	811	1083	993	1623	969	667	886	890	987	1195	1463	1152	233	1277	598	1776	1996	718	1310	1910	744	1103
27-May	789	500	876	1022	2928	1476	1212	929	798	868	765	1225	1164	1839	965	639	739	764	1129	1252	1217	1132	239	1600	611	1669	2127	735	1370	1730	955	1138
28-May	828	789	935	1214	2754	1658	1257	864	858	1014	850	1279	967	2010	1079	551	677	687	1259	1190	1298	1302	292	2407	669	1566	1836	910	1550	1630	1340	1210
29-May	911	888	1006	1323	2677	2542	1238	854	999	1136	929	1204	823	1679	1126	511	639	707	1411	1414	1874	1295	342	2991	850	1410	1522	1130	1730	1600	1390	1295
30-May	894	882	1014	1483	2872	2340	1171	806	997	1198	734	1211	732	1673	1217	510	666	955	1502	1366	2243	1161	443	3546	730	1484	1288	976	1880	1670	1250	1319
31-May	947	950	944	1351	2887	1934	1191	895	748	1073	779	1120	667	1833	1396	510	681	1282	1424	1403	2173	1309	656	3304	604	1331	1243	905	1990	1830	1080	1305
Count	0	0	0	0	0	0	0	0	0	0	1	0	0	7	2	7	1	0	5	7	1	4	2	5	0	2	0	2	3	4	2	2

Lower Structure Unit Water Rights (cfs)	Date Begin	Date End	No. Days	Period Total Days	No. Days when Historical Flow (1980 - 2010) was Less than or Equal to RICD and Greater than or Equal to 85% of the RICD	No. Days in Range as a Percentage of the Period Total Days
1,350	14-May	31-May	18	558	76	14%

Table 5

Lower Structure Unit RICD Water Right+A126

2,000 cfs flow rate, June 1 - July 14

Explanation Values indicate daily flow rate in cubic feet per second.

Shaded cells indicate days when the estimated flow of the Roaring Fork River was between 2,000 and 1,700 cfs

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
1-Jun	1488	1079	1315	1901	3306	1768	2085	1126	757	1348	924	1270	649	2865	2222	882	844	2481	1475	1293	2011	1403	772	3717	600	1250	1239	1000	2250	1860	1140	1557
2-Jun	1455	1146	1323	1827	3077	1772	2054	1414	720	1361	686	1130	610	2790	2185	1141	1021	2862	1737	1355	1812	1622	736	3052	581	1345	1389	1050	2700	1730	1050	1573
3-Jun	1605	1433	1302	1580	2974	2001	2213	1560	1092	1295	700	1023	662	2483	2164	1342	1314	2666	1794	1344	1740	1622	681	2515	660	1495	1539	1310	3030	1750	939	1607
4-Jun	1806	1312	1233	1687	2662	2167	2404	1769	1575	1061	1114	970	760	1842	2192	1503	1532	2891	1602	1360	1664	1405	547	2323	774	1403	1663	1270	3120	1770	1040	1628
5-Jun	2113	1454	1475	1705	2437	2616	2550	1908	1893	1087	1595	1166	919	1632	2082	1684	1730	2972	1327	1457	1596	1118	454	2070	954	1167	1808	1420	3030	1830	2220	1722
6-Jun	2243	1707	1479	1486	2072	2907	3032	1977	2025	1166	1864	1441	983	1787	1964	2043	1951	2861	1042	1318	1512	1091	480	1557	1284	1095	1996	1640	2620	1820	3420	1803
7-Jun	2019	1934	1425	1542	2147	3531	3304	2190	2006	1171	1933	1681	960	1816	1783	1882	1944	2797	829	1378	1484	1281	518	1372	1505	1146	1130	1220	2590	1690	4027	1851
8-Jun	2066	2043	1550	1743	1840	4440	2976	2509	1875	1234	1962	1897	835	1382	1658	1703	1950	2976	778	1815	1425	1373	519	1225	1564	1130	2374	1030	2670	1470	4100	1868
9-Jun	2442	2162	1627	1816	1566	4856	2514	2686	1826	1115	2068	2059	809	1154	1486	1827	2473	874	2116	1452	1384	520	1306	1563	1199	2514	980	2150	1420	4178	1856	1809
10-Jun	2971	2082	1753	1957	1449	4406	1882	2468	1903	1163	2197	1232	845	1130	1461	1225	1787	2166	840	2143	1376	1496	516	1437	1103	2010	1160	2060	1340	4162	1743	1743
11-Jun	3450	1994	1750	2161	1582	3234	1574	2305	1771	1143	2314	2254	916	1330	1499	1326	1824	2149	819	1980	1219	1446	455	1311	1154	984	1941	1370	2530	1310	2914	1729
12-Jun	3403	1747	1806	2367	1768	2956	1591	2259	1611	1157	2078	2373	1050	1689	1491	1844	1971	2174	822	2040	1171	1309	407	1378	957	964	1874	1750	2090	1230	2290	1718
13-Jun	3438	1439	1908	1731	2135	3092	1853	1770	1399	1113	1567	2262	1179	2282	1519	2524	2125	2355	1042	2123	1069	1230	399	1466	856	910	1759	1490	1750	1200	1860	1725
14-Jun	3223	1094	1741	1296	2845	3244	2070	2258	1108	1046	1675	2416	1192	2771	1445	3096	2247	2422	934	2123	943	971	376	1259	959	834	1710	1450	1970	1300	1470	1785
15-Jun	2936	737	1731	1234	3337	3351	2339	2377	1168	1164	1535	2004	1089	3234	1431	3774	2428	2449	934	2144	883	781	359	1333	1096	888	1631	1590	2350	1280	1170	1803
16-Jun	2704	610	1699	1450	3422	3320	2373	2364	1237	1420	1240	2559	933	3239	1293	4303	2223	2409	840	1996	888	733	325	1414	1012	1107	1309	1720	3370	1340	1030	1827
17-Jun	2729	661	1863	1830	2873	3219	2446	2208	1239	1499	1187	2440	762	3572	1222	4558	2238	2332	884	2004	775	673	307	1224	963	1354	1113	1810	4270	1390	1000	1836
18-Jun	2959	694	2156	2631	2564	3288	2488	1987	1240	1412	1303	2271	863	2769	1185	4025	2210	2602	809	2064	708	737	290	1195	903	1604	1114	1830	4480	1530	1000	1825
19-Jun	3454	674	2055	3532	2910	3026	2420	1840	1373	1440	1379	1941	1036	2356	1169	2924	2123	3264	765	2208	796	743	276	1214	877	1919	1158	1540	3570	1630	1120	1817
20-Jun	3498	810	1808	3713	2970	2812	2326	1524	1442	1323	1251	1739	1158	2496	1299	2915	2063	3813	965	2279	887	759	269	1158	920	2020	1068	1470	2650	1780	1150	1845
21-Jun	3319	862	1846	3756	3344	2758	2379	1419	1434	1179	1255	1878	1164	2983	1182	3298	2216	3606	1141	2415	757	729	269	1078	908	2000	1048	1430	2710	1670	1130	1839
22-Jun	3148	835	1937	3750	3576	2715	2304	1381	1335	815	1224	1816	1077	3111	1337	3369	2539	3408	1305	2453	690	761	280	1031	801	2147	988	1320	2800	1720	1080	1770
23-Jun	3109	727	2092	3616	3301	2426	2210	1348	1205	675	1189	1690	1067	3148	1212	3165	2078	3315	1474	2519	659	685	250	1023	713	2254	906	1220	2880	1830	1000	1728
24-Jun	2990	594	2137	5022	3233	2899	1933	1221	1160	712	1087	1423	1157	2443	910	3184	1566	2749	1302	2616	618	763	198	829	728	2172	880	1120	3030	2000	995	1732
25-Jun	3169	581	2158	4778	3077	2210	2281	1187	1052	740	1059	1177	1132	2612	824	3511	1525	2498	1476	2598	645	716	214	819	737	2107	823	1000	3310	2260	968	1700
26-Jun	3169	581	2158	4778	3077	2210	2281	1187	1052	740	1059	1177	1132	2612	824	3511	1525	2498	1476	2598	645	716	214	819	737	2107	823	1000	3310	2260	968	1624
27-Jun	3169	581	2158	4778	3077	2210	2281	1187	1052	740	1059	1177	1132	2612	824	3511	1525	2498	1476	2598	645	716	214	819	737	2107	823	1000	3310	2260	968	1573
28-Jun	2745	580	2349	2938	3263	1316	2346	1109	944	744	941	1084	833	2954	658	3303	1419	2355	1642	2399	632	729	183	802	649	1791	646	905	2970	2200	836	1544
29-Jun	2328	466	2471	2401	3454	1421	2236	1083	1118	748	818	1265	889	3063	560	3671	1191	2247	1693	2109	575	703	177	771	655	1894	650	845	2980	2070	907	1515
30-Jun	2240	440	1412	3092	2800	3814	1459	2092	966	912	726	1278	814	3338	509	3336	1196	2138	1700	1990	570	657	182	744	939	1794	645	785	2990	1870	1060	1649
1-Jul	2546	603	2593	3028	4935	1742	1892	1401	935	857	910	1373	967	2997	668	4081	1612	2671	1684	2005	553	634	164	701	804	1708	652	766	2820	1800	1010	1571
2-Jul	2483	748	2306	2949	4527	1858	1866	1307	832	789	852	1283	847	2909	625	4109	1549	2432	1922	2054	541	574	154	695	681	1615	668	726	2400	1750	995	1496
3-Jul	2330	611	2063	3034	4289	1894	1850	1251	778	750	812	1219	729	2907	594	3824	1413	2297	1522	1905	502	528	150	629	650	1591	707	655	2090	1810	1000	1398
4-Jul	2135	526	1972	2774	3833	1956	1827	1186	733	720	854	1134	711	2475	568	3416	1384	2216	1460	1737	466	514	178	599	609	1434	675	612	2100	1660	880	1318
5-Jul	1888	481	1787	2712	3519	1951	2336	1127	696	695	777	1061	742	1834	526	2862	1423	2070	1433	1672	409	481	214	579	584	1362	617	600	2090	1550	794	1254
6-Jul	1716	458	1589	2812	3168	1908	2079	1069	673	678	811	1005	769	1543	491	2960	1322	1809	1462	1623	377	449	211	546	583	1306	722	584	1960	1450	712	1226
7-Jul	1646	440	1412	3092	2939	1835	1744	979	613	646	704	986	770	1641	460	3521	1263	1757	1354	1577	349	457	190	518	574	1274	661	540	2060	1340	653	1256
8-Jul	1638	444	1384	3798	3120	1765	1421	867	552	628	753	1070	995	1925	429	4345	1171	1684	1232	1584	314	443	159	495	535	1193	710	524	1890	1230	627	1280
9-Jul	1568	451	1456	3917	3500	1771	1425	844	498	569	804	1091	816	1840	418	5296	1075	1528	1244	1590	360	455	177	451	510	1188	837	493	1720	1170	639	1268
10-Jul	1517	503	1343	3665	4221	1646	1387	721	479	552	698	913	658	1857	405	5924	1014	1279	1468	1444	368	526	169	423	499	1112	801	451	1600	1100	568	1156
11-Jul	1453	409	1355	2964	3130	1540	1232																									

Lower Structure Unit RICD Water Right

380 cfs flow rate, July 15 - Sept 15

Explanation Values indicate daily flow rate in cubic feet per second.

Shaded cells indicate days when the estimated flow of the Roaring Fork River was between 380 and 323 cfs

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
15-Jul	1175	370	1296	1968	2491	1259	1246	525	434	443	456	799	502	1782	340	4223	785	1038	955	944	349	493	426	306	370	1047	510	361	1150	858	407	936
16-Jul	1328	383	1351	2264	2927	1490	2029	545	436	413	459	942	515	1855	300	5600	977	1148	865	927	615	467	129	303	949	448	476	336	1110	781	378	1055
17-Jul	1261	440	1279	2167	2705	1475	2052	573	428	384	438	1081	466	1697	299	5329	1071	1114	836	935	744	395	125	280	638	950	442	312	1060	745	351	1035
18-Jul	1156	443	1208	2022	2396	1431	1668	551	382	364	451	1005	443	1566	294	4328	1034	1126	792	865	593	350	116	270	496	864	422	323	1050	711	326	937
19-Jul	1129	359	1130	2024	2283	1386	1631	476	365	344	454	870	427	1389	343	4066	1017	1028	766	855	478	327	116	260	446	763	414	364	995	690	302	887
20-Jul	1032	320	1087	1944	2268	1505	1688	451	335	327	397	889	430	1334	366	4922	879	1052	704	886	415	307	122	263	411	713	456	390	956	654	270	896
21-Jul	921	286	1035	2031	1989	1554	1677	438	317	315	365	809	430	1248	358	4445	820	978	682	807	374	292	124	253	377	661	506	417	978	613	355	854
22-Jul	869	268	1016	1755	1722	1722	1774	457	298	316	358	782	415	1147	359	3595	760	992	765	820	333	278	118	245	330	686	426	509	1090	577	379	815
23-Jul	848	258	1077	1716	1633	1607	1707	439	289	328	321	771	403	1042	372	3331	724	1206	732	810	327	264	117	240	320	661	400	461	1100	549	318	786
24-Jul	765	247	1063	1498	1744	1491	1656	401	277	414	309	663	411	1045	414	3124	688	1065	844	781	308	234	110	219	353	804	361	441	1200	508	275	765
25-Jul	723	260	1011	1377	1578	1247	1565	378	266	393	427	694	443	909	396	3321	658	904	1000	807	293	242	109	167	315	968	362	430	1010	487	244	741
26-Jul	697	343	967	1448	1500	1018	1347	399	267	404	356	628	423	925	341	3434	625	817	891	877	270	253	133	139	287	902	357	503	949	531	221	718
27-Jul	654	352	1015	1280	1437	958	1222	437	286	373	305	585	391	851	291	3150	608	788	804	787	268	273	147	195	290	764	365	453	888	538	203	679
28-Jul	604	277	1046	1218	1382	862	1106	464	265	411	278	518	352	906	275	2836	580	800	792	730	254	220	135	200	274	668	322	510	997	495	212	645
29-Jul	562	242	1168	1080	1282	811	1020	429	349	508	268	476	339	876	267	2930	644	839	1026	701	242	197	133	213	243	578	310	423	848	489	273	638
30-Jul	543	225	993	1241	1343	805	943	394	390	470	264	448	334	857	263	2969	603	817	792	709	230	185	126	203	229	518	311	345	754	486	321	616
31-Jul	528	218	869	1151	1264	758	919	428	503	370	273	428	314	838	268	2940	553	918	719	739	211	191	120	184	220	508	341	307	699	464	286	598
1-Aug	494	190	857	1469	1353	752	901	358	411	441	250	388	286	951	269	2790	491	839	759	729	182	215	116	179	210	503	374	275	670	470	274	595
2-Aug	482	177	803	1185	1192	813	866	386	343	483	300	433	278	908	301	2333	481	719	731	728	176	229	85	174	206	496	358	260	654	430	401	562
3-Aug	479	165	745	1139	1033	773	828	336	318	445	255	436	274	814	276	2194	490	685	645	685	182	238	56	171	172	497	307	266	634	403	397	527
4-Aug	449	161	679	1463	948	662	767	302	303	353	243	496	272	763	257	2248	492	726	612	646	181	282	56	160	182	578	278	266	617	375	320	520
5-Aug	409	151	629	1450	933	585	725	286	282	314	212	404	347	810	232	2358	435	837	610	641	178	249	57	151	188	678	279	258	591	356	415	518
6-Aug	378	129	585	1411	1003	536	914	278	270	282	198	377	401	759	220	2212	398	932	563	758	179	291	59	142	191	538	297	323	653	345	363	516
7-Aug	361	122	598	1295	949	524	790	366	260	253	182	397	441	675	207	1938	378	950	544	668	169	389	69	125	185	493	265	324	693	351	309	483
8-Aug	350	119	566	1175	846	491	739	440	241	238	169	334	447	722	199	1909	359	731	508	594	160	343	71	115	172	474	248	321	796	334	298	468
9-Aug	336	115	573	1153	776	477	695	323	223	225	178	293	387	731	218	1516	345	624	469	566	132	381	62	108	162	456	239	275	724	320	257	430
10-Aug	312	119	644	965	721	439	628	319	195	231	171	281	369	889	232	1368	332	988	429	601	149	358	56	102	143	358	236	718	307	229	419	
11-Aug	285	161	521	863	658	423	588	280	183	259	169	270	391	609	210	1441	319	1078	399	651	141	346	49	76	132	475	243	222	666	273	212	413
12-Aug	262	182	516	852	641	434	597	270	175	317	176	290	374	666	203	1399	299	1146	389	626	150	294	46	70	120	453	237	205	579	249	235	402
13-Aug	262	169	541	1015	670	368	648	256	171	276	221	309	352	612	211	1315	280	1020	374	552	179	257	44	70	116	419	240	204	528	241	248	393
14-Aug	259	147	601	792	617	340	568	251	158	260	209	276	348	564	228	1169	278	933	340	520	159	302	56	69	118	394	228	201	488	241	202	365
15-Aug	405	151	545	730	676	316	523	231	156	248	257	260	341	519	237	995	265	863	325	542	152	462	54	81	117	359	214	215	464	253	183	359
16-Aug	425	182	543	739	665	322	530	253	205	241	238	297	326	571	225	1053	270	792	319	515	181	380	81	107	112	356	209	246	480	249	190	368
17-Aug	322	162	507	671	623	313	518	245	210	228	254	270	376	552	210	965	263	727	315	484	322	72	122	109	372	208	262	460	234	239	348	
18-Aug	282	146	493	676	746	309	523	232	196	266	242	241	322	512	203	994	266	660	315	481	186	289	71	138	114	376	196	238	425	216	201	340
19-Aug	257	133	475	635	780	315	554	223	182	306	213	236	281	510	216	985	265	615	228	451	225	288	72	126	152	357	208	222	401	202	219	333
20-Aug	239	124	647	630	590	218	175	279	198	241	259	503	218	978	250	918	278	545	307	434	223	258	85	104	154	340	192	212	386	192	376	332
21-Aug	223	117	502	576	859	298	683	219	202	246	222	216	243	562	191	958	248	523	348	418	228	294	91	88	158	337	191	196	373	179	265	331
22-Aug	210	122	495	527	879	311	685	261	286	221	196	205	268	676	189	947	252	500	368	425	226	318	91	86	161	335	187	181	358	173	228	333
23-Aug	216	117	477	500	692	311	576	347	223	201	191	191	433	546	187	1009	243	477	348	395	223	285	64	84	170	314	178	173	346	173	222	320
24-Aug	232	108	442	471	934	299	664	437	200	207	158	182	577	494	173	953	231	453	334	363	221	263	55	84	147	253	177	175	341	176	212	323
25-Aug	250	113	455	453	906	291	937	449	185	200	144	176	518	490	162	888	229	502	403	353	219	242	55	82	136	255	182	174	338	179	193	328
26-Aug	268	106	529	448	826	284	702	394	169	193	133	180	529	706	153	829	225	575	345	362	227	229	46	91	130	264	214	167	338	179	177	323
27-Aug	228	102	441	416	646	279	576	313	174	184	124	182	467	607	140	845	232	460	353	359	247											

Lower Structure Unit Water Rights (cfs)	Date Begin 15-Jul	Date End 15-Sep	No. Days between Begin and End Dates 63	Total Days for 31-year Period (1980 - 2010) 1953	No. Days when Historical Flow (1980 - 2010) was Less than or Equal to RICD and Greater than or Equal to 85% of the RICD 162	No. Days in Range as a Percentage of the Period Total Days 8%

Attachment A
Comparison RICD Total Volume to Fifty percent
Average Historical Volume
For the Upper Structure Unit RICD Water Right

	Daily Average for 1980 - 2010 (cfs)	50 % Average Historical Volume (af)	Daily Rate of the Upper Structure Unit RICD (cfs)	RICD Daily Volume (af)
1-Apr	173	171	240	475
2-Apr	177	176	240	475
3-Apr	176	175	240	475
4-Apr	177	176	240	475
5-Apr	183	181	240	475
6-Apr	186	184	240	475
7-Apr	190	188	240	475
8-Apr	197	195	240	475
9-Apr	205	203	240	475
10-Apr	207	205	240	475
11-Apr	210	208	240	475
12-Apr	212	210	240	475
13-Apr	221	218	240	475
14-Apr	227	225	240	475
15-Apr	219	217	240	475
16-Apr	228	225	240	475
17-Apr	239	237	240	475
18-Apr	252	250	240	475
19-Apr	255	253	240	475
20-Apr	257	255	240	475
21-Apr	266	263	240	475
22-Apr	279	277	240	475
23-Apr	290	287	240	475
24-Apr	303	300	240	475
25-Apr	302	299	240	475
26-Apr	296	293	240	475
27-Apr	294	292	240	475
28-Apr	311	308	240	475
29-Apr	332	329	240	475
30-Apr	357	353	240	475
1-May	359	355	240	475
2-May	372	368	240	475
3-May	391	387	240	475
4-May	410	406	240	475
5-May	425	420	240	475
6-May	436	432	240	475
7-May	454	449	240	475
8-May	481	477	240	475
9-May	491	486	240	475
10-May	515	510	240	475
11-May	542	536	240	475
12-May	567	561	240	475
13-May	590	584	240	475
14-May	630	624	240	475
	Subtotal (af)	13744	Subtotal (af)	20909

Attachment A
Comparison RICD Total Volume to Fifty percent
Average Historical Volume
For the Upper Structure Unit RICD Water Right

	Daily Average for 1980 - 2010 (cfs)	50 % Average Historical Volume (af)	Daily Rate of the Upper Structure Unit RICD (cfs)	RICD Daily Volume (af)
15-May	665	658	1500	2970
16-May	704	697	1500	2970
17-May	743	735	1500	2970
18-May	763	755	1500	2970
19-May	835	826	1500	2970
20-May	894	885	1500	2970
21-May	966	957	1500	2970
22-May	1026	1016	1500	2970
23-May	1064	1054	1500	2970
24-May	1102	1091	1500	2970
25-May	1103	1092	1500	2970
26-May	1103	1092	1500	2970
27-May	1138	1126	1500	2970
28-May	1210	1198	1500	2970
29-May	1295	1282	1500	2970
30-May	1319	1306	1500	2970
31-May	1305	1291	1500	2970
1-Jun	1557	1542	1500	2970
2-Jun	1573	1557	1500	2970
3-Jun	1607	1591	1500	2970
4-Jun	1628	1612	1500	2970
5-Jun	1722	1705	1500	2970
6-Jun	1803	1785	1500	2970
7-Jun	1851	1832	1500	2970
8-Jun	1868	1849	1500	2970
9-Jun	1856	1838	1500	2970
10-Jun	1809	1791	1500	2970
11-Jun	1743	1725	1500	2970
12-Jun	1729	1712	1500	2970
13-Jun	1718	1700	1500	2970
14-Jun	1725	1708	1500	2970
15-Jun	1785	1767	1500	2970
16-Jun	1803	1785	1500	2970
17-Jun	1827	1809	1500	2970
18-Jun	1836	1817	1500	2970
19-Jun	1825	1807	1500	2970
20-Jun	1817	1798	1500	2970
21-Jun	1845	1826	1500	2970
22-Jun	1839	1821	1500	2970
23-Jun	1770	1753	1500	2970
24-Jun	1728	1711	1500	2970
25-Jun	1732	1714	1500	2970
26-Jun	1700	1683	1500	2970
27-Jun	1624	1608	1500	2970
28-Jun	1573	1557	1500	2970

Attachment A
Comparison RICD Total Volume to Fifty percent
Average Historical Volume
For the Upper Structure Unit RICD Water Right

	Daily Average for 1980 - 2010 (cfs)	50 % Average Historical Volume (af)	Daily Rate of the Upper Structure Unit RICD (cfs)	RICD Daily Volume (af)
29-Jun	1544	1528	1500	2970
30-Jun	1515	1500	1500	2970
	Subtotal (af)	68494	Subtotal (af)	139590
1-Jul	1649	1632	1000	1980
2-Jul	1571	1556	1000	1980
3-Jul	1496	1481	1000	1980
4-Jul	1398	1384	1000	1980
5-Jul	1318	1305	1000	1980
6-Jul	1254	1241	1000	1980
7-Jul	1226	1213	1000	1980
8-Jul	1256	1243	1000	1980
9-Jul	1280	1267	1000	1980
10-Jul	1268	1255	1000	1980
11-Jul	1156	1144	1000	1980
12-Jul	1106	1095	1000	1980
13-Jul	1051	1041	1000	1980
14-Jul	1007	997	1000	1980
15-Jul	936	926	1000	1980
16-Jul	1055	1044	1000	1980
17-Jul	1035	1024	1000	1980
18-Jul	937	927	1000	1980
19-Jul	887	878	1000	1980
20-Jul	896	887	1000	1980
21-Jul	854	845	1000	1980
22-Jul	815	807	1000	1980
23-Jul	786	778	1000	1980
24-Jul	765	758	1000	1980
25-Jul	741	734	1000	1980
26-Jul	718	711	1000	1980
27-Jul	679	672	1000	1980
28-Jul	645	638	1000	1980
29-Jul	638	631	1000	1980
30-Jul	616	610	1000	1980
31-Jul	598	592	1000	1980
1-Aug	595	589	1000	1980
2-Aug	562	556	1000	1980
3-Aug	527	522	1000	1980
4-Aug	520	515	1000	1980
5-Aug	518	513	1000	1980
6-Aug	516	510	1000	1980
7-Aug	493	488	1000	1980
8-Aug	468	463	1000	1980
9-Aug	430	426	1000	1980
10-Aug	419	414	1000	1980
11-Aug	413	409	1000	1980

Attachment A
Comparison RICD Total Volume to Fifty percent
Average Historical Volume
For the Upper Structure Unit RICD Water Right

	Daily Average for 1980 - 2010 (cfs)	50 % Average Historical Volume (af)	Daily Rate of the Upper Structure Unit RICD (cfs)	RICD Daily Volume (af)
12-Aug	402	398	1000	1980
13-Aug	393	389	1000	1980
14-Aug	365	361	1000	1980
15-Aug	359	356	1000	1980
	Subtotal (af)	38228	Subtotal (af)	91080
	Total April 1 - Aug 15 (af)	120465	Total April 1 - Aug 15 (af)	251579

Attachment B
Comparison RICD Total Volume to Fifty percent
Average Historical Volume
For the Lower Structure Unit RICD Water Right

	Day Average for 1980 - 2010 (cfs)	50 % Average Historical Volume (af)	Daily Rate of the Lower Structure Unit RICD (cfs)	RICD Daily Volume (af)
14-May	630	624	1350	2673
15-May	665	658	1350	2673
16-May	704	697	1350	2673
17-May	743	735	1350	2673
18-May	763	755	1350	2673
19-May	835	826	1350	2673
20-May	894	885	1350	2673
21-May	966	957	1350	2673
22-May	1026	1016	1350	2673
23-May	1064	1054	1350	2673
24-May	1102	1091	1350	2673
25-May	1103	1092	1350	2673
26-May	1103	1092	1350	2673
27-May	1138	1126	1350	2673
28-May	1210	1198	1350	2673
29-May	1295	1282	1350	2673
30-May	1319	1306	1350	2673
31-May	1305	1291	1350	2673
	Subtotal (af)	17685	Subtotal (af)	48114
1-Jun	1557	1542	2000	3960
2-Jun	1573	1557	2000	3960
3-Jun	1607	1591	2000	3960
4-Jun	1628	1612	2000	3960
5-Jun	1722	1705	2000	3960
6-Jun	1803	1785	2000	3960
7-Jun	1851	1832	2000	3960
8-Jun	1868	1849	2000	3960
9-Jun	1856	1838	2000	3960
10-Jun	1809	1791	2000	3960
11-Jun	1743	1725	2000	3960
12-Jun	1729	1712	2000	3960
13-Jun	1718	1700	2000	3960
14-Jun	1725	1708	2000	3960
15-Jun	1785	1767	2000	3960
16-Jun	1803	1785	2000	3960
17-Jun	1827	1809	2000	3960
18-Jun	1836	1817	2000	3960
19-Jun	1825	1807	2000	3960
20-Jun	1817	1798	2000	3960
21-Jun	1845	1826	2000	3960
22-Jun	1839	1821	2000	3960
23-Jun	1770	1753	2000	3960
24-Jun	1728	1711	2000	3960
25-Jun	1732	1714	2000	3960

Attachment B
Comparison RICD Total Volume to Fifty percent
Average Historical Volume
For the Lower Structure Unit RICD Water Right

	Day Average for 1980 - 2010 (cfs)	50 % Average Historical Volume (af)	Daily Rate of the Lower Structure Unit RICD (cfs)	RICD Daily Volume (af)
26-Jun	1700	1683	2000	3960
27-Jun	1624	1608	2000	3960
28-Jun	1573	1557	2000	3960
29-Jun	1544	1528	2000	3960
30-Jun	1515	1500	2000	3960
1-Jul	1649	1632	2000	3960
2-Jul	1571	1556	2000	3960
3-Jul	1496	1481	2000	3960
4-Jul	1398	1384	2000	3960
5-Jul	1318	1305	2000	3960
6-Jul	1254	1241	2000	3960
7-Jul	1226	1213	2000	3960
8-Jul	1256	1243	2000	3960
9-Jul	1280	1267	2000	3960
10-Jul	1268	1255	2000	3960
11-Jul	1156	1144	2000	3960
12-Jul	1106	1095	2000	3960
13-Jul	1051	1041	2000	3960
14-Jul	1007	997	2000	3960
	Subtotal (af)	69288	Subtotal (af)	174240
15-Jul	936	926	380	752
16-Jul	1055	1044	380	752
17-Jul	1035	1024	380	752
18-Jul	937	927	380	752
19-Jul	887	878	380	752
20-Jul	896	887	380	752
21-Jul	854	845	380	752
22-Jul	815	807	380	752
23-Jul	786	778	380	752
24-Jul	765	758	380	752
25-Jul	741	734	380	752
26-Jul	718	711	380	752
27-Jul	679	672	380	752
28-Jul	645	638	380	752
29-Jul	638	631	380	752
30-Jul	616	610	380	752
31-Jul	598	592	380	752
1-Aug	595	589	380	752
2-Aug	562	556	380	752
3-Aug	527	522	380	752
4-Aug	520	515	380	752
5-Aug	518	513	380	752
6-Aug	516	510	380	752
7-Aug	493	488	380	752

Attachment B

Comparison RICD Total Volume to Fifty percent Average Historical Volume For the Lower Structure Unit RICD Water Right

	Day Average for 1980 - 2010 (cfs)	50 % Average Historical Volume (af)	Daily Rate of the Lower Structure Unit RICD (cfs)	RICD Daily Volume (af)
8-Aug	468	463	380	752
9-Aug	430	426	380	752
10-Aug	419	414	380	752
11-Aug	413	409	380	752
12-Aug	402	398	380	752
13-Aug	393	389	380	752
14-Aug	365	361	380	752
15-Aug	359	356	380	752
16-Aug	368	364	380	752
17-Aug	348	345	380	752
18-Aug	340	337	380	752
19-Aug	333	329	380	752
20-Aug	332	329	380	752
21-Aug	331	327	380	752
22-Aug	333	167	380	752
23-Aug	320	160	380	752
24-Aug	323	162	380	752
25-Aug	328	164	380	752
26-Aug	323	162	380	752
27-Aug	296	148	380	752
28-Aug	279	140	380	752
29-Aug	266	133	380	752
30-Aug	256	128	380	752
31-Aug	248	124	380	752
1-Sep	221	111	380	752
2-Sep	219	109	380	752
3-Sep	208	104	380	752
4-Sep	203	101	380	752
5-Sep	200	100	380	752
6-Sep	198	99	380	752
7-Sep	201	100	380	752
8-Sep	209	105	380	752
9-Sep	204	102	380	752
10-Sep	209	105	380	752
11-Sep	207	104	380	752
12-Sep	218	109	380	752
13-Sep	218	109	380	752
14-Sep	205	102	380	752
15-Sep	204	102	380	752
Subtotal (af)		25452	Subtotal (af)	47401
Total (af)		112425	Total (af)	269755

EXHIBIT G

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FILING ID: E22C4775F6524

CASE NUMBER: 2010CW305

**Second Supplemental Report in Support of the Pitkin County River
Park Recreational In-Channel Diversions Water Right Application
Case No. 10CW305, Water Division 5**

December 2011

Prepared for:

Board of County Commissioners of Pitkin County

Prepared by:

Mr. James F. Pearce, P.E.
Canyon Water Resources, LLC
685 Canyon Creek Driver
Glenwood Springs, CO 81601

Introduction

This supplemental report provides information regarding the proposed Pitkin County River Park Recreational In-Channel Diversion (RICD) water right. The report addresses areas of concern raised by the CWCB staff at the CWCB Board meeting in July 2011 and during discussions with Pitkin County's representatives.

The RICD flow rates were revised in response to the CWCB Board's finding. This work evaluates one water right with 3 flow rates and five time periods of 14 days or more each. This report calculates the total volume represented by proposed RICD flow rates and evaluates water availability by comparing proposed RICD flows to 50 percent of the average daily flow volume in the Roaring Fork River at the River Park. Based on objectives established by Pitkin County's representatives, the RICD flow rates were selected such that:

- The RICD flow rate mimicked the shape of the hydrograph to ensure that the claimed flows are consistent with the historically available water supply,
- The RICD water right protects stream flows for recreational purposes during the peak flows and falling limb later in the summer, and
- The total volume of water represented by the RICD flow rates is less than fifty percent of the sum of the total average historical volume of water in the stream segment where the recreational in-channel diversion is located for each day on which a claim is made.

Discussion

1 – Statutory Limitations

The RICD legislation sets forth the following restrictions on RICD water rights under paragraphs C.R.S. § 37-92-305 (10.3):

10.3 ...from April 1 to Labor Day of each year unless the applicant can demonstrate that there will be a demand for the reasonable recreational experience on additional days. The Recreational In-Channel Diversion shall be limited to one specified flow rate for each time period claimed by the applicant. Individual time periods shall not be shorter than fourteen days unless the applicant can demonstrate a need for a shorter time period...

(e) If the other elements of the appropriation are satisfied, the decree shall specify the total volume of water represented by the flow rates decreed for the recreational in-channel diversion. For the purposes of the subsection (13), the "total volume of water represented by the flow rates decreed for the recreational

in-channel diversion” means the sum of the flow rates claimed in cubic feet per second for each day on which a claim is made multiplied by 1.98.

And under C.R.S. § 37-92-305 (13)(e) and (f)

(f) If the court determines that the total volume of water represented by the flow rates decreed for the recreational in-channel diversion exceeds fifty percent of the sum of the total average historical volume of water for the stream segment where the recreational in-channel diversion is located for each day on which a claim is made, the decree shall:

- (I) Specify that the state engineer shall not administer a call for the recreational in-channel diversion unless the call would result in at least eighty-five percent of the decreed flow rate for the applicable time period;*
- (II) Limit the recreational in-channel diversion to no more than three time periods; and*
- (III) Specify that each time period is limited to one flow rate.”*

Paragraph (e) of the RICD statute requires the determination of the “*total volume of water represented by the flow rates decreed for the recreational in-channel diversion,*” which is defined as, “*the sum of the flow rates claimed in cubic feet per second for each day on which a claim is made multiplied by 1.98* (RICD total volume).

Paragraph (f) requires that an applicant compare the RICD total volume to “*fifty percent of the sum of the total average historical volume of water for the stream segment where the recreational in-channel diversion is located for each day on which a claim is made.*” (fifty percent average historical volume). When the RICD total volume exceeds the fifty percent average historical volume paragraph (f) imposes three restrictions on the RICD water rights: (1) the state engineer shall not administer a call for the recreational in-channel diversion unless the call would result in at least eighty-five percent of the decreed flow rate for the applicable time period; (2) limits the RICD water right to no more than three time periods, and (3) limits each time period to one flow rate.

Appendix A provides the previously reported estimated historical daily flow rates for April 15th to September 3rd and the years of 1980 to 2010 (Canyon Water Resources, 2011)¹. The right hand side columns present the estimated average historical daily rate (cfs), the average historical daily volume (af), and the 50 percent average historical volume (af). The average estimated daily flows for the RICD season (1980 to 2010) is 878 cfs. Fifty percent of the average historical daily rate is 439 cfs, so the 50 percent average historical daily volume is 123,647 acre-feet.

This effort considered the RICD flow rates described by River Restoration (January, 2011) and selected time periods for flow rates of 240, 380, and 1,350 cfs such

¹ For the purposes of this report, September 3rd is the “average” date for Labor Day and the RICD season is 142 days long.

that the RICD flow rates mimicked the hydrograph, protected the peak and shoulder flows of the run-off hydrograph for recreational use, and total volume did not exceed the fifty percent average historical volume. Table 1 provides the timing, flow rate, and total volume for the RICD water right. Figure 1 presents a graph of the RICD daily flow rate, estimated average historical rate, and the 50 percent average historical rate. Figure 2 expresses the water right and historical flow information in terms of volumes.

Table 1: Timing and Flow Rate of the RICD Water Right

Time Period		No. Days	RICD (cfs)	No. Days x RICD x 1.98 (af)	RICD Total Volume (af)
15-Apr	17-May	33	240	15,709	15,709
18-May	10-Jun	24	380	18,090	33,799
11-Jun	25-Jun	15	1,350	40,166	73,965
26-Jun	20-Aug	56	380	42,209	116,174
21-Aug	3-Sep	14	240	6,665	122,839

The RICD total volume is 122,839 af which is less than one-half the average historical daily volume (123,647 af). Consequently, the RICD is not restricted by the three provisions in paragraph (f) of the Statute.

Section 2 – Analysis of the Pitkin County River Park RICD Water Right

This section compares the Pitkin County River Park RICD water right to the estimated historical flow in the Roaring Fork River at the River Park to determine when river flows were less than each proposed RICD flow rate on a daily basis. These analyses will indicate how the RICD water right may potentially affect administration of upstream water rights decreed junior to the RICD water right.²

The analysis is a relative comparison of the two most junior water right priorities; the RICD water right and a future upstream junior water right. In general, river administration at the River Park will be the result of operations of other senior water rights (e.g., the “Cameo” rights, Home Supply Ditch, CWCB in-stream flows). Those calls would affect both the RICD and the upstream juniors. Consequently, even though this analysis indicates the days when upstream juniors would be out-of-priority with respect to the RICD, the RICD may not be the primary control on water administration for that particular day.

This evaluation incorporates 60 cfs as the lower limit for administration of the RICD. If flow at the River Park is less than 60 cfs, then the RICD would not place a call.

² Other administrative calls may impact administration of the Roaring Fork River upstream of the confluence with the Frying-Pan River (i.e., CWCB instream flow or Grand Valley “Cameo” water rights).

In the Appendix the estimated historical daily flow rate value is shaded if the flow rate is less than the RICD flow rate and greater than 60 cfs. If the daily flow value is less than 60 cfs, then the cell is not shaded.

Table 2 summarizes the RICD flow rates and timing and the historical period of 1980 – 2010 showing the number of days when the estimated flow of the Roaring Fork River was such that a Pitkin County RICD water right would be been able to place a call and as a result, may have potentially affected river administration. The historical data indicate that the RICD may potentially affect river administration on average approximately 43 out of the 142 day season or 30% of the days from April 15th to September 3rd.

The data in Table 2 indicates that the RICD will help protect water for recreational uses at various flows particularly during the critical late summer period. The bottom row of Table 2 shows the percentage of days (for each RICD flow rate and period) that the estimated historical flows were less than the RICD and greater than 60 cfs. For June 11 - June 25, 380 cfs, 42%; June 26 – August 20, 380 cfs, 32%, and August 21 – September 2, 240 cfs, 52% of the days are shown to be potentially affected by the RICD.

Table 2: Number of Days when the Historical Flows were less than RICD and greater than 60 cfs

	Pitkin County River Park RICD					
	240 cfs April 15 - May 17	380 cfs, May 18 - Jun 10	1,350 cfs, Jun 11 - Jun 25	380 cfs, Jun 26 Aug 20	240 cfs, Aug 21 - Sep 3	Annual Total
Days	33	24	15	56	14	142
1980	5	0	0	13	12	30
1981	12	8	12	34	14	80
1982	0	3	0	0	0	3
1983	23	5	2	0	0	30
1984	22	0	0	0	0	22
1985	0	0	0	8	3	11
1986	3	0	0	0	0	3
1987	2	0	3	19	5	29
1988	17	0	9	30	13	69
1989	4	0	11	25	13	53
1990	20	3	9	29	14	75
1991	24	0	0	14	14	52
1992	7	0	15	19	1	42
1993	9	0	1	0	0	10
1994	9	0	10	37	14	70
1995	25	0	1	0	0	26
1996	16	0	0	14	11	41
1997	3	0	0	0	0	3
1998	3	0	13	8	0	24
1999	21	0	0	0	0	21
2000	4	0	15	41	13	73
2001	14	0	14	31	9	68
2002	31	10	15	46	3	105
2003	26	0	12	40	14	92
2004	8	0	15	32	14	69
2005	14	1	6	6	6	33
2006	0	0	10	28	13	51
2007	1	0	4	28	14	47
2008	3	0	0	0	0	3
2009	0	0	6	17	14	37
2010	0	0	11	33	13	57
Total	326	30	194	552	227	1329
Ave.	10.5	1	6.3	17.8	7.3	42.9
Percent	32%	4%	42%	32%	52%	30%

Conclusions

This second supplemental report addresses areas of concern raised by the CWCB and provides information to support the revised RICD flow rates. This report evaluates one water right with 3 flow rates and five time periods of 14 days or more each. The analysis indicates:

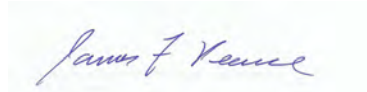
- Because the RICD water right is non-consumptive, it has no effect on any water uses downstream of the Lower Structure Unit (i.e., downstream of Basalt).
- Because the RICD water right operates in the prior appropriation system, the RICD water right has no effect on any uses decreed senior to the RICD water right.
- The RICD water right may impact development of consumptive uses located upstream and with priorities junior to the Pitkin County River Park RICD water right.
- The RICD total volume is 122,839 af which is less than one-half the average historical daily volume (123,647 af). Consequently, the RICD is not restricted by the three provisions in paragraph (f) of the C.R.S. § 37-92-305(13).
- Considering the Roaring Fork River historical flows (1980 – 2010) at the Pitkin County River Park and RICD water right, the water right could have called on junior water rights an average of 43 days over the 142 day RICD season (April 15th – September 3rd).
- Considering the average 43 days per year, water rights upstream and junior to the Pitkin County River Park RICDs would not be impacted by the water right on 70% of the days during the RICD season. If not limited by other administrative or physical water supply constraints, new junior rights will have many days other to divert (on average 99 out of 142 days). Obviously, the junior water rights would not be affected outside the RICD season.
- Even with the RICD water right, new junior water right will have ample opportunities to divert water supplies in-priority.

References

Design Engineering Report, Case No. 2010-CW-305, Pitkin County's Recreational In-Channel Diversion Water Right in the Roaring Fork River. River Restoration, Inc., January, 2011

Report in Support of the Pitkin County River Park Recreation In-Channel Diversions Water Rights Application Case number 10CW305, Division 5. Canyon Water Resources, LLC, February, 2011

Signature Page

A handwritten signature in blue ink, reading "James F. Keene", is positioned above a horizontal line.

This report was prepared by _____ Manager, Canyon Water
Resources, LLC

Date: December 2, 2011

Figure 1: RICD Daily Rate and the Estimated Average Historical and 50 Percent Average Historical Rates

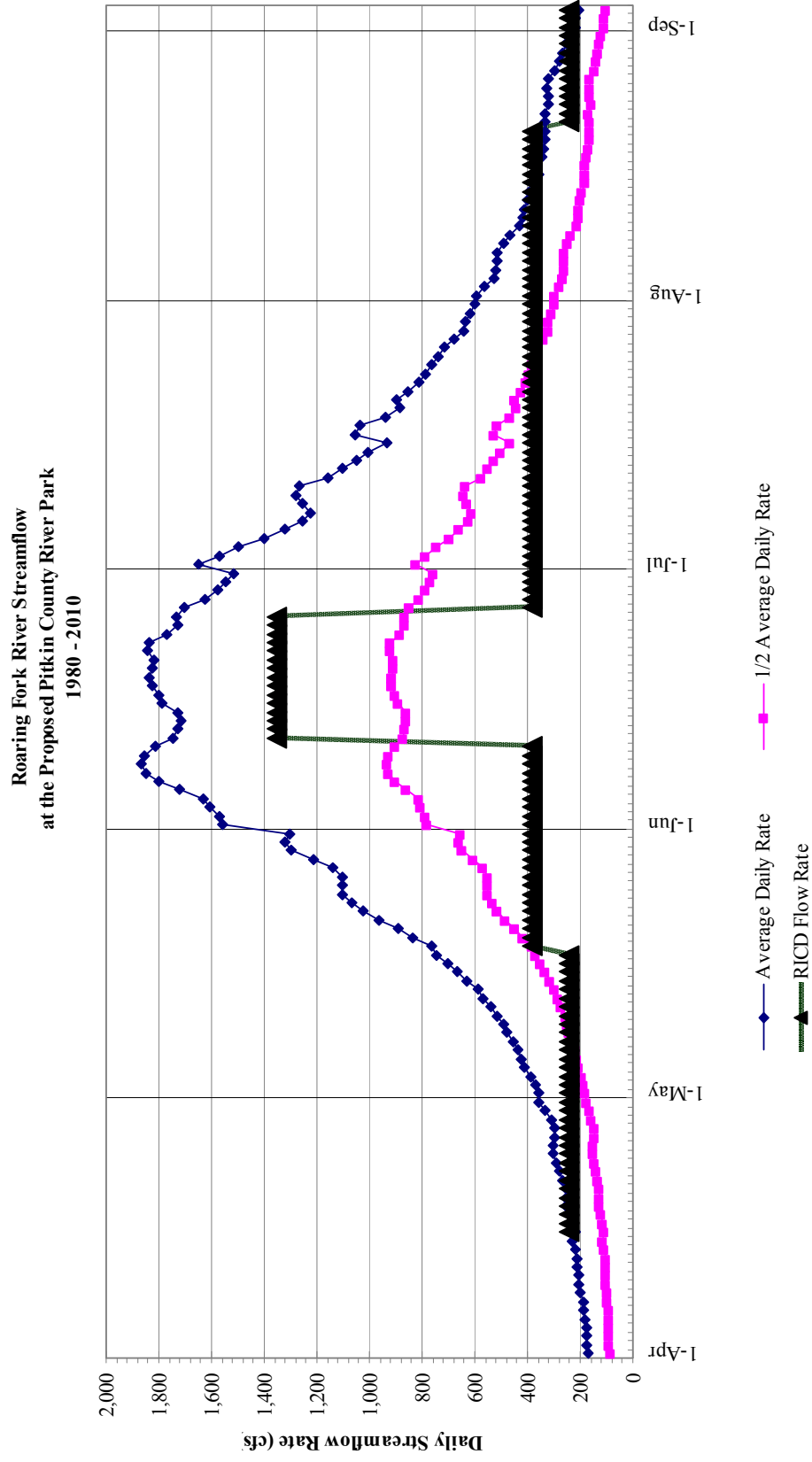
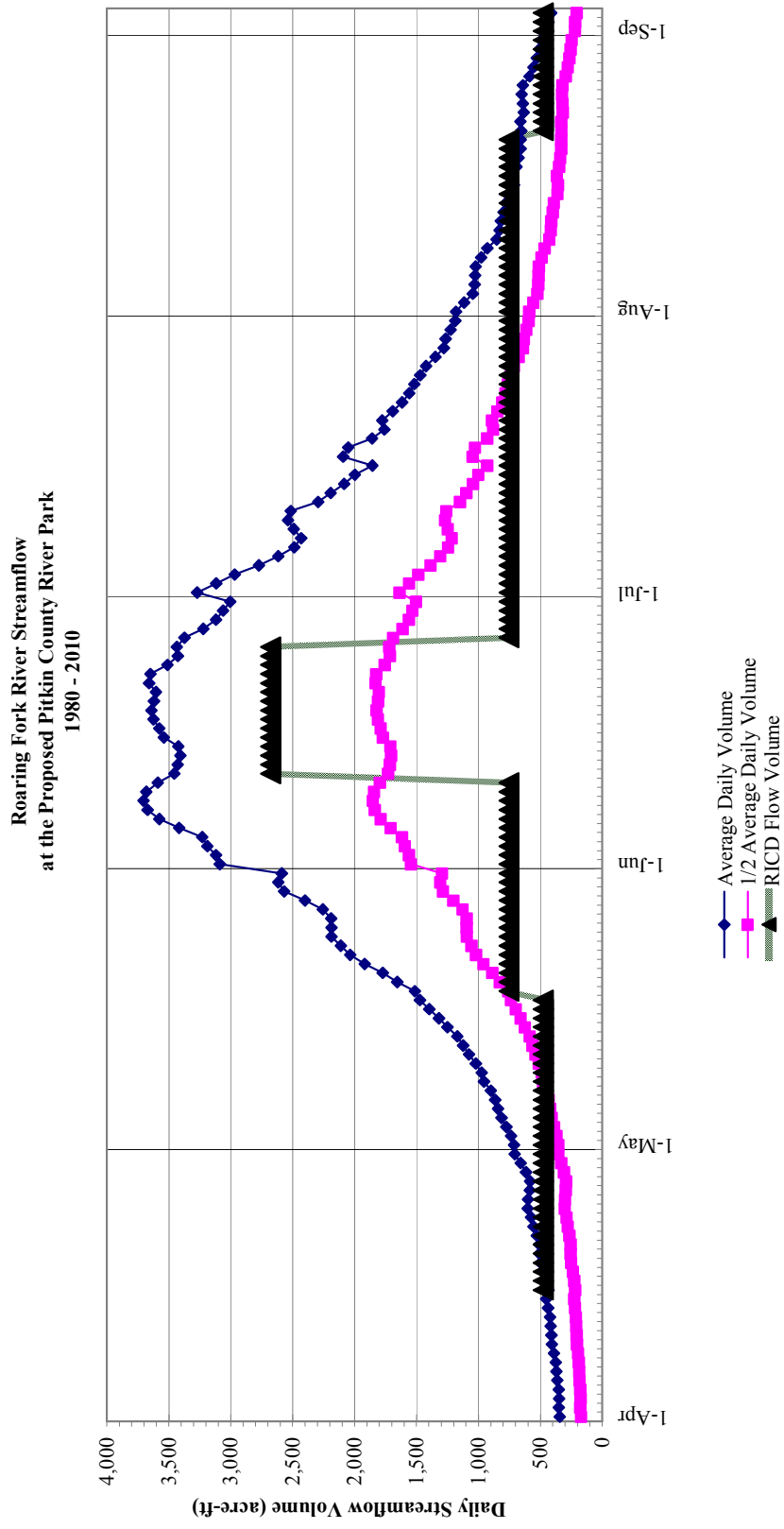


Figure 2: RICD Daily Volume and the Estimated Average Historical and 50 Percent Average Historical Volumes



Estimated Historical Daily Streamflow-At the Proposed Pitkin County Recreational Park

	Cubic Feet per Second																														Average Historical Daily Rate (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Volume (af)	RICD Daily Volume (af)	
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010				
15-Apr	127	155	328	95	146	509	254	164	245	244	168	114	272	140	130	188	182	167	272	105	245	124	228	208	257	199	511	235	231	276	278	219	435	218	476
16-Apr	144	162	325	96	172	555	266	196	246	274	191	117	268	141	146	180	179	190	278	86	213	131	254	188	265	224	442	245	270	301	312	228	452	226	476
17-Apr	159	182	303	99	217	569	259	258	247	303	208	130	244	141	182	181	180	237	272	99	216	146	218	188	281	258	455	272	229	276	398	239	474	237	476
18-Apr	188	216	306	104	260	609	240	327	218	336	198	146	274	151	219	174	186	291	275	100	260	160	203	198	289	290	475	263	220	252	385	252	500	250	476
19-Apr	232	259	298	110	256	592	222	348	211	380	205	146	241	151	254	178	175	323	245	90	252	188	205	181	277	302	419	261	263	246	409	255	507	254	476
20-Apr	285	257	282	114	237	490	214	323	209	424	205	151	216	146	302	174	166	356	215	93	219	215	207	175	272	316	381	269	318	259	480	257	510	255	476
21-Apr	347	222	268	119	210	459	237	276	235	512	233	159	201	152	383	168	159	398	215	121	225	189	185	172	247	279	387	305	339	294	538	266	527	264	476
22-Apr	395	222	274	120	201	411	341	289	218	539	254	154	202	193	446	163	156	360	231	128	259	192	171	191	231	239	407	327	347	355	648	279	554	277	476
23-Apr	408	222	288	120	213	358	440	372	209	536	261	167	198	236	449	160	170	327	247	122	309	170	155	216	216	233	495	312	403	406	561	290	575	288	476
24-Apr	363	264	296	131	237	343	443	461	197	578	259	167	188	246	465	155	194	318	335	105	333	156	129	203	203	288	573	331	466	476	488	303	601	301	476
25-Apr	325	316	306	152	246	337	433	511	184	566	231	176	205	244	420	155	223	284	438	158	290	158	122	193	208	299	523	305	439	494	422	302	599	300	476
26-Apr	351	382	314	170	226	316	389	565	176	542	212	184	228	247	344	164	244	271	374	136	284	159	147	203	187	267	504	287	392	514	383	296	586	293	476
27-Apr	376	399	314	198	213	313	326	632	179	455	195	168	272	267	303	168	249	266	338	114	322	183	176	233	182	255	544	285	367	479	357	294	584	292	476
28-Apr	425	391	349	190	196	381	295	680	188	376	183	161	366	334	271	179	237	316	337	127	411	220	155	258	205	256	635	320	398	446	361	311	617	309	476
29-Apr	468	435	386	189	185	487	310	712	201	323	183	151	472	395	255	194	223	339	340	128	472	256	164	245	224	232	573	415	458	468	411	332	659	330	476
30-Apr	478	481	433	193	179	528	367	743	246	292	175	148	585	402	239	213	215	316	348	220	483	277	160	239	288	207	539	553	573	569	363	357	707	354	476
1-May	396	544	457	165	161	588	455	758	307	248	156	125	659	322	206	183	206	288	362	211	388	311	126	239	253	200	576	643	583	664	344	359	712	356	476
2-May	373	587	577	157	173	680	574	716	250	235	158	144	654	320	198	216	225	264	372	282	397	405	74	219	255	159	564	775	476	704	334	372	737	369	476
3-May	368	797	649	157	171	852	720	570	225	224	164	148	655	362	202	230	279	248	410	261	512	405	87	217	272	145	599	779	414	681	313	391	775	388	476
4-May	387	612	712	163	169	1053	886	479	221	222	167	150	652	426	203	211	353	265	516	273	648	348	73	251	314	141	629	809	397	661	327	410	814	407	476
5-May	419	497	737	187	178	1090	866	448	242	220	172	148	693	440	268	237	461	352	595	236	792	358	89	241	349	164	671	675	412	591	339	425	842	421	476
6-May	472	435	552	238	191	1039	752	481	282	266	207	160	729	358	395	240	563	473	613	207	915	317	95	201	424	194	633	599	526	607	360	436	865	433	476
7-May	543	376	465	223	177	1044	692	579	243	370	282	183	748	329	491	231	609	572	579	199	862	289	124	177	488	247	623	528	678	773	335	454	900	450	476
8-May	574	334	429	281	183	1121	600	684	234	506	277	239	771	298	511	221	676	601	548	214	892	278	146	166	548	271	612	463	985	927	335	481	955	478	476
9-May	558	296	438	378	228	1107	528	797	217	682	257	390	817	272	533	208	759	670	566	271	706	305	111	148	593	221	597	460	832	941	337	491	974	487	476
10-May	528	270	450	440	356	1184	497	880	229	788	275	551	687	262	513	216	751	705	610	407	653	334	113	157	608	269	526	447	914	911	430	515	1021	511	476
11-May	510	277	440	480	516	1063	494	941	263	789	317	673	556	325	568	259	792	750	739	385	869	347	105	149	643	325	491	485	796	1020	429	542	1075	538	476
12-May	487	248	433	379	704	873	513	1020	374	727	256	604	570	462	716	338	951	769	713	334	859	456	146	132	612	281	485	640	820	1220	452	567	1124	562	476
13-May	413	224	416	357	950	740	549	1060	530	599	231	585	591	678	756	296	1126	835	720	339	606	623	120	154	500	257	527	869	888	1300	449	590	1170	585	476
14-May	373	220	354	312	1293	644	582	1207	681	572	257	732	678	842	718	285	1218	936	754	446	525	837	118	172	423	229	633	1020	775	1270	427	630	1250	625	476
15-May	349	239	318	302	1645	623	608	1378	782	485	299	748	713	975	724	407	1250	1029	642	488	496	827	125	257	378	241	688	1090	736	1330	433	665	1318	659	476
16-May	380	239	305	282	1719	649	606	1492	876	435	279	537	746	1146	766	559	1433	1134	552	536	496	1011	161	302	375	287	787	1170	707	1440	409	704	1396	698	476
17-May	483	242	299	265	1625	685	602	1468	956	399	247	457	767	1196	881	612	1548	1169	561	538	634	1089	167	452											

Estimated Historical Daily Streamflow-At the Proposed Pitkin County Recreational Park

	Cubic Feet per Second																					Average Historical Daily Rate (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Volume (af)	RICD Daily Volume (af)										
12-Jun	3403	1747	1806	2361	1768	2956	1591	2259	1611	1157	2078	2373	1050	1689	1481	1844	1971	2174	822	2049	1171	1309	407	1378	957	964	1874	1750	2090	1230	2290	1729	3430	1715	2678
13-Jun	3438	1439	1908	1731	2135	3092	1853	2170	1399	1113	1567	2262	1179	2282	1519	2524	2125	2355	1042	2123	1069	1230	399	1466	856	910	1759	1490	1750	1200	1860	1718	3407	1704	2678
14-Jun	3223	1094	1741	1298	2845	3244	2070	2258	1108	1046	1675	2416	1192	2771	1445	3096	2247	2422	934	2123	943	971	376	1259	959	834	1710	1450	1970	1300	1470	1725	3422	1711	2678
15-Jun	2936	737	1731	1234	3337	3351	2339	2377	1168	1164	1535	2604	1089	3234	1431	3774	2428	2449	934	2144	883	781	359	1333	1096	868	1631	1590	2350	1280	1170	1785	3541	1771	2678
16-Jun	2704	610	1699	1450	3422	3320	2373	2364	1237	1420	1240	2559	933	3239	1293	4303	2223	2409	840	1996	888	733	325	1414	1012	1107	1309	1720	3370	1340	1030	1803	3576	1788	2678
17-Jun	2729	661	1863	1830	2873	3219	2446	2208	1239	1499	1187	2440	762	3572	1222	4558	2238	2332	884	2004	775	673	307	1224	963	1354	1113	1810	4270	1390	1000	1827	3624	1812	2678
18-Jun	2959	694	2156	2631	2564	3288	2468	1997	1240	1412	1303	2271	863	2769	1185	4025	2210	2602	809	2064	708	737	290	1195	903	1604	1114	1830	4480	1530	1000	1836	3641	1821	2678
19-Jun	3294	674	2055	3532	2910	3026	2420	1840	1373	1440	1376	1941	1036	2356	1169	2924	2123	3264	765	2208	796	743	276	1214	877	1919	1158	1540	3570	1630	1120	1825	3620	1810	2678
20-Jun	3458	810	1808	3713	2970	2812	2326	1524	1442	1323	1251	1739	1158	2496	1299	2915	2063	3813	985	2279	887	759	269	1158	920	2020	1068	1470	2650	1780	1150	1817	3603	1802	2678
21-Jun	3319	862	1846	3775	3344	2758	2379	1419	1434	1179	1255	1878	1164	2983	1182	3298	2216	3606	1141	2415	757	729	269	1078	908	2000	1048	1430	2710	1670	1130	1845	3659	1830	2678
22-Jun	3148	835	1937	3750	3576	2715	2304	1381	1335	815	1224	1816	1077	3111	1337	3369	2539	3406	1305	2453	690	761	260	1031	801	2147	986	1320	2800	1720	1060	1839	3648	1824	2678
23-Jun	3109	727	2092	3616	3301	2426	2210	1348	1205	675	1189	1690	1067	3148	1212	3165	2078	3315	1474	2519	659	685	250	1023	713	2283	934	1210	2670	1890	1000	1770	3512	1756	2678
24-Jun	3099	658	2087	3936	3265	2446	2142	1274	1245	595	1162	1603	1118	2758	1025	3128	1715	3053	1427	2554	626	684	223	934	715	2254	906	1220	2880	1830	1000	1728	3427	1714	2678
25-Jun	2990	594	2137	5032	3233	2899	1933	1221	1160	712	1087	1423	1157	2443	910	3184	1566	2749	1302	2616	618	763	198	829	728	2172	880	1120	3030	2000	995	1732	3435	1718	2678
26-Jun	3169	581	2158	4178	3077	2210	2281	1187	1052	740	1059	1177	1132	2612	824	3511	1525	2498	1476	2598	645	782	214	819	737	2107	823	1000	3310	2260	968	1700	3373	1687	754
27-Jun	3169	581	2162	3318	3164	1531	2408	1136	907	742	1030	969	958	2809	753	3765	1597	2373	1595	2423	661	879	221	818	697	1960	726	967	2870	2230	937	1624	3221	1611	754
28-Jun	2745	580	2349	2938	3263	1316	2346	1109	944	744	941	1084	833	2954	658	3903	1419	2355	1642	2299	632	729	183	802	649	1791	646	905	2970	2200	836	1573	3120	1560	754
29-Jun	2328	466	2471	2801	3454	1421	2236	1083	1118	748	818	1265	889	3063	560	3671	1191	2247	1693	2109	575	703	177	771	655	1894	650	845	2980	2070	907	1544	3062	1531	754
30-Jun	2240	400	2280	2800	3814	1459	2092	966	912	744	726	1278	814	3338	509	3336	1196	2138	1700	1990	570	657	182	744	939	1794	645	785	2990	1870	1060	1515	3005	1503	754
1-Jul	2546	603	2593	3028	4935	1742	1892	1401	935	857	910	1373	967	2997	668	4081	1612	2677	1684	2055	553	634	164	701	804	1708	652	766	2820	1800	1010	1649	3271	1636	754
2-Jul	2483	748	2306	2949	4527	1858	1866	1307	832	789	852	1283	847	2909	625	4109	1549	2432	1592	2054	541	574	154	695	681	1615	668	726	2400	1750	995	1571	3117	1559	754
3-Jul	2330	611	2063	3034	4289	1894	1850	1251	779	750	812	1219	729	2907	594	3824	1413	2297	1522	1905	502	528	150	629	650	1591	707	655	2090	1810	1000	1496	2968	1484	754
4-Jul	2135	526	1972	2774	3833	1956	1827	1186	733	720	854	1134	711	2475	568	3416	1384	2216	1460	1737	466	514	178	599	609	1434	675	612	2100	1660	880	1398	2773	1387	754
5-Jul	1888	481	1787	2712	3519	1951	2336	1127	696	695	777	1061	742	1834	526	2862	1423	2070	1433	1672	409	481	214	579	584	1362	617	600	2090	1550	794	1318	2615	1308	754
6-Jul	1716	458	1589	2812	3158	1908	2079	1069	673	678	811	1005	769	1543	491	2990	1322	1809	1462	1623	377	449	211	546	583	1306	722	584	1960	1450	712	1254	2487	1244	754
7-Jul	1646	440	1412	3092	2939	1835	1744	979	613	646	704	986	770	1641	460	3521	1263	1757	1354	1577	349	457	190	518	574	1274	661	540	2060	1340	653	1226	2431	1216	754
8-Jul	1638	444	1384	3798	3120	1765	1421	867	552	628	753	1070	995	1925	429	4345	1171	1684	1232	1584	314	443	159	495	535	1193	710	524	1890	1230	627	1256	2491	1246	754
9-Jul	1568	451	1456	3917	3500	1771	1425	844	498	569	804	1091	816	1840	418	5296	1075	1528	1244	1590	360	455	177	451	510	1168	837	493	1720	1170	639	1280	2539	1270	754
10-Jul	1517	503	1343	3665	4221	1645	1387	721	479	552	698	913	658	1857	405	5924	1014	1279	1468	1444	368	526	169	423	499	1112	801	451	1600	1100	568	1268	2515	1258	754
11-Jul	1453	409	1355	2954	3130	1540	1232	609	492	541	609	785	595	2006	396	5781	990	1235	1312	1307	298	464	165	392	466	1043	702	425	1520	1070	560	1156	2293	1147	754
12-Jul	1410	451	1345	2435	2614	1501	1238	599	446	563	548	772	632	2104	389	6027	923	1146	1180	1154	266	426	153	369	439	1046	696	434	1400	1040	532	1106	2193	1097	754
13-Jul	1459	441	1370	2160	2134	1636	1285	569	425	522	504	745	607	2068	363	5676	861	1128	1104	1013	249	460	149	352	406	1057	633	437	1320	986	466	1051	2085	1043	754
14-Jul	1244	404	1317	2094	2915	1406	1224	543	455	481	478	783	541	1849	347	4973	823	1076	1021	1031	247	472	137	327	391	1100	579	380	1230	922	427	1007	1997	999	754
15-Jul	1175	370	1296	1968	2491	1259	1246	525	434	443	456	799	500	1782	340	4223	785	1038	955	944	349	493	126	306	370	1047	510	361	1150	858	407	936	1856	928	754
16-Jul	1328	383	1351	2264	2927	1490	2029	545	436	413	458	942	515	1855	304	5600	977	1148	865	927	615	467	129	303	399	948	476	336	1110	781	378	1055	2092	1046	754
17-Jul	1261	440	1279	2167	2705	1475	2052	573	428	384	438	1081	466	1697	299	5329	1071	1114	836	935	744	395	125	280	638	950	442	312	1060	745	351	1035	2052	1026	754
18-Jul	1156	443	1208	2022	2396	1431	1668	551	382	364	451	1005	443	1566	294	4328	1034	1116	792	865	593	350	116	270	496	864	422	323	1050	711	326	937	1858	929	754
19-Jul	1129	359	1130	2041	2283	1386	1631	476	365	344	454	870	427	1389	343	4066	1017	1028	756	855	478	327	116	280	446	763	414	364	995	690	302	887	1760	880	754
20-Jul	1032	320	1087	1944	2268</																														

Estimated Historical Daily Streamflow-At the Proposed Pitkin County Recreational Park

Cubic Feet per Second																																Average Historical Daily Rate (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Volume (af)	RICD Daily Volume (af)		
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010						
11-Aug	285	161	521	863	658	423	588	280	183	259	169	270	391	809	210	1441	319	1078	399	651	141	346	49	76	132	475	243	222	666	273	212	413	819	410	754		
12-Aug	262	182	516	852	641	434	597	270	175	317	176	290	374	666	203	1399	299	1146	389	626	150	294	46	70	120	453	237	205	579	249	235	402	797	399	754		
13-Aug	262	169	543	1015	670	368	648	256	171	276	221	309	352	612	211	1315	280	1020	374	552	179	257	44	70	116	419	240	204	528	241	248	393	779	390	754		
14-Aug	259	147	601	792	617	340	568	251	158	260	209	276	348	564	228	1169	270	933	343	520	159	302	56	69	118	394	228	201	488	241	202	365	724	362	754		
15-Aug	405	151	545	730	676	316	523	231	156	248	257	260	341	519	237	995	265	863	325	542	152	462	54	81	117	359	214	215	464	253	183	359	713	357	754		
16-Aug	425	182	543	739	765	322	530	253	205	241	238	297	326	571	225	1053	270	792	319	515	181	380	81	107	112	356	209	246	480	249	190	368	730	365	754		
17-Aug	322	162	507	671	623	313	518	245	210	228	254	270	376	552	210	965	263	727	315	494	173	322	72	122	109	377	208	262	460	234	239	348	691	346	754		
18-Aug	282	146	493	676	746	309	523	232	196	266	242	241	322	512	203	994	266	660	315	481	186	289	71	138	114	376	196	238	425	216	201	340	675	338	754		
19-Aug	257	133	475	635	780	315	554	223	182	306	213	236	281	510	216	985	265	615	228	451	225	268	72	126	152	357	208	222	401	202	219	333	660	330	754		
20-Aug	239	124	460	647	803	304	590	218	175	279	198	241	259	503	218	978	250	545	307	434	223	258	85	104	154	340	192	212	386	192	376	332	659	330	754		
21-Aug	223	117	502	576	859	299	683	219	202	246	222	216	243	562	191	958	248	523	348	418	228	294	91	88	158	337	191	196	373	179	265	331	656	328	476		
22-Aug	210	122	495	527	879	311	665	261	286	221	196	205	268	676	189	947	252	500	358	425	226	318	91	86	161	335	187	181	358	173	228	333	661	331	476		
23-Aug	216	113	477	500	692	311	576	347	223	205	191	191	439	546	187	1009	243	477	348	395	223	285	64	84	170	314	178	173	346	173	222	320	635	318	476		
24-Aug	232	108	442	471	934	299	664	437	200	207	158	182	577	494	173	953	231	453	334	363	221	263	55	84	147	253	177	175	341	176	212	323	641	321	476		
25-Aug	250	113	455	453	906	291	937	449	185	200	144	176	518	490	162	888	229	502	403	353	219	242	55	82	136	255	182	174	338	179	193	328	650	325	476		
26-Aug	268	106	529	448	826	284	702	394	169	193	133	180	529	706	153	829	225	575	345	362	227	229	46	91	130	264	214	167	338	179	177	323	641	321	476		
27-Aug	228	102	441	416	646	279	576	313	174	184	124	182	467	607	140	845	232	460	353	359	247	216	31	92	120	244	282	159	336	170	166	296	588	294	476		
28-Aug	201	99	432	408	594	275	525	279	165	175	119	203	407	487	160	810	238	413	345	350	225	208	17	101	124	251	227	170	328	167	160	279	554	277	476		
29-Aug	185	97	399	392	538	257	590	263	155	167	112	180	346	446	162	759	229	392	314	341	225	198	21	91	131	235	213	168	320	161	159	266	528	264	476		
30-Aug	178	126	381	426	513	252	540	241	148	162	108	162	308	417	158	724	214	372	295	326	232	196	25	99	126	218	198	171	315	158	157	256	508	254	476		
31-Aug	176	137	387	387	519	239	466	225	146	160	110	149	295	404	149	669	204	367	281	324	219	219	22	103	115	220	184	160	318	158	163	248	491	246	476		
1-Sep	155	130	283	295	507	209	361	193	138	146	112	147	245	338	152	492	172	326	320	331	207	212	15	97	107	206	169	165	320	152	151	221	438	219	476		
2-Sep	146	117	262	284	446	232	361	196	137	142	112	179	255	404	164	477	168	311	303	361	200	201	11	99	92	188	157	161	324	149	137	219	434	217	476		
3-Sep	143	110	249	282	376	244	341	187	129	136	111	151	230	342	179	467	162	300	284	383	180	192	16	76	90	191	150	153	314	147	122	208	412	206	476		
Count Days	30	79	3	30	22	11	3	29	69	53	75	52	42	10	70	26	41	3	24	21	73	68	106	92	69	33	51	47	3	37	57	Average	Average	Total	Total		
																																	878	1741	123628	122862	
page 1	5	19	3	28		22	0	3	2	17	5	23	24	8	10	9	26	16	3	4	21	5	14	43	27	9	16	0	1	3	1	0					
page 2	5	36	0	2		0	0	0	12	29	25	28	4	24	0	37	0	4	0	12	0	45	36	55	41	36	5	28	22	0	12	34					
page 3	20	24	0	0		0	11	0	15	23	23	24	10	0	24	0	21	0	8	0	23	18	8	24	24	12	23	24	0	24	23						
																																				123628	122862

EXHIBIT H

Canyon Water Resources, LLC
685 Canyon Creek Drive
Glenwood Springs, CO 81601
[SERVED ONLY: December 1, 2013 5:13 PM](#)
[FILING ID: E22C4775F6524](#)
[CASE NUMBER: 2010CW305](#)

July 9, 2012

Ms. Patricia DeChristopher
Moses, Wittemyer, Harrison & Woodruff, P.C.
1002 Walnut Street, Suite 300
PO Box 1440
Boulder, CO 80306

Dear Patricia:

This letter transmits updated hydrology for the Pitkin County River Park Recreational In-Channel Diversion water rights application (Case No. 10CW305, Water Division 5). This update corrects an error in the hydrological analysis for the 1980 – 1997 daily hydrology. The correction resulted in a slight increase in the estimate of historical flows at the River Park.

The error was in the regression analysis for the 1980 – 1997 time period. The analysis developed regression equations for two-week periods for April 1 – September 15. For each two week period, the regression equations determine the flow at the Park as a function of the flows at the Roaring Fork near Aspen (id 09073400) and Crystal River above Avalanche Creek (id 09081600) stream gages. The error only affected flow estimates for the periods May 16 – 31 and June 16 – 30.

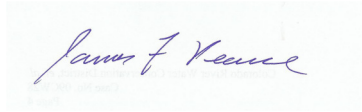
In the previously reported hydrology, flows for May 16 – May 31 were calculated with the regression equation for May 1 – May 15. Similarly, for June 16 – June 30, the flows were calculated with the regression equation for June 1 – June 15. This update uses the correct equations for the second half of those months and recalculates the one-half average historical flow rate at the Park.

The first table provides the corrected hydrology and second table labeled “Appendix” is the previously reported hydrology (Second Supplemental Report, Canyon Water Resources, December 2011). The December 2011 hydrology reported the fifty percent historical volume for the RICD season and the period 1980 – 2010 as 123,628 acre-feet. The corrected hydrology indicates that the fifty percent historical volume is 125,443 acre-feet. The correction resulted in the fifty percent historical volume increasing by approximately 1,800 acre-feet. The RICD total volume is 122,580 acre-feet and is less than the corrected fifty percent historical volume¹.

¹ This update also calculated the 50% average historical volume and the RICD total volume by multiplying daily flow rates by 1.98 instead of 1.9835 to convert the daily flow rate in cubic feet per second to a daily volume in acre-feet. That changed the RICD volume from 122,862 acre-feet (reported in December 2011) to 122,580 acre-feet.

I apologize for the error in the calculations. Please call if you have any questions (970-379-6918).

Sincerely,

A handwritten signature in blue ink that reads "James F. Pearce". Below the signature, there is a faint, light blue rectangular stamp or watermark.

James Pearce, P.E.
Manager, Canyon Water Resources, LLC

enclosures

Daily Streamflow-At the Proposed Kayak Park

1980 - 2010

units = cubic feet per second

Indicates day when stream flow is less than RICD flow rate and greater than 60 cfs

7/3/2012 Repair Hydrology for 1980 - 1997. Correct regression equations for May 16 - 31 and June 16 - 30.

																														Average Historical Daily Rate (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Volume (af)	RICD Flow Rate (cfs)	RICD Daily Volume (af)			
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010					
15-Apr		127	155	328	95	146	509	254	164	245	244	168	114	272	140	130	188	182	167	272	105	245	124	228	208	257	199	511	235	231	276	278	219	434	217	240	475
16-Apr		144	162	325	96	172	555	266	196	246	274	191	117	268	141	146	180	179	190	278	86	213	131	254	188	265	224	442	245	270	301	312	228	451	226	240	475
17-Apr		159	182	303	99	217	569	259	258	247	303	208	130	244	141	182	181	180	237	272	99	216	146	218	188	281	258	455	272	229	276	398	239	473	237	240	475
18-Apr		188	216	306	104	260	609	240	327	218	336	198	146	274	151	219	174	186	291	275	100	260	160	203	198	289	290	475	263	220	252	385	252	499	250	240	475
19-Apr		232	259	298	110	256	592	222	348	211	380	205	146	241	151	254	178	175	323	245	90	252	188	205	181	277	302	419	261	263	246	409	255	506	253	240	475
20-Apr		285	257	282	114	237	490	214	323	209	424	205	151	216	146	302	174	166	356	215	93	219	215	207	175	272	316	381	269	318	259	480	257	509	255	240	475
21-Apr		347	222	268	119	210	459	237	276	235	512	233	159	201	152	383	168	159	398	215	121	225	189	185	172	247	279	387	305	339	294	538	266	526	263	240	475
22-Apr		395	222	274	120	201	411	341	289	218	539	254	154	202	193	446	163	156	360	231	128	259	192	171	191	231	239	407	327	347	355	648	279	553	277	240	475
23-Apr		408	222	288	120	213	358	440	372	209	536	261	167	198	236	449	160	170	327	247	122	309	170	155	216	216	233	495	312	403	406	561	290	573	287	240	475
24-Apr		363	264	296	131	237	343	443	461	197	578	259	167	188	246	465	155	194	318	335	105	333	156	129	203	203	288	573	331	466	476	488	303	600	300	240	475
25-Apr		325	316	306	152	246	337	433	511	184	566	231	176	205	244	420	155	223	284	438	158	290	158	122	193	208	299	523	305	439	494	422	302	598	299	240	475
26-Apr		351	382	314	170	226	316	389	565	176	542	212	184	228	247	344	164	244	271	374	136	284	159	147	203	187	267	504	287	392	514	383	296	585	293	240	475
27-Apr		376	399	314	198	213	313	326	632	179	455	195	168	272	267	303	168	249	266	338	114	322	183	176	233	182	255	544	285	367	479	357	294	583	292	240	475
28-Apr		425	391	349	190	196	381	295	680	188	376	183	161	366	334	271	179	237	316	337	127	411	220	155	258	205	256	635	320	398	446	361	311	616	308	240	475
29-Apr		468	435	386	189	185	487	310	712	201	323	183	151	472	395	255	194	223	339	340	128	472	256	164	245	224	232	573	415	458	468	411	332	657	329	240	475
30-Apr		478	481	433	193	179	528	367	743	246	292	175	148	585	402	239	213	215	316	348	220	483	277	160	239	288	207	539	553	573	569	363	357	706	353	240	475
1-May		396	544	457	165	161	588	455	758	307	248	156	125	659	322	206	183	206	288	362	211	388	311	126	239	253	200	576	643	583	664	344	359	711	356	240	475
2-May		373	587	577	157	173	680	574	716	250	235	158	144	654	320	198	216	225	264	372	282	397	405	74	219	255	159	564	775	476	704	334	372	736	368	240	475
3-May		368	797	649	157	171	852	720	570	225	224	164	148	655	362	202	230	279	248	410	261	512	405	87	217	272	145	599	779	414	681	313	391	774	387	240	475
4-May		387	612	712	163	169	1053	886	479	221	222	167	150	652	426	203	211	353	265	516	273	648	348	73	251	314	141	629	809	397	661	327	410	812	406	240	475
5-May		419	497	737	187	178	1090	866	448	242	220	172	148	693	440	268	237	461	352	595	236	792	358	89	241	349	164	671	675	412	591	339	425	841	421	240	475
6-May		472	435	552	238	191	1039	752	481	282	266	207	160	729	358	395	240	563	473	613	207	915	317	95	201	424	194	633	599	526	607	360	436	864	432	240	475
7-May		543	376	465	223	177	1044	692	579	243	370	282	183	748	329	491	231	609	572	579	199	862	289	124	177	488	247	623	528	678	773	335	454	898	449	240	475
8-May		574	334	429	281	183	1121	600	684	234	506	277	239	771	298	511	221	676	601	548	214	892	278	146	166	548	271	612	463	985	927	335	481	953	477	240	475
9-May		558	296	438	378	228	1107	528	797	217	682	257	390	817	272	533	208	759	670	566	271	706	305	111	148	593	221	597	460	832	941	337	491	972	486	240	475
10-May		528	270	450	440	356	1184	497	880	229	788	275	551	687	262	513	216	751	705	610	407	653	334	113	157	608	269	526	447	914	911	430	515	1019	510	240	475
11-May		510	277	440	480	516	1063	494	941	263	789	317	673	556	325	568	259	792	750	739	385	869	347	105	149	643	325	491	485	796	1020	429	542	1073	537	240	475
12-May		487	248	433	379	704	873	513	1020	374	727	256	604	570	462	716	338	951	769	713	334	859	456	146	132	612	281	485	640	820	1220	452	567	1122	561	240	475
13-May		413	224	416	357	950	740	549	1060	530	599	231	585	591	678	756	296	1126	835	720	339	606	623	120	154	500	257	527	869	888	1300	449	590	1168	584	240	475
14-May		373	220	354	312	1293	644	582	1207	681	572	257	732	678	842	718	285	1218	936	754	446	525	837	118	172	423	229	633	1020	775	1270	427	630	1248	624	240	475
15-May		349	239	318	302	1645	623	608	1378	782	485	299	748	713	975	724	407	1250	1029	642	488	496	827	125	257	378	241	688	1090	736	1330	433	665	1316	658	240	475
16-May		254	153	210	148	2183	666	535	1809	912	387	206	489	843																							

Daily Streamflow-At the Proposed Kayak Park

1980 - 2010

units = cubic feet per second

Indicates day when stream flow is less than RICD flow rate and greater than 60 cfs

7/3/2012 Repair Hydrology for 1980 - 1997. Correct regression equations for May 16 - 31 and June 16 - 30.

																														Average Historical Daily Rate (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Volume (af)	RICD Flow Rate (cfs)	RICD Daily Volume (af)			
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010					
4-Jun		1806	1312	1233	1687	2662	2167	2404	1769	1575	1061	1114	970	760	1842	2192	1503	1582	2891	1602	1360	1664	1405	547	2329	774	1403	1663	1270	3120	1770	1040	1628	3224	1612	380	752
5-Jun		2113	1454	1475	1705	2437	2616	2550	1908	1893	1017	1595	1166	919	1632	2082	1684	1730	2972	1327	1457	1596	1118	454	2070	954	1167	1806	1420	3030	1830	2220	1722	3411	1706	380	752
6-Jun		2243	1707	1479	1486	2072	2907	3032	1977	2025	1186	1864	1441	983	1787	1964	2043	1951	2861	1042	1318	1512	1091	480	1557	1284	1095	1996	1640	2620	1820	3420	1803	3569	1785	380	752
7-Jun		2019	1934	1425	1542	2417	3531	3304	2190	2006	1171	1933	1481	960	1816	1783	1882	1944	2797	829	1378	1484	1281	518	1372	1505	1146	2193	1220	2590	1690	4027	1851	3664	1832	380	752
8-Jun		2066	2043	1550	1743	1840	4440	2976	2509	1875	1234	1962	1697	835	1382	1658	1703	1950	2976	778	1815	1425	1373	519	1225	1564	1130	2374	1030	2670	1470	4100	1868	3699	1850	380	752
9-Jun		2442	2162	1627	1816	1566	4856	2514	2686	1826	1115	2068	2059	809	1150	1534	1486	1827	2423	814	2116	1452	1384	520	1306	1543	1199	2514	980	2150	1420	4178	1856	3675	1838	380	752
10-Jun		2971	2082	1753	1957	1449	4406	1882	2468	1903	1165	2197	2132	845	1116	1461	1225	1787	2166	840	2143	1376	1496	516	1437	1463	1103	2010	1160	2080	1340	4162	1809	3583	1792	380	752
11-Jun		3450	1994	1750	2161	1582	3234	1574	2305	1771	1143	2314	2254	916	1330	1499	1326	1824	2149	819	1990	1219	1446	455	1311	1154	984	1941	1370	2530	1310	2914	1743	3450	1725	1350	2673
12-Jun		3403	1747	1806	2361	1768	2956	1591	2259	1611	1157	2078	2373	1050	1689	1481	1844	1971	2174	822	2049	1171	1309	407	1378	957	964	1874	1750	2090	1230	2290	1729	3424	1712	1350	2673
13-Jun		3438	1439	1908	1731	2135	3092	1853	2170	1399	1113	1567	2262	1179	2282	1519	2524	2125	2355	1042	2123	1069	1230	399	1466	856	910	1759	1490	1750	1200	1860	1718	3401	1701	1350	2673
14-Jun		3223	1094	1741	1298	2845	3244	2070	2258	1108	1046	1675	2416	1192	2771	1445	3096	2247	2422	934	2123	943	971	376	1259	959	834	1710	1450	1970	1300	1470	1725	3416	1708	1350	2673
15-Jun		2936	737	1731	1234	3337	3351	2339	2377	1168	1164	1535	2604	1089	3234	1431	3774	2428	2449	934	2144	883	781	359	1333	1096	868	1631	1590	2350	1280	1170	1785	3534	1767	1350	2673
16-Jun		2724	714	1737	1473	3642	3435	2301	2651	1299	1457	1330	2527	1026	3171	1319	4281	2506	2624	840	1996	888	733	325	1414	1012	1107	1309	1720	3370	1340	1030	1848	3660	1830	1350	2673
17-Jun		2745	757	1894	1842	3089	3325	2370	2499	1296	1528	1278	2414	879	3507	1252	4643	2534	2562	884	2004	775	673	307	1224	963	1354	1113	1810	4270	1390	1000	1877	3716	1858	1350	2673
18-Jun		2962	782	2173	2648	2742	3383	2381	2269	1291	1440	1387	2269	976	2762	1216	4250	2468	2854	809	2064	708	737	290	1195	903	1604	1114	1830	4480	1530	1000	1888	3738	1869	1350	2673
19-Jun		3333	760	2064	3554	3096	3121	2347	2096	1424	1466	1465	1958	1135	2355	1199	2992	2374	3557	765	2268	796	743	276	1214	877	1919	1158	1540	3570	1630	1120	1875	3712	1856	1350	2673
20-Jun		3627	879	1837	3769	3102	2900	2255	1707	1475	1354	1334	1785	1245	2486	1315	3005	2270	4154	985	2279	887	759	269	1158	920	2020	1068	1470	2650	1780	1150	1868	3698	1849	1350	2673
21-Jun		3459	920	1877	3862	3565	2799	2296	1607	1484	1222	1333	1902	1246	2938	1221	3391	2412	3964	1141	2415	757	729	269	1078	908	2000	1048	1430	2710	1670	1130	1896	3755	1878	1350	2673
22-Jun		3240	895	1964	3820	3862	2739	2225	1570	1377	890	1302	1841	1170	3052	1348	3470	2747	3723	1305	2453	690	761	260	1031	801	2147	986	1320	2800	1720	1060	1889	3741	1871	1350	2673
23-Jun		3198	798	2097	3543	3564	2453	2138	1537	1260	761	1262	1717	1165	3084	1239	3263	2278	3616	1474	2519	659	685	250	1023	713	2283	934	1210	2670	1890	1000	1816	3595	1798	1350	2673
24-Jun		3198	734	2122	3899	3513	2481	2083	1457	1284	689	1233	1635	1212	2715	1065	3297	1882	3328	1427	2554	626	684	223	934	715	2254	906	1220	2880	1830	1000	1777	3518	1759	1350	2673
25-Jun		3084	675	2154	4961	3500	2918	1894	1407	1203	788	1156	1469	1246	2412	958	3439	1713	2993	1302	2616	618	763	198	829	728	2172	880	1120	3030	2000	995	1781	3527	1764	1350	2673
26-Jun		3249	661	2170	4229	3348	2275	2224	1357	1104	806	1124	1246	1216	2569	880	3883	1669	2715	1476	2598	645	782	214	819	737	2107	823	1000	3310	2260	968	1757	3479	1740	380	752
27-Jun		3236	641	2182	3328	3437	1632	2324	1306	972	805	1093	1056	1053	2747	813	4113	1737	2587	1595	2423	661	879	221	818	697	1960	726	967	2870	2230	937	1679	3324	1662	380	752
28-Jun		2821	658	2365	2954	3536	1419	2257	1279	998	805	1013	1161	940	2865	728	4261	1581	2541	1642	2299	632	729	183	802	649	1791	646	905	2970	2200	836	1628	3223	1612	380	752
29-Jun		2406	559	2470	2827	3719	1511	2143	1247	1164	807	898	1312	985	2966	641	4053	1362	2416	1693	2109	575	703	177	771	655	1894	650	845	2980	2070	907	1597	3163	1582	380	752
30-Jun		2232	501	2288	2793	4130	1532	2012	1137	978	802	811	1317	910	3213	594	3683	1355	2317	1700	1990	570	657	182	744	939	1794	645	785	2990	1870	1060	1566	3100	1550	380	752
1-Jul		2546	603	2593	3028	4935	1742	1892	1401	935	857	910	1373	967	2997	668	4081	1612	2677	1684	2005	553	634	164	701	804	1708	652	766	2820	1800	1010	1649	3265	1633	380	752
2-Jul		2483	748	2306	2949	4527	1858	1866	1307	832	789	852	1283	847	2909	625	4109	1549	2432	1592	2054	541	574	154	695	681	1615	668	726	24							

Daily Streamflow-At the Proposed Kayak Park

1980 - 2010

units = cubic feet per second

Indicates day when stream flow is less than RICD flow rate and greater than 60 cfs

7/3/2012 Repair Hydrology for 1980 - 1997. Correct regression equations for May 16 - 31 and June 16 - 30.

																															Average Historical Daily Rate (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Volume (af)	RICD Flow Rate (cfs)	RICD Daily Volume (af)	
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010					
24-Jul	765	247	1083	1498	1744	1491	1656	401	277	414	309	663	411	1045	414	3114	688	1065	844	781	308	234	110	219	353	804	361	441	1200	508	275	765	1515	758	380	752
25-Jul	723	260	1011	1377	1578	1247	1565	378	266	393	427	694	443	909	396	3321	658	904	1000	807	293	242	109	167	315	968	362	430	1010	487	244	741	1468	734	380	752
26-Jul	697	343	967	1448	1500	1018	1347	399	267	404	356	628	423	925	341	3434	625	817	891	877	270	253	133	139	287	902	357	503	949	531	221	718	1421	711	380	752
27-Jul	654	352	1015	1280	1437	958	1222	437	286	373	305	585	391	940	291	3150	608	788	804	787	268	273	147	195	290	764	365	453	888	538	203	679	1344	672	380	752
28-Jul	604	277	1046	1218	1382	862	1106	464	265	411	278	518	352	906	275	2836	580	800	792	730	254	220	135	200	274	668	322	510	997	495	212	645	1277	639	380	752
29-Jul	562	242	1168	1080	1282	811	1020	429	349	508	268	476	339	876	267	2930	644	839	1026	701	242	197	133	213	243	578	310	423	848	489	273	638	1262	631	380	752
30-Jul	543	225	993	1241	1343	805	943	394	390	470	264	448	333	857	263	2969	603	817	792	709	230	185	126	203	229	518	311	345	754	486	321	616	1221	611	380	752
31-Jul	528	218	869	1151	1264	758	919	428	503	370	273	428	314	838	268	2940	553	918	719	739	211	191	120	184	220	508	341	307	699	464	286	598	1183	592	380	752
1-Aug	494	190	857	1469	1353	752	901	358	411	441	250	388	286	951	269	2790	491	839	759	729	182	215	116	179	210	503	374	275	670	470	274	595	1178	589	380	752
2-Aug	482	177	803	1185	1192	812	866	396	343	483	300	433	278	908	301	2333	481	719	731	726	176	229	85	174	206	496	358	260	654	430	401	562	1113	557	380	752
3-Aug	479	165	745	1139	1033	773	828	336	318	445	255	436	274	814	276	2194	490	685	645	685	182	238	56	171	172	497	307	266	634	403	397	527	1044	522	380	752
4-Aug	449	161	679	1463	948	662	767	302	303	353	223	496	272	763	257	2248	492	726	612	646	181	282	56	160	182	578	278	266	617	375	320	520	1029	515	380	752
5-Aug	409	151	629	1450	933	585	725	286	282	314	212	404	347	810	232	2358	435	837	610	641	178	249	57	151	188	678	279	258	591	356	415	518	1025	513	380	752
6-Aug	378	129	585	1411	1003	536	914	278	270	282	198	377	401	759	220	2212	398	932	563	758	179	291	59	142	191	538	297	323	653	345	363	516	1021	511	380	752
7-Aug	361	122	598	1295	949	524	790	366	260	253	182	397	441	675	207	1938	378	950	544	668	169	389	69	125	185	493	265	324	693	351	309	493	975	488	380	752
8-Aug	350	119	566	1175	846	491	739	440	241	238	169	334	447	722	199	1909	359	731	508	594	160	343	71	115	172	474	248	321	796	334	298	468	927	464	380	752
9-Aug	336	115	573	1153	773	477	695	323	223	225	176	293	387	731	218	1516	345	624	469	566	132	381	62	108	162	456	239	275	724	320	257	430	852	426	380	752
10-Aug	312	119	564	965	721	439	628	319	195	231	171	281	369	689	232	1368	332	989	429	601	149	358	56	102	143	489	235	236	718	307	229	419	829	415	380	752
11-Aug	285	161	521	863	658	423	588	280	183	259	169	270	391	809	210	1441	319	1078	399	651	141	346	49	76	132	475	243	222	666	273	212	413	817	409	380	752
12-Aug	262	182	516	852	641	434	597	270	175	317	176	290	374	666	203	1399	299	1146	389	626	150	294	46	70	120	453	237	205	579	249	235	402	795	398	380	752
13-Aug	262	169	543	1015	670	368	648	256	171	276	221	309	352	612	211	1315	280	1020	374	552	179	257	44	70	116	419	240	204	528	241	248	393	777	389	380	752
14-Aug	259	147	601	792	617	340	568	251	158	260	209	276	348	564	228	1169	270	933	343	520	159	302	56	69	118	394	228	201	488	241	202	365	722	361	380	752
15-Aug	405	151	545	730	676	316	523	231	156	248	257	260	341	519	237	995	265	863	325	542	152	462	54	81	117	359	214	215	464	253	183	359	711	356	380	752
16-Aug	425	182	543	739	765	322	530	253	205	241	238	297	326	571	225	1053	270	792	319	515	181	380	81	107	112	356	209	246	480	249	190	368	728	364	380	752
17-Aug	322	162	507	671	623	313	518	245	210	228	254	270	376	552	210	965	263	727	315	494	173	322	72	122	109	377	208	262	460	234	239	348	690	345	380	752
18-Aug	282	146	493	676	746	309	523	232	196	266	242	241	322	512	203	994	266	660	315	481	186	289	71	138	114	376	196	238	425	216	201	340	674	337	380	752
19-Aug	257	133	475	635	780	315	554	223	182	306	213	236	281	510	216	985	265	615	228	451	225	268	72	126	152	357	208	222	401	202	219	333	659	330	380	752
20-Aug	239	124	460	647	803	304	590	218	175	279	198	241	259	503	218	978	250	545	307	434	223	258	85	104	154	340	192	212	386	192	376	332	657	329	380	752
21-Aug	223	117	502	576	859	299	683	219	202	246	222	216	243	562	191	958	248	523	348	418	228	294	91	88	158	337	191	196	373	179	265	331	655	328	240	475
22-Aug	210	122	495	527	879	311	665	261	286	221	196	205	268	676	189	947	252	500	358	425	226	318	91	86	161	335	187	181	358	173	228	333	660	330	240	475
23-Aug	216	113	477	500	692	311	576	347	223	205	191	191	439	546	187	1009	243	477	348	395	223	285	64	84	170	314	178	173	346	173	222	320	633	317	240	475
24-Aug	232	108	442	471	934	299	664	437	200	207	158	182	577	494	173	953	231	453	334	363	221	263	55	84	147	253	177	175	341	176	212	323	640	320	240	475
25-Aug	250	113	455																																	

Estimated Historical Daily Streamflow-At the Proposed Pitkin County Recreational Park

	Cubic Feet per Second																																		Average Historical Daily Rate (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Volume (af)	RICD Daily Volume (af)
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010							
15-Apr	127	155	328	95	146	509	254	164	245	244	168	114	272	140	130	188	182	167	272	105	245	124	228	208	257	199	511	235	231	276	278	219	435	218	476			
16-Apr	144	162	325	96	172	555	266	196	246	274	191	117	268	141	146	180	179	190	278	86	213	131	254	188	265	224	442	242	275	301	312	228	452	226	476			
17-Apr	159	182	303	99	217	569	289	258	247	303	208	130	241	141	182	181	180	231	272	99	216	146	218	188	281	258	455	272	229	278	398	239	474	237	476			
18-Apr	188	216	306	104	260	609	240	327	218	336	146	274	151	219	174	186	291	275	100	260	160	203	198	289	290	475	263	220	252	385	252	500	237	476				
19-Apr	232	259	298	110	256	592	222	348	211	380	205	146	241	151	254	178	175	323	245	90	252	188	205	181	277	302	419	261	263	246	409	255	507	254	476			
20-Apr	285	257	282	114	237	490	214	323	209	424	205	151	216	146	302	174	166	356	215	93	219	215	207	175	272	316	381	269	318	259	480	257	510	255	476			
21-Apr	347	222	268	119	210	459	237	276	235	512	233	159	201	152	383	168	159	398	215	121	225	189	185	172	247	279	387	305	339	294	538	266	527	264	476			
22-Apr	395	222	274	120	201	411	341	289	218	539	264	154	202	193	446	160	170	327	247	122	309	170	155	216	216	233	495	312	403	406	561	290	575	288	476			
23-Apr	408	222	288	120	213	358	440	372	209	536	261	167	198	236	449	160	170	327	247	122	309	170	155	216	216	233	495	312	403	406	561	290	575	288	476			
24-Apr	363	264	296	131	237	343	443	461	197	578	259	167	188	246	465	155	194	318	335	105	333	156	129	203	203	288	573	331	468	476	488	303	601	301	476			
25-Apr	325	316	306	152	246	337	433	511	184	566	231	176	205	244	420	155	223	284	438	158	290	158	122	193	208	299	523	305	439	494	422	302	599	300	476			
26-Apr	351	362	314	170	226	316	389	565	176	542	212	184	228	247	344	164	244	271	374	136	284	159	147	203	187	267	504	287	392	514	383	296	586	293	476			
27-Apr	376	399	314	198	213	313	326	632	179	455	195	168	272	267	303	168	249	266	338	114	322	183	176	233	182	255	544	285	367	479	357	294	584	292	476			
28-Apr	425	391	349	190	196	381	295	680	188	376	183	161	366	334	271	179	237	316	337	127	411	220	155	258	205	256	635	320	398	446	361	311	617	309	476			
29-Apr	468	435	386	189	185	487	310	712	201	323	183	151	472	395	255	194	223	339	340	128	472	256	164	245	224	232	573	415	458	468	411	332	659	330	476			
30-Apr	478	481	433	193	179	528	367	743	246	292	175	148	565	402	239	213	215	316	348	220	483	277	160	239	288	207	539	553	573	569	363	357	707	354	476			
1-May	396	544	457	165	161	588	455	758	307	248	156	125	659	322	206	183	208	288	362	211	388	311	126	239	255	200	576	643	583	684	344	359	712	356	476			
2-May	373	587	577	167	173	680	574	716	250	235	158	144	654	320	198	216	225	264	372	282	397	405	74	219	255	159	564	775	476	704	334	372	737	369	476			
3-May	368	797	649	157	171	852	720	570	225	224	164	148	655	362	202	230	279	248	410	261	512	405	87	217	272	145	599	779	414	681	313	391	775	388	476			
4-May	387	612	712	163	169	1053	886	479	221	222	167	150	652	426	203	211	353	265	516	273	648	348	73	251	314	141	629	809	397	661	327	410	814	407	476			
5-May	419	497	737	187	178	1090	866	448	242	220	172	148	693	440	268	230	461	352	595	236	792	358	89	241	349	164	671	675	412	591	339	425	842	421	476			
6-May	472	435	552	238	191	1039	752	481	282	266	207	160	729	358	395	240	563	437	613	207	915	317	95	201	424	194	633	599	526	607	360	436	865	433	476			
7-May	543	376	465	223	177	1044	692	579	243	370	282	183	748	329	491	231	609	572	579	199	862	289	124	177	488	247	623	528	678	773	335	454	900	450	476			
8-May	574	334	429	281	183	1121	600	684	234	506	277	239	717	298	511	221	676	601	548	214	892	278	146	166	548	271	612	483	985	927	335	481	955	478	476			
9-May	558	296	438	378	222	1107	528	797	217	682	257	390	817	272	533	208	759	670	566	271	706	305	111	148	593	221	597	460	832	941	337	491	974	487	476			
10-May	528	270	450	440	356	1184	497	880	229	788	275	551	687	262	513	216	751	705	610	407	653	334	113	157	608	269	526	447	914	911	430	515	1021	511	476			
11-May	501	277	440	480	516	1063	494	941	263	789	317	673	556	325	568	259	792	759	739	385	859	456	105	149	643	325	491	485	796	1020	429	542	1075	538	476			
12-May	487	248	433	379	704	513	1020	374	727	726	356	604	570	462	716	338	951	769	713	334	859	456	146	132	612	281	485	640	820	1220	452	567	1124	562	476			
13-May	413	224	416	357	950	740	549	1060	530	599	231	585	591	678	756	296	1126	835	720	339	606	623	120	154	500	257	527	869	888	1300	449	590	1170	585	476			
14-May	373	220	354	312	1293	644	582	1207	681	572	257	732	678	842	718	285	1218	936	784	446	525	837	118	172	423	229	633	1020	775	1270	427	630	1250	625	476			
15-May	349	239	318	302	1645	623	608	1378	782	485	299	748	713	975	724	407	1250	1029	642	488	827	125	257	378	241	688	1090	736	1330	433	665	1318	659	476				
16-May	300	239	305	282	1719	649	606	1492	876	435	279	537	746	1146	766	559	1433	1134	552	536	496	1011	161	302	375	287	787	1707	1440	409	704	1396	698	476				
17-May	483	242	299	265	1625	685	602	1468	956	399	247	457	767	1196	881	612	1548	1169	561	538	634	1089	167	452	406	399	873	1160	782	1650	414	743	1473	737	476			
18-May	419	234	3																																			

Estimated Historical Daily Streamflow-At the Proposed Pitkin County Recreational Park

	Cubic Feet per Second												Average Historical Daily Rate		Average Historical Daily Volume		50 Percent Average Historical Daily Volume		RICD Daily Volume (af)																
	(cfs)	(af)	(cfs)	(af)	(cfs)	(af)	(cfs)	(af)	(cfs)	(af)	(cfs)	(af)	(cfs)	(af)	(cfs)	(af)	(cfs)	(af)	(af)																
12-Jun	3403	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010				
13-Jun	3403	1747	1806	2361	1768	2366	1591	2259	1611	1157	2078	2373	1050	1689	1481	1844	1971	2174	822	2049	1171	1309	407	1378	957	964	1874	1750	2090	1230	2290	1715	2678		
14-Jun	3438	1439	1908	1731	2135	3092	1853	2170	1399	1113	1567	2282	1179	2282	1519	2524	2125	2355	1042	2123	1069	1230	399	1466	856	910	1759	1490	1750	1200	1860	1718	2678		
15-Jun	3223	1094	1741	1298	2845	3244	2070	2258	1108	1046	1675	2416	1192	2771	1445	3096	2247	2422	934	2123	883	971	376	1259	959	883	1710	1490	1970	1300	1470	1725	2678		
16-Jun	2936	737	1731	1234	3337	3351	2339	2377	1168	1164	1535	2604	1089	3234	1431	3774	2428	2449	934	2123	883	781	359	1333	1096	868	1631	1590	2350	1280	1170	1785	2678		
17-Jun	2704	601	1699	1450	3422	3320	2373	2364	1237	1420	1240	2559	933	3239	1293	4303	2233	2409	840	1996	888	733	325	1414	1012	1012	1710	1309	1720	3370	1340	1030	1803	2678	
18-Jun	2729	661	1863	1830	2873	3219	2446	2208	1239	1499	1187	2440	962	3572	1222	4558	2238	2332	884	2004	775	673	307	1224	963	1354	1113	1810	4270	1390	1000	1827	2678		
19-Jun	2959	694	2165	2631	2564	3288	2468	1997	1240	1412	1303	2271	863	2791	1181	4025	2210	2602	809	2064	708	737	290	1195	903	1604	1114	1830	4480	1530	1000	1836	2678		
20-Jun	3294	810	2058	3371	2970	2812	2326	1524	1443	1432	1323	2511	1739	1158	2496	1299	2915	2063	3813	985	2279	887	759	269	1158	908	2000	1048	1430	2710	1670	1130	1845	2678	
21-Jun	3458	862	1846	3775	3344	2758	2379	1419	1434	1179	1265	1878	1164	2983	1182	3298	2216	3606	1141	2415	757	729	269	1078	908	2000	1048	1430	2710	1670	1130	1845	2678		
22-Jun	3148	835	1937	3750	3576	2715	2304	1335	1335	815	1224	1816	1077	3111	1337	3369	2539	3406	1305	2453	690	761	260	1031	801	2147	986	1320	2800	1720	1060	1839	3648	2678	
23-Jun	3109	727	2092	3616	3301	2426	2210	1348	1205	675	1189	1690	1067	3148	1212	3165	2078	3315	1474	2519	659	685	250	1023	713	2283	934	1210	2670	1890	1000	1770	3512	2678	
24-Jun	3099	658	2087	3936	3266	2446	2142	1274	1245	595	1162	1603	1118	2758	1025	3128	1715	3053	1427	2554	626	684	223	934	715	2254	906	1220	2880	1830	1000	1728	3427	2678	
25-Jun	2990	594	2137	5032	3233	2899	1933	1221	1160	712	1087	1423	1157	2443	910	3184	1566	2749	1302	2616	618	763	198	829	728	2172	880	1120	3030	2000	995	1732	3435	2678	
26-Jun	3169	581	2158	4178	3077	2221	2281	1187	1052	740	1059	1177	1132	2612	824	3511	1525	2498	1476	2598	645	782	214	819	737	2107	823	1000	3310	2260	968	1700	3373	1687	754
27-Jun	3169	561	2162	3318	3164	1531	2408	1136	907	742	1030	969	958	2809	753	3765	1597	2373	1595	2423	661	879	221	818	697	1960	726	967	2870	2230	937	1624	3221	1611	754
28-Jun	2745	580	2349	2938	3263	1316	2346	1109	944	744	941	1084	833	2954	658	3903	1419	2355	1642	2299	632	729	183	802	649	1791	646	905	2970	2200	836	1573	3120	1560	754
29-Jun	2328	466	2471	2801	3454	1241	2362	1083	1118	748	818	1265	889	3036	560	3671	1191	2247	1693	2109	575	703	177	771	655	1894	650	845	2980	2070	907	1544	3062	1531	754
30-Jun	2240	400	2280	2800	3814	1459	2092	966	912	744	726	1278	814	3338	509	3336	1196	2138	1700	1990	570	657	182	744	839	1794	645	785	2990	1870	1060	1515	3005	1503	754
1-Jul	2546	603	2993	3028	4935	1742	1892	1401	935	857	910	1373	967	2997	668	4081	1612	2677	1684	2005	553	634	164	701	804	1708	652	766	2820	1800	1010	1649	3271	1636	754
2-Jul	2483	748	2306	2949	4527	1898	1866	1307	832	789	892	1283	847	2909	625	4709	1549	2432	1592	2054	541	574	154	695	681	1615	668	726	2400	1750	995	1571	3117	1559	754
3-Jul	2330	611	2063	3034	4289	1894	1850	1251	779	750	812	1219	729	2907	594	3824	1413	2217	1522	1905	502	528	150	629	650	1591	707	655	2090	1810	1000	1496	2968	1484	754
4-Jul	2135	526	1972	2774	3633	1956	1827	1186	733	720	854	1134	711	2475	568	3416	1384	2216	1460	1737	466	514	178	599	609	1431	675	612	2100	1660	880	1398	2773	1387	754
5-Jul	1868	481	1787	2712	3519	1951	2336	1127	696	695	777	1061	742	1834	526	2862	1423	2070	1433	1672	409	481	214	579	584	1362	617	600	2090	1550	794	1318	2615	1308	754
6-Jul	1716	458	1689	2821	3159	1908	2079	1069	673	678	811	906	769	1541	460	2991	1322	1809	1462	1623	377	449	211	546	583	1306	722	584	1960	1480	712	1254	2487	1244	754
7-Jul	1646	440	1412	3092	2939	1835	1744	971	613	646	704	966	707	1641	460	3521	1263	1577	1354	1577	457	190	518	574	1274	661	540	2060	1340	653	1226	2431	1216	754	
8-Jul	1638	444	1384	3798	3120	1765	1421	867	552	628	763	1070	995	1925	429	4345	1171	1684	1232	1584	314	443	159	495	535	1193	710	524	1890	1230	827	1256	2491	1246	754
9-Jul	1568	451	1456	3917	3500	1771	1425	844	498	569	804	1091	816	1840	418	5296	1075	1528	1444	1590	360	455	177	451	510	1168	837	493	1720	1170	639	1280	2539	1270	754
10-Jul	1517	503	1343	3665	4221	1645	1387	721	479	552	698	913	658	1857	405	5924	1014	1279	1468	1444	368	526	169	423	499	1112	801	451	1600	1100	968	1268	2539	1270	754
11-Jul	1453	409	1355	2954	3130	1540	1232	609	492	541	609	785	595	2006	396	5781	990	1235	1312	1307	298	464	165	392	466	1043	702	425	1520	1070	560	1156	2293	1147	754
12-Jul	1410	451	1345	2435	2614	1501	1238	599	446	563	549	772	632	2104	389	6027	923	1146	1180	1154	266	426	153	389	439	1048	696	434	1400	1040	532	1106	2193	1097	754
13-Jul	1459	441	1370	2160	2134	1636	1285	569	425	522	504	745	607	2068	363	5676	861	1128	1104	1013	249	460	139	352	404	1057	633	437	1320	986	466	1051	2085	1043	754
14-Jul	1244	400	1317	2094	2915	1406	1224	543	455	481	478	783	541	1849	347	4973	823	1076	1021	1013	472	472	137	327	391	1047	510	361	1230	922	427	1007	1997	999	754
15-Jul	1175	370	1296	1968	2491	1259	1246	525	434	443	456	799	501	1782	340	4223	785	1038	955	944	349	449	126	306	391	1047	510	361	1150	856	407	936	1856	928	754
16-Jul	1328	383	1351	2284	2927	1490	2029	545	436	413	459	942	515	1855	304	5600	977	1148	865	927	615	467	129	303	399	948	476	336	1110	781	378	1055	2092	1046	754
17-Jul	1261	443	1209	2167	2705	1475	2052	573	428	384	438	1081	466	1697	299	5329	1034	1116	836	953	744	395	116	270	496	864	422	312	1060	745	311	1035	2052	1036	754
18-Jul	1156	443	1202	2392	1431	1668	551	382	364	431	451	1005	443	1566	294	4328	1031	1116	836	953	744	395	116	270	496	864	422	312	1060	745	311	1035	2052	1036	754
19-Jul	1129	359	1130	2041	2283	1386	1631	476	365	344	454	870	427	1389	343	4066	1017	1028	756	855	478	327	116	260	446	763	414	364	995	690	302	887	1760	880	754
20-Jul	1032	320	1087	1944	2268	1505	1688	451	335	327	397	889	430	1334	366	4922	879	1052																	

Estimated Historical Daily Streamflow-At the Proposed Pitkin County Recreational Park

	Cubic Feet per Second																														Average Historical Daily Rate Volume (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Daily Volume (af)	RICD Daily Volume (af)			
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010						
11-Aug	285	161	521	863	658	423	588	280	183	259	169	270	391	809	210	1441	319	1078	399	651	141	346	49	76	132	475	243	222	666	273	212	413	819	410	754		
12-Aug	262	182	516	852	641	434	597	270	175	317	176	290	374	666	203	1399	299	1146	389	626	150	294	46	70	120	453	237	205	579	249	235	402	797	399	754		
13-Aug	262	169	543	1015	670	368	648	256	171	276	221	309	352	612	211	1315	280	1020	374	552	179	257	44	70	116	419	240	204	528	241	248	393	779	390	754		
14-Aug	259	147	601	792	617	340	568	251	158	260	209	276	348	564	228	1169	270	933	343	520	159	302	56	69	118	394	228	201	488	241	202	365	724	362	754		
15-Aug	405	151	545	730	676	316	523	231	156	248	257	260	341	519	237	995	265	863	325	542	152	462	54	81	117	359	214	215	464	253	183	359	713	357	754		
16-Aug	425	182	543	739	765	322	530	253	205	241	238	297	326	571	225	1053	270	792	319	515	181	380	81	107	112	356	209	246	480	249	190	368	730	365	754		
17-Aug	322	162	507	671	623	313	518	241	228	254	220	376	552	210	965	263	727	315	494	173	322	72	122	109	377	208	262	460	234	239	348	691	346	754			
18-Aug	282	146	493	676	746	309	523	232	196	266	242	241	322	512	203	994	266	660	315	481	186	289	71	138	114	376	196	238	425	216	201	340	675	338	754		
19-Aug	257	133	475	635	780	315	554	223	182	306	213	236	281	510	216	985	265	615	228	451	225	268	72	126	152	357	208	222	401	202	219	333	660	330	754		
20-Aug	239	124	460	647	803	304	590	218	175	279	198	241	289	503	218	978	250	545	307	434	223	258	85	104	154	340	192	212	386	192	376	332	659	330	754		
21-Aug	223	117	502	576	859	299	683	219	202	246	222	216	243	562	191	958	248	523	348	418	228	294	91	88	158	337	191	196	373	179	265	331	656	328	476		
22-Aug	210	122	495	527	879	311	665	261	286	221	196	205	268	676	189	947	252	500	358	425	226	318	91	86	161	335	187	181	358	173	228	333	661	331	476		
23-Aug	216	113	477	500	692	311	576	347	223	205	191	191	439	546	187	1009	243	477	348	395	223	285	64	84	170	314	178	173	346	173	222	320	635	318	476		
24-Aug	232	108	442	471	934	299	664	437	200	207	158	182	577	494	173	953	231	453	334	363	221	263	55	84	147	253	177	175	341	176	212	323	641	321	476		
25-Aug	250	113	455	453	906	291	937	449	185	200	144	176	518	490	162	888	229	502	403	353	219	242	55	82	136	255	182	174	338	179	193	328	650	325	476		
26-Aug	268	106	529	448	826	284	702	394	169	193	133	180	529	706	153	829	225	575	345	362	227	229	46	91	130	264	214	167	338	179	177	323	641	321	476		
27-Aug	228	102	441	416	646	279	576	313	174	184	124	182	467	607	140	845	232	460	353	359	247	216	31	92	120	244	282	159	336	170	166	296	588	294	476		
28-Aug	201	99	432	408	594	275	525	279	165	175	119	203	407	487	160	810	238	413	345	350	225	208	17	101	124	251	227	170	328	167	160	279	554	277	476		
29-Aug	185	97	399	392	538	257	590	263	155	167	112	180	346	446	162	759	229	392	314	341	225	198	21	91	131	235	213	168	320	161	159	266	528	264	476		
30-Aug	178	126	381	426	513	252	540	241	148	162	108	162	308	417	158	724	214	372	295	326	232	196	25	99	126	218	198	171	315	158	157	256	508	254	476		
31-Aug	176	137	387	387	519	239	466	225	146	160	110	149	295	404	149	669	204	367	281	324	219	219	22	103	115	220	184	160	318	158	163	248	491	246	476		
1-Sep	155	130	283	295	507	209	361	193	138	146	112	147	245	338	152	492	172	326	320	331	207	212	15	97	107	206	169	165	320	152	151	221	438	219	476		
2-Sep	146	117	262	284	446	232	361	196	137	142	112	179	255	404	164	477	168	311	303	361	200	201	11	99	92	188	157	161	324	149	137	219	434	217	476		
3-Sep	143	110	249	282	376	244	341	187	129	136	111	151	230	342	179	467	162	300	284	383	180	192	16	76	90	191	150	153	314	147	122	208	412	206	476		
Count Days	30	79	3	30	22	11	3	29	69	53	75	52	42	10	70	26	41	3	24	21	73	68	106	92	69	33	51	47	3	37	57	Average	Average	Total	123628		
page 1	5	19	3	28	22	0	3	2	17	5	23	24	8	10	9	26	16	3	4	21	5	14	43	27	9	16	0	1	3	1	0						
page 2	5	36	0	2	0	0	0	12	29	25	28	4	24	0	37	0	4	0	12	0	45	36	55	41	36	5	28	22	0	12	34						
page 3	20	24	0	0	0	11	0	15	23	23	24	24	10	0	24	0	21	0	8	0	23	18	8	24	24	12	23	24	0	24	23						
																																				123628	122862

EXHIBIT I

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Case No. 2010CW305
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DESIGN ENGINEERING REPORT

CASE No. 2010-CW-305
PITKIN COUNTY'S
RECREATIONAL IN-CHANNEL DIVERSION
WATER RIGHTS IN THE
ROARING FORK RIVER

PREPARED FOR
PITKIN COUNTY FOR SUBMISSION TO COLORADO WATER
CONSERVATION BOARD

FEBRUARY 2011

DESIGN ENGINEERING REPORT

CASE NO. 2010-CW-305 PITKIN COUNTY'S RECREATIONAL IN-CHANNEL DIVERSION WATER RIGHTS IN THE ROARING FORK RIVER

PREPARED FOR
PITKIN COUNTY FOR SUBMISSION TO COLORADO WATER
CONSERVATION BOARD

FEBRUARY 2011

The Hydraulic Engineering material in this report was prepared by or under the supervision and direction of the undersigned, whose seal as a Professional Engineer is affixed below:



Jason P. Carey, P.E.

DESIGN ENGINEERING REPORT
PITKIN COUNTY’S RECREATIONAL IN-CHANNEL DIVERSION
WATER RIGHT IN THE ROARING FORK RIVER

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**DESIGN ENGINEERING REPORT
PITKIN COUNTY'S RECREATIONAL IN-CHANNEL DIVERSION
WATER RIGHT IN THE ROARING FORK RIVER**

I. Background

The Board of County Commissioners of Pitkin County, Colorado (Pitkin County) has filed an application with the Division 5 Water Court to appropriate flows in the Roaring Fork River for two Recreational In-Channel Diversion (RICD) Water Rights, Case No. 10-CW-305, Water Division No. 5. The application seeks entry of a decree for the purpose of maintaining flows at levels to achieve specific reasonable recreational whitewater boating and other recreational experiences.

The amounts claimed by the County for the RICD are the minimum amounts of flow required to achieve the desired recreational experiences and operate two hydraulic Structure Units to be constructed in the Roaring Fork River. The periods of the requested flow amounts are based on hydrologic studies conducted by Jim Pearce that are documented in a separate Hydrologic Engineering Report (2011). A summary of the RICD flow amounts requested by the County are shown in Table 1.

II. Recreational Experience Sought

Two features are being proposed in Pitkin County. Each is designed to appeal to different skill levels at differing flows. The upstream most feature is referred to as Upper Structure Unit and the downstream most feature is referred to as Lower Structure Unit.

The category of whitewater boating experience sought by Pitkin County is freestyle whitewater. There are three main categories of whitewater sport: slalom, extreme and freestyle. Each category has equipment modified for that use. Freestyle whitewater appeals to a broader population than the other categories. For explanation purposes herein, we use the analogy of the recreational experiences associated with green, blue, black, and double black runs at a ski area. Similar to ski sports, there are also a number of different equipment types that can be used to practice the recreation. Kayaks are the standard; however, rafts, surf boards, stand-up paddle boards, rafts, inner tubes, boogie boards and a number of other equipment types can be used. Innovation in the sport may develop other equipment in the future.

Freestyle whitewater can be practiced at a single whitewater feature and repeated multiple times by navigating upstream after being washed downstream. The repeatable nature of freestyle whitewater at a single feature, casually termed “park and play”, is what creates a popular destination. The feature itself can vary in character, but typically described as a “hole” a “wave-hole” or a “wave”. An important part of a whitewater park is the pool downstream of the feature. The pool allows for rolling and navigation back upstream after being flushed from a feature. A “Rodeo” is the typical name given to a freestyle whitewater competition.

A freestyle whitewater feature is created where there is a “hydraulic jump,” which is a natural phenomenon resulting in an abrupt rise of the water surface. A hydraulic jump in the river channel is what creates the hole, wave-hole or wave. The physical characteristics of hydraulic jumps are described further in Section V below. A hydraulic jump can occur naturally, or can be created (as in a whitewater park) by the placement of structures in the river bed. Ideally formed hydraulic jumps are what create the freestyle whitewater recreational experience.

Beginner freestyle whitewater can be practiced in a hole or small wave; more forceful holes and wave-holes may be considered an intermediate experience. As of 2010, most intermediate through expert freestyle whitewater users desire a wave that would allow equipment to hydroplane on the water.

The season of whitewater recreation is anytime that the channel is not obstructed by ice and there is sufficient water. Typically the warm-up season is in April and May on the rising limb of the hydrograph. Expert freestyle whitewater season is around the peak in late May or June. As the runoff recedes, the water warms and the intermediate and beginning freestyle paddlers are more active. When the channel drops to levels less than those claimed for the in the RICD water rights, freestyle whitewater is not popular on this reach.

Green Freestyle Whitewater Recreation Experience

Green freestyle whitewater experiences are characterized by gentler features where beginners can be introduced to the sport and practice new skills. True novice boaters are not expected in the course. Even a freestyle whitewater beginner must have certain skills such as “eddy catching”, “ferrying”, “bracing” and “wet exit” or “combat rolling”. The green experience may allow a boater to be captured by a hydraulic and practice navigating the secondary currents and recovering.

Blue Freestyle Whitewater Recreation Experience

Blue freestyle whitewater experience may allow intermediates and experts to perform tricks and “play” in a hydraulic. It is important for this reasonable recreation experience to have an extended season duration, where a feature offers interest before and after runoff. The blue experience allows for locals to hone skills but may not create a regional destination.

Black Freestyle Whitewater Recreation Experience

Black freestyle whitewater experience may challenge intermediates and allows experts to perform basic aerial maneuvers in a hydraulic. This reasonable recreation experience may be differentiated from blue by navigation obstacles in the reach or more dynamic currents. The black experience may create a regional destination.

Double Black Freestyle Whitewater Recreation Experience

The double black freestyle whitewater experience may be characterized by high velocity water and dynamic hydraulics creating a wave feature that allows equipment (including surf boards) to hydroplane and for significant aerial maneuvers to be attempted. Rodeo events are often planned and advertised when the double black experience is anticipated. This may attract regional and national expert athletes.

III. Reach Length

Upper Structure Unit

The distance from the backwater influence of the Upper Structure Unit, downstream across the pool backed up by the Lower Structure Unit is 330 feet. There is a total hydraulic drop within the reach of 4.8 feet.

Lower Structure Unit

The distance from the backwater influence of the Lower Structure Unit, downstream across the scour pool backed up by augmented deposits from construction of the whitewater park facility is 300 feet. There is a total hydraulic drop within the reach of 1.7 feet.

IV. Measurement and Administration of the RICD

The Colorado Division of Water Resources (CDWR) gage ROARING FORK RIVER AB FRYINGPAN RIVER NR BASALT (ROAFRYCO) located 300 feet upstream of the Upper Structure Unit RICD reach. Administration of the RICD water rights by the Division Engineer may be based on direct measurements from this gage. Pitkin County plans to work with the Division Engineer to ensure that the water right is administrable.

V. Minimal Flows Sought

It is often observed in nature, and at existing whitewater parks, that the characteristics of a whitewater feature can change through a range of flows. Typically holes form at low flows, but as the discharge increases, waves often form. Holes most often are characterized by steep flow into a submerged hydraulic jump. In a hole, the recreation equipment is displaced in the white of the whitewater. Forceful jets of water can push the hole away from the structure and create a trough which identifies a wave-hole. In a wave-hole recreation equipment can move from the whitewater to the bottom of the trough and “side surf” or hydroplane on it side. As a wave forms the trough becomes greatly extended horizontally and vertically so that recreation equipment can “front surf” by hydroplaning in the upstream direction on the water.

Any structure designed as a permanent fixture in the river must appropriately function through the range of any and all flows that the river can experience. Structures must accompany wide ranging functions such as sediment transport, fish passage, boat passage and flood conveyance. Consideration of the other river functions (beyond freestyle whitewater recreation) informs the design constraints and, therefore, performance of the recreation. These considerations also apply to the design described herein.

The minimum flows and associated reasonable recreation experiences sought for Pitkin County are discussed in the sub-sections immediately below and shown in Table 1.

Upper Structure Unit

Three different levels of recreation experience are sought for three different periods for the Upper Structure Unit. The different recreation experiences sought are blue, black, and double black freestyle whitewater.

One limiting factor for a reasonable recreational experience is the depth of channel adequate for plunging a bow into the current and for rolling over and wet exiting. The November 21, 2003 RICD Technical Criteria suggest a minimum depth of 3.0-3.3 ft. The Upper Structure Unit is designed to provide a hole feature at 240 cfs which maintains adequate depths. The Upper Structure Unit feature will change character from a hole feature with a blue experience, to a wave-hole with a black experience at flows greater than 1,000 cfs. Similarly, the Upper Structure Unit has a phase change at 1,500 cfs at which it is expected to create a wave with a double black recreation experience.

Lower Structure Unit

Three different levels of recreation experience are sought for three different periods for the Lower Structure Unit. The different recreation experiences sought are green, blue, and freestyle whitewater.

The Lower Structure Unit feature will change character from a hole feature with a green experience at 380 cfs, when depths are adequate, to a wave-hole with a blue experience at flows greater than 1,350 cfs. The Lower Structure Unit has a phase change at 2,000 cfs at which it is expected to form a wave and create a black recreation experience.

Table 1 RICD Flow Rates, Periods and Recreational Experience Sought

Structure	Period	Flow Rate (cfs)	Experience
The Upper Structure Unit	April 1 – May 14	240	Blue
	July 1 – August 15	1,000	Black
	May 15 – June 30	1,500	Double Black
The Lower Structure Unit	July 15 – Sept. 15	380	Green
	May 14 – May 31	1,350	Blue
	June 1 - July 14	2,000	Black

VI. Permits

Pitkin County intends to apply for and comply with all of the necessary state and federal permits for this project. Pitkin County received an Army Corps of Engineers §404 individual permit (COE 2010-00639), issued on January 4, 2011. Pitkin County also received for a Department of Public Health and Environment §401 Water Quality permit (Certification No. 4265), issued September 3, 2010.

VII. Floodplain Compliance

The RICD Structure Units are designed to be fully submerged at flood flows and have no impact on the 100-year event flooding. The proposed project will not result in an increase of the Federal Emergency Management Agency (FEMA) Corrected Effective Base Flood Elevations after completion of a Letter Of Map Revision (LOMR) based “solely on submission of more detailed data” (LOMR has not been filed as of January 2011). The most current flood information is the Flood Insurance Study (FIS) dated December 4, 2007 (FEMA, 2007) which is based on the detailed study described in the Floodplain Information Report (FIR) dated November 14, 2001 (Matrix, 2001). The FIR was prepared by Matrix Design Group for the Town of Basalt Board of Trustees and

Pitkin County in cooperation with the Colorado Water Conservation Board. The FIR is the most current detailed floodway information available for the Roaring Fork River. The FIR presents Base Flood Elevations (BFE) through the project site based on the use of the HEC-RAS floodway model developed by the U.S. Army Corps of Engineers. (1997).

As applied to the Roaring Fork River, the HEC-RAS model used in the 2001 FIR represents the channel upstream and downstream of the RICD reaches. During preliminary investigations it became apparent that there was poor resolution by the geometry as represented in the FIR HEC-RAS for the project reach. Specifically, the HEC-RAS model used for the FIR represents the project reach with three cross-sections spaced an average of 470 feet in the downstream direction (cross-sections 88.5, 86.5, and 86.4). The FIR model indicates that there is approximately 10 feet of drop across the project reach. To accurately evaluate the potential impacts of the Pitkin County RICD Structure Units on flood profiles for the Roaring Fork River, four additional control cross-sections were surveyed by RiverRestoration in November of 2008 between the bounding cross-sections (88.5 and 86.5). These four cross-sections replaced cross-section 86.5. The addition of cross-sections to the HEC-RAS model more accurately represents the hydraulic control sections throughout the project reach. The resulting updated HEC-RAS model is the proposed Corrected Effective model that Pitkin County intends to use to support the filing of a Letter of Map Revision (LOMR) with FEMA (pending).

Upon completion of the LOMR process, the Corrected Effective Water Surface Elevations (WSE) will become the new regulatory Base Flood Elevation (BFE). Two additional cross-sections were surveyed and input into the Corrective Effective HEC-RAS model to represent the two RICD Structure Units units. The HEC-RAS results (Table 2) compares water surface elevations post RICD Structure Units with the Corrected Effective BFE (post-LOMR) following construction of the RICD Structure Units.

Table 2 Corrected Effective (pending) Base Flood Elevations and Proposed RICD Conditions

Station	Description	BFE (pending LOMR) (ft)	WSE (post RICD) (ft)
88.5	FEMA 88.5 242ft upstream of project area	6621.51	6621.51
87	RRO cross-section 194 upstream of Upper Structure Unit	6619.67	6619.67
86.57	RRO cross-section at Upper Structure Unit	6617.20	6617.08
86.49	RRO cross-section 52 upstream of Lower Structure Unit	6616.17	6615.81
86.43	RRO cross-section at Lower Structure Unit	6616.36	6616.27
86.425	RRO cross-section 14 downstream of Lower Structure Unit	6616.41	6616.41
86.42	RRO cross-section 77 ft downstream of Lower Structure Unit	6613.41	6613.41
86.4	FEAM 86.4 306 feet downstream of project	6609.46	6609.46

VIII. Environmental Effects

The reach is managed by the Colorado Division of Wildlife (CDOW) for cold water fisheries and the predominant species, Brown Trout. The reach is upstream of the CDOW classified Gold Medal Water at the confluence of the Frying Pan River. The substrate is armored cobble boulder bed or very large alluvium and there is no significant spawning habitat within the reach.

No long-term impacts from the project are expected. The project may have temporary construction impacts with track equipment driving on and excavating the bed material in the wet channel and temporary redirection of flow of the main channel. Construction activity may have isolated increases in turbidity. Best management practices (Plate C-8) such as turbidity curtains, silt fences, construction sequencing and care of water shall be utilized to minimize potential turbid conditions and locations. Relocation of any fish trapped in the coffered area is expected to be coordinated with CDOW at the time of construction.

Any potential increase in flow velocities would be locally dissipated as a result of the hydraulic jumps which are created. Reach wide sediment transport and fluvial geomorphology would be insignificantly altered by the project. No change in location of the downstream riffle is anticipated because of the stability revealed in the historical aerial photographic record. The project has been located in the most stable area of an unstable channel. The project is designed to encourage and support the stability of the

current geomorphic trends. The current geomorphic trends indicate that the project area will remain stable, short of an extreme transport event. The channel migration result of an extreme transport event is unpredictable, independent of the installation of the whitewater park. In general, structures in the river environment (including bridges, head gates, bank stabilization, etc...) require maintenance after significant channel migration. The predicted return flow of a transport event that may incite migration in the project area is the 10 year return flow of 6,100cfs.

The environmental effects of the proposed RICD flow could prove beneficial to the future ecology, riparian zone and fluvial geomorphic processes by maintaining channel forming flows. The proposed RICD may help to maintain a resemblance to the pre-development hydrograph that all riparian ecological processes have evolved upon.

IX. Other Considerations

Drift boating is a historical and continued use of the reach. The site is designed to be navigable for its entire length at flows when navigation typically occurs. The character of the whitewater park rapids will be of similar character to other navigation obstacles in the greater drift boat reach which includes Class III- rapids. Public comments repeatedly indicated that a boat ramp improvement and superior location downstream of Fisherman's Park is desired.

A high flow gage calibration cable way is planned for a section within the Lower Structure Unit RICD reach. The CDNR and Pitkin County are coordinating issues concerning the proposed cable way (Kellogg, 2010).

Immediately upstream of the proposed location is the Basalt Fisherman's Park. The Basalt Fisherman Park consists of a parking area, picnic tables and grill, restrooms, and boat access. Adequate parking will be provided at the whitewater park for all average daily use with over twelve spaces created. Special event parking may impact Fisherman's park, however, events are expected during peak runoff when the fishing quality is poor due to highly turbid waters. It is not feasible to install toilets or additional structures within the whitewater park project limits. Town of Basalt maintains the facilities at Fisherman's park and estimates that the facilities are adequate for current use and could function with a 50 percent to 100 percent increase in use. If use of the facilities at Fisherman's park becomes strained, the Town and Pitkin County will partner to expand facilities at Fisherman's Park in the future.

X. Hydraulic Analysis

The scientific study of hydraulic jump is largely based on empirical equations under the civil engineering discipline of open channel hydraulics. These equations do have quantifiable results, but require assumptions and expert judgment to apply the equations to a complex natural setting. No equations have been developed to quantify a recreational experience; however, distinct changes in hydraulic parameters, in my opinion, indicate phase changes in recreational experiences.

There are two proposed recreation enhancement Structure Units within the reach. Each of these Structure Units is located at what is known as a “control section,” in which flows pass through a “critical” state. In the CWCB’s 2003 Technical Criteria, the CWCB defined control as:

“A section across the stream where a manmade structure causes the flow to pass through critical depth when flow changes from sub-critical to super-critical.”

Each of these Structure Units enhances a hydraulic jump for recreation; this hydraulic jump happens at a section across the river where flows pass from a super-critical state to a sub-critical state. The proposed Structure Units “control” the flow to create the desired hydraulic jump. The “critical” state of flow is measured by a Froude Number. When a Froude Number is greater than 1.0 the flow is super-critical, when less than 1.0 the flow is sub-critical, and when equal to 1.0 the flow is considered critical. Table 3 shows the Froude Numbers for the Upper Structure Unit. Table 4 shows the Froude Numbers for the Lower Structure Unit. For each Structure Unit, these Froude Numbers were calculated at multiple sections, including: at the control section, upstream of the control section, and downstream of the control section, to reveal the control section and the hydraulic jump. This table includes the hydraulic parameters of depth, velocity and Froude Numbers for each of the three sections for each Structure Unit (based on 1 dimensional hydraulic modeling with mixed flow regime).

Upper Structure Unit

The Upper Structure Unit is located at an existing ‘natural’ control section (Froude Number = 1.0) in the channel. However, the existing hydraulic jump is not organized well enough to provide the recreational experience sought, nor efficient at low flows. Therefore, the control section would be reworked with large boulders and pre-cast concrete structures to organize and create reasonable recreation experiences.

The Upper Structure Unit hydraulic jump would form at all flows; however, above 240 cfs the downstream pool deepens to greater than 3 feet. Depths of 3 feet and greater are generally considered adequate for rolling and providing a reasonable recreational experience. Therefore, 240 cfs is the minimum flow rate for the proposed Upper Structure Unit hole because at that flow the depths of the pool are the minimum necessary for a reasonable blue recreation experience.

The Upper Structure Unit exhibits multiple phase changes as flows increase. These phase changes are identified by super-critical flow extending to downstream cross sections as the flow rates increase. At the Upper Structure Unit, the number of super-critical cross sections increases from 2 sections to 3 sections at 1,000 cfs (Table 3) creating a black experience, and peaks at 4 sections at 1,500 cfs creating a double black experience. These extensions of super-critical flow describe the expected response of the hole to extending out to a wave-hole (1,000 cfs) and eventually a wave (1,500 cfs). Above 1,500 cfs the Structure Unit begins to submerge and gradually reduce its hydraulic influence to the point of the 100-year flood when the Structure Unit is predicted to have an insignificant effect on channel hydraulics.

<i>Table 3. Upper Structure Unit Hydraulic Parameters</i>							
Q	F*	delta E	Depth	Inv<BW	# of Supers	V max	V pool
240	1.88	1.29	3.0	Yes	2	10.92	3.19
380	2.22	1.37	3.6	yes	2	11.9	3.81
950	1.79	1.26	5.1	yes	2	13.61	5.74
1000	1.92	1.26	5.2	yes	3	14.50	5.87
1300	1.81	1.23	5.7	yes	3	14.99	6.59
1350	1.80	1.22	5.8	yes	3	15.05	6.71
1425	1.76	1.21	5.9	yes	3	15.12	6.89
1500	1.70	1.20	6.4	yes	4	15.24	7.06
1900	1.57	1.16	6.4	yes	3	15.34	8.12
2000	1.55	1.13	6.5	yes	3	15.36	8.38

Lower Structure Unit

The Lower Structure Unit is in an existing sub-critical section of the channel. Placing the pre-cast structures and boulders would focus the hydraulic jump and create the desired whitewater feature. The whitewater feature created by this pre-cast structure would begin to form at all flows, but beginning at 380 cfs, the downstream pool deepens to greater

than 3 feet. When the depths are greater than 3 feet, kayakers would be able to plunge the bows into the flow and Eskimo-roll their boats. Therefore, 380 cfs is the minimum flow rate for the proposed Lower Structure Unit because at that flow the depths of the pool are the minimum necessary for a reasonable Green recreation experience.

The Lower Structure Unit exhibits multiple phase changes as flows increase. These phase changes are identified by super-critical flow extending to downstream cross sections as the flow rates increase. At the Lower Structure Unit the number of super-critical cross sections increases from 1 section to 2 sections at 1,350 cfs (Table 4) creating a blue experience, and increases a second time to 3 sections at 2,000cfs creating a black experience. This describes the expected response of the hole to extending out to a wave-hole (1,350 cfs) and eventually a wave (2,000 cfs). Above 2,000 cfs the Structure Unit begins to submerge and gradually reduce its hydraulic influence to the point of the 100-year flood when the Structure Unit is predicted to have insignificant affect on channel hydraulics.

<i>Table 4. Lower Structure Unit Hydraulic Parameters</i>							
Q	F*	delta E	Depth	Inv<BW	# of Supers	V max	V pool
240	0.48	0.77	2.6	yes	1	3.44	1.60
380	1.62	1.02	3.0	yes	1	11.54	2.22
950	1.78	1.46	4.0	yes	1	12.97	4.00
1000	1.76	1.49	4.1	yes	1	4.78	4.13
1300	1.69	1.60	4.5	yes	1	5.55	4.84
1350	2.14	1.62	5.0	yes	2	15.62	4.95
1425	2.12	1.64	5.1	yes	2	15.71	5.11
1500	2.10	1.65	5.2	yes	2	15.82	5.26
1900	1.98	1.63	5.7	yes	2	16.26	6.01
2000	1.95	1.62	5.8	yes	3	16.34	6.18

XI. Stability Analysis

The Structure Units are designed to withstand the forces of the 100-year flood from potential local scour, incipient motion and over-turning moment. The concepts of stability are discussed in the sub-sections that follow.

Scour

Undermining, scour and general bed degradation are the most common methods for failure of large structures in alluvial channels. Typically large obstructions in the channel causes localized secondary currents, which scour the bed around the obstruction. This scenario often undermines the footing and may eventually lead to failure of the structure under the force of gravity. The potential depth of these scour holes are dependent on the mobility of the channel bed material. Scour depths were calculated at the pre-cast structure elevations. The substrate for both the Upper Structure Unit and the Lower Structure Unit is alluvial with an approximate median particle size (d_{50}) of 181 mm (Elliot, 2002). The minimum scour elevation calculated at the Upper Structure Unit was determined to be 6602.7 feet. The minimum scour elevation computed at the Lower Structure Unit was determined to be 6598.9 feet. To prevent failure of the Structure Units, the base of the pre-cast structures at Upper Structure Unit and the Lower Structure Unit will be keyed down below elevation 6598.9 feet. Potential for scour failure is further reduced because of the armoring nature of the existing alluvium and the design of overlying boulder apron.

Incipient Motion

Individual particles in the channel bed were analyzed to determine their potential to move as a function of bed shear stresses imposed by the flowing water. These predictions were analyzed up to the 100-year flood scenario and were performed using incipient motion analysis based on Shields' method (Gessler, 1971). The results were used to describe the "critical size" of the bed material. The "critical size" describes the length of the median particle axis at which motion begins when subjected to the shearing force of a given flow. The "critical size" was determined at each Structure Units using the maximum calculated bed shear stress as the critical shear stress in the Shield's Equation. The bed shear stress was calculated for a range of flows, including the 100-year discharge of 9,400 cfs. The maximum resulting bed shear stress, calculated over the range of flows, occurred at 1,400 cfs for the Upper Structure Unit and 2,900 cfs for the Lower Structure Unit. These maximum bed shear stresses were subsequently used to predict the "critical size" at which the motion of an individual particle begins for each Structure Unit. The maximum particle size to be mobilized at the Upper Structure Unit is 2.0 feet and Lower Structure Unit is 2.5 feet.

Boulders to be used for construction of the ramp and wings of each Structure Unit were sized based on the “critical size” predicted by the Shields’ equation and a Factor of Safety (FOS). The FOS calculation describes the ratio of the design boulder size relative to the calculated “critical size”. For example, a FOS of 1.0 indicates that the design boulder size will mobilize under the maximum bed shear stress calculated for the range of flow rates at each Structure Unit. A FOS greater than 1.0 indicates a more stable design, where the maximum bed shear stress would be insufficient to mobilize the design boulder size. The minimum boulder size for the Upper Structure Unit is 4.0 feet with an associated factor of safety of 2.0. The minimum boulder size for the Lower Structure Unit is 5.0 feet with an associated factor of safety of 2.0. The design boulder size at each Structure Unit is sufficient to prevent particle mobilization up to the 100-year flood event.

Precast Structure Stability

Stability analyses were conducted to evaluate the stability of the pre-cast structures. The pre-cast structures were evaluated for drag forces on sliding potential and overturning moment. Maximum predicted velocities and the structure geometry were used to predict the drag forces acting on the pre-cast structures. The maximum drag force for both the Upper Structure Unit and the Lower Structure Unit occurs at a discharge of 8,400 cfs, under the 100-year flood scenario. These drag forces were compared to the frictional resistance to sliding, determined from the combined weight of the pre-cast structure, in order to determine a FOS. The FOS was calculated as the ratio of the force needed to slide the pre-cast structure relative to its drag force. Similar to the analysis of the particle “critical size,” a FOS of 1.0 indicates that the pre-cast structure may slide, where as a FOS greater than 1.0 indicates stability. At Upper Structure Unit the sliding FOS was determined to be 3, and at Lower Structure Unit the sliding FOS was calculated as 2.2. The calculated drag force was also used to determine the overturning moments about the toe of the pre-cast structure. At the Upper Structure Unit the overturning FOS was calculated as 3.1, while the overturning FOS at the Lower Structure Unit was calculated as 2.5. These analyses demonstrate the ability of the pre-cast structures to avoid sliding or overturning up to the 100-year flood event.

In all of the above stability analyses conservative assumptions and values were utilized. The Structure Unit components were analyzed independently for a number of different mobilization scenarios. The conclusion is that all Structure Units are designed to be stable under the 100-year flow scenario and during the maximum potential mobility flows less than the 100-year event.

XII. Summary

The proposed design, stream reach and recreational experiences sought are very appropriate for these RICD applications. Our opinion is based on the fact that the recreational experiences sought, which includes three distinct levels of freestyle whitewater for each Structure Unit, the 300 feet long reach lengths, and the depth and width of the course are all reasonable. A CDNR gage is available for administration of the RICD and all federal and state statutory requirements will be met by Pitkin County. The flows requested for appropriation are the minimum for each Structure Unit differing recreational experience as shown in hydraulic analyses. The Structure Units maximize efficiency within the range of flows sought. The design has an adequate factor of safety to be considered stable under the 100-year flood scenario. The proposed project is expected to have insignificant temporary environmental impacts associated with construction and no long-term environmental impacts.

XIII. References

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Kellogg, J., 2010. Email dated May 18, 2010. Signed James Kellogg, Aug. Plan Coordinator/Hydrographer, Colorado Division of Water Resources, Glenwood Springs, CO.

Pearce, J., 2011. Design Engineering Report, Case No. 2010-CW-305, Pitkin County's Recreational In-Channel Diversion Water Right in the Roaring Fork River. Jim Pearce. February 2011.

USACE, 1997, *HEC-RAS River Analysis System User's Manual*. U.S. Army Corps of Engineers, Hydrologic Engineering Center, Davis, California.

XIII. Appended Drawings

Appended are sixteen 11X17 half scale drawing plates representing the final design of the project as listed in Table 5.

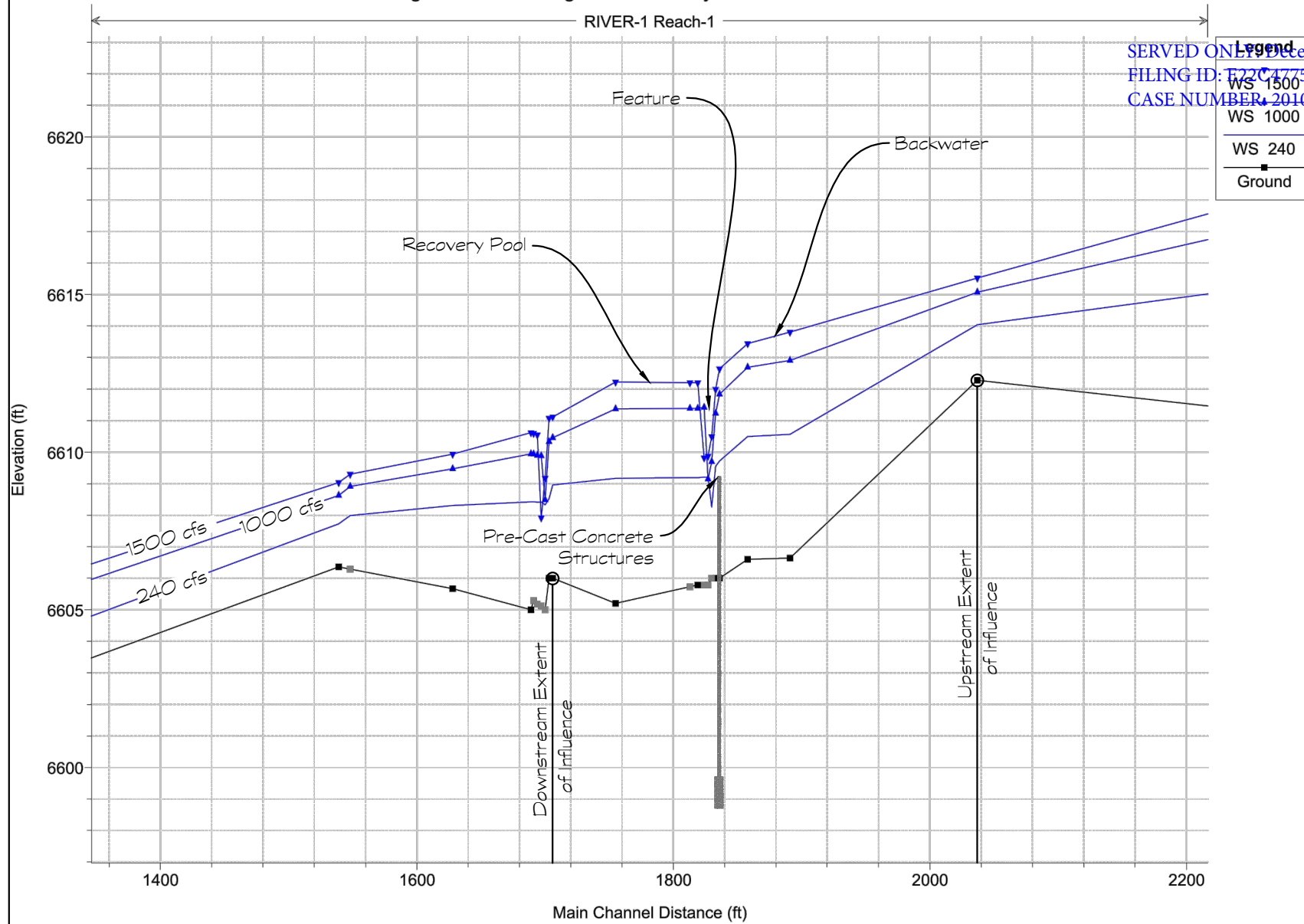
Table 5. Appended Drawing Index

SHEET NO.	PLATE NO.	TITLE
	GENERAL	
1	G1	VICINITY MAP, DRAWING INDEX, LEGEND
2	C1	PLAN VIEW
3	C2	PLAN VIEW WHITEWATER STRUCTURES
4	C3	PLAN VIEW GEOMORPHIC STRUCTURES
5	C4	SECTIONS I
6	C5	SECTIONS II
7	C6	STRIPING PLAN
8	C7	PLANTING PLAN
9	C8	CONSTRUCTION BMP'S (TYPICAL)
10	D1	CARE OF WATER DETAILS
11	D2	NON-POINT SOURCE POLLUTION CNTRL.
12	D3	BOULDER STRUCTURES
13	D4	PRE-CAST CONCRETE STRUCTURES
14	D5	PATH STRUCTURES
15	D6	VEGETATION INSTALLATION
16	D7	EROSION CONTROL BLANKETS

EXHIBIT J

Roaring Fork River - Eagle & Pitkin Cnty Plan: RICD 6/29/2011

RIVER-1 Reach-1



SERVED ONLY December 1, 2013 5:13 PM
FILING ID: E22C4775F6524
CASE NUMBER: 2010CW305

Legend
WS 1500
WS 1000
WS 240
Ground

PITKIN COUNTY
WHITEWATER PARK FACILITY
UPPER STRUCTURE UNIT

NOT FOR CONSTRUCTION

No.	Revision/Issue	Date

Firm Name and Address
RIVER
P.O. Box 2123
Glenwood Springs, CO 81602
www.RiverRestoration.org

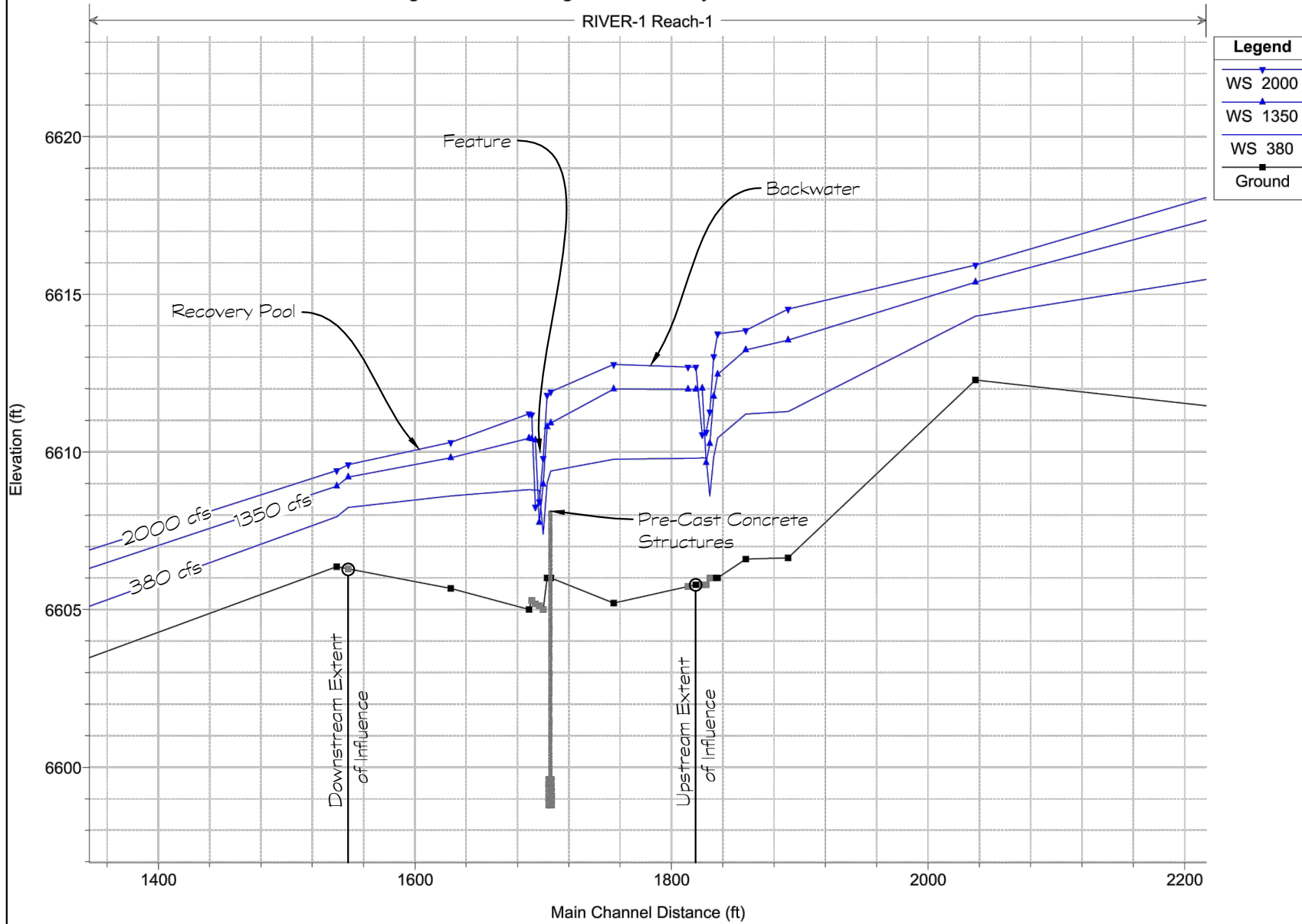
Project Name and Address
PITKIN COUNTY
ROARING FORK RIVER

Project PITKIN WWP
Date 06-29-2011
Scale NTS

Roaring Fork River - Eagle & Pitkin Cnty

Plan: RICD 6/29/2011

RIVER-1 Reach-1



General Notes

PITKIN COUNTY
WHITEWATER PARK FACILITY
LOWER STRUCTURE UNIT

NOT FOR CONSTRUCTION

First Design		06/29/2011
No.	Revision/Issue	Date

Firm Name and Address

RIVER
RESTORATION

P.O. Box 2123
Glenwood Springs, CO 81602
www.RiverRestoration.org

Project Name and Address

PITKIN COUNTY
ROARING FORK RIVER

Project	PITKIN WWP	Sheet
Date	06-29-2011	
Scale	NTS	

EXHIBIT K



SERVED ONLY: December 1, 2013 5:13 PM
FILING ID: E22C4775E6524
CASE NUMBER: 2010CW305
April 5, 2012

Board of County Commissioners
c/o John Ely, County Attorney
Pitkin County Colorado
530 E Main Street, Suite 302
Aspen, CO 81611
(970) 920-5190
John.Ely@co.pitkin.co.us

RE: Pitkin County Recreational In-channel Diversions Case No. 10CW305

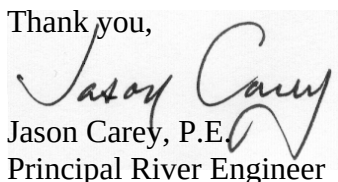
Pitkin BOCC,

My staff and I very excited about the Pitkin County Whitewater Facility and appreciate your attention to the valley's water issues. The BOCC's and Staff's commitment to the Roaring Fork River is very valuable to our community and one of the reasons I live here. I understand that a minimum 60 cfs flow rate, which is less than those necessary for the intended recreational experiences, has been negotiated on behalf of Pitkin County to satisfy C.R.S. § 37-92-305(13)(d). This negotiated minimum flow rate is referenced in the proposed decree dated December 5, 2011 under paragraph 8D. I have been asked if, in my opinion, a beneficial use, as defined in the decree, can occur at the proposed whitewater structure units at the flow of 60 cfs.

We regularly observe low flow conditions at whitewater parks that we have designed, as well as at other parks that have RICD water rights. We often observe recreational use, including non-motorized boating, at these parks during low flow conditions. I have reviewed designs of this park at 60 cfs and have determined that water will pass all structure units at the respected flows. The depth of the pool at the upstream structure unit is predicted to be 2.0 feet, and the depth of the pool at downstream structure unit is predicted to be 2.4 feet. These depths are not design depths but those that are within the range of depths anticipated throughout the channel at these flows.

It is my opinion that beneficial use can and will occur at the whitewater structure units at 60 cfs flow. This beneficial use is distinguishable from the targeted recreational experiences that I have designed the structure units for and which are described in my February 4, 2011 Report. Although this flow may not facilitate the intended uses of the design, the Whitewater Facility will host other decreed uses such as tubing.

Thank you,



Jason Carey, P.E.
Principal River Engineer

EXHIBIT L

**Engineering Report
for January 2014 CWCB Board Meeting**

Case No. 2010CW305

**Application by Pitkin County
for Recreational In-Channel Diversion Water Right
for Pitkin County River Park Project**

Prepared by Louis T. Rozaklis

**Prepared for the
Board of Pitkin County Commissioners
Aspen, Colorado**

December 1, 2013



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List of Attachments

- A: Application, Case No. 2010CW305.
- B: Colorado Historical Average Annual Stream Flows (2011 Revision)

1 Introduction

From its headwaters on Independence Pass through the City of Aspen and past the Town of Basalt, the Roaring Fork River runs through the heart of Pitkin County, Colorado. Much of Pitkin County's spring and summer season tourism activities are focused on water-related recreational opportunities on the Roaring Fork River. The Roaring Fork River has long been recognized as having exceptional whitewater kayaking and rafting opportunities, and these activities have become increasingly popular in the previous two decades. As part of its ongoing effort to improve water-based recreational opportunities within the County, the Board of Pitkin County Commissioners has applied for a conditional recreational in-channel diversion (RICD) water right for the Pitkin County River Park Project, a whitewater park in and on the Roaring Fork River just upstream of its confluence with the Fryingpan River.

The purpose of this report is to provide engineering support for County's application. This report focuses on the subjects of water availability and statutory and Colorado Water Conservation Board (CWCB) rule requirements related to Colorado's interstate compact entitlements, maximum utilization of water, and potential injury to instream flow rights. In developing this report, I have reviewed the reports by James F. Pearce dated February 2011, May 2011, December 2011 and July 9, 2012; and the design report and letter by Jason P. Carey respectively dated February 2011 and April 5, 2012.

Issues related to the selection of the recreational in-channel river reach, the specific locations and hydraulic and design aspects of the individual RICD control structures, the specific recreational boating experiences to be provided by each RICD control structure, and the determination of the minimum flows required to provide the specific recreational boating experiences are addressed in the report by Jason P. Carey dated February 2011. The existence of beneficial in-channel recreational uses in the claimed RICD reach at 60 cfs flow is addressed in the letter from Jason P. Carey dated April 5, 2012.

2 Proposed Water Right

2.1 The 10CW305 Application

On December 30, 2010, in Case No. 2010CW305, Water Division 5, the Board of County Commissioners for Pitkin County applied for two RICD water rights for the Pitkin County River Park Project. A summary of these two RICD water rights is provided in Table 1. A copy of the County's application is included in Attachment A. Pitkin County has revised its claimed RICD water right as further described below.

The Pitkin County River Park Project will be located on the Roaring Fork River within the Town of Basalt, just downstream of the Town's Fisherman's Park and upstream of the confluence with the Fryingpan River, within portions of the northwest quarter of Section 17 and of the northeast quarter of Section 18, Township 8 South, Range 86 West, 6th Principal

Meridian, as shown in Figure 1. There will be two control structures (the Upper Structure and the Lower Structure) located within the Pitkin County River Park stream reach, but only one RICD water right is claimed for both structures.

2.2 Refinement of Claimed RICD Water Right

Following the submission of the application, the County commissioned a design report by Jason P. Carey (Carey, February 2011), which developed specific RICD flow rates corresponding to three levels of desired recreational experiences at each of the control structures, as summarized in Table 2.

Subsequently the County further revised its RICD claims, as summarized in Table 3, to respond to the CWCB's concerns while still meeting the County's objectives of mimicking the shape of the hydrograph and protecting recreational flows during spring peak flow periods and during the summer. These revised flow rates and periods are for a single RICD water right that is claimed for both the Upper and Lower Structures. The County also changed how the flow rates are structured to reduce the overall volume of water associated with the RICD water right to be less than 50% of the total average historical volume of stream flow in the reach of the Roaring Fork River in which the River Park will be located.

3 Water Availability

The water supply available to the claimed RICD right is essentially the historical flow of the Roaring Fork River upstream of its confluence with the Fryingpan River. The Pearce reports (Pearce, February 2011; Pearce, May 2011; Pearce, December 2011; Pearce, July 9, 2011) estimated the historical flows available to the claimed RICD right over a 1980-2010 study period using stream gage data, a stream flow model that accounts for upstream diversions, return flows and ungagged inflows, and a regression analysis. The 1980-2010 study period reflects a representative range of conditions in terms of water supply and demands. I have reviewed these reports and have determined that the historical flows as shown in the first table of the July 9, 2012 Pearce letter are a reasonable and representative depiction of the historical flows available to the claimed RICD right.

Figure 2 provides a statistical depiction of the historical flows available to the claimed RICD right. The claimed RICD flow rates are lower than the 50th percentile historical flows during 111 days of the claimed 142-day RICD season, and are always less than the 75th percentile historical flows. This means that sufficient water would be available to satisfy the RICD water right for 78% of the days in the claimed RICD season in more than half of the years, and for the entire claimed RICD season in more than 1 out of 4 years. There is sufficient water available at Pitkin County River Park to satisfy the recreation-specific flow rates proposed for the Upper and Lower Structures. The "ROAFRYCO" stream gauge is located just upstream of the Pitkin County River Park and is adequate to administer the claimed RICD right.

3.1 Volume of Appropriation

CRS § 37-92-305 (13)(f) requires that, if the Water Court determines that the total volume of water represented by the flow rates decreed for an RICD exceeds fifty percent of the sum of the total average historical volume of water for the stream segment where the RICD is located for each day on which a claim is made, the decree shall: (i) specify that the state engineer shall not administer a call for the RICD unless the call would result in at least eighty-five percent of the decreed flow rate for the applicable time period; (ii) limit the RICD to no more than three time periods; and (iii) specify that each time period is limited to one flow rate.

Based upon the historical flows available to the claimed RICD right as depicted in the first table of the July 9, 2011 Pearce letter, the claimed RICD right does not exceed the 50% threshold; the claimed RICD flow volume is 122,622 acre-feet compared to a 50% average historical flow volume of 125,404 acre-feet.

4 Interstate Compacts

Colorado's statutes governing RICD rights require that, in determining whether a decree should be issued for a proposed RICD right, the Water Court shall consider evidence and make affirmative findings that the RICD right will not materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements. In making its findings, the Water Court must consider the findings of the CWCB on this subject. Section 7(a) of the CWCB's RICD rules includes ten factors that the CWCB may consider in this regard. The relevant factors are addressed in the discussion below.

The interstate compacts relevant to Pitkin County's claimed RICD right are the Colorado River Compact of 1922 and the Upper Colorado River Compact of 1948. The Colorado River Compact allocates 7.5 million acre-feet (MAF) per year to the Upper Basin states, including Colorado. This allocation is subject to a requirement that the Upper Basin states deliver a running total of 75 MAF every ten years, plus a portion of Mexico's right to use water from the Colorado River if such right is not supplied by excess waters, to the Lower Basin States as measured at Lee Ferry. The Upper Colorado River Compact allocates to Colorado 51.75% of the Upper Basin states' net allocation after 50,000 acre-feet per year are first deducted for delivery to Arizona.

Thus, Colorado's entitlement to Colorado River water is not a fixed amount, but varies as a function of the long-term average natural flow of the Colorado River. Several entities have estimated the long-term average flow of the Colorado River based upon historical hydrology and paleo-climate information; those estimates range from 13.0 to 14.7 MAF. Based upon those estimates, Colorado's entitlement to Colorado River water would correspondingly range from approximately 2.8 to 3.7 MAF. According to the U.S. Bureau of Reclamation's Consumptive Uses and Losses Reports, in recent years Colorado has consumed an average of approximately 2.09 MAF per year. Mainstem reservoir evaporation in the Upper Colorado River basin has averaged approximately 0.46 MAF per year. Assuming that Colorado would bear a portion of that evaporation proportionate to its Upper Colorado River Compact

allocation percentage, Colorado's remaining developable entitlement would range from approximately 0.5 to 1.4 MAF per year.

Neither the Compacts nor any state statutes or regulations apportion Colorado's entitlement between sub-basins within Colorado. Development of Colorado's remaining unused entitlement could therefore occur within any of the Colorado River sub-basins within Colorado: Colorado, Yampa, White, Green/Little Snake, Dolores or San Juan depending demands for additional water, either locally or for trans-basin export.

The volume of water claimed by Pitkin County at its proposed Pitkin County River Park Project is 122,622 acre-feet per year. The volume of water claimed is non-consumptive and would be available to downstream water users. The drainage area tributary to the Pitkin County River Park Project is approximately 511 square miles. The proposed Pitkin County River Park Project is located more than 100 miles (by line of sight) and more than 150 river miles from the Colorado-Utah state line. In comparison, the total physical supply leaving Colorado in the Colorado, Yampa, White, Green/Little Snake, Dolores and San Juan sub-basins averages more than 8.7 MAF per year, according to the State Engineer's most recent graphical depiction of historical average annual stream flows (Attachment B), and the combined drainage area of those sub-basins is approximately 48,000 square miles. Thus Pitkin County's proposed RICD right could potentially affect no more than 1.5% of the 8.7 MAF per year of water leaving Colorado in the Colorado River and its tributaries, out of which no more than 500,000 to 1,400,000 acre-feet per year of additional water may be developed. The lands upstream of Pitkin County's proposed Pitkin County River Park Project comprise less than 1% of the combined drainage area from which the 8.7 MAF per year of water leaving Colorado originates and flows. Thus Pitkin County's proposed RICD right could potentially affect less than 1% of Colorado's water development opportunities for utilizing its remaining Colorado River Compact entitlement.

Because of their senior priorities, upstream absolute and conditional water rights and absolute and conditional exchange rights that would operate through the RICD reach would not be affected by Pitkin County's proposed RICD water right. Potential future upstream water rights and potential future exchange rights that would operate through the RICD reach will be protected by a carve-out provision that is the subject of a settlement under negotiation among Pitkin County, the Colorado River Water Conservation District and other in-basin objectors. The carve-out proposal would subordinate the claimed RICD water right to up to 3,000 acre-feet per year of additional upstream depletions, which reflects the objectors' estimate of the reasonably foreseeable additional upstream water supply development needs, over and above any depletions attributed to existing absolute and conditional water rights. Calls by Pitkin County's proposed RICD water right would also be limited to daylight hours, according to the proposed decree for this case.

Pitkin County's claimed RICD right will not materially impair Colorado's ability to fully use its Colorado River compact entitlements.

5 Maximum Utilization

Colorado's statutes governing RICD rights require that, in determining whether a decree should be issued for a proposed RICD right, the Water Court shall consider evidence and make affirmative findings that the RICD right will promote maximum utilization of waters of the state. In making its findings, the Water Court must consider the findings of the CWCB on this subject. Section 7(c) of the CWCB's RICD rules includes twenty factors that the CWCB may consider in this regard. The relevant factors are addressed in the discussion below.

Pitkin County's claimed RICD right will promote maximum utilization of waters of the state because it will be non-consumptive in nature and will provide for new beneficial uses of water for recreational purposes while not diminishing or impairing any existing or future downstream uses of water. Because Pitkin County's claimed RICD right will be a new water right with a 2010 appropriation date, it will not affect any upstream existing absolute or conditional water rights. As previously mentioned, potential future upstream water rights and potential future exchange rights that would operate through the RICD reach will be protected by a 3,000 acre-foot annual carve-out provision that is the subject of a settlement under negotiation among Pitkin County, the Colorado River Water Conservation District and other in-basin objectors. The 3,000 acre-foot carve-out amount reflects the objectors' estimate of the reasonably foreseeable additional upstream water supply development. Also, as previously mentioned, calls by Pitkin County's proposed RICD water right would also be limited to daylight hours, according to the proposed decree for this case.

Issues related to reasonable and efficient means to divert, reasonable demand for recreational activity, depth and flow velocities of claims are addressed in the report by Jason P. Carey (Carey, February 2011).

The water that would be claimed by the proposed RICD water right would be comprised of a mixture of already appropriated natural flows that flow through the RICD stream segments to their downstream points of diversion and some amount of unappropriated natural flows.

Pitkin County's claimed RICD right will promote maximum utilization of waters of the State of Colorado.

6 Instream Flow Rights

Colorado's statutes governing RICD rights require that, in determining whether a decree should be issued for a proposed RICD right, the Water Court shall consider evidence and make affirmative findings that the RICD right will not cause material injury to instream flow water rights appropriated pursuant to section 37-92-102(3) and (4).

Because Pitkin County's claimed RICD right will be non-consumptive in nature, it will not diminish stream flows upstream, downstream or within the claimed reach and will not cause material injury to existing instream flow rights, including the CWCB's instream flow rights

decreed for the Roaring Fork River. Issues related to potential construction-related impacts to instream flow rights are addressed in the report by Jason P. Carey (Carey, February 2011).

7 Conclusions

There is sufficient water available at the Pitkin County River Park Project to satisfy the recreation-specific flow rates claimed by Pitkin County for the Upper and Lower Structures in the flow rates and time periods shown in Table 3.

Pitkin County's claimed RICD right will not materially impair Colorado's ability to fully use its Colorado River compact entitlements.

Pitkin County's claimed RICD right will promote maximum utilization of waters of the State of Colorado.

Because Pitkin County's claimed RICD right will be non-consumptive in nature, it will not diminish stream flows upstream, downstream or within the claimed reaches and will not cause material injury to instream flow rights.

8 References

1. Colorado River Outfitters Association. Commercial River Use in the State of Colorado, 1988-2010.
2. Jason P. Carey, P.E. Design Engineering Report, Case No. 2010-CW-305, Pitkin County's Recreational In-Channel Diversion Water Rights for the Roaring Fork River, February 2011.
3. Letter from Jason P. Carey to Pitkin County Board of Commissioners regarding Pitkin County RICD Case No. 10CW305, April 5, 2012.
4. James F. Pearce. Report in Support of the Pitkin County River Park Recreational In-Channel Diversions, Water Rights Application Case No. 10CW305, Water Division No. 5, February 2011.
5. James F. Pearce. Supplemental Report in Support of the Pitkin County River Park Recreational In-Channel Diversions, Water Rights Application Case No. 10CW305, Water Division No. 5, May 2011.
6. James F. Pearce. Second Supplemental Report in Support of the Pitkin County River Park Recreational In-Channel Diversions, Water Rights Application Case No. 10CW305, Water Division No. 5, December 2011.
7. Letter from James F. Pearce to Patricia DeChristopher regarding correction of error in hydrologic analysis, July 9, 2012.

8. Draft Findings of Fact, Conclusions of Law, Judgment, and Decree of the Water Court, Case No.: 2010CW305, September 17, 2013.
9. Selected Streamflow Records, Colorado Decision Support System.
10. U.S. Bureau of Reclamation, 2007. Upper Colorado River Basin Consumptive Uses and Losses Report 2001-2005 (Provisional), June 2007.
11. U.S. Bureau of Reclamation, 2010. Upper Colorado River Basin Consumptive Uses and Losses Report 2006-2010 (Provisional), November 2010.
12. U.S. Bureau of Reclamation Climate Technical Work Group, August 21, 2007. Review of Science and Methods for Incorporating Climate Change Information into Reclamation's Colorado River Basin Planning Studies (Final Report).
13. Colorado Division of Water Resources, 2011. Colorado Historical Average Annual Stream Flows (2011 Revision).
14. Colorado Water Availability Study.

Figure 1: Pitkin County River Park Project

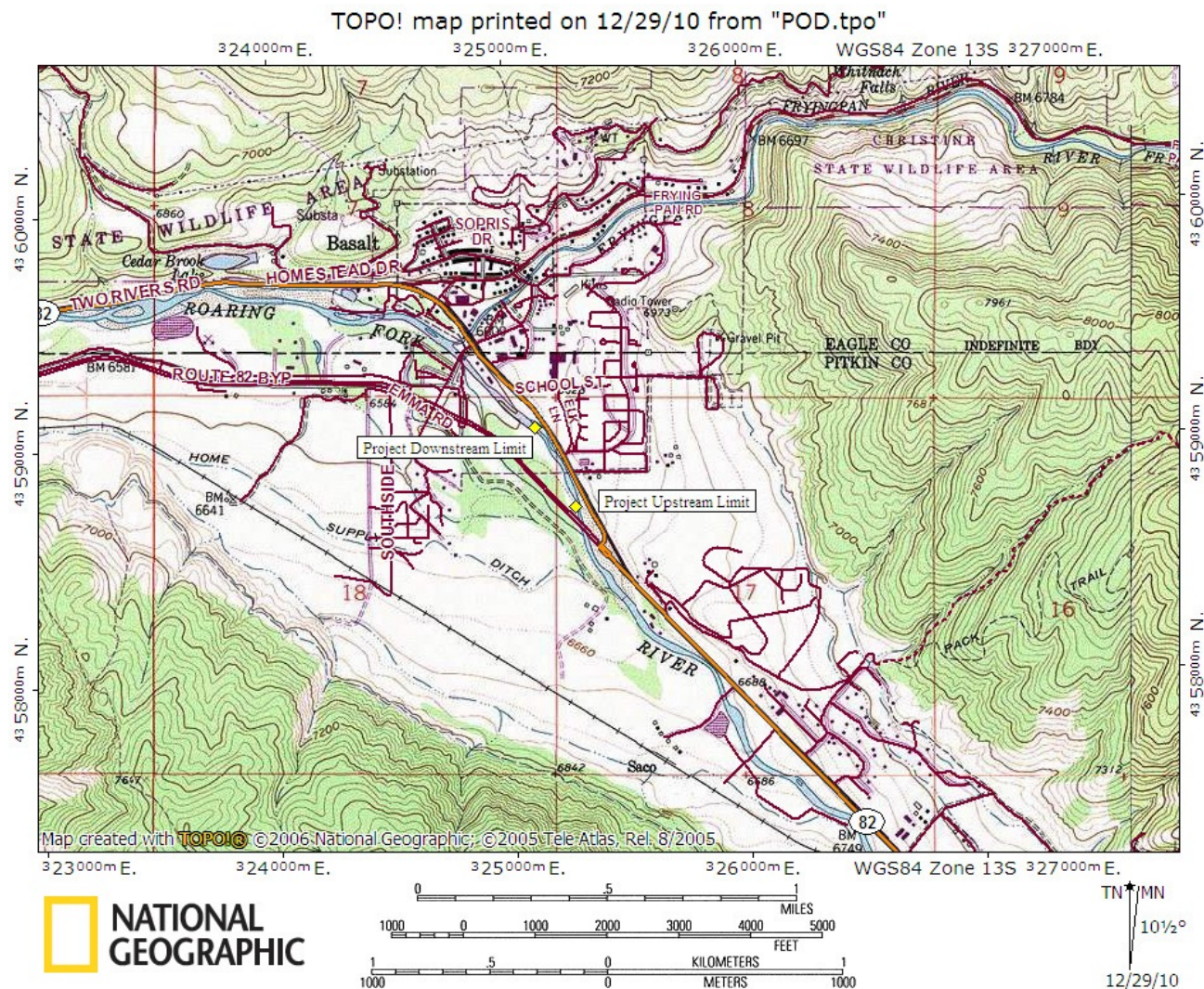


Figure 2: Historical Flows Available to the Claimed RICD Right

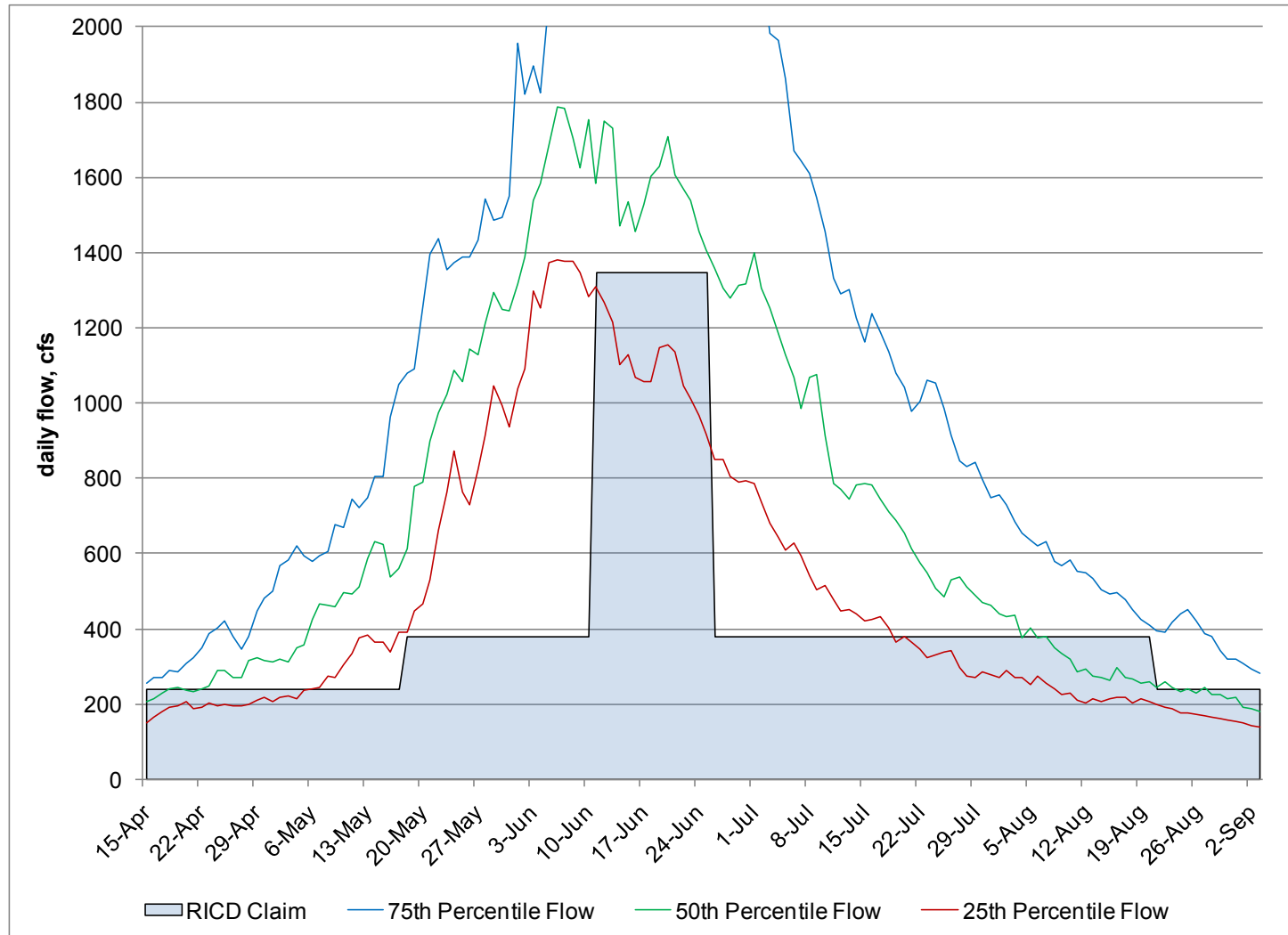


Table 1: Summary of RICD Water Rights as Included in the Application for Case No. 2010CW305

Location	Period	Flow Rate (cfs)	Appropriation Date
Upper Structure	April 1 - Labor Day	1,500	July 13, 2007
Lower Structure	April 1 - Labor Day	2,000	July 13, 2007

The claimed beneficial use for each water right is recreational including all beneficial uses associated with RICD water rights as permitted under Colorado law as may be later changed or amended, including but not limited to non-motorized boating including kayaking, canoeing, rafting, tubing, floating and paddling.

Table 2: 2010CW305 Claimed RICD Water Rights Modified to Reflect the Design Report

Location	Period	Flow Rate (cfs)	Experience
Upper Structure	April 1 - May 14	240	Blue
	May 15 - June 30	1,500	Double Black
	July 1 - August 15	1,000	Black
Lower Structure	May 14 - May 31	1,350	Blue
	June 1 - July 14	2,000	Black
	July 15 - September 15	380	Green

Table 3: 2010CW305 Claimed RICD Water Right Modified to Address CWCB Concerns

Period	Flow Rate (cfs)	Experience
April 15 - May 17	240	Blue, Upper Structure
May 18 - June 10	380	Green, Lower Structure
June 11 - June 25	1,350	Blue, Lower Structure
June 26 - August 20	380	Green, Lower Structure
August 21 - Labor Day	240	Blue, Upper Structure

Attachment A:

Application for Case No. 2010CW305,
District Court, Water Division 5, Colorado

DISTRICT COURT, WATER DIVISION NO. 5, COLORADO 109 - 8th Street, Suite 104 Glenwood Springs, CO 81601-3361 (970) 947-3861 CONCERNING THE APPLICATION FOR WATER RIGHTS OF BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY, COLORADO IN PITKIN COUNTY Timothy J. Beaton, #10403 Aaron S. Ladd, #41165 Moses, Wittemyer, Harrison and Woodruff, P.C. P. O. Box 1440 Boulder, Colorado 80306-1440 Telephone: (303) 443-8782 Facsimile: (303) 443-8796 tbeaton@mwhw.com; aladd@mwhw.com	FILED Document ~~CO Garfield County District Court 9th JD~~ Filing Date: Dec 30 2010 3:59PM MST Filing ID: 35131615 Review Clerk: Kathy Hall ▲ COURT USE ONLY ▲ Case Number: 10CW <u>305</u>
APPLICATION FOR SURFACE WATER RIGHT APPROPRIATIONS FOR RECREATIONAL IN-CHANNEL DIVERSION	

1. Name, address and telephone number of applicants:

Board of County Commissioners of Pitkin County
c/o John M. Ely, Pitkin County Attorney
530 East Main Street, Third Floor
Aspen, Colorado 81611
(970) 920-5190

2. Introduction: This application seeks two conditional recreational in-channel diversion ("RICD") water right appropriations for the Pitkin County River Park Project, which consists of two in-channel diversion and control structures that divert, capture, possess, and/or control the flow of the Roaring Fork River in its natural course to create reasonable recreation experiences in and on the water for all non-motorized boating and related recreational uses as described more fully below.

3. Name of structures: The Pitkin County River Park Project is comprised of two control structure units: (1) the Pitkin County River Park Project Upper Control Structures ("Upper Structure Unit") and (2) the Pitkin County River Park Project Lower Control Structures ("Lower Structure Unit").
4. Description of conditional water right appropriations:
 - A. Location of structures: The Pitkin County River Park Project will be located on the Roaring Fork River downstream of the Highway 82 Upper Bypass Bridge, upstream of the confluence of the Fryingpan and Roaring Fork Rivers, within the channel of the Roaring Fork River in Sections 17 and 18, Township 8 South, Range 86 West of the 6th P.M., Pitkin County, Colorado. The Pitkin County River Park Project will consist of two structure units within the Roaring Fork River. This application seeks two RICD water right appropriations, one for each of the two structure units, each of which will, by design, control, concentrate and direct the stream flows between the upper and lower extent of that structure units, independent of the other structure units, for the beneficial uses described below. A map depicting the upstream and downstream extent of the Pitkin County River Park Project, within which both structure units will be constructed, is attached as **Exhibit A**. Each of the two structure units will be constructed in the channel of the Roaring Fork River between the following two points:
 - i. The Pitkin County River Park Project Upstream Extent will be located in the SW¼ of the NW¼ of Section 17, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 320 feet from the west section line and 1480 feet from the north section line of said Section 17.
 - ii. The Pitkin County River Park Project Downstream Extent will be located in the NE¼ of the NE¼ of Section 18, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 265 feet from the east section line and 560 feet from the north section line of said Section 18.

The precise location of the two structure units and related water right appropriations, upon construction, may be located within this stretch of the Roaring Fork River. Provided that the structure unit locations remain within the stream reach described above, the actual locations will be described in the decree entered herein, identified by upper and lower control structures for each of the two structure units, or, if such decree is entered before construction of any or all of the structures, in subsequent applications for diligence or to make absolute the water rights claimed herein.

- B. Source: Roaring Fork River, tributary to the Colorado River.
- C. Appropriation:
- i. Date of appropriation: July 13, 2007.
 - ii. How appropriation was initiated: Engineering, field work, planning, considerations and decisions of the Board of County Commissioners, and posting notice of the appropriations.
 - iii. Date water first applied to beneficial use: Not applicable.
- D. Amounts claimed: Applicant claims two RICD water right appropriations for the following time periods and amounts, **CONDITIONAL**, as follows:
- i. **Upstream Structure Units**: Between April 1 and Labor Day of each year, this RICD water right appropriation will not exceed 1,500 cfs.
 - ii. **Downstream Structure Units**: Between April 1 and Labor Day of each year, this RICD water right appropriation will not exceed 2,000 cfs.
 - iii. Pitkin County hereby reserves the right to refine time periods and flow rates associated with either or both of the RICD water right appropriations claimed in this application. The RICD water right appropriations will not extend beyond the time periods listed above nor exceed the flow rates listed above for each RICD water right appropriations. Because any refinement in time periods and flow rates would constitute a reduction in the claims, the above constitutes notice to all interested parties.
 - iv. The above amounts are claimed as conditional. However, Pitkin County reserves the right to seek these amounts as absolute to the extent that the Pitkin County River Park Project or individual Structure units are constructed and flows are placed to beneficial use prior to the date of entry of a decree in this case.
- E. Beneficial use: Recreational uses including all beneficial uses associated with RICD water rights as permitted under Colorado Law as may be later changed or amended, including but not limited to non-motorized boating including kayaking, canoeing, rafting, tubing, floating, and paddling.

5. Name and address of owner of land upon which any new diversion structure or modification to any existing diversion structure is or will be constructed:

Town of Basalt
Tom Smith, County Attorney
600 E. Hopkins
Aspen, CO 81611
970-925-2600

Tom Kinney, Town of Basalt Water Rights Counsel
201 Main Street #301
Carbondale, CO 81623-2216
970-963-3900

Fredrick S. Arbaney Trust
Josephine Arbaney, Trustee
252 Cottonwood Drive
Basalt, CO 81621

Applicant
c/o John M. Ely, Pitkin County Attorney
530 East Main Street, Third Floor
Aspen, Colorado 81611
(970) 920-5190

WHEREFORE, Applicants respectfully request this Court enter a decree granting the two conditional recreational in-channel diversion water right appropriations claimed in this application for the Pitkin County River Park and granting such other relief as may be appropriate.

Board of County Commissioners of
Pitkin County, Colorado
Case No. 10CW 305
Page 5

Respectfully submitted this 30th day of December, 2010.

MOSES, WITTEMYER, HARRISON AND
WOODRUFF, P.C.

A handwritten signature in black ink, appearing to read "Timothy J. Beaton", written over a horizontal line.

Timothy J. Beaton, #10403
Aaron S. Ladd, #41165

ATTORNEYS FOR APPLICANT, BOARD
OF COUNTY COMMISSIONERS OF
PITKIN COUNTY, COLORADO

*E-FILED PURSUANT TO C.R.C.P. 121 Duly signed original on file at the law offices of
Moses, Wittemyer, Harrison and Woodruff, P.C.*

Board of County Commissioners of Pitkin County, Colorado
Case No. 10CW 305
Page 6

VERIFICATION

STATE OF COLORADO

COUNTY OF ~~PITKIN~~

)
) SS.
)

James F. Pearce, being first duly sworn upon oath, deposes and says that he is the water rights consultant, for applicant herein, that he has read the foregoing Application for Surface Water Right Appropriations for Recreational In-Channel Diversion, knows the contents thereof, and that the same is true to the best of his knowledge and belief.

James F. Pearce

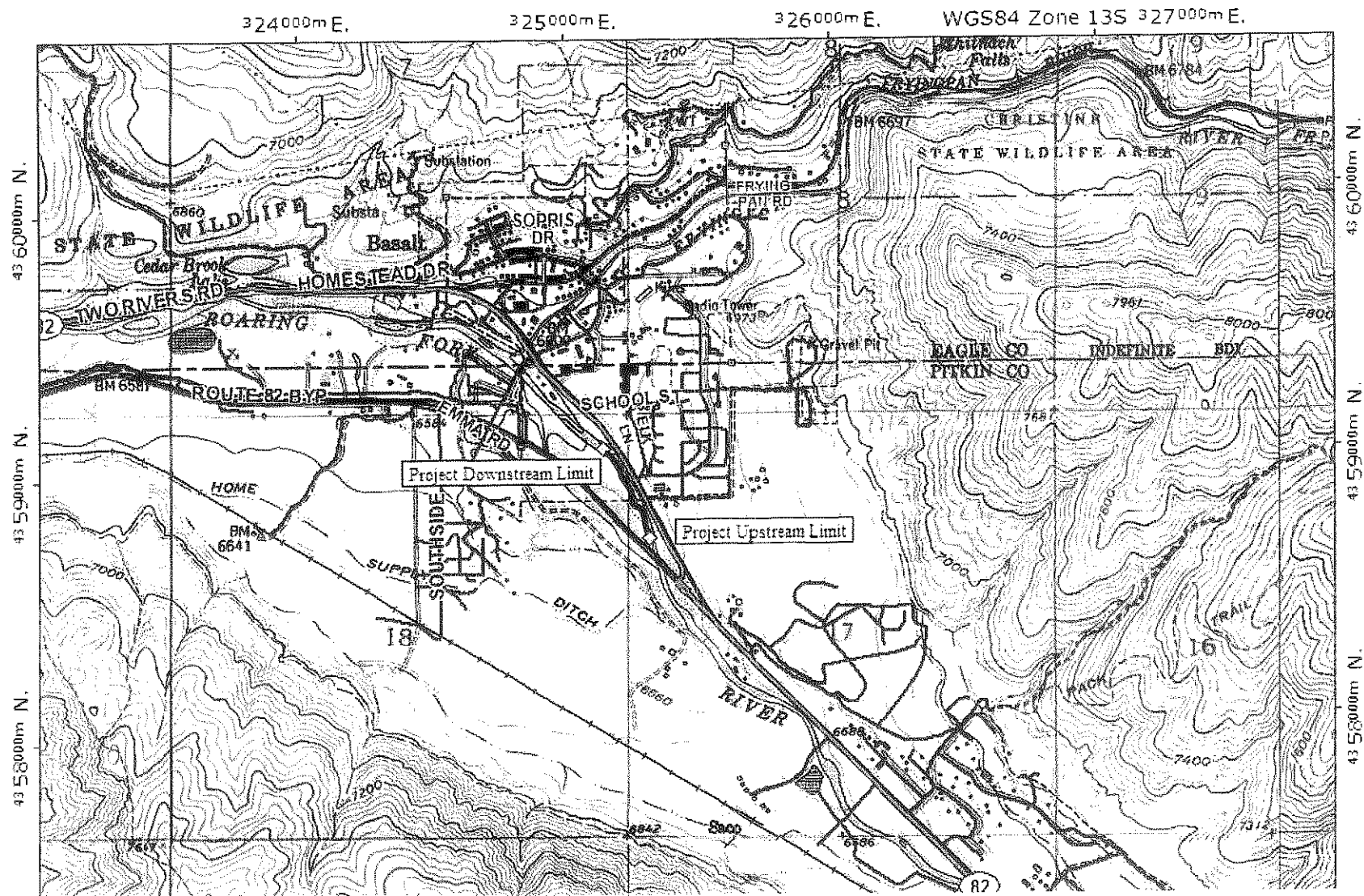
SUBSCRIBED AND SWORN to before me this 30th day of December, 2010.
Witness my hand and official seal.

My commission expires:

My Commission Expires
05/16/2014

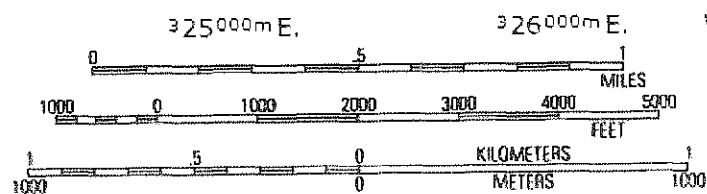


Notary Public



323000m E. 324000m E. 325000m E. 326000m E. WGS84 Zone 13S 327000m E.

Exhibit A - Location of Pitkin County River Park RICD Water Rights
12/29/2010



TN MN
10 1/2°
12/29/10

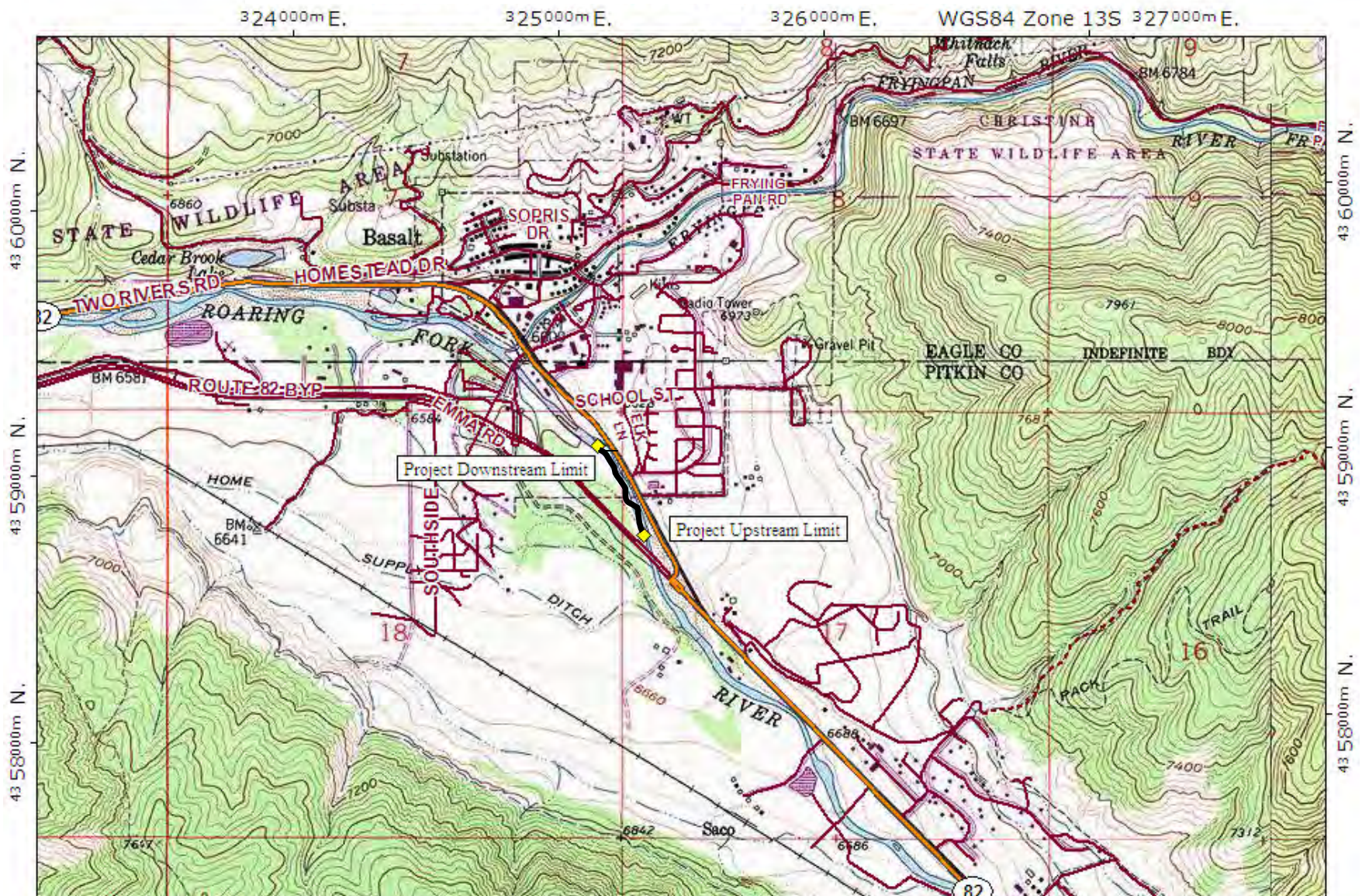
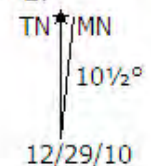
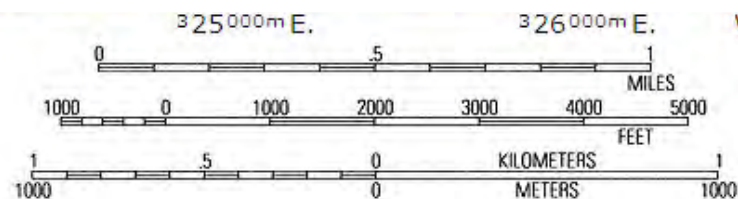


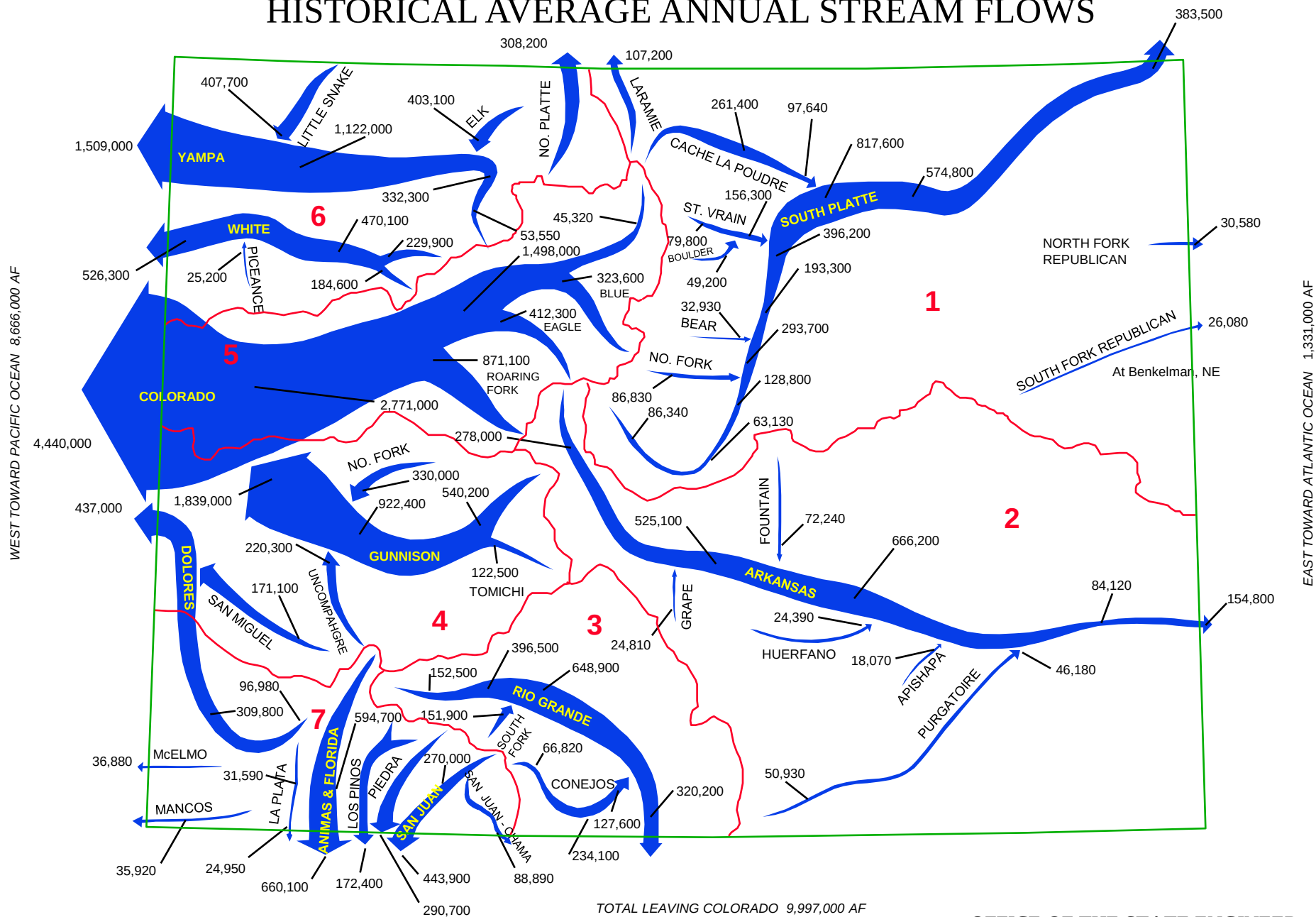
Exhibit A - Location of Pitkin
County River Park RICD
Water Rights
12/29/2010



Attachment B:

Colorado Historical Average Annual Stream Flows (2011 Revision)
Office of the State Engineer, Colorado Division of Water Resources

HISTORICAL AVERAGE ANNUAL STREAM FLOWS



Prepared by the Hydrographic Branch (2011 Revision)
[all values in acre feet (AF)]

OFFICE OF THE STATE ENGINEER
COLORADO DIVISION OF WATER RESOURCES

EXHIBIT M

Colorado Water Conservation Board's Recommended Findings of Fact
Board of County Commissioners of Pitkin County, Colorado

Case No. 5-10CW305

January 27-28, 2014

SERVED ONLY: December 1, 2013 5:13 PM

FILING ID: E22C4775F6524

CASE NUMBER: 2010CW305

[12/1/2013 DRAFT PREPARED BY PITKIN COUNTY]

- I. Considering the specific amounts and activities as claimed in the application and proposed decree, and after deliberation in a public meeting held on January [27 or 28], 2014, the Board makes the following findings about the RICD water right for the Pitkin County River Park Project:
 - a. The Board must consider whether the adjudication and administration of the RICD water right would materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements. The Board makes the finding that there remains unallocated Colorado River Compact apportionment available for consumptive use within Colorado. The Board also finds that the adjudication and administration of the RICD water right, for the flow amounts and time periods specified in the proposed decree, would not impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements but could have an impact on the manner, cost, and timing of such development. The Board makes the following findings about the RICD water right for the flow amounts claimed:
 - i. Unappropriated water that Colorado could consumptively use exists upstream of the RICD reach. The RICD water right will not materially impact Colorado's ability to fully develop and place to consumptive beneficial use Colorado's compact entitlements under the Colorado River Compact, the Upper Colorado River Compact, and the associated law of the river upstream of the RICD. Effects on upstream compact development are significantly reduced because the Applicant has claimed flow rates that are less than 50% of the total average historical volume of stream flow in the reach of the Roaring Fork River in which the River Park will be located. The Applicant seeks flow rates that will not exceed 240 cfs between April 15 and May 17, 380 cfs between May 18 and June 10, 1,350 cfs between June 11 and June 25, 380 cfs between June 26 and August 20, and 240 cfs between August 21 and Labor Day. The proposed decree provides that Pitkin County cannot call for water under the RICD water right if such call will not produce at least 60 cfs at the control structures, Pitkin County cannot call for water during the non-RICD season, and Pitkin County cannot call for water during non-daylight hours. Moreover, the proposed decree contains language that Pitkin County will comply with any compact curtailment rules promulgated by the State Engineer related to Colorado River compact compliance then in effect, and if no compact curtailment rules are in effect, the RICD water right may be exercised only if the State Engineer or Division Engineer determines that such exercise will not affect Colorado's ability to comply with the Compact. Given

these restrictive terms and conditions, the Board finds that the RICD water right likely will not impair the ability of Colorado to consumptively use its compact entitlements.

- ii. The Board finds that the distance of this RICD water right to the State line is considerable, which demonstrates that the location of the RICD water right does not significantly impact Colorado's ability to develop its compact entitlements.
- iii. The RICD water right is in proximity to suitable upstream points of diversion and upstream storage that may be utilized by those who would place the water to consumptive beneficial use. Many of these points are located in existing service areas and would appear to be served by existing decreed absolute and conditional water rights supplies that, due to their senior priorities, will not be affected by the RICD water right.
- iv. The existence of suitable downstream points of diversion or storage for consumptive beneficial use before the water leaves the State serves as a factual basis for the Board to determine that the RICD water right should be granted under this factor. There are numerous downstream diversions and storage reservoirs that could be used to capture water that would flow through the RICD reach that would allow Colorado to fully use its compact entitlements.
- v. Exchange opportunities within the Roaring Fork River basin may be adversely impacted by the existence of the RICD water right. However, the Board finds that the RICD water right does not impair the ability of Colorado to consumptively use its compact entitlements because Applicant seeks flow rates that will not exceed 240 cfs between April 15 and May 17, 380 cfs between May 18 and June 10, 1,350 cfs between June 11 and June 25, 380 cfs between June 26 and August 20, and 240 cfs between August 21 and Labor Day. The proposed decree includes language such that Pitkin County cannot call for water under the RICD water right if such call will not produce at least 60 cfs at the control structures, Pitkin County cannot call for water during the non-RICD season, and Pitkin County cannot call for water during non-daylight hours.
- vi. The Colorado River basin is over-appropriated; however, the Roaring Fork River itself is rarely subject to internal call. Ruedi Reservoir, located on the Fryngpan River, is commonly used to satisfy the prevailing downstream call at Grand Valley. Adequate water is physically and legally available for future development on the Roaring Fork River above the RICD water right during most times of the year. In addition, the Applicant seeks flow rates that will not exceed 240 cfs between April 15 and May 17, 380 cfs between May 18 and

June 10, 1,350 cfs between June 11 and June 25, 380 cfs between June 26 and August 20, and 240 cfs between August 21 and Labor Day. The proposed decree includes language such that Pitkin County cannot call for water under the RICD water right if such call will not produce at least 60 cfs at the control structures, Pitkin County cannot call for water during the non-RICD season, and Pitkin County cannot call for water during non-daylight hours. As such, even though the Colorado River Basin as a whole is over-appropriated, the unique physical, geographical, and administrative characteristics of the Roaring Fork River permit further development upstream of the RICD water right.

- vii. The Board finds that decreed existing water rights will not be negatively impacted by the RICD water right. The RICD water right is non-consumptive and will be subject to in priority administration vis-à-vis senior decreed water rights. The Board finds that the RICD water right will have an effect on future water right development; however, such effect will be limited due to the limitations set forth in the proposed decree, such as the daylight-only call limitation and the inability of Pitkin County to call if such call will not produce at least 60 cfs at the control structures. Such limited effects will not materially impair development of compact entitlements.
 - viii. The Board finds that the RICD water right does not shield water from a consumptive use that would otherwise be available under a particular compact.
 - ix. The Board finds that the RICD water right would not materially impact any beneficial consumptive water use opportunities upstream from the claimed RICD water right that would further develop Colorado's compact entitlements and that such opportunities would not be impaired by Applicant's claimed stream flow amounts.
 - x. The RICD water right is subject to the same legal and evidentiary standards for abandonment as other water rights under Colorado law.
- b. The Board must consider whether the exercise of the RICD water right would cause material injury to existing Colorado instream flow ("ISF") water rights. The Board makes the finding that the RICD water right will not materially injure existing ISF water rights:
- i. As summarized below, there are two ISF water rights held by the CWCB within the RICD reach. The Board finds that the existing ISF water rights do not serve as a basis for denying the RICD water right application because the RICD water right is not inconsistent in season or amount and will have no

effect on the ISF water rights. The CWCB holds the following minimum ISF water right:

CWCB Case No.	Stream	Amount (cfs)	Approp. Date	Watershed	Counties
5-85CW646	Roaring Fork River	30 (10/1-3/31) 55 (4/1-9/30)	11/8/1985	Roaring Fork	Eagle & Pitkin

- ii. In addition to the minimum instream flow water right, CWCB and Pitkin County adjudicated a change of Pitkin County's Stapleton Brothers' Ditch water right in Case No. 10CW184, allowing a portion of the water right to be used for instream flow purposes. The stream segments in which the Stapleton Brothers' Ditch may be used for instream flow purposes include the RICD reach. As a result, the Stapleton Brothers' Ditch water right may be used up to the amounts identified below, in addition to the minimum instream flow amount:

	May 1-15	May 16-31	June	July	Aug.	Sept.
Maximum Flow Rate (cfs)	0.89	0.89	0.59	0.64	0.50	0.40

- iii. The Board finds that the 60 cfs call limitation will ensure that the RICD water right will not materially injure the existing ISF water right, because the 60 cfs minimum flow rate is greater than the combination of the 55 cfs minimum ISF water right and the Stapleton Brothers' Ditch water right changed to instream flow uses.
- iv. The nature and extent of the ISF water rights do not serve as a basis to recommend denial of the RICD water right application.
- v. Based on information provided by the Applicant, the Board finds that the RICD water right would not negatively impact the natural environment for which the ISF was decreed.
- vi. The Board finds that the Applicant has obtained all required permits for construction and that the RICD water right will not affect the natural environment that the ISF protects during the construction process.
- c. The Board must determine whether the adjudication and administration of the RICD water right would promote maximum utilization of the waters of the State of Colorado. The Board makes the following findings about the RICD water right regarding maximum utilization:

- i. The Board finds that future upstream junior appropriations for direct diversion or storage will not be materially affected. Effects on upstream rights may be significantly reduced because the Applicant seeks flow rates that will not exceed 240 cfs between April 15 and May 17, 380 cfs between May 18 and June 10, 1,350 cfs between June 11 and June 25, 380 cfs between June 26 and August 20, and 240 cfs between August 21 and Labor Day. The proposed decree includes language such that Pitkin County cannot call for water under the RICD water right if such call will not produce at least 60 cfs at the control structures, Pitkin County cannot call for water during the non-RICD season, and Pitkin County cannot call for water during non-daylight hours. The Board finds that there should be adequate opportunity to allow upstream junior appropriations for direct diversion and storage such that the RICD water right will promote maximum utilization of the waters of the State of Colorado.
- ii. The Board finds that the proposed RICD water right appropriation for the flow amounts sought and the time periods specified will promote maximum utilization although there are probable future changes, transfers, or exchanges of water rights from points of diversion downstream of the reach affected by the RICD water right to points upstream of or in the reach affected by the RICD water right. Effects on upstream rights may be significantly reduced because Applicant seeks flow rates that will not exceed 240 cfs between April 15 and May 17, 380 cfs between May 18 and June 10, 1,350 cfs between June 11 and June 25, 380 cfs between June 26 and August 20, and 240 cfs between August 21 and Labor Day. The proposed decree includes language such that Pitkin County cannot call for water under the RICD water right if such call will not produce at least 60 cfs at the control structures, Pitkin County cannot call for water during the non-RICD season, and Pitkin County cannot call for water during non-daylight hours. The Board finds that there is adequate opportunity to allow future changes, transfers, and exchanges of water from points located downstream of the RICD water right to points located upstream of the RICD water right.
- iii. The RICD water right should not be denied or granted based upon any federal policies, regulations, and laws.
- iv. The Board finds that the proposed RICD water right appropriation promotes maximum utilization of Colorado's water resources because the Applicant has used a reasonable means to use, divert, capture and control the water for a RICD so as to minimize its call upon the river and avoid waste.
- v. The Board finds that there is reasonable demand for the recreational activities sought for the time periods at the flow rates specified above.

- vi. The Board finds that the application has appropriate limitations upon the time of day, days per month, and seasons during which the RICD water right would be exercised. Applicant has shown that the 60 cfs call limitation as well as daytime only call will maximize beneficial use of the RICD water right and promote maximum utilization.
- vii. The Board finds the depth and flow rate of the proposed RICD water right promotes maximum utilization for the flow amounts sought for their respective time periods.
- viii. The frequency and duration of the requested amounts of water from the Roaring Fork River for the RICD water right and time periods are appropriate and promote maximum utilization.
- ix. The economic effect of the proposed RICD water right does not serve as a factual basis for the Board to determine that the RICD water right should be denied or granted under this factor.
- x. The flows associated with the RICD water right may benefit and enhance the natural environment by providing reinforcement of flows greater than the minimum ISF right.
- xi. The Board finds that the relationship of the requested RICD water right flow rates to the historical appropriated and unappropriated flow rates for each time period requested is appropriate, because Applicant's requested flow rates for each time period are less than 50% of the total average historical stream flow in the reach of the Roaring Fork River in which the River Park will be located.
- xii. The Board finds that the RICD water right's non-consumptive use of water will not have an effect on other potential uses of water downstream. The RICD water right will not materially affect junior upstream consumptive uses because the RICD water right will be subject to the 60 cfs call limitation as well as daytime call restrictions.
- xiii. The Board finds that the application as a whole meets the elements of the definition of a RICD, as found in section 37-92-103(10.3).
- xiv. The Board finds that the RICD water right would conserve and efficiently use the available stream flow, thereby promoting maximum utilization of the State of Colorado's water resources.
- xv. The Board finds that the Colorado River Basin is over-appropriated, however the Roaring Fork River itself is rarely subject to internal call. Ruedi Reservoir, located on the Fryingpan River, is commonly used to satisfy the prevailing

downstream call at Grand Valley. Adequate water is physically and legally available for future development on the Roaring Fork River above the RICD water right during most times of the year. The Board finds that the RICD water right promotes maximum utilization of the waters of the State of Colorado.

- xvi. The Board finds that the RICD water right will work together with existing and/or future uses within Colorado to promote maximum utilization.
- xvii. The RICD water right is subject to the same legal and evidentiary standards for abandonment as other water rights under Colorado law.
- xviii. The Board finds that the information submitted by the Applicant describes each recreational opportunity sought by the Applicant at each flow amount sought, and why the flow amount is the minimum amount for each reasonable recreation experience sought.
- xix. The Board finds that imported water and reservoir releases (in historical frequency and flow rates) through the proposed RICD reach will not be necessary to meet the flow rates claimed for the proposed RICD water right.
- xx. The Board finds, due to the unique physical, legal, and administrative characteristics of the Roaring Fork River, as referenced above, that there are unappropriated native flows in the proposed RICD stream reach during the periods claimed and the RICD water right, therefore, claims unappropriated flows.

EXHIBIT N

DISTRICT COURT, WATER DIVISION NO. 5, COLORADO 109 - 8th Street, Suite 104 Glenwood Springs, CO 81601-3361 (970) 947-3861 CONCERNING THE APPLICATION FOR WATER RIGHTS OF BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY, COLORADO IN PITKIN COUNTY	SERVED ONLY: December 1, 2013 5:13 PM FILING ID: E22C4775F6524 CASE NUMBER: 2010CW305 12/01/2013 DRAFT ▲ COURT USE ONLY ▲ Case Number: 10CW305
FINDINGS OF FACT, CONCLUSIONS OF LAW, JUDGMENT AND DECREE	

This matter is before the Court on the application of the Board of County Commissioners of Pitkin County ("Pitkin County") for Surface Water Right Appropriations for Recreational In-Channel Diversion. The Court, having considered the application, the pleadings, and other materials and having become fully informed and advised with respect to the subject matter of the application, hereby makes the following decree in this matter:

FINDINGS OF FACT

1. Applicant. The applicant is Board of County Commissioners of Pitkin County, c/o John M. Ely, Pitkin County Attorney, 530 East Main Street, Third Floor, Aspen, Colorado 81611, (970) 920-5190.
2. Application, Notice and Jurisdiction. The application in this case was filed with the District Court, Water Division No. 5 on December 30, 2010. Timely and adequate notice of the application was given in the manner prescribed by law, and the Court has jurisdiction over the subject matter of this proceeding and over all persons and property affected hereby, whether those persons or owners of property have appeared or not. The

lands and water involved in this case are not within the boundaries of a designated groundwater basin.

3. Statements of Opposition. Statements of opposition were filed timely by Basalt Water Conservancy District, City of Aspen, Colorado River Water Conservation District and the Colorado River Water Conservation District, acting by and through its Colorado River Water Projects Enterprise, Colorado Water Conservation Board, Elk Mountain Lodge, LLC, Fall Line Properties, LLC, GRE II, LLP, Grand County Board of County Commissioners, Mountain Valley Cabin, LLC and Warren Creek LLC, PT RANCH BARN LLC, Southeastern Colorado Water Conservancy District, Starwood Metropolitan District, and Twin Lakes Reservoir and Canal Company. The City of Aspen withdrew its statement of opposition. The Basalt Water Conservancy District, Starwood Metropolitan District, and _____ have stipulated to the entry of this decree and such stipulations are incorporated into this decree.
4. Referral. The Application was referred to the Water Referee for Water Division No. 5 on January 3, 2011. The Application was re-referred to the Water Judge on August 31, 2012.
5. Report of the Division Engineer. The Division Engineer issued a Summary of Consultation on April 6, 2011. Pitkin County filed a Response to the Summary of Consultation on _____. The Court has considered the Summary of Consultation and Pitkin County's response.
6. CWCB Findings of Fact Considered. The Colorado Water Conservation Board ("CWCB") submitted its findings of fact to the Court on July 22, 2011 and revised/supplemental findings of fact on _____. The Court has duly considered the findings of fact as required by C.R.S. § 37-92-305.
7. General Description of Application. Pitkin County's application claimed two recreational in-channel diversion ("RICD") conditional water right appropriations for the Pitkin County River Park Project. When constructed, the Pitkin County River Park Project will consist of two in-channel diversion and control structure units that divert, capture, possess, and/or control the flow of the Roaring Fork River in its natural course to create reasonable recreation experiences in and on the water for all non-motorized boating and recreational uses as described more fully below. Pitkin County has withdrawn the claim for one of the two RICD conditional water rights without prejudice. Therefore, this decree grants Pitkin County one RICD conditional water right for the Pitkin County River Park Project, as described herein.

8. Description of Water Right. The Pitkin County River Park Project is comprised of two recreational control structure units: (1) the Pitkin County River Park Project Upper Control Structure (“Upper Structure”) and (2) the Pitkin County River Park Project Lower Control Structure (“Lower Structure”) (collectively, “Structures”). One water right, the “Pitkin County RICD,” is claimed for both Structures.

A. Location of Structures. The Pitkin County River Park Project will be located on the Roaring Fork River downstream of the Highway 82 Upper Bypass Bridge, upstream of the confluence of the Fryingpan and Roaring Fork Rivers, within the channel of the Roaring Fork River in Sections 17 and 18, Township 8 South, Range 86 West of the 6th P.M., Pitkin County, Colorado. The Pitkin County River Park Project will consist of two structure units within the Roaring Fork River. Each of the two structure units are designed to control, concentrate, and direct the stream flows, creating hydraulic features on the river for the beneficial uses described below. A map depicting the upstream and downstream extent of the Pitkin County River Park Project, within which both Structures will be constructed, is attached as **Exhibit A**. Each of the two Structures will be constructed in the channel of the Roaring Fork River between the following two points:

- i. The Pitkin County River Park Project Upstream Extent will be located in the SW¼ of the NW¼ of Section 17, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 320 feet from the west section line and 1480 feet from the north section line of said Section 17.
- ii. The Pitkin County River Park Project Downstream Extent will be located in the NE¼ of the NE¼ of Section 18, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 265 feet from the east section line and 560 feet from the north section line of said Section 18.

The precise location of the two Structures and the Pitkin County RICD, upon construction, may be located within this stretch of the Roaring Fork River and will be confirmed upon making the Pitkin County RICD water right absolute.

B. Source. Roaring Fork River, tributary to the Colorado River.

C. Appropriation Information.

- i. Date of initiation of appropriation. August 28, 2008.

- ii. How appropriation was initiated. Engineering, requests for proposals, field work, planning, considerations and decisions of the Board of County Commissioners, and posting notice of the appropriations.
- iii. Date water first applied to beneficial use. Not applicable.

D. Rates of Flow.

- i. The amounts of water claimed are rates of flow during daylight hours for different levels of recreational use as follows:

Period	Flow Rate (cfs)	Experience Level
April 15 – May 17	240	Blue, Upper Unit
May 18 – June 10	380	Green, Lower Unit
June 11 – June 25	1,350	Blue, Lower Unit
June 26 – Aug. 20	380	Green, Lower Unit
Aug. 21 – Labor Day	240	Blue, Upper Unit

- ii. Minimum Rate of Flow. As required by C.R.S. § 37-92-305(13)(d), the flow rate below which there is no longer any beneficial use of the Pitkin County RICD water right at the Structures is 60 cfs. As a result, Pitkin County cannot call for water if such call will not produce at least 60 cfs at the Structures.

- E. Uses. Recreational uses, including all beneficial uses associated with RICD water rights as permitted under Colorado law, including but not limited to non-motorized boating such as kayaking, canoeing, rafting, tubing, floating, and paddling.

13. Findings Pursuant to C.R.S. § 37-92-305(13)(a). As required by C.R.S. § 37-92-305(13)(a), the Court has considered the evidence presented by the parties, the CWCB's findings of fact dated July 22, 2011, and the CWCB's revised/supplemental findings of fact dated _____, and finds as follows:

- A. The Pitkin County RICD water right decreed herein will not materially impair the ability of the State of Colorado ("State") to fully develop and place to consumptive beneficial use its compact entitlements.
- B. The adjudication and administration of the water right decreed herein will promote maximum utilization of waters of the State. The Pitkin County RICD water right decreed herein controls water and places it to the intended beneficial

uses via a reasonably efficient means of diversion without waste. The Pitkin County RICD water right is non-consumptive and does not preclude all other water development opportunities.

- C. The reach of the Roaring Fork River in which the Pitkin County River Park Project will be located is an appropriate reach of stream for the intended recreational in-channel uses.
 - D. The Pitkin County River Park Project will be accessible to the public for recreational in-channel uses. Pitkin County owns and controls the property over which access will be allowed.
 - E. The CWCB holds instream flow water rights within and below this reach of the Roaring Fork River. Pitkin County shall consult with the Colorado Division of Parks and Wildlife (“CPW”) before and during any construction and repair of the Structures to ensure that the construction activities will not impact the natural environment that the instream flow water rights seek to protect. The Court finds that exercise of the Pitkin County RICD water right decreed herein will not cause material injury to instream flow water rights appropriated pursuant to C.R.S. § 37-92-102(3) and (4).
14. Volume of Water. Fifty percent of the sum of the total average historical volume of water for the reach of stream in which the Pitkin County River Park Project will be located has been calculated to be 123,647 acre-feet per year. As summarized in the table below, the total volume of water represented by the flow rates for the Pitkin County RICD water right decreed herein is less than fifty percent of the sum of the total average historical volume. Therefore, the requirements of C.R.S. § 37-92-305(13)(f) do not apply.

Period	Number of Days	Flow Rate (cfs)	Volume (AF)
April 15 – May 17	33	240	15,682
May 18 – June 10	24	380	18,058
June 11 – June 25	15	1,350	40,095
June 26 – Aug. 20	56	380	42,134
Aug. 21 – Labor Day ¹	14	240	6,653
		Total	122,622

¹ September 3 was selected as a representative date for Labor Day in the volume calculation.
00067017-1

15. Availability of Unappropriated Water. With respect to the conditional water right and priority that is awarded herein, Pitkin County has shown that unappropriated water is available for appropriation.
16. Intent to Appropriate. Pitkin County has effected the appropriation of water by demonstrating a specific plan and intent to capture and control the claimed amounts of water at the claimed time periods and to place such water to beneficial uses, specifically recreational in-channel non-motorized boating use in the Pitkin County River Park Project. C.R.S. § 37-92-103(3)(a). Pitkin County has completed the "first step" toward the conditional appropriation by showing the requisite intent to appropriate accompanied by an open, physical demonstration of that intent.

CONCLUSIONS OF LAW

17. Incorporation of Findings of Fact. The foregoing Findings of Fact are incorporated herein.
18. Notice and Jurisdiction. The Water Court for Water Division No. 5 has jurisdiction over the subject matter of these proceedings and over all persons, owners of property and water rights that may be affected hereby, whether or not they have chosen to appear. The application in this matter and the resume publication of the application placed such persons on notice of the relief requested by the application and granted by this decree.
19. RICD Water Right Contemplated by Law. The application for approval of the Pitkin County RICD water right described in paragraph 8 of this decree is contemplated by law and satisfies the requirements of §§ 37-92-101, C.R.S., *et seq.*, including, but not limited to, §§ 37-92-102(6)(b), 37-92-103(10.3), 37-92-302, 37-92-305(13), 37-92-305(15) and 37-92-305(16), C.R.S.
20. Can and Will. The water right decreed herein can and will be diligently completed and water can and will be diverted and beneficially used for the purposes adjudicated by this decree within a reasonable time.
21. Control Structures. The amounts of water claimed and decreed herein will be controlled in the water's natural course in the Roaring Fork River during the claimed time periods by means of the Upper and Lower Structures as described in paragraph 8 above. *See* C.R.S. § 37-92-103(7). Flow rates up to 1,350 cfs will be efficiently controlled, concentrated, and diverted, without waste, to create waves, hydraulic holes, large changes in current direction, and whitewater features that are used by kayakers and other boaters for the intended recreational experiences.

22. Diversion and Use. Controlling the claimed amounts of water during the claimed time periods by the proposed in-channel structures and devices and the use of such water for the intended recreational in-channel boating purposes:
- A. Represents a reasonably efficient practice of diversion and beneficial use, *Alamosa-La Jara Water Users Protection Ass'n v. Gould*, 674 P.2d 914, 934-5 (Colo. 1983); C.R.S. §§ 37-92-102(2)(b), 37-92-103(4) and (7);
 - B. Represents the use of the minimum amounts of water that are reasonable and appropriate under reasonably efficient practices to accomplish without waste the purpose for which the appropriations were lawfully made by Pitkin County, C.R.S. § 37-92-103(4) and (10.3); and
 - C. Will create opportunities for the intended recreational experiences to occur, at the minimum stream flows needed to provide the identified recreational experiences. C.R.S. § 37-92-103(10.3).
23. Reasonable Recreational Experience. The proposed recreation experiences are reasonable. By using the proposed in-channel structures and devices in a reasonably efficient manner to control that amount of water that is reasonable and appropriate to accomplish without waste the intended recreational in-channel non-motorized boating purposes, and by thereby providing opportunities for reasonable recreation experiences to occur with the minimum amounts of water for each recreational opportunity, the proposed appropriation of water meets the beneficial use standards historically applied to water rights, which standards, as recognized by Senate Bill 01-216, are to be applied to "recreational in-channel diversions." See C.R.S. § 37-92-103(4) and (10.3). See also *Santa Fe Ranches Property Owners Assoc. v. Simpson*, 990 P.2d 46, 53-54 (Colo. 1999).
24. No Injury to Instream Flow Rights and Flood Control. Decreed instream flow water rights exist in and below the reach of the Pitkin County RICD water right decreed herein. Pitkin County shall consult with CPW before and during any construction or maintenance of the Structures to ensure that such activities will not impact the natural environment that the instream flow water rights seek to protect. As a result, exercise of the water right decreed herein will not cause material injury to, any CWCB instream flow water rights. The CWCB maintains no liability for any damages, injury, or other issues related to or arising from Pitkin County's control structures.
25. No Injury. Operation of the Pitkin County RICD water right decreed herein will not injuriously affect any owner of or person entitled to use water under a vested water right or decreed conditional water right so long as administered in accordance with this decree.

26. Subsequent Applications. Pursuant to C.R.S. § 37-92-103(10.3), a presumption exists that the Pitkin County RICD water right will not be materially injured from subsequent appropriations or changes of water rights if the effect on the Pitkin County RICD water right caused by such appropriations or changes does not exceed one-tenth of one percent of the lowest decreed rate of flow (i.e., 0.24 cfs) as measured at the Structures and the cumulative effects on the Pitkin County RICD water right caused by such appropriations or changes do not exceed two percent of the lowest decreed rate of flow (i.e., 4.8 cfs) as measured at the Structures.

JUDGMENT AND DECREE

27. Incorporation of the Findings of Fact and Conclusions of Law. The Findings of Fact and Conclusions of Law set forth in paragraphs 1 through 26 above are incorporated herein.
28. Approval of RICD Water Right. The Pitkin County RICD water right, described in paragraph 8 above, is hereby confirmed, approved and decreed, subject to the terms and conditions contained in this decree.
29. Terms and Conditions. The following terms and conditions are necessary to prevent injury to other water rights from the operation of the Pitkin County RICD water right decreed herein:
- A. Pitkin County shall provide to CPW, the Division Engineer, and the Water Court final design documents for the Pitkin County River Park Project control structures that are signed and sealed by a professional engineer. Pitkin County will ensure that the design of the control structures will comply with applicable floodplain management requirements. Pitkin County shall consult with CPW before and during any construction or maintenance of the Structures to ensure that such activities will not impact the natural environment that the CWCB's instream flow water rights seek to protect.
 - B. Pitkin County shall maintain and repair the control structures to conform to the original design.
 - C. Pitkin County may place a call for the Pitkin County RICD water right only when such call will produce flows at the Structures during daylight hours in the amounts specified in paragraph 8 above, subject to other terms and conditions decreed herein.
 - D. During any period identified by the Upper Colorado River Commission in a finding issued pursuant to Article VIII(d)(8) of the Upper Colorado River Basin

Compact of 1948 for curtailment of Colorado River basin water uses within Colorado, which the State of Colorado has agreed to implement in a manner that impacts water diversions within Water Division 5, the Pitkin County RICD water right will be administered in accordance with the compact curtailment rules adopted by the State of Colorado that are then in effect, if any. If no such compact curtailment rules are then in effect, Pitkin County shall not exercise the Pitkin County RICD water right during the period of any such Compact curtailment unless the State Engineer or Division Engineer determines that exercise of the Pitkin County RICD water right will not affect Colorado's ability to comply with the Compact. The Pitkin County RICD water right shall be administered in accordance with any rules promulgated by the State Engineer related to Colorado River compact compliance. The Pitkin County RICD water right decreed herein is not intended to materially impair the ability of Colorado to fully develop and place to consumptive beneficial use those waters available by law and interstate compact.

- E. Pursuant to C.R.S. § 37-92-103(10.3), Pitkin County may not call for water that has been lawfully stored by another appropriator.
30. Measurement and Administration. Colorado Division of Water Resources Gauge ROARING FORK RIVER AB FRYINGPAN RIVER NR BASALT (ROAFRYCO) is located 300 feet upstream of the Pitkin County River Park Project Upstream Extent. The Pitkin County RICD water right decreed herein can be adequately measured and administered through the proposed reach by using the ROAFRYCO Gauge, or any other gauge acceptable to the Division Engineer, with or without adjustment for any intervening inflows and diversions between the Pitkin County RICD water right and that gauge, as may be determined by the Division Engineer.
31. No Material Injury. The terms and conditions provided for in this decree are adequate to assure that no material injury to any water users will result from the operation of the Pitkin County RICD water right.
32. Measuring Devices. Pitkin County shall install and maintain, at Pitkin County's expense, such additional meters, gauges, or other measuring devices as are reasonably required by the Water Commissioner or Division Engineer, and shall report at reasonable times to the Water Commissioner and/or Division Engineer the readings of such meters, gauges or other measuring devices pursuant to C.R.S. § 37-92-502(5)(a).
33. Accounting. Pitkin County shall provide accounting forms in a manner acceptable to the Division Engineer to incorporate the Pitkin County RICD water right decreed herein. Such accounting forms are not decreed herein, and may be changed, from time to time, with the approval of the Division Engineer, as may be appropriate under circumstances

then existing. The accounting forms shall be adequate to account for Pitkin County's use under this decree on a daily basis and shall be completed and provided to the Division Engineer at intervals reasonably required by the Division Engineer. Upon request and payment of reasonable reproduction costs, Pitkin County shall provide such accounting forms to opposers.

34. Priorities. The Pitkin County RICD water right and priority granted herein are based on the appropriation date contained herein and on the filing of the application in this case in the Water Court in the year of 2010. The Pitkin County RICD water right and priority shall be administered as having been filed in 2010, and shall be junior to all water rights granted pursuant to applications filed in previous years. As between all water rights applied for in the same calendar year, priorities shall be determined by historical dates of appropriation and shall not be affected by the date of application or the date of entry of ruling.
35. Diligence. The conditional Pitkin County RICD water right decreed herein is hereby continued in full force and effect until the last day of _____, 20____. To maintain the conditional Pitkin County RICD water right, an application for a finding of reasonable diligence shall be filed on or before the last day of _____, 20____, or a showing made on or before such date that such conditional right has become absolute by reason of the completion of the appropriation.
36. Notice of Transfer. Upon the sale or other transfer of the conditional water right decreed herein, the transferee shall file with the Water Court having jurisdiction a notice of transfer which shall state: (1) the title and case number of the case in which the conditional decree was issued, (2) the description of the conditional water right transferred, (3) the name of the transferor, (4) the name and mailing address of the transferee, and (5) a copy of the recorded deed or other transfer document. The owner of any conditional water right shall notify the Clerk of the Water Court having jurisdiction of any change in mailing address.
37. The Water Clerk shall file a copy of this Decree with the Division Engineer of Water Division No. 5 and the State Engineer.

Dated: _____

BY THE COURT

James Boyd
Water Judge
Water Division No. 5
State of Colorado

DISTRICT COURT, WATER DIVISION NO. 5,
COLORADO
109 – 8th Street, Suite 104
Glenwood Springs, Colorado 81601-3361

CONCERNING THE APPLICATION FOR WATER
RIGHTS OF THE BOARD OF COUNTY
COMMISSIONERS OF PITKIN COUNTY,
COLORADO

IN PITKIN COUNTY

Timothy J. Beaton, #10403
Patricia M. DeChristopher, #36951
Anne D. Bensard, #45316
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▲ COURT USE ONLY ▲

Case Number: 2010CW305

**SUPPLEMENTAL STATEMENT OF PITKIN COUNTY TO THE COLORADO
WATER CONSERVATION BOARD**

The Board of County Commissioners of Pitkin County (“Pitkin County”), by and through its undersigned attorneys, hereby submits additional materials in support of its Statement to the Colorado Water Conservation Board dated December 1, 2013.

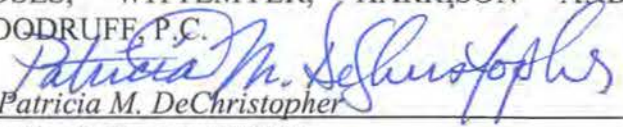
Exhibit O is a revised proposed decree, dated December 20, 2013, which is intended to replace the proposed decree dated December 1, 2013, which was previously submitted as Exhibit N. As noted in the December 1, 2013 Statement, Pitkin County has been negotiating a “carve-out” provision with several opposers to address concerns regarding the potential for future water development. Paragraph 29.F of Exhibit O contains the carve-out provision. The proposed decree has also been updated to address other concerns that have been raised by opposers. A redlined version of the proposed decree showing the changes since December 1, 2013 is attached as Exhibit P.

Exhibit Q is a supplemental engineering report by Louis T. Rozaklis, which updates Exhibit L, his December 1, 2013 Engineering Report. The supplemental engineering report

updates the stream flow analysis previously completed and Mr. Rozaklis' opinion regarding maximum utilization in light of the carve-out provision included within Exhibit O. As described in Mr. Rozaklis' supplemental report, the carve-out provision grants additional protections to other water users and additional assurances that the Pitkin County RICD water right will promote maximum utilization of the waters of the State. Overall, the Proposed Decree contains a number of protections that will serve maximum utilization of the waters of the State: (1) the 3000 acre-foot carve-out; (2) the Pitkin County RICD water right flow rates are less than 50% of the total average historical stream flows for the RICD reach; and (3) the de minimis provisions of C.R.S. §37-92-103(10.3). For these reasons and those stated in the December 1, 2013 Statement, Pitkin County requests favorable written findings of fact from the CWCB Board.

Respectfully submitted this 20th day of December, 2013.

MOSES, WITTEMYER, HARRISON AND
WOODRUFF, P.C.


/s/ Patricia M. DeChristopher

Timothy J. Beaton, #10403

Patricia M. DeChristopher, #36951

Anne D. Bensard, #45316

Attorney for Applicant, Board of County
Commissioners of Pitkin County, Colorado

*E-FILED PURSUANT TO C.R.C.P. 121 Duly signed original on file at the law offices of
Moses, Wittemyer, Harrison and Woodruff, P.C*

CERTIFICATE OF SERVICE

(Case No. 10CW305)

I HEREBY CERTIFY that the foregoing **SUPPLEMENTAL STATEMENT OF PITKIN COUNTY TO THE COLORADO WATER CONSERVATION BOARD** was served electronically through ICCES this 20th day of December, 2013, on the parties of record.

/s/

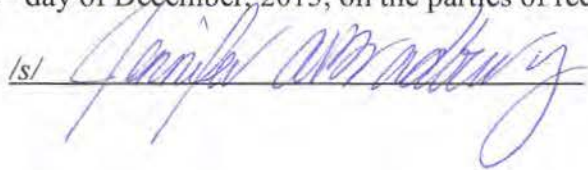
A handwritten signature in blue ink, appearing to read "Jennifer W. Bradley", is written over a horizontal line.

EXHIBIT O

SERVED ONLY: December 20, 2013 4:19 PM

DISTRICT COURT, WATER DIVISION NO. 5, COLORADO 109 - 8th Street, Suite 104 Glenwood Springs, CO 81601-3361 (970) 947-3861 CONCERNING THE APPLICATION FOR WATER RIGHTS OF BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY, COLORADO IN PITKIN COUNTY	FILING ID: 8E0A744C897DF CASE NUMBER: 2010CW305 12/20/2013 DRAFT ▲ COURT USE ONLY ▲ Case Number: 10CW305
FINDINGS OF FACT, CONCLUSIONS OF LAW, JUDGMENT AND DECREE	

This matter is before the Court on the application of the Board of County Commissioners of Pitkin County ("Pitkin County") for Surface Water Right Appropriations for Recreational In-Channel Diversion. The Court, having considered the application, the pleadings, and other materials and having become fully informed and advised with respect to the subject matter of the application, hereby makes the following decree in this matter:

FINDINGS OF FACT

1. Applicant. The applicant is Board of County Commissioners of Pitkin County, c/o John M. Ely, Pitkin County Attorney, 530 East Main Street, Third Floor, Aspen, Colorado 81611, (970) 920-5190.
2. Application, Notice and Jurisdiction. The application in this case was filed with the District Court, Water Division No. 5 on December 30, 2010. Timely and adequate notice of the application was given in the manner prescribed by law, and the Court has jurisdiction over the subject matter of this proceeding and over all persons and property affected hereby, whether those persons or owners of property have appeared or not. The

lands and water involved in this case are not within the boundaries of a designated groundwater basin.

3. Statements of Opposition. Statements of opposition were filed timely by Basalt Water Conservancy District, City of Aspen, Colorado River Water Conservation District and the Colorado River Water Conservation District, acting by and through its Colorado River Water Projects Enterprise, Colorado Water Conservation Board, Elk Mountain Lodge, LLC, Fall Line Properties, LLC, GRE II, LLP, Grand County Board of County Commissioners, Mountain Valley Cabin, LLC and Warren Creek LLC, PT RANCH BARN LLC, Southeastern Colorado Water Conservancy District, Starwood Metropolitan District, and Twin Lakes Reservoir and Canal Company. The City of Aspen withdrew its statement of opposition. The Basalt Water Conservancy District, Starwood Metropolitan District, and _____ have stipulated to the entry of this decree and such stipulations are incorporated into this decree.
4. Referral. The Application was referred to the Water Referee for Water Division No. 5 on January 3, 2011. The Application was re-referred to the Water Judge on August 31, 2012.
5. Report of the Division Engineer. The Division Engineer issued a Summary of Consultation on April 6, 2011. Pitkin County filed a Response to the Summary of Consultation on _____. The Court has considered the Summary of Consultation and Pitkin County's response.
6. CWCB Findings of Fact Considered. The Colorado Water Conservation Board ("CWCB") submitted its findings of fact to the Court on July 22, 2011 and revised/supplemental findings of fact on _____. The Court has duly considered the findings of fact as required by C.R.S. § 37-92-305.
7. General Description of Application. Pitkin County's application claimed two recreational in-channel diversion ("RICD") conditional water right appropriations for the Pitkin County River Park Project. When constructed, the Pitkin County River Park Project will consist of two in-channel diversion and control structures that divert, capture, possess, and/or control the flow of the Roaring Fork River in its natural course to create reasonable recreation experiences in and on the water for all non-motorized boating and recreational uses as described more fully below. Pitkin County has withdrawn the claim for one of the two RICD conditional water rights without prejudice. Therefore, this decree grants Pitkin County one RICD conditional water right for the Pitkin County River Park Project, as described herein.

8. Description of Water Right. The Pitkin County River Park Project is comprised of two recreational control structures: (1) the Pitkin County River Park Project Upper Control Structure (“Upper Structure”) and (2) the Pitkin County River Park Project Lower Control Structure (“Lower Structure”) (collectively, “Structures”). One water right, the “Pitkin County RICD,” is claimed for both Structures.

A. Location of Structures. The Pitkin County River Park Project will be located on the Roaring Fork River downstream of the Highway 82 Upper Bypass Bridge, upstream of the confluence of the Fryingpan and Roaring Fork Rivers, within the channel of the Roaring Fork River in Sections 17 and 18, Township 8 South, Range 86 West of the 6th P.M., Pitkin County, Colorado. The Pitkin County River Park Project will consist of two structures within the Roaring Fork River. Each of the two structures are designed to control, concentrate, and direct the stream flows, creating hydraulic features on the river for the beneficial uses described below. A map depicting the upstream and downstream extent of the Pitkin County River Park Project, within which both Structures will be constructed, is attached as **Exhibit A**. Each of the two Structures will be constructed in the channel of the Roaring Fork River between the following two points:

- i. The Pitkin County River Park Project Upstream Extent will be located in the SW¹/₄ of the NW¹/₄ of Section 17, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 320 feet from the west section line and 1480 feet from the north section line of said Section 17.
- ii. The Pitkin County River Park Project Downstream Extent will be located in the NE¹/₄ of the NE¹/₄ of Section 18, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 265 feet from the east section line and 560 feet from the north section line of said Section 18.

The precise location of the two Structures and the Pitkin County RICD, upon construction, may be located within this stretch of the Roaring Fork River and will be confirmed upon making the Pitkin County RICD water right absolute.

B. Source. Roaring Fork River, tributary to the Colorado River.

C. Appropriation Information.

- i. Date of initiation of appropriation. December 30, 2010.

- ii. How appropriation was initiated. By Pitkin County filing its application to appropriate the Pitkin County RICD water right in Water Court.
- iii. Date water first applied to beneficial use. Not applicable.

D. Rates of Flow.

- i. The amounts of water claimed are rates of flow during daylight hours for different levels of recreational use as follows:

Period	Flow Rate (cfs)	Experience Level
April 15 – May 17	240	Blue, Upper Structure
May 18 – June 10	380	Green, Lower Structure
June 11 – June 25	1,350	Blue, Lower Structure
June 26 – Aug. 20	380	Green, Lower Structure
Aug. 21 – Labor Day	240	Blue, Upper Structure

- ii. Minimum Rate of Flow. As required by C.R.S. § 37-92-305(13)(d), the flow rate below which there is no longer any beneficial use of the Pitkin County RICD water right at the Structures is 60 cfs. As a result, Pitkin County cannot call for water if such call will not produce at least 60 cfs at the Structures.

- E. Uses. Recreational uses, including all beneficial uses associated with RICD water rights as permitted under Colorado law, including but not limited to non-motorized boating such as kayaking, canoeing, rafting, tubing, floating, and paddling.

13. Findings Pursuant to C.R.S. § 37-92-305(13)(a). As required by C.R.S. § 37-92-305(13)(a), the Court has considered the evidence presented by the parties, the CWCB's findings of fact dated July 22, 2011, and the CWCB's revised/supplemental findings of fact dated _____, and finds as follows:

- A. The Pitkin County RICD water right decreed herein will not materially impair the ability of the State of Colorado ("State") to fully develop and place to consumptive beneficial use its compact entitlements.

- B. The adjudication and administration of the water right decreed herein will promote maximum utilization of waters of the State. The Pitkin County RICD water right decreed herein controls water and places it to the intended beneficial uses via a reasonably efficient means of diversion without waste. The Pitkin County RICD water right is non-consumptive and does not preclude all other water development opportunities.
- C. The reach of the Roaring Fork River in which the Pitkin County River Park Project will be located is an appropriate reach of stream for the intended recreational in-channel uses.
- D. The Pitkin County River Park Project will be accessible to the public for recreational in-channel uses. Pitkin County owns and controls the property over which access will be allowed.
- E. The CWCBC holds instream flow water rights within and below this reach of the Roaring Fork River. Pitkin County shall consult with the Colorado Division of Parks and Wildlife (“CPW”) before and during any construction and repair of the Structures to ensure that the construction activities will not impact the natural environment that the instream flow water rights seek to protect. As a result, the Court finds that exercise of the Pitkin County RICD water right decreed herein will not cause material injury to instream flow water rights appropriated pursuant to C.R.S. § 37-92-102(3) and (4).
14. Volume of Water. Fifty percent of the sum of the total average historical volume of water for the reach of stream in which the Pitkin County River Park Project will be located has been calculated to be 125,729 acre-feet per year. As summarized in the table below, the total volume of water represented by the flow rates for the Pitkin County RICD water right decreed herein is less than fifty percent of the sum of the total average historical volume. Therefore, the requirements of C.R.S. § 37-92-305(13)(f) do not apply.

Period	Number of Days	Flow Rate (cfs)	Volume (AF)
April 15 – May 17	33	240	15,682
May 18 – June 10	24	380	18,058
June 11 – June 25	15	1,350	40,095
June 26 – Aug. 20	56	380	42,134
Aug. 21 – Labor Day ¹	14	240	6,653
		Total	122,622

¹ September 3 was selected as a representative date for Labor Day in the volume calculation.
00068662-1

15. Availability of Unappropriated Water. With respect to the conditional water right and priority that is awarded herein, Pitkin County has shown that unappropriated water is available for appropriation.
16. Intent to appropriate. Pitkin County has effected the appropriation of water by demonstrating a specific plan and intent to capture and control the claimed amounts of water at the claimed time periods and to place such water to beneficial uses, specifically recreational in-channel non-motorized boating use in the Pitkin County River Park Project. C.R.S. § 37-92-103(3)(a). Pitkin County has completed the "first step" toward the conditional appropriation by showing the requisite intent to appropriate accompanied by an open, physical demonstration of that intent.

CONCLUSIONS OF LAW

17. Incorporation of Findings of Fact. The foregoing Findings of Fact are incorporated herein.
18. Notice and Jurisdiction. The Water Court for Water Division No. 5 has jurisdiction over the subject matter of these proceedings and over all persons, owners of property and water rights that may be affected hereby, whether or not they have chosen to appear. The application in this matter and the resume publication of the application placed such persons on notice of the relief requested by the application and granted by this decree.
19. RICD Water Right Contemplated by Law. The application for approval of the Pitkin County RICD water right described in paragraph 8 of this decree is contemplated by law and satisfies the requirements of C.R.S. §§ 37-92-101, *et seq.*, including, but not limited to, C.R.S. §§ 37-92-102(6)(b), 37-92-103(10.3), 37-92-302, 37-92-305(13), 37-92-305(15) and 37-92-305(16).
20. Can and Will. The water right decreed herein can and will be diligently completed and water can and will be diverted and beneficially used for the purposes adjudicated by this decree within a reasonable time.
21. Control Structures. The amounts of water claimed and decreed herein will be controlled in the water's natural course in the Roaring Fork River during the claimed time periods by means of the Upper and Lower Structures as described in paragraph 8 above. See C.R.S. § 37-92-103(7). Flow rates up to 1,350 cfs will be efficiently controlled, concentrated, and diverted, without waste, to create waves, hydraulic holes, large changes in current direction, and whitewater features that are used by kayakers and other boaters for the intended recreational experiences.

22. Diversion and Use. Controlling the claimed amounts of water during the claimed time periods by the proposed in-channel structures and devices and the use of such water for the intended recreational in-channel boating purposes:
- A. Represents a reasonably efficient practice of diversion and beneficial use, *Alamosa-La Jara Water Users Protection Ass'n v. Gould*, 674 P.2d 914, 934-5 (Colo. 1983); C.R.S. §§ 37-92-102(2)(b), 37-92-103(4) and (7);
 - B. Represents the use of the minimum amounts of water that are reasonable and appropriate under reasonably efficient practices to accomplish without waste the purpose for which the appropriations were lawfully made by Pitkin County, C.R.S. § 37-92-103(4) and (10.3); and
 - C. Will create opportunities for the intended recreational experiences to occur, at the minimum stream flows needed to provide the identified recreational experiences. C.R.S. § 37-92-103(10.3).
23. Reasonable Recreational Experience. The proposed recreation experiences are reasonable. By using the proposed in-channel structures and devices in a reasonably efficient manner to control that amount of water that is reasonable and appropriate to accomplish without waste the intended recreational in-channel non-motorized boating purposes, and by thereby providing opportunities for reasonable recreation experiences to occur with the minimum amounts of water for each recreational opportunity, the proposed appropriation of water meets the beneficial use standards historically applied to water rights, which standards, as recognized by Senate Bill 01-216, are to be applied to "recreational in-channel diversions." See C.R.S. § 37-92-103(4) and (10.3). See also *Santa Fe Ranches Property Owners Assoc. v. Simpson*, 990 P.2d 46, 53-54 (Colo. 1999).
24. No Injury to Instream Flow Rights and Flood Control. Decreed instream flow water rights exist in and below the reach of the Pitkin County RICD water right decreed herein. Pitkin County shall consult with CPW before and during any construction or maintenance of the Structures to ensure that such activities will not impact the natural environment that the instream flow water rights seek to protect. As a result, exercise of the water right decreed herein will not cause material injury to any CWCBC instream flow water rights. The CWCBC maintains no liability for any damages, injury, or other issues related to or arising from Pitkin County's control structures.
25. No Injury. Operation of the Pitkin County RICD water right decreed herein will not injuriously affect any owner of or person entitled to use water under a vested water right or decreed conditional water right so long as administered in accordance with this decree.

JUDGMENT AND DECREE

26. Incorporation of the Findings of Fact and Conclusions of Law. The Findings of Fact and Conclusions of Law set forth in paragraphs 1 through 25 above are incorporated herein.
27. Approval of RICD Water Right. The Pitkin County RICD water right, described in paragraph 8 above, is hereby confirmed, approved and decreed, subject to the terms and conditions contained in this decree.
28. Terms and Conditions. The following terms and conditions are necessary to prevent injury to other water rights from the operation of the Pitkin County RICD water right decreed herein:
- A. Pitkin County shall provide to CPW, the Division Engineer, and the Water Court final design documents for the Pitkin County River Park Project control structures that are signed and sealed by a professional engineer. Pitkin County will ensure that the design of the control structures will comply with applicable floodplain management requirements. Pitkin County shall consult with CPW before and during any construction or maintenance of the Structures to ensure that such activities will not impact the natural environment that the CWCB's instream flow water rights seek to protect.
 - B. Pitkin County shall maintain and repair the control structures to conform to the original design.
 - C. During any period identified by the Upper Colorado River Commission in a finding issued pursuant to Article VIII(d)(8) of the Upper Colorado River Basin Compact of 1948 for curtailment of Colorado River basin water uses within Colorado, which the State of Colorado has agreed to implement in a manner that impacts water diversions within Water Division 5, the Pitkin County RICD water right will be administered in accordance with the compact curtailment rules adopted by the State of Colorado that are then in effect, if any. If no such compact curtailment rules are then in effect, Pitkin County shall not exercise the Pitkin County RICD water right during the period of any such Compact curtailment unless the State Engineer or Division Engineer determines in writing that the exercise of the Pitkin County RICD water right will not affect Colorado's ability to comply with the Compact. The Pitkin County RICD water right shall be administered in accordance with any rules promulgated by the State Engineer related to Colorado River compact compliance. The Pitkin County RICD water right decreed herein is not intended to materially impair the ability of Colorado to

fully develop and place to consumptive beneficial use those waters available by law and interstate compact.

- D. Pursuant to C.R.S. § 37-92-103(10.3), Pitkin County may not call for water that has been lawfully stored by another appropriator.
- E. The hours and days of operation of the Pitkin County River Park Project are daylight hours between April 15 and Labor Day of each year. Pitkin County may place a call for the Pitkin County RICD water right only when such call will produce flows at the decreed control structures during daylight hours between April 15 and Labor Day, subject to other terms and conditions decreed herein.
- F. Pitkin County shall not place a call on and the water right decreed herein shall be administered as subordinate in priority to up to 3000 acre feet of depletions between April 15 and Labor Day (the latest date for Labor Day being September 7) ("RICD Season") on the Roaring Fork River and its tributaries that (a) have point(s) of diversion upstream from the Pitkin County River Park Project stream reach, (b) are not senior to the water right decreed herein by virtue of their year of filing, appropriation dates, or both, and (c) are decreed by the Water Judge for Water Division No. 5 based upon applications filed between January 1, 2011 and the tenth anniversary of the entry of the decree herein ("Tenth Anniversary"). The following procedures shall be used to identify the water rights that are included in this subordination:
 - (1) The RICD Season volume of water assigned to a decreed water right for purposes of inclusion in the subordination shall be either (a) the volume of a water right in acre feet specifically decreed for diversion and storage, refill of such storage, and refill to replace evaporation loss from such storage, during the RICD Season or (b) the RICD Season volume of depletions in acre feet expressly authorized by the decree for a direct flow water right or, if no depletion volume is expressly authorized by the decree, the RICD Season volume obtained by (i) multiplying the decreed diversion rate in cubic feet per second (cfs) times 1.98 (to convert cfs to acre feet) times 143 days per RICD Season or (ii) dividing the decreed diversion rate in gallons per minute (gpm) by 449 (to convert gpm to cfs) and then multiplying the result times 1.98 (to convert cfs to acre feet) times 143. Water rights decreed as non-consumptive as to the upstream terminus of the Pitkin County River Park Project stream reach shall be included in the subordination and shall be assigned a RICD Season diversion volume of zero.

- (2) On or before April 15 of each year, Pitkin County shall prepare and file with the Division Engineer a summary of all the water rights decreed in the preceding calendar year that meet the requirements of paragraph 29.F. above, all of which will be included in the subordination, as well as a summary of all decreed water rights included in the subordination for all prior years beginning 2011. The summary shall include the identity of each water right by decree number, name, and the annual volume of water assigned to each water right for purposes of the subordination. Pitkin County shall serve the summary on counsel of record for all opposers herein or any other person or entity requesting a copy of the summary; in addition, such summary shall be provided to all those who are on the Water Division No. 5 SWSP notice network. The opposers and any other person or entity, whether a party to this proceeding or not, shall have 45 days within which to file objections to the summary with the Division Engineer. If no objections are filed, the summary shall be deemed final for purposes of the subordination for that year, except as otherwise provided in subparagraph (3) below. If objections are filed and the parties are unable to resolve the objections, any party may file a petition with the Water Judge to hold a hearing to resolve objections.
- (3) After the 3000 acre feet per RICD Season limit on the subordination is reached or all applications filed between January 1, 2011 and the Tenth Anniversary are decreed or otherwise disposed of, whichever occurs first, no further action by Pitkin County shall be required under subparagraph (2) above. For purposes of administration, the priority date for water rights decreed herein shall be the earlier of the date of when the RICD Season limit is reached or the Tenth Anniversary. In the event that the 3000 acre-feet RICD Season limit is reached by virtue of a water right that will exceed the 3000 acre-feet RICD Season limit if included in its entirety, only that portion of the water right needed to bring the RICD Season limit to 3000 acre-feet shall be included in the subordination, and the remaining portion of the water right shall be administered as junior to the Pitkin County RICD water right. If any conditional water rights included within the subordination are thereafter canceled by the Water Judge or otherwise abandoned prior to the Tenth Anniversary, Pitkin County shall notify the Division Engineer and the opposers of the identity and RICD Season volume of diversions of the additional water rights to be included in the subordination, if any, determined using the criteria in subparagraph (1) above, as a result of any such cancelation of conditional water rights.

- (4) After the Tenth Anniversary or when the 3000 acre-feet RICD Season limit is reached, whichever is earlier as provided herein, and pursuant to C.R.S. § 37-92-103(10.3), the presumption that there will not be material injury to the Pitkin County RICD water right from subsequent appropriations or changes of water rights by any individual water right appropriations or water right changes shall be determined in accordance with the provisions of C.R.S. § 37-92-103(10.3).
 - (5) After the Tenth Anniversary or when the 3000 acre-feet limit RICD Season limit is reached, whichever is earlier as provided herein, Pitkin County shall notify the Water Court, the Division Engineer, and the opposers that no further action by Pitkin County shall be required under subparagraph (2) above, and that the priority date for purposes of administration has been established pursuant to subparagraph (3) above, subject to the cancellation or abandonment of conditional water rights prior to the Tenth Anniversary as allowed by subparagraph (3) above.
 - G. Pitkin County will not claim injury to the Pitkin County RICD water right as the basis for filing a statement of opposition to any application for water use in Pitkin County that is filed under the 3000 acre foot per RICD Season subordination described in paragraph 29.F.
 - H. Only Pitkin County employees or their representatives shall place a call for the Pitkin County RICD water right. Pitkin County shall designate the individuals who may place a call as part of its submission of accounting records to the Division Engineer.
29. Measurement and Administration. Pitkin County shall identify a stream gauge that will ensure that the Pitkin County RICD water right decreed herein can be adequately measured and administered through the proposed reach, as acceptable to the Division Engineer. The Division Engineer shall determine whether adjustment for any intervening inflows and diversions between the Pitkin County RICD water right and that gauge is required.
30. No Material Injury. The terms and conditions provided for in this decree are adequate to assure that no material injury to any water users will result from the operation of the Pitkin County RICD water right.
31. Measuring Devices. Pitkin County shall install and maintain, at Pitkin County's expense, such additional meters, gauges, or other measuring devices as are reasonably required by the Water Commissioner or Division Engineer, and shall report at reasonable times to the

Water Commissioner and/or Division Engineer the readings of such meters, gauges or other measuring devices pursuant to C.R.S. § 37-92-502(5)(a).

32. Accounting. Pitkin County shall provide accounting forms in a manner acceptable to the Division Engineer to incorporate the Pitkin County RICD water right decreed herein. Such accounting forms are not decreed herein, and may be changed, from time to time, with the approval of the Division Engineer, as may be appropriate under circumstances then existing. The accounting forms shall identify the individuals that may call for the Pitkin County RICD water right, as required by paragraph 29.H. The accounting forms shall be adequate to account for Pitkin County's use under this decree on a daily basis and shall be completed and provided to the Division Engineer at intervals reasonably required by the Division Engineer. Upon request and payment of reasonable reproduction costs, Pitkin County shall provide such accounting forms to opposers.
33. Priorities. The Pitkin County RICD water right and priority granted herein are based on the appropriation date contained herein and on the filing of the application in this case in the Water Court in the year of 2010, subject to the provisions set forth in Paragraph 29.F. above. The Pitkin County RICD water right and priority shall be administered as having been filed in 2010, and shall be junior to all water rights granted pursuant to applications filed in previous years. As between all water rights applied for in the same calendar year, priorities shall be determined by historical dates of appropriation and shall not be affected by the date of application or the date of entry of ruling.
34. Diligence. The conditional Pitkin County RICD water right decreed herein is hereby continued in full force and effect until the last day of _____, 20___. To maintain the conditional Pitkin County RICD water right, an application for a finding of reasonable diligence shall be filed on or before the last day of _____, 20___, or a showing made on or before such date that such conditional right has become absolute by reason of the completion of the appropriation.
35. Notice of Transfer. Upon the sale or other transfer of the conditional water right decreed herein, the transferee shall file with the Water Court having jurisdiction a notice of transfer which shall state: (1) the title and case number of the case in which the conditional decree was issued, (2) the description of the conditional water right transferred, (3) the name of the transferor, (4) the name and mailing address of the transferee, and (5) a copy of the recorded deed or other transfer document. The owner of any conditional water right shall notify the Clerk of the Water Court having jurisdiction of any change in mailing address.
36. The Water Clerk shall file a copy of this Decree with the Division Engineer of Water Division No. 5 and the State Engineer.

Dated: _____

BY THE COURT

James Boyd
Water Judge
Water Division No. 5
State of Colorado

EXHIBIT P

DISTRICT COURT, WATER DIVISION NO. 5, COLORADO 109 - 8th Street, Suite 104 Glenwood Springs, CO 81601-3361 (970) 947-3861 CONCERNING THE APPLICATION FOR WATER RIGHTS OF BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY, COLORADO IN PITKIN COUNTY	12/~~01~~<u>20</u>/2013 DRAFT ▲ COURT USE ONLY ▲ Case Number: 10CW305
FINDINGS OF FACT, CONCLUSIONS OF LAW, JUDGMENT AND DECREE	

This matter is before the Court on the application of the Board of County Commissioners of Pitkin County ("Pitkin County") for Surface Water Right Appropriations for Recreational In-Channel Diversion. The Court, having considered the application, the pleadings, and other materials and having become fully informed and advised with respect to the subject matter of the application, hereby makes the following decree in this matter:

FINDINGS OF FACT

1. Applicant. The applicant is Board of County Commissioners of Pitkin County, c/o John M. Ely, Pitkin County Attorney, 530 East Main Street, Third Floor, Aspen, Colorado 81611, (970) 920-5190.
2. Application, Notice and Jurisdiction. The application in this case was filed with the District Court, Water Division No. 5 on December 30, 2010. Timely and adequate notice of the application was given in the manner prescribed by law, and the Court has jurisdiction over the subject matter of this proceeding and over all persons and property affected hereby, whether those persons or owners of property have appeared or not. The

lands and water involved in this case are not within the boundaries of a designated groundwater basin.

3. Statements of Opposition. Statements of opposition were filed timely by Basalt Water Conservancy District, City of Aspen, Colorado River Water Conservation District and the Colorado River Water Conservation District, acting by and through its Colorado River Water Projects Enterprise, Colorado Water Conservation Board, Elk Mountain Lodge, LLC, Fall Line Properties, LLC, GRE II, LLP, Grand County Board of County Commissioners, Mountain Valley Cabin, LLC and Warren Creek LLC, PT RANCH BARN LLC, Southeastern Colorado Water Conservancy District, Starwood Metropolitan District, and Twin Lakes Reservoir and Canal Company. The City of Aspen withdrew its statement of opposition. The Basalt Water Conservancy District, Starwood Metropolitan District, and _____ have stipulated to the entry of this decree and such stipulations are incorporated into this decree.
4. Referral. The Application was referred to the Water Referee for Water Division No. 5 on January 3, 2011. The Application was re-referred to the Water Judge on August 31, 2012.
5. Report of the Division Engineer. The Division Engineer issued a Summary of Consultation on April 6, 2011. Pitkin County filed a Response to the Summary of Consultation on _____. The Court has considered the Summary of Consultation and Pitkin County's response.
6. CWCB Findings of Fact Considered. The Colorado Water Conservation Board ("CWCB") submitted its findings of fact to the Court on July 22, 2011 and revised/supplemental findings of fact on _____. The Court has duly considered the findings of fact as required by C.R.S. § 37-92-305.
7. General Description of Application. Pitkin County's application claimed two recreational in-channel diversion ("RICD") conditional water right appropriations for the Pitkin County River Park Project. When constructed, the Pitkin County River Park Project will consist of two in-channel diversion and control ~~structure-units~~structures that divert, capture, possess, and/or control the flow of the Roaring Fork River in its natural course to create reasonable recreation experiences in and on the water for all non-motorized boating and recreational uses as described more fully below. Pitkin County has withdrawn the claim for one of the two RICD conditional water rights without prejudice. Therefore, this decree grants Pitkin County one RICD conditional water right for the Pitkin County River Park Project, as described herein.

8. Description of Water Right. The Pitkin County River Park Project is comprised of two recreational control ~~structure-units~~structures: (1) the Pitkin County River Park Project Upper Control Structure (“Upper Structure”) and (2) the Pitkin County River Park Project Lower Control Structure (“Lower Structure”) (collectively, “Structures”). One water right, the “Pitkin County RICD,” is claimed for both Structures.

A. Location of Structures. The Pitkin County River Park Project will be located on the Roaring Fork River downstream of the Highway 82 Upper Bypass Bridge, upstream of the confluence of the Fryingpan and Roaring Fork Rivers, within the channel of the Roaring Fork River in Sections 17 and 18, Township 8 South, Range 86 West of the 6th P.M., Pitkin County, Colorado. The Pitkin County River Park Project will consist of two ~~structure-units~~structures within the Roaring Fork River. Each of the two ~~structure-units~~structures are designed to control, concentrate, and direct the stream flows, creating hydraulic features on the river for the beneficial uses described below. A map depicting the upstream and downstream extent of the Pitkin County River Park Project, within which both Structures will be constructed, is attached as **Exhibit A**. Each of the two Structures will be constructed in the channel of the Roaring Fork River between the following two points:

- i. The Pitkin County River Park Project Upstream Extent will be located in the SW¼ of the NW¼ of Section 17, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 320 feet from the west section line and 1480 feet from the north section line of said Section 17.
- ii. The Pitkin County River Park Project Downstream Extent will be located in the NE¼ of the NE¼ of Section 18, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 265 feet from the east section line and 560 feet from the north section line of said Section 18.

The precise location of the two Structures and the Pitkin County RICD, upon construction, may be located within this stretch of the Roaring Fork River and will be confirmed upon making the Pitkin County RICD water right absolute.

B. Source. Roaring Fork River, tributary to the Colorado River.

C. Appropriation Information.

- i. Date of initiation of appropriation. ~~August 28, 2008~~December 30, 2010.

ii. How appropriation was initiated. ~~Engineering, requests for proposals, field work, planning, considerations and decisions of the Board of By Pitkin County Commissioners, and posting notice of the appropriations~~ filing its application to appropriate the Pitkin County RICD water right in Water Court.

iii. Date water first applied to beneficial use. Not applicable.

D. Rates of Flow.

i. The amounts of water claimed are rates of flow during daylight hours for different levels of recreational use as follows:

Period	Flow Rate (cfs)	Experience Level
April 15 – May 17	240	Blue, Upper ~~Unit~~ Structure
May 18 – June 10	380	Green, Lower ~~Unit~~ Structure
June 11 – June 25	1,350	Blue, Lower ~~Unit~~ Structure
June 26 – Aug. 20	380	Green, Lower ~~Unit~~ Structure
Aug. 21 – Labor Day	240	Blue, Upper ~~Unit~~ Structure

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ii. Minimum Rate of Flow. As required by C.R.S. § 37-92-305(13)(d), the flow rate below which there is no longer any beneficial use of the Pitkin County RICD water right at the Structures is 60 cfs. As a result, Pitkin County cannot call for water if such call will not produce at least 60 cfs at the Structures.

E. Uses. Recreational uses, including all beneficial uses associated with RICD water rights as permitted under Colorado law, including but not limited to non-motorized boating such as kayaking, canoeing, rafting, tubing, floating, and paddling.

13. Findings Pursuant to C.R.S. § 37-92-305(13)(a). As required by C.R.S. § 37-92-305(13)(a), the Court has considered the evidence presented by the parties, the CWCB's findings of fact dated July 22, 2011, and the CWCB's revised/supplemental findings of fact dated _____, and finds as follows:
- A. The Pitkin County RICD water right decreed herein will not materially impair the ability of the State of Colorado ("State") to fully develop and place to consumptive beneficial use its compact entitlements.
 - B. The adjudication and administration of the water right decreed herein will promote maximum utilization of waters of the State. The Pitkin County RICD water right decreed herein controls water and places it to the intended beneficial uses via a reasonably efficient means of diversion without waste. The Pitkin County RICD water right is non-consumptive and does not preclude all other water development opportunities.
 - C. The reach of the Roaring Fork River in which the Pitkin County River Park Project will be located is an appropriate reach of stream for the intended recreational in-channel uses.
 - D. The Pitkin County River Park Project will be accessible to the public for recreational in-channel uses. Pitkin County owns and controls the property over which access will be allowed.
 - E. The CWCB holds instream flow water rights within and below this reach of the Roaring Fork River. Pitkin County shall consult with the Colorado Division of Parks and Wildlife ("CPW") before and during any construction and repair of the Structures to ensure that the construction activities will not impact the natural environment that the instream flow water rights seek to protect. TheAs a result, the Court finds that exercise of the Pitkin County RICD water right decreed herein will not cause material injury to instream flow water rights appropriated pursuant to C.R.S. § 37-92-102(3) and (4).
14. Volume of Water. Fifty percent of the sum of the total average historical volume of water for the reach of stream in which the Pitkin County River Park Project will be located has been calculated to be 123,647,125.729 acre-feet per year. As summarized in the table below, the total volume of water represented by the flow rates for the Pitkin County RICD water right decreed herein is less than fifty percent of the sum of the total average historical volume. Therefore, the requirements of C.R.S. § 37-92-305(13)(f) do not apply.

Period	Number	Flow Rate	Volume (AF)

	of Days	(cfs)	
April 15 – May 17	33	240	15,682
May 18 – June 10	24	380	18,058
June 11 – June 25	15	1,350	40,095
June 26 – Aug. 20	56	380	42,134
Aug. 21 – Labor Day ¹	14	240	6,653
		Total	122,622

15. Availability of Unappropriated Water. With respect to the conditional water right and priority that is awarded herein, Pitkin County has shown that unappropriated water is available for appropriation.
16. Intent to appropriate. Pitkin County has effected the appropriation of water by demonstrating a specific plan and intent to capture and control the claimed amounts of water at the claimed time periods and to place such water to beneficial uses, specifically recreational in-channel non-motorized boating use in the Pitkin County River Park Project. C.R.S. § 37-92-103(3)(a). Pitkin County has completed the "first step" toward the conditional appropriation by showing the requisite intent to appropriate accompanied by an open, physical demonstration of that intent.

CONCLUSIONS OF LAW

17. Incorporation of Findings of Fact. The foregoing Findings of Fact are incorporated herein.
18. Notice and Jurisdiction. The Water Court for Water Division No. 5 has jurisdiction over the subject matter of these proceedings and over all persons, owners of property and water rights that may be affected hereby, whether or not they have chosen to appear. The application in this matter and the resume publication of the application placed such persons on notice of the relief requested by the application and granted by this decree.
19. RICD Water Right Contemplated by Law. The application for approval of the Pitkin County RICD water right described in paragraph 8 of this decree is contemplated by law and satisfies the requirements of C.R.S. §§ 37-92-101, C.R.S., et seq., including, but not limited to, C.R.S. §§ 37-92-102(6)(b), 37-92-103(10.3), 37-92-302, 37-92-305(13), 37-92-305(15) and 37-92-305(16), C.R.S..

¹ September 3 was selected as a representative date for Labor Day in the volume calculation.

20. Can and Will. The water right decreed herein can and will be diligently completed and water can and will be diverted and beneficially used for the purposes adjudicated by this decree within a reasonable time.
21. Control Structures. The amounts of water claimed and decreed herein will be controlled in the water's natural course in the Roaring Fork River during the claimed time periods by means of the Upper and Lower Structures as described in paragraph 8 above. See C.R.S. § 37-92-103(7). Flow rates up to 1,350 cfs will be efficiently controlled, concentrated, and diverted, without waste, to create waves, hydraulic holes, large changes in current direction, and whitewater features that are used by kayakers and other boaters for the intended recreational experiences.
22. Diversion and Use. Controlling the claimed amounts of water during the claimed time periods by the proposed in-channel structures and devices and the use of such water for the intended recreational in-channel boating purposes:
 - A. Represents a reasonably efficient practice of diversion and beneficial use, *Alamosa-La Jara Water Users Protection Ass'n v. Gould*, 674 P.2d 914, 934-5 (Colo. 1983); C.R.S. §§ 37-92-102(2)(b), 37-92-103(4) and (7);
 - B. Represents the use of the minimum amounts of water that are reasonable and appropriate under reasonably efficient practices to accomplish without waste the purpose for which the appropriations were lawfully made by Pitkin County, C.R.S. § 37-92-103(4) and (10.3); and
 - C. Will create opportunities for the intended recreational experiences to occur, at the minimum stream flows needed to provide the identified recreational experiences. C.R.S. § 37-92-103(10.3).
23. Reasonable Recreational Experience. The proposed recreation experiences are reasonable. By using the proposed in-channel structures and devices in a reasonably efficient manner to control that amount of water that is reasonable and appropriate to accomplish without waste the intended recreational in-channel non-motorized boating purposes, and by thereby providing opportunities for reasonable recreation experiences to occur with the minimum amounts of water for each recreational opportunity, the proposed appropriation of water meets the beneficial use standards historically applied to water rights, which standards, as recognized by Senate Bill 01-216, are to be applied to "recreational in-channel diversions." See C.R.S. § 37-92-103(4) and (10.3). See also *Santa Fe Ranches Property Owners Assoc. v. Simpson*, 990 P.2d 46, 53-54 (Colo. 1999).

24. No Injury to Instream Flow Rights and Flood Control. Decreed instream flow water rights exist in and below the reach of the Pitkin County RICD water right decreed herein. Pitkin County shall consult with CPW before and during any construction or maintenance of the Structures to ensure that such activities will not impact the natural environment that the instream flow water rights seek to protect. As a result, exercise of the water right decreed herein will not cause material injury to any CWCB instream flow water rights. The CWCB maintains no liability for any damages, injury, or other issues related to or arising from Pitkin County's control structures.
25. No Injury. Operation of the Pitkin County RICD water right decreed herein will not injuriously affect any owner of or person entitled to use water under a vested water right or decreed conditional water right so long as administered in accordance with this decree.
- ~~26. Subsequent Applications. Pursuant to C.R.S. § 37-92-103(10.3), a presumption exists that the Pitkin County RICD water right will not be materially injured from subsequent appropriations or changes of water rights if the effect on the Pitkin County RICD water right caused by such appropriations or changes does not exceed one-tenth of one percent of the lowest decreed rate of flow (i.e., 0.24 cfs) as measured at the Structures and the cumulative effects on the Pitkin County RICD water right caused by such appropriations or changes do not exceed two percent of the lowest decreed rate of flow (i.e., 4.8 cfs) as measured at the Structures.~~

JUDGMENT AND DECREE

- ~~27.~~26. Incorporation of the Findings of Fact and Conclusions of Law. The Findings of Fact and Conclusions of Law set forth in paragraphs 1 through ~~26~~25 above are incorporated herein.
- ~~28.~~27. Approval of RICD Water Right. The Pitkin County RICD water right, described in paragraph 8 above, is hereby confirmed, approved and decreed, subject to the terms and conditions contained in this decree.
- ~~29.~~28. Terms and Conditions. The following terms and conditions are necessary to prevent injury to other water rights from the operation of the Pitkin County RICD water right decreed herein:
- A. Pitkin County shall provide to CPW, the Division Engineer, and the Water Court final design documents for the Pitkin County River Park Project control structures that are signed and sealed by a professional engineer. Pitkin County will ensure that the design of the control structures will comply with applicable floodplain management requirements. Pitkin County shall consult with CPW before and

during any construction or maintenance of the Structures to ensure that such activities will not impact the natural environment that the CWCB's instream flow water rights seek to protect.

B. Pitkin County shall maintain and repair the control structures to conform to the original design.

~~C. Pitkin County may place a call for the Pitkin County RICD water right only when such call will produce flows at the Structures during daylight hours in the amounts specified in paragraph 8 above, subject to other terms and conditions decreed herein.~~

~~D.C.~~ During any period identified by the Upper Colorado River Commission in a finding issued pursuant to Article VIII(d)(8) of the Upper Colorado River Basin Compact of 1948 for curtailment of Colorado River basin water uses within Colorado, which the State of Colorado has agreed to implement in a manner that impacts water diversions within Water Division 5, the Pitkin County RICD water right will be administered in accordance with the compact curtailment rules adopted by the State of Colorado that are then in effect, if any. If no such compact curtailment rules are then in effect, Pitkin County shall not exercise the Pitkin County RICD water right during the period of any such Compact curtailment unless the State Engineer or Division Engineer determines in writing that the exercise of the Pitkin County RICD water right will not affect Colorado's ability to comply with the Compact. The Pitkin County RICD water right shall be administered in accordance with any rules promulgated by the State Engineer related to Colorado River compact compliance. The Pitkin County RICD water right decreed herein is not intended to materially impair the ability of Colorado to fully develop and place to consumptive beneficial use those waters available by law and interstate compact.

~~E.D.~~ Pursuant to C.R.S. § 37-92-103(10.3), Pitkin County may not call for water that has been lawfully stored by another appropriator.

~~E. Measurement and Administration. Colorado Division of Water Resources Gauge ROARING FORK RIVER AB FRYINGPAN RIVER NR BASALT (ROAFRYCO) is located 300 feet upstream of the Pitkin County River Park Project Upstream Extent. The hours and days of operation of the Pitkin County River Park Project are daylight hours between April 15 and Labor Day of each year. Pitkin County may place a call for the Pitkin County RICD water right only when such call will produce flows at the decreed control structures during daylight hours between April 15 and Labor Day, subject to other terms and conditions decreed herein.~~

F. Pitkin County shall not place a call on and the water right decreed herein shall be administered as subordinate in priority to up to 3000 acre feet of depletions between April 15 and Labor Day (the latest date for Labor Day being September 7) ("RICD Season") on the Roaring Fork River and its tributaries that (a) have point(s) of diversion upstream from the Pitkin County River Park Project stream reach, (b) are not senior to the water right decreed herein by virtue of their year of filing, appropriation dates, or both, and (c) are decreed by the Water Judge for Water Division No. 5 based upon applications filed between January 1, 2011 and the tenth anniversary of the entry of the decree herein ("Tenth Anniversary"). The following procedures shall be used to identify the water rights that are included in this subordination:

- (1) The RICD Season volume of water assigned to a decreed water right for purposes of inclusion in the subordination shall be either (a) the volume of a water right in acre feet specifically decreed for diversion and storage, refill of such storage, and refill to replace evaporation loss from such storage, during the RICD Season or (b) the RICD Season volume of depletions in acre feet expressly authorized by the decree for a direct flow water right or, if no depletion volume is expressly authorized by the decree, the RICD Season volume obtained by (i) multiplying the decreed diversion rate in cubic feet per second (cfs) times 1.98 (to convert cfs to acre feet) times 143 days per RICD Season or (ii) dividing the decreed diversion rate in gallons per minute (gpm) by 449 (to convert gpm to cfs) and then multiplying the result times 1.98 (to convert cfs to acre feet) times 143. Water rights decreed as non-consumptive as to the upstream terminus of the Pitkin County River Park Project stream reach shall be included in the subordination and shall be assigned a RICD Season diversion volume of zero.
- (2) On or before April 15 of each year, Pitkin County shall prepare and file with the Division Engineer a summary of all the water rights decreed in the preceding calendar year that meet the requirements of paragraph 29.F. above, all of which will be included in the subordination, as well as a summary of all decreed water rights included in the subordination for all prior years beginning 2011. The summary shall include the identity of each water right by decree number, name, and the annual volume of water assigned to each water right for purposes of the subordination. Pitkin County shall serve the summary on counsel of record for all opposers herein or any other person or entity requesting a copy of the summary; in addition, such summary shall be provided to all those who are on the Water Division No. 5 SWSP notice network. The opposers and any other

person or entity, whether a party to this proceeding or not, shall have 45 days within which to file objections to the summary with the Division Engineer. If no objections are filed, the summary shall be deemed final for purposes of the subordination for that year, except as otherwise provided in subparagraph (3) below. If objections are filed and the parties are unable to resolve the objections, any party may file a petition with the Water Judge to hold a hearing to resolve objections.

- (3) After the 3000 acre feet per RICD Season limit on the subordination is reached or all applications filed between January 1, 2011 and the Tenth Anniversary are decreed or otherwise disposed of, whichever occurs first, no further action by Pitkin County shall be required under subparagraph (2) above. For purposes of administration, the priority date for water rights decreed herein shall be the earlier of the date of when the RICD Season limit is reached or the Tenth Anniversary. In the event that the 3000 acre-feet RICD Season limit is reached by virtue of a water right that will exceed the 3000 acre-feet RICD Season limit if included in its entirety, only that portion of the water right needed to bring the RICD Season limit to 3000 acre-feet shall be included in the subordination, and the remaining portion of the water right shall be administered as junior to the Pitkin County RICD water right. If any conditional water rights included within the subordination are thereafter canceled by the Water Judge or otherwise abandoned prior to the Tenth Anniversary, Pitkin County shall notify the Division Engineer and the opposers of the identity and RICD Season volume of diversions of the additional water rights to be included in the subordination, if any, determined using the criteria in subparagraph (1) above, as a result of any such cancelation of conditional water rights.
- (4) After the Tenth Anniversary or when the 3000 acre-feet RICD Season limit is reached, whichever is earlier as provided herein, and pursuant to C.R.S. § 37-92-103(10.3), the presumption that there will not be material injury to the Pitkin County RICD water right from subsequent appropriations or changes of water rights by any individual water right appropriations or water right changes shall be determined in accordance with the provisions of C.R.S. § 37-92-103(10.3).
- (5) After the Tenth Anniversary or when the 3000 acre-feet limit RICD Season limit is reached, whichever is earlier as provided herein, Pitkin County shall notify the Water Court, the Division Engineer, and the opposers that no further action by Pitkin County shall be required under subparagraph (2) above, and that the priority date for purposes of

administration has been established pursuant to subparagraph (3) above, subject to the cancellation or abandonment of conditional water rights prior to the Tenth Anniversary as allowed by subparagraph (3) above.

G. Pitkin County will not claim injury to the Pitkin County RICD water right as the basis for filing a statement of opposition to any application for water use in Pitkin County that is filed under the 3000 acre foot per RICD Season subordination described in paragraph 29.F.

H. Only Pitkin County employees or their representatives shall place a call for the Pitkin County RICD water right. Pitkin County shall designate the individuals who may place a call as part of its submission of accounting records to the Division Engineer.

~~30-29.~~ Measurement and Administration. Pitkin County shall identify a stream gauge that will ensure that the Pitkin County RICD water right decreed herein can be adequately measured and administered through the proposed reach~~by using the ROAFRYCO Gauge, or any other gauge, as~~ acceptable to the Division Engineer, with or without. The Division Engineer shall determine whether adjustment for any intervening inflows and diversions between the Pitkin County RICD water right and that gauge,~~as may be determined by the Division Engineer is required.~~

~~31-30.~~ No Material Injury. The terms and conditions provided for in this decree are adequate to assure that no material injury to any water users will result from the operation of the Pitkin County RICD water right.

~~32-31.~~ Measuring Devices. Pitkin County shall install and maintain, at Pitkin County's expense, such additional meters, gauges, or other measuring devices as are reasonably required by the Water Commissioner or Division Engineer, and shall report at reasonable times to the Water Commissioner and/or Division Engineer the readings of such meters, gauges or other measuring devices pursuant to C.R.S. § 37-92-502(5)(a).

~~33-32.~~ Accounting. Pitkin County shall provide accounting forms in a manner acceptable to the Division Engineer to incorporate the Pitkin County RICD water right decreed herein. Such accounting forms are not decreed herein, and may be changed, from time to time, with the approval of the Division Engineer, as may be appropriate under circumstances then existing. The accounting forms shall identify the individuals that may call for the Pitkin County RICD water right, as required by paragraph 29.H. The accounting forms shall be adequate to account for Pitkin County's use under this decree on a daily basis and shall be completed and provided to the Division Engineer at intervals reasonably required by the Division Engineer. Upon request and payment of reasonable reproduction costs, Pitkin County shall provide such accounting forms to opposers.

- | ~~34.~~33. Priorities. The Pitkin County RICD water right and priority granted herein are based on the appropriation date contained herein and on the filing of the application in this case in the Water Court in the year of 2010, [subject to the provisions set forth in Paragraph 29.F. above.](#) The Pitkin County RICD water right and priority shall be administered as having been filed in 2010, and shall be junior to all water rights granted pursuant to applications filed in previous years. As between all water rights applied for in the same calendar year, priorities shall be determined by historical dates of appropriation and shall not be affected by the date of application or the date of entry of ruling.
- | ~~35.~~34. Diligence. The conditional Pitkin County RICD water right decreed herein is hereby continued in full force and effect until the last day of _____, 20___. To maintain the conditional Pitkin County RICD water right, an application for a finding of reasonable diligence shall be filed on or before the last day of _____, 20___, or a showing made on or before such date that such conditional right has become absolute by reason of the completion of the appropriation.
- | ~~36.~~35. Notice of Transfer. Upon the sale or other transfer of the conditional water right decreed herein, the transferee shall file with the Water Court having jurisdiction a notice of transfer which shall state: (1) the title and case number of the case in which the conditional decree was issued, (2) the description of the conditional water right transferred, (3) the name of the transferor, (4) the name and mailing address of the transferee, and (5) a copy of the recorded deed or other transfer document. The owner of any conditional water right shall notify the Clerk of the Water Court having jurisdiction of any change in mailing address.
- | ~~37.~~36. The Water Clerk shall file a copy of this Decree with the Division Engineer of Water Division No. 5 and the State Engineer.

Dated: _____

BY THE COURT

James Boyd
Water Judge
Water Division No. 5
State of Colorado

EXHIBIT Q



December 20, 2013

SERVED ONLY: December 20, 2013 4:19 PM

FILING ID: 8E0A744C897DF

CASE NUMBER: 2010CW305

Ms. Patricia DeChristopher
Mr. Tim Beaton
Moses, Wittemyer, Harrison and Woodruff, P.C.
1002 Walnut Street, Suite 300
Boulder, Colorado 80302

Re: Case No, 10CW305, Water Division 5: Application for RICD Water Right by Pitkin County

Dear Patricia and Tim:

This letter summarizes my supplemental opinions in support of the draft decree for this case provided by Pitkin County and dated December 20, 2013. I have considered comments received from staff representatives of the CWCB and the Colorado Attorney General's office via email and at a meeting held on December 18, 2013, in addition to the information that I previously reviewed. I also spoke to Mr. Jim Pearce on December 16, 2013 to clarify certain aspects of his previous analyses.

Water Availability

In response to comments from CWCB staff regarding a potential transposition error in the water availability flow data, I reviewed Mr. Pearce's reports and analyses and I found that, in an Excel file named "20110506 Daily Flows Pitco River Park.xls", which was previously sent to the CWCB, the dates entered in the leftmost column are in chronological order from top to bottom except for August 20 and 21, which are transposed. The daily flows in the cells to the right of August 21 are the correct values for August 21, and the daily flows in the cells to the right of August 20 are correct for August 20, so there was not a transposition error in Mr. Pearce's analysis, just in his preparation of this table. The daily flows shown in his original February 2011 report, May 2011 supplemental report, December 2011 second supplemental report and July 9, 2012 letter do not have this error.

I also noticed that the daily flows for the year 2010 are provisional values for the ROAFRYCO gage, which Mr. Pearce obtained from the Colorado Division of Water Resources' website. Final flow values were not available when Mr. Pearce prepared his reports in 2011, as it normally takes up to 12 months for hydrographers to work up the raw gage data into final values. I replaced the provisional 2010 daily flow data with final 2010 daily flow data that I obtained from the CDSS website and I recalculated the numbers relevant to the CWCB's findings and to Paragraph 14 of the decree.

I also refined the call calculations and conditional formatting highlighting the call days to count only those days when the flow is less than the claimed RICD flow, rather than less than or equal to the claimed RICD flow. Attachment A is table of revised historical daily flows at the Pitkin County River Park Project during the claimed RICD season for the years 1980-2010.

Maximum Utilization

The draft decree contains several terms and provisions that, taken together, ensure that Pitkin County's claimed RICD water right would promote and would not impair the maximum utilization of waters in the State.

Pitkin County has reduced the season length of its RICD claim from an average of 168 days to an average of 143 days. The County has also reduced the volume of its RICD claim to less than 50% of the average historical flow volume through the RICD stream reach. Given its reduced season and flow rates, the claimed RICD water right would leave unaffected an average of approximately 198,000 acre-feet per year of flow through the claimed RICD reach, which is approximately 62% of the average annual historical flow through the reach. I determined the average annual flow through the RICD reach based upon the relative flow volumes within and outside of the claimed RICD season as recorded at the Roaring Fork River near Aspen gage (ID# 09073400). Flows in excess of the claimed RICD flow rates would occur in more than half of the years for 78% of the days in the claimed RICD season, and in more than 1 out of 4 years for the remaining 22% of the days claimed. Flows outside of the claimed RICD season would be unaffected by the claimed RICD water right.

Considering the call limitation included in Paragraph 29E of the draft decree, the claimed RICD water right would leave unaffected an average of approximately 246,000 acre-feet per year of stream flow through the claimed RICD reach, which is approximately 77% of the average annual historical flow through the reach.

The 3,000 acre-foot "carve-out" provision in Paragraph 29F of the draft decree provides an additional allowance for future water rights that would otherwise be called out by the County's RICD right. The 3,000 acre-foot carve-out volume and the ten-year inclusion period for the carve-out were determined with input from and to the satisfaction of local objectors to the County's RICD application during settlement negotiations, and are seen by those objectors as sufficient to meet foreseeable local needs. Given that water providers typically plan their supplies and obtain water rights well in advance of their anticipated needs, the ten-year period for inclusion in the carve-out is adequate for the purposes of Paragraph 29F of the draft decree.

The statutory *de minimis* provision under § 37-92-103(10.3), which is referred to in Paragraph 29(F)(4) of the draft decree, would allow for additional future development supplied by small future water rights or changes of water rights beyond the carve-out period.

Please do not hesitate to call if you have any questions.

Sincerely,



Lee Rozaklis
Principal

Historical Daily Streamflows at the proposed Pitkin County River Park Project (revised)

1980 - 2010

units = cubic feet per second

Indicates day when stream flow is less than RICD flow rate and greater than or equal to 60 cfs.

12/16/2013 Replaced provisional flows with final flows for 2010. Refined call calculations and conditional formatting.

																															Average Historical Daily Rate (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Volume (af)	RICD Flow Rate (cfs)	RICD Daily Volume (af)	
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010					
15-Apr	127	155	328	95	146	509	254	164	245	244	168	114	272	140	130	188	182	167	272	105	245	124	228	208	257	199	511	235	231	276	278	219	434	217	240	475
16-Apr	144	162	325	96	172	555	266	196	246	274	191	117	268	141	146	180	179	190	278	86	213	131	254	188	265	224	442	245	270	301	310	228	451	225	240	475
17-Apr	159	182	303	99	217	569	259	258	247	303	208	130	244	141	182	181	180	237	272	99	216	146	218	188	281	258	455	272	229	276	393	239	473	236	240	475
18-Apr	188	216	306	104	260	609	240	327	218	336	198	146	274	151	219	174	186	291	275	100	260	160	203	198	289	290	475	263	220	252	380	252	499	249	240	475
19-Apr	232	259	298	110	256	592	222	348	211	380	205	146	241	151	254	178	175	323	245	90	252	188	205	181	277	302	419	261	263	246	403	255	505	253	240	475
20-Apr	285	257	282	114	237	490	214	323	209	424	205	151	216	146	302	174	166	356	215	93	219	215	207	175	272	316	381	269	318	259	474	257	509	254	240	475
21-Apr	347	222	268	119	210	459	237	276	235	512	233	159	201	152	383	168	159	398	215	121	225	189	185	172	247	279	387	305	339	294	532	265	526	263	240	475
22-Apr	395	222	274	120	201	411	341	289	218	539	254	154	202	193	446	163	156	360	231	128	259	192	171	191	231	239	407	327	347	355	641	279	553	276	240	475
23-Apr	408	222	288	120	213	358	440	372	209	536	261	167	198	236	449	160	170	327	247	122	309	170	155	216	216	233	495	312	403	406	559	290	573	287	240	475
24-Apr	363	264	296	131	237	343	443	461	197	578	259	167	188	246	465	155	194	318	335	105	333	156	129	203	203	288	573	331	466	476	488	303	600	300	240	475
25-Apr	325	316	306	152	246	337	433	511	184	566	231	176	205	244	420	155	223	284	438	158	290	158	122	193	208	299	523	305	439	494	422	302	598	299	240	475
26-Apr	351	382	314	170	226	316	389	565	176	542	212	184	228	247	344	164	244	271	374	136	284	159	147	203	187	267	504	287	392	514	383	296	585	293	240	475
27-Apr	376	399	314	198	213	313	326	632	179	455	195	168	272	267	303	168	249	266	338	114	322	183	176	233	182	255	544	285	367	479	357	294	583	292	240	475
28-Apr	425	391	349	190	196	381	295	680	188	376	183	161	366	334	271	179	237	316	337	127	411	220	155	258	205	256	635	320	398	446	361	311	616	308	240	475
29-Apr	468	435	386	189	185	487	310	712	201	323	183	151	472	395	255	194	223	339	340	128	472	256	164	245	224	232	573	415	458	468	411	332	657	329	240	475
30-Apr	478	481	433	193	179	528	367	743	246	292	175	148	585	402	239	213	215	316	348	220	483	277	160	239	288	207	539	553	573	569	368	357	706	353	240	475
1-May	396	544	457	165	161	588	455	758	307	248	156	125	659	322	206	183	206	288	362	211	388	311	126	239	253	200	576	643	583	664	349	359	711	355	240	475
2-May	373	587	577	157	173	680	574	716	250	235	158	144	654	320	198	216	225	264	372	282	397	405	74	219	255	159	564	775	476	704	339	372	736	368	240	475
3-May	368	797	649	157	171	852	720	570	225	224	164	148	655	362	202	230	279	248	410	261	512	405	87	217	272	145	599	779	414	681	318	391	774	387	240	475
4-May	387	612	712	163	169	1053	886	479	221	222	167	150	652	426	203	211	353	265	516	273	648	348	73	251	314	141	629	809	397	661	331	410	813	406	240	475
5-May	419	497	737	187	178	1090	866	448	242	220	172	148	693	440	268	237	461	352	595	236	792	358	89	241	349	164	671	675	412	591	343	425	841	421	240	475
6-May	472	435	552	238	191	1039	752	481	282	266	207	160	729	358	395	240	563	473	613	207	915	317	95	201	424	194	633	599	526	607	367	436	864	432	240	475
7-May	543	376	465	223	177	1044	692	579	243	370	282	183	748	329	491	231	609	572	579	199	862	289	124	177	488	247	623	528	678	773	345	454	899	449	240	475
8-May	574	334	429	281	183	1121	600	684	234	506	277	239	771	298	511	221	676	601	548	214	892	278	146	166	548	271	612	463	985	927	345	482	954	477	240	475
9-May	558	296	438	378	228	1107	528	797	217	682	257	390	817	272	533	208	759	670	566	271	706	305	111	148	593	221	597	460	832	941	347	491	973	486	240	475
10-May	528	270	450	440	356	1184	497	880	229	788	275	551	687	262	513	216	751	705	610	407	653	334	113	157	608	269	526	447	914	911	442	515	1020	510	240	475
11-May	510	277	440	480	516	1063	494	941	263	789	317	673	556	325	568	259	792	750	739	385	869	347	105	149	643	325	491	485	796	1020	440	542	1073	537	240	475
12-May	487	248	433	379	704	873	513	1020	374	727	256	604	570	462	716	338	951	769	713	334	859	456	146	132	612	281	485	640	820	1220	463	567	1123	562	240	475
13-May	413	224	416	357	950	740	549	1060	530	599	231	585	591	678	756	296	1126	835	720	339	606	623	120	154	500	257	527	869	888	1300	451	590	1168	584	240	475
14-May	373	220	354	312	1293	644	582	1207	681	572	257	732	678	842	718	285	1218	936	754	446	525	837	118	172	423	229	633	1020	775	1270	423	630	1247	624	240	475
15-May	349	239	318	302	1645	623	608	1378	782	485	299	748	713	975	724	407	1250	1029	642	488	496	827	125	257	378	241	688	1090	736	1330	433	665	1316	658	240	475
16-May	254	153	210	148	2183	666	535	1809	912	387	206	489	843	1202	770	427	1695	1124	552	536	496	1011	161	302	375	287	787	1170	707	1440	409	718	1402	710	240	475
17-May	370	165	196	126	2124	714	525	1755	1008	341	160	386	860																							

Historical Daily Streamflows at the proposed Pitkin County River Park Project (revised)

1980 - 2010

units = cubic feet per second

Indicates day when stream flow is less than RICD flow rate and greater than or equal to 60 cfs.

12/16/2013 Replaced provisional flows with final flows for 2010. Refined call calculations and conditional formatting.

																															Average Historical Daily Rate (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Volume (af)	RICD Flow Rate (cfs)	RICD Daily Volume (af)	
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010					
30-May	879	1008	1101	1409	4459	3650	1022	1205	1082	1452	888	1472	851	1922	1301	418	835	1146	1502	1366	2243	1161	443	3546	730	1484	1288	976	1880	1670	1410	1477	2925	1463	380	752
31-May	883	1061	1061	1246	4493	2892	1066	1356	778	1234	972	1401	774	2157	1541	413	856	1560	1424	1403	2173	1309	656	3304	604	1331	1243	905	1990	1830	1220	1456	2883	1441	380	752
1-Jun	1488	1079	1315	1901	3306	1768	2065	1126	757	1348	924	1270	649	2865	2222	862	844	2481	1475	1293	2011	1403	772	3717	600	1250	1239	1000	2250	1860	1290	1562	3093	1547	380	752
2-Jun	1455	1146	1323	1827	3077	1772	2054	1414	720	1361	686	1130	610	2790	2185	1141	1021	2882	1737	1355	1812	1622	736	3052	581	1345	1389	1050	2700	1730	1190	1577	3123	1561	380	752
3-Jun	1605	1433	1302	1580	2974	2001	2213	1560	1092	1295	700	1023	662	2483	2164	1342	1314	2666	1794	1344	1740	1622	681	2515	660	1495	1539	1310	3030	1750	1070	1612	3191	1595	380	752
4-Jun	1806	1312	1233	1687	2662	2167	2404	1769	1575	1061	1114	970	760	1842	2192	1503	1582	2891	1602	1360	1664	1405	547	2329	774	1403	1663	1270	3120	1770	1180	1633	3233	1616	380	752
5-Jun	2113	1454	1475	1705	2437	2616	2550	1908	1893	1017	1595	1166	919	1632	2082	1684	1730	2972	1327	1457	1596	1118	454	2070	954	1167	1806	1420	3030	1830	2450	1730	3425	1713	380	752
6-Jun	2243	1707	1479	1486	2072	2907	3032	1977	2025	1186	1864	1441	983	1787	1964	2043	1951	2861	1042	1318	1512	1091	480	1557	1284	1095	1996	1640	2620	1820	3340	1800	3564	1782	380	752
7-Jun	2019	1934	1425	1542	2417	3531	3304	2190	2006	1171	1933	1481	960	1816	1783	1882	1944	2797	829	1378	1484	1281	518	1372	1505	1146	2193	1220	2590	1690	4280	1859	3680	1840	380	752
8-Jun	2066	2043	1550	1743	1840	4440	2976	2509	1875	1234	1962	1697	835	1382	1658	1703	1950	2976	778	1815	1425	1373	519	1225	1564	1130	2374	1030	2670	1470	4980	1897	3755	1878	380	752
9-Jun	2442	2162	1627	1816	1566	4856	2514	2686	1826	1115	2068	2059	809	1150	1534	1486	1827	2423	814	2116	1452	1384	520	1306	1543	1199	2514	980	2150	1420	4220	1858	3678	1839	380	752
10-Jun	2971	2082	1753	1957	1449	4406	1882	2468	1903	1165	2197	2132	845	1116	1461	1225	1787	2166	840	2143	1376	1496	516	1437	1463	1103	2010	1160	2080	1340	4290	1814	3591	1795	380	752
11-Jun	3450	1994	1750	2161	1582	3234	1574	2305	1771	1143	2314	2254	916	1330	1499	1326	1824	2149	819	1990	1219	1446	455	1311	1154	984	1941	1370	2530	1310	3200	1752	3469	1734	1350	2673
12-Jun	3403	1747	1806	2361	1768	2956	1591	2259	1611	1157	2078	2373	1050	1689	1481	1844	1971	2174	822	2049	1171	1309	407	1378	957	964	1874	1750	2090	1230	2570	1738	3442	1721	1350	2673
13-Jun	3438	1439	1908	1731	2135	3092	1853	2170	1399	1113	1567	2262	1179	2282	1519	2524	2125	2355	1042	2123	1069	1230	399	1466	856	910	1759	1490	1750	1200	2200	1729	3423	1711	1350	2673
14-Jun	3223	1094	1741	1298	2845	3244	2070	2258	1108	1046	1675	2416	1192	2771	1445	3096	2247	2422	934	2123	943	971	376	1259	959	834	1710	1450	1970	1300	1810	1736	3438	1719	1350	2673
15-Jun	2936	737	1731	1234	3337	3351	2339	2377	1168	1164	1535	2604	1089	3234	1431	3774	2428	2449	934	2144	883	781	359	1333	1096	868	1631	1590	2350	1280	1500	1796	3556	1778	1350	2673
16-Jun	2724	714	1737	1473	3642	3435	2301	2651	1299	1457	1330	2527	1026	3171	1319	4281	2506	2624	840	1996	888	733	325	1414	1012	1107	1309	1720	3370	1340	1350	1859	3680	1840	1350	2673
17-Jun	2745	757	1894	1842	3089	3325	2370	2499	1296	1528	1278	2414	879	3507	1252	4643	2534	2562	884	2004	775	673	307	1224	963	1354	1113	1810	4270	1390	1320	1887	3737	1868	1350	2673
18-Jun	2962	782	2173	2648	2742	3383	2381	2269	1291	1440	1387	2269	976	2762	1216	4250	2468	2854	809	2064	708	737	290	1195	903	1604	1114	1830	4480	1530	1330	1898	3759	1879	1350	2673
19-Jun	3333	760	2064	3554	3096	3121	2347	2096	1424	1466	1465	1958	1135	2355	1199	2992	2374	3557	765	2208	796	743	276	1214	877	1919	1158	1540	3570	1630	1460	1886	3733	1867	1350	2673
20-Jun	3627	879	1837	3769	3102	2900	2255	1707	1475	1354	1334	1785	1245	2486	1315	3005	2270	4154	985	2279	887	759	269	1158	920	2020	1068	1470	2650	1780	1490	1879	3719	1860	1350	2673
21-Jun	3459	920	1877	3862	3565	2799	2296	1607	1484	1222	1333	1902	1246	2938	1221	3391	2412	3964	1141	2415	757	729	269	1078	908	2000	1048	1430	2710	1670	1470	1907	3776	1888	1350	2673
22-Jun	3240	895	1964	3820	3862	2739	2225	1570	1377	890	1302	1841	1170	3052	1348	3470	2747	3723	1305	2453	690	761	260	1031	801	2147	986	1320	2800	1720	1390	1900	3762	1881	1350	2673
23-Jun	3198	798	2097	3543	3564	2453	2138	1537	1260	761	1262	1717	1165	3084	1239	3263	2278	3616	1474	2519	659	685	250	1023	713	2283	934	1210	2670	1890	1330	1826	3616	1808	1350	2673
24-Jun	3198	734	2122	3899	3513	2481	2083	1457	1284	689	1233	1635	1212	2715	1065	3297	1882	3328	1427	2554	626	684	223	934	715	2254	906	1220	2880	1830	1340	1788	3540	1770	1350	2673
25-Jun	3084	675	2154	4961	3500	2918	1894	1407	1203	788	1156	1469	1246	2412	958	3439	1713	2993	1302	2616	618	763	198	829	728	2172	880	1120	3030	2000	1330	1792	3548	1774	1350	2673
26-Jun	3249	661	2170	4229	3348	2275	2224	1357	1104	806	1124	1246	1216	2569	880	3883	1669	2715	1476	2598	645	782	214	819	737	2107	823	1000	3310	2260	1300	1768	3500	1750	380	752
27-Jun	3236	641	2182	3328	3437	1632	2324	1306	972	805	1093	1056	1053	2747	813	4113	1737	2587	1595	2423	661	879	221	818	697	1960	726	967	2870	2230	1270	1690	3345	1673	380	752
28-Jun	2821	658	2365	2954	3536	1419	2257	1279	998	805	1013	1161	940	2865	728	4261	1581	2541	1642	2299	632</															

Historical Daily Streamflows at the proposed Pitkin County River Park Project (revised)

1980 - 2010

units = cubic feet per second

Indicates day when stream flow is less than RICD flow rate and greater than or equal to 60 cfs.

12/16/2013 Replaced provisional flows with final flows for 2010. Refined call calculations and conditional formatting.

	12/10/2010 Replaced provisional data with final data for 2010. Revised calculations and conditional formatting.																														Average Historical Daily Rate (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Volume (af)	RICD Flow Rate (cfs)	RICD Daily Volume (af)	
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010					
14-Jul	1244	404	1317	2094	2915	1406	1224	543	455	481	478	783	541	1849	347	4973	823	1076	1021	1031	247	472	137	327	391	1100	579	380	1230	922	486	1009	1998	999	380	752
15-Jul	1175	370	1296	1968	2491	1259	1246	525	434	443	456	799	500	1782	340	4223	785	1038	955	944	349	493	126	306	370	1047	510	361	1150	858	468	938	1857	928	380	752
16-Jul	1328	383	1351	2264	2927	1490	2029	545	436	413	459	942	515	1855	304	5600	977	1148	865	927	615	467	129	303	399	948	476	336	1110	781	432	1057	2092	1046	380	752
17-Jul	1261	440	1279	2167	2705	1475	2052	573	428	384	438	1081	466	1697	299	5329	1071	1114	836	935	744	395	125	280	638	950	442	312	1060	745	398	1036	2051	1026	380	752
18-Jul	1156	443	1208	2022	2396	1431	1668	551	382	364	451	1005	443	1566	294	4328	1034	1116	792	865	593	350	116	270	496	864	422	323	1050	711	372	938	1857	929	380	752
19-Jul	1129	359	1130	2041	2283	1386	1631	476	365	344	454	870	427	1389	343	4066	1017	1028	756	855	478	327	116	260	446	763	414	364	995	690	349	889	1760	880	380	752
20-Jul	1032	320	1087	1944	2268	1505	1688	451	335	327	397	889	430	1334	366	4922	879	1052	704	886	415	307	122	263	411	713	456	390	956	654	322	898	1777	889	380	752
21-Jul	912	286	1033	2031	1989	1554	1677	438	317	315	385	809	430	1248	358	4445	820	978	682	807	374	292	124	253	377	661	506	417	978	613	399	855	1693	847	380	752
22-Jul	869	268	1016	1755	1823	1722	1774	457	298	316	358	782	415	1147	359	3595	760	992	765	820	333	278	118	245	330	686	426	509	1090	577	421	816	1616	808	380	752
23-Jul	848	258	1077	1716	1633	1607	1707	439	289	328	321	771	403	1042	372	3331	724	1206	732	810	327	264	117	240	320	661	400	461	1100	549	361	788	1559	780	380	752
24-Jul	765	247	1083	1498	1744	1491	1656	401	277	414	309	663	411	1045	414	3114	688	1065	844	781	308	234	110	219	353	804	361	441	1200	508	323	767	1518	759	380	752
25-Jul	723	260	1011	1377	1578	1247	1565	378	266	393	427	694	443	909	396	3321	658	904	1000	807	293	242	109	167	315	968	362	430	1010	487	297	743	1471	736	380	752
26-Jul	697	343	967	1448	1500	1018	1347	399	267	404	356	628	423	925	341	3434	625	817	891	877	270	253	133	139	287	902	357	503	949	531	278	720	1425	712	380	752
27-Jul	654	352	1015	1280	1437	958	1222	437	286	373	305	585	391	940	291	3150	608	788	804	787	268	273	147	195	290	764	365	453	888	538	263	681	1348	674	380	752
28-Jul	604	277	1046	1218	1382	862	1106	464	265	411	278	518	352	906	275	2836	580	800	792	730	254	220	135	200	274	668	322	510	997	495	255	646	1279	640	380	752
29-Jul	562	242	1168	1080	1282	811	1020	429	349	508	268	476	339	876	267	2930	644	839	1026	701	242	197	133	213	243	578	310	423	848	489	270	638	1262	631	380	752
30-Jul	543	225	993	1241	1343	805	943	394	390	470	264	448	333	857	263	2969	603	817	792	709	230	185	126	203	229	518	311	345	754	486	304	616	1219	610	380	752
31-Jul	528	218	869	1151	1264	758	919	428	503	370	273	428	314	838	268	2940	553	918	719	739	211	191	120	184	220	508	341	307	699	464	280	598	1183	592	380	752
1-Aug	494	190	857	1469	1353	752	901	358	411	441	250	388	286	951	269	2790	491	839	759	729	182	215	116	179	210	503	374	275	670	470	271	595	1178	589	380	752
2-Aug	482	177	803	1185	1192	812	866	396	343	483	300	433	278	908	301	2333	481	719	731	726	176	229	85	174	206	496	358	260	654	430	361	561	1110	555	380	752
3-Aug	479	165	745	1139	1033	773	828	336	318	445	255	436	274	814	276	2194	490	685	645	685	182	238	56	171	172	497	307	266	634	403	359	526	1041	521	380	752
4-Aug	449	161	679	1463	948	662	767	302	303	353	223	496	272	763	257	2248	492	726	612	646	181	282	56	160	182	578	278	266	617	375	303	519	1028	514	380	752
5-Aug	409	151	629	1450	933	585	725	286	282	314	212	404	347	810	232	2358	435	837	610	641	178	249	57	151	188	678	279	258	591	356	374	516	1023	511	380	752
6-Aug	378	129	585	1411	1003	536	914	278	270	282	198	377	401	759	220	2212	398	932	563	758	179	291	59	142	191	538	297	323	653	345	333	515	1019	510	380	752
7-Aug	361	122	598	1295	949	524	790	366	260	253	182	397	441	675	207	1938	378	950	544	668	169	389	69	125	185	493	265	324	693	351	296	492	974	487	380	752
8-Aug	350	119	566	1175	846	491	739	440	241	238	169	334	447	722	199	1909	359	731	508	594	160	343	71	115	172	474	248	321	796	334	288	468	926	463	380	752
9-Aug	336	115	573	1153	773	477	695	323	223	225	176	293	387	731	218	1516	345	624	469	566	132	381	62	108	162	456	239	275	724	320	259	430	852	426	380	752
10-Aug	312	119	564	965	721	439	628	319	195	231	171	281	369	689	232	1368	332	989	429	601	149	358	56	102	143	489	235	236	718	307	240	419	829	415	380	752
11-Aug	285	161	521	863	658	423	588	280	183	259	169	270	391	809	210	1441	319	1078	399	651	141	346	49	76	132	475	243	222	666	273	225	413	818	409	380	752
12-Aug	262	182	516	852	641	434	597	270	175	317	176	290	374	666	203	1399	299	1146	389	626	150	294	46	70	120	453	237	205	579	249	244	402	796	398	380	752
13-Aug	262	169	543	1015	670	368	648	256	171	276	221	309	352	612	211	1315	280	1020	374	552	179	257	44	70	116	419	240	204	528	241	252	393	778	389	380	752
14-Aug	259	147	601	792	617	340	568	251	158	260	209	276	348	564	228	1169	270	933	343	520	159	302	56	69												

Historical Daily Streamflows at the proposed Pitkin County River Park Project (revised)

1980 - 2010

units = cubic feet per second

■ Indicates day when stream flow is less than RICD flow rate and greater than or equal to 60 cfs.

12/16/2013 Replaced provisional flows with final flows for 2010. Refined call calculations and conditional formatting.

																															Average Historical Daily Rate (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Volume (af)	RICD Flow Rate (cfs)	RICD Daily Volume (af)		
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010						
28-Aug	201	99	432	408	594	275	525	279	165	175	119	203	407	487	160	810	238	413	345	350	225	208	17	101	124	251	227	170	328	167	190	280	555	278	240	475	
29-Aug	185	97	399	392	538	257	590	263	155	167	112	180	346	446	162	759	229	392	314	341	225	198	21	91	131	235	213	168	320	161	189	267	529	264	240	475	
30-Aug	178	126	381	426	513	252	540	241	148	162	108	162	308	417	158	724	214	372	295	326	232	196	25	99	126	218	198	171	315	158	186	257	509	255	240	475	
31-Aug	176	137	387	387	519	239	466	225	146	160	110	149	295	404	149	669	204	367	281	324	219	219	22	103	115	220	184	160	318	158	190	248	492	246	240	475	
1-Sep	155	130	283	295	507	209	361	193	138	146	112	147	245	338	152	492	172	326	320	331	207	212	15	97	107	206	169	165	320	152	181	222	440	220	240	475	
2-Sep	146	117	262	284	446	232	361	196	137	142	112	179	255	404	164	477	168	311	303	361	200	201	11	99	92	188	157	161	324	149	171	220	435	217	240	475	
3-Sep	143	110	249	282	376	244	341	187	129	136	111	151	230	342	179	467	162	300	284	383	180	192	16	76	90	191	150	153	314	147	160	209	414	207	240	475	
Total Count Days w/ Potential Call																																	Average Historical Daily Rate (cfs)	Average Historical Daily Volume (af)	50 Percent Average Historical Volume (af)		RICD Daily Volume (af)
	33	80	6	34	22	11	3	26	68	53	77	52	42	10	70	26	41	3	24	21	73	67	106	92	69	33	51	46	3	37	50	894	1771	125729		122621	

MOSES, WITTEMYER, HARRISON AND WOODRUFF, P.C.

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SERVED ONLY: January 9, 2014 4:18 PM
FILING ID: A7020CF1C3E0F
CASE NUMBER: 2010CW305

JOHN WITTEMYER
DAVID L. HARRISON
JAMES R. MONTGOMERY

January 9, 2014

All Counsel of Record

Re: Case No. 10CW305 (Pitkin County)

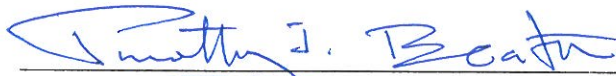
Dear Counsel:

Enclosed is a draft proposed decree dated January 9, 2014 in the above-referenced case. This draft reflects changes made after further consideration of issues raised by the staff and attorneys of the Colorado Water Conservation Board ("CWCB").

As part of the Supplemental Statement of Pitkin County to the CWCB, Pitkin County submitted a draft proposed decree dated December 20, 2013 as Exhibit O. We have made the following revisions to the draft proposed decree: (1) we reformatted the draft proposed decree to reflect the correct paragraph numbers and also fixed the internal paragraph citations to be consistent with these formatting changes; (2) we revised the compact compliance language, which is now located in paragraph 24.C; and (3) we revised the time frame for the carveout from ten years to fifteen years, which is reflected in paragraph 24.E. This revised proposed decree is Exhibit R.

Please let us know if you have any questions about these revisions.

Sincerely,



Timothy J. Beaton

Anne D. Bensard

for

MOSES, WITTEMYER, HARRISON AND
WOODRUFF, P.C.

TJB:ADB
Enclosure

EXHIBIT R

DISTRICT COURT, WATER DIVISION NO. 5, COLORADO 109 - 8th Street, Suite 104 Glenwood Springs, CO 81601-3361 (970) 947-3861 CONCERNING THE APPLICATION FOR WATER RIGHTS OF BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY, COLORADO IN PITKIN COUNTY	SERVED ONLY: January 9, 2014 4:18 PM FILING ID: A7020CF1C3E0F 1/09/2014 DRAFT 10CW305 ▲ COURT USE ONLY ▲ Case Number: 10CW305
FINDINGS OF FACT, CONCLUSIONS OF LAW, JUDGMENT AND DECREE	

This matter is before the Court on the application of the Board of County Commissioners of Pitkin County ("Pitkin County") for Surface Water Right Appropriations for Recreational In-Channel Diversion. The Court, having considered the application, the pleadings, and other materials and having become fully informed and advised with respect to the subject matter of the application, hereby makes the following decree in this matter:

FINDINGS OF FACT

1. Applicant. The applicant is Board of County Commissioners of Pitkin County, c/o John M. Ely, Pitkin County Attorney, 530 East Main Street, Third Floor, Aspen, Colorado 81611, (970) 920-5190.
2. Application, Notice and Jurisdiction. The application in this case was filed with the District Court, Water Division No. 5 on December 30, 2010. Timely and adequate notice of the application was given in the manner prescribed by law, and the Court has jurisdiction over the subject matter of this proceeding and over all persons and property affected hereby, whether those persons or owners of property have appeared or not. The

lands and water involved in this case are not within the boundaries of a designated groundwater basin.

3. Statements of Opposition. Statements of opposition were timely filed by Basalt Water Conservancy District, City of Aspen, Colorado River Water Conservation District and the Colorado River Water Conservation District, acting by and through its Colorado River Water Projects Enterprise, Colorado Water Conservation Board, Elk Mountain Lodge, LLC, Fall Line Properties, LLC, GRE II, LLP, Grand County Board of County Commissioners, Mountain Valley Cabin, LLC and Warren Creek LLC, PT RANCH BARN LLC, Southeastern Colorado Water Conservancy District, Starwood Metropolitan District, and Twin Lakes Reservoir and Canal Company. The City of Aspen withdrew its statement of opposition. The Basalt Water Conservancy District, Starwood Metropolitan District, and _____ have stipulated to the entry of this decree and such stipulations are incorporated into this decree.
4. Referral. The Application was referred to the Water Referee for Water Division No. 5 on January 3, 2011. The Application was re-referred to the Water Judge on August 31, 2012.
5. Report of the Division Engineer. The Division Engineer issued a Summary of Consultation on April 6, 2011. Pitkin County filed a Response to the Summary of Consultation on _____. The Court has considered the Summary of Consultation and Pitkin County's response.
6. CWCB Findings of Fact Considered. The Colorado Water Conservation Board ("CWCB") submitted its findings of fact to the Court on July 22, 2011 and revised/supplemental findings of fact on _____. The Court has duly considered the findings of fact as required by C.R.S. § 37-92-305.
7. General Description of Application. Pitkin County's application claimed two recreational in-channel diversion ("RICD") conditional water right appropriations for the Pitkin County River Park Project. When constructed, the Pitkin County River Park Project will consist of two in-channel diversion and control structures that divert, capture, possess, and/or control the flow of the Roaring Fork River in its natural course to create reasonable recreation experiences in and on the water for all non-motorized boating and recreational uses as described more fully below. Pitkin County has withdrawn the claim for one of the two RICD conditional water rights without prejudice. Therefore, this decree grants Pitkin County one RICD conditional water right for the Pitkin County River Park Project, as described herein.
8. Description of Water Right. The Pitkin County River Park Project is comprised of two recreational control structures: (1) the Pitkin County River Park Project Upper Control

Structure (“Upper Structure”) and (2) the Pitkin County River Park Project Lower Control Structure (“Lower Structure”) (collectively, “Structures”). One water right, the “Pitkin County RICD,” is claimed for both Structures.

A. Location of Structures. The Pitkin County River Park Project will be located on the Roaring Fork River downstream of the Highway 82 Upper Bypass Bridge, upstream of the confluence of the Fryingpan and Roaring Fork Rivers, within the channel of the Roaring Fork River in Sections 17 and 18, Township 8 South, Range 86 West of the 6th P.M., Pitkin County, Colorado. The Pitkin County River Park Project will consist of two structures within the Roaring Fork River. Each of the two structures are designed to control, concentrate, and direct the stream flows, creating hydraulic features on the river for the beneficial uses described below. A map depicting the upstream and downstream extent of the Pitkin County River Park Project, within which both Structures will be constructed, is attached as **Exhibit A**. Each of the two Structures will be constructed in the channel of the Roaring Fork River between the following two points:

- i The Pitkin County River Park Project Upstream Extent will be located in the SW¼ of the NW¼ of Section 17, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 320 feet from the west section line and 1480 feet from the north section line of said Section 17.
- ii The Pitkin County River Park Project Downstream Extent will be located in the NE¼ of the NE¼ of Section 18, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 265 feet from the east section line and 560 feet from the north section line of said Section 18.

The precise location of the two Structures and the Pitkin County RICD, upon construction, may be located within this stretch of the Roaring Fork River and will be confirmed upon making the Pitkin County RICD water right absolute.

B. Source. Roaring Fork River, tributary to the Colorado River.

C. Appropriation Information.

- i Date of initiation of appropriation. December 30, 2010.
- ii How appropriation was initiated. By Pitkin County filing its application to appropriate the Pitkin County RICD water right in Water Court.
- iii Date water first applied to beneficial use. Not applicable.

D. Rates of Flow.

- i The amounts of water claimed are rates of flow during daylight hours for different levels of recreational use as follows:

Period	Flow Rate (cfs)	Experience Level
April 15 – May 17	240	Blue, Upper Structure
May 18 – June 10	380	Green, Lower Structure
June 11 – June 25	1,350	Blue, Lower Structure
June 26 – Aug. 20	380	Green, Lower Structure
Aug. 21 – Labor Day	240	Blue, Upper Structure

- ii Minimum Rate of Flow. As required by C.R.S. § 37-92-305(13)(d), the flow rate below which there is no longer any beneficial use of the Pitkin County RICD water right at the Structures is 60 cfs. As a result, Pitkin County cannot call for water if such call will not produce at least 60 cfs at the Structures.

- E. Uses. Recreational uses, including all beneficial uses associated with RICD water rights as permitted under Colorado law, including but not limited to non-motorized boating such as kayaking, canoeing, rafting, tubing, floating, and paddling.

9. Findings Pursuant to C.R.S. § 37-92-305(13)(a). As required by C.R.S. § 37-92-305(13)(a), the Court has considered the evidence presented by the parties, the CWCB's findings of fact dated July 22, 2011, and the CWCB's revised/supplemental findings of fact dated _____, and finds as follows:

- A. The Pitkin County RICD water right decreed herein will not materially impair the ability of the State of Colorado ("State") to fully develop and place to consumptive beneficial use its compact entitlements.
- B. The adjudication and administration of the water right decreed herein will promote maximum utilization of waters of the State. The Pitkin County RICD water right decreed herein controls water and places it to the intended beneficial

uses via a reasonably efficient means of diversion without waste. The Pitkin County RICD water right is non-consumptive and does not preclude all other water development opportunities.

- C. The reach of the Roaring Fork River in which the Pitkin County River Park Project will be located is an appropriate reach of stream for the intended recreational in-channel uses.
 - D. The Pitkin County River Park Project will be accessible to the public for recreational in-channel uses. Pitkin County owns and controls the property over which access will be allowed.
 - E. The CWCB holds instream flow water rights within and below this reach of the Roaring Fork River. Pitkin County shall consult with the Colorado Division of Parks and Wildlife (“CPW”) before and during any construction and repair of the Structures to ensure that the construction activities will not impact the natural environment that the instream flow water rights seek to protect. As a result, the Court finds that exercise of the Pitkin County RICD water right decreed herein will not cause material injury to instream flow water rights appropriated pursuant to C.R.S. § 37-92-102(3) and (4).
10. Volume of Water. Fifty percent of the sum of the total average historical volume of water for the reach of stream in which the Pitkin County River Park Project will be located has been calculated to be 125,729 acre-feet per year. As summarized in the table below, the total volume of water represented by the flow rates for the Pitkin County RICD water right decreed herein is less than fifty percent of the total average historical volume. Therefore, the requirements of C.R.S. § 37-92-305(13)(f) do not apply.

Period	Number of Days	Flow Rate (cfs)	Volume (AF)
April 15 – May 17	33	240	15,682
May 18 – June 10	24	380	18,058
June 11 – June 25	15	1,350	40,095
June 26 – Aug. 20	56	380	42,134
Aug. 21 – Labor Day ¹	14	240	6,653
		Total	122,622

¹ September 3 was selected as a representative date for Labor Day in the volume calculation.
00068471-4

11. Availability of Unappropriated Water. With respect to the conditional water right and priority that is awarded herein, Pitkin County has shown that unappropriated water is available for appropriation.
12. Intent to Appropriate. Pitkin County has effected the appropriation of water by demonstrating a specific plan and intent to capture and control the claimed amounts of water at the claimed time periods and to place such water to beneficial uses, specifically recreational in-channel non-motorized boating use in the Pitkin County River Park Project. C.R.S. § 37-92-103(3)(a). Pitkin County has completed the "first step" toward the conditional appropriation by showing the requisite intent to appropriate accompanied by an open, physical demonstration of that intent.

CONCLUSIONS OF LAW

13. Incorporation of Findings of Fact. The foregoing Findings of Fact are incorporated herein.
14. Notice and Jurisdiction. The Water Court for Water Division No. 5 has jurisdiction over the subject matter of these proceedings and over all persons, owners of property and water rights that may be affected hereby, whether or not they have chosen to appear. The application in this matter and the resume publication of the application placed such persons on notice of the relief requested by the application and granted by this decree.
15. RICD Water Right Contemplated by Law. The application for approval of the Pitkin County RICD water right described in paragraph 8 of this decree is contemplated by law and satisfies the requirements of C.R.S. §§ 37-92-101, *et seq.*, including, but not limited to, C.R.S. §§ 37-92-102(6)(b), 37-92-103(10.3), 37-92-302, 37-92-305(13), 37-92-305(15) and 37-92-305(16).
16. Can and Will. The water right decreed herein can and will be diligently completed and water can and will be diverted and beneficially used for the purposes adjudicated by this decree within a reasonable time.
17. Control Structures. The amounts of water claimed and decreed herein will be controlled in the water's natural course in the Roaring Fork River during the claimed time periods by means of the Upper and Lower Structures as described in paragraph 8 above. *See* C.R.S. § 37-92-103(7). Flow rates up to 1,350 cfs will be efficiently controlled, concentrated, and diverted, without waste, to create waves, hydraulic holes, large changes in current direction, and whitewater features that are used by kayakers and other boaters for the intended recreational experiences.

18. Diversion and Use. Controlling the claimed amounts of water during the claimed time periods by the proposed in-channel structures and devices and the use of such water for the intended recreational in-channel boating purposes:
 - A. Represents a reasonably efficient practice of diversion and beneficial use, *Alamosa-La Jara Water Users Protection Ass'n v. Gould*, 674 P.2d 914, 934-5 (Colo. 1983); C.R.S. §§ 37-92-102(2)(b), and 37-92-103(4) and (7);
 - B. Represents the use of the minimum amounts of water that are reasonable and appropriate under reasonably efficient practices to accomplish without waste the purpose for which the appropriations were lawfully made by Pitkin County, C.R.S. § 37-92-103(4) and (10.3); and
 - C. Will create opportunities for the intended recreational experiences to occur, at the minimum stream flows needed to provide the identified recreational experiences. C.R.S. § 37-92-103(10.3).
19. Reasonable Recreational Experience. The proposed recreation experiences are reasonable. By using the proposed in-channel structures and devices in a reasonably efficient manner to control the amount of water that is reasonable and appropriate to accomplish without waste the intended recreational in-channel non-motorized boating purposes, and by thereby providing opportunities for reasonable recreation experiences to occur with the minimum amounts of water for each recreational opportunity, the proposed appropriation of water meets the beneficial use standards historically applied to water rights, which standards, as recognized by Senate Bill 01-216, are to be applied to "recreational in-channel diversions." See C.R.S. § 37-92-103(4) and (10.3). See also *Santa Fe Ranches Property Owners Assoc. v. Simpson*, 990 P.2d 46, 53-54 (Colo. 1999).
20. No Injury to Instream Flow Rights and Flood Control. Decreed instream flow water rights exist in and below the reach of the Pitkin County RICD water right decreed herein. Pitkin County shall consult with CPW before and during any construction or maintenance of the Structures to ensure that such activities will not impact the natural environment that the instream flow water rights seek to protect. As a result, exercise of the water right decreed herein will not cause material injury to any CWCB instream flow water rights. The CWCB maintains no liability for any damages, injury, or other issues related to or arising from Pitkin County's control structures.
21. No Injury. Operation of the Pitkin County RICD water right decreed herein will not injuriously affect any owner of or person entitled to use water under a vested water right or decreed conditional water right so long as administered in accordance with this decree.

JUDGMENT AND DECREE

22. Incorporation of the Findings of Fact and Conclusions of Law. The Findings of Fact and Conclusions of Law set forth in paragraphs 1 through 21 above are incorporated herein.
23. Approval of RICD Water Right. The Pitkin County RICD water right described in paragraph 8 above is hereby confirmed, approved and decreed, subject to the terms and conditions contained in this decree.
24. Terms and Conditions. The following terms and conditions are necessary to prevent injury to other water rights from the operation of the Pitkin County RICD water right decreed herein:
 - A. Pitkin County shall provide to CPW, the Division Engineer, and the Water Court final design documents for the Pitkin County River Park Project control structures that are signed and sealed by a professional engineer. Pitkin County will ensure that the design of the control structures will comply with applicable floodplain management requirements. Pitkin County shall consult with CPW before and during any construction or maintenance of the Structures to ensure that such activities will not impact the natural environment that the CWCB's instream flow water rights seek to protect.
 - B. Pitkin County shall maintain and repair the control structures to conform to the original design.
 - C. During any period identified by the Upper Colorado River Commission in a finding issued pursuant to Article VIII(d)(8) of the Upper Colorado River Basin Compact of 1948 for curtailment of Colorado River basin water uses within Colorado, which the State of Colorado has agreed to implement in a manner that impacts water diversions within Water Division 5, the Pitkin County RICD water right will be administered in accordance with the compact curtailment rules adopted by the State of Colorado that are then in effect, if any, including any such rules intended to avoid, delay, or limit the severity of such a compact curtailment. If no such compact curtailment rules are then in effect, Pitkin County shall not exercise the Pitkin County RICD water right during the period of any such Compact curtailment, or during any time period where the State is attempting to avoid, delay or limit the severity of a compact curtailment, unless the State Engineer or Division Engineer determines in writing that the exercise of the Pitkin County RICD water right will not affect Colorado's ability to comply with the Compact. The Pitkin County RICD water right shall be administered in accordance with any rules promulgated by the State Engineer or the CWCB

related to Colorado River compact compliance. The Pitkin County RICD water right decreed herein is not intended to materially impair the ability of Colorado to fully develop and place to consumptive beneficial use those waters available by law and interstate compact. Pursuant to C.R.S. § 37-92-103(10.3), Pitkin County may not call for water that has been lawfully stored by another appropriator.

- D. The hours and days of operation of the Pitkin County River Park Project are daylight hours between April 15 and Labor Day of each year. Pitkin County may place a call for the Pitkin County RICD water right only when such call will produce flows at the decreed control structures during daylight hours between April 15 and Labor Day, subject to other terms and conditions decreed herein.
- E. Pitkin County shall not place a call on, and the water right decreed herein shall be administered as subordinate in priority to up to 3000 acre feet of depletions between April 15 and Labor Day (the latest date for Labor Day being September 7) (“RICD Season”) on the Roaring Fork River and its tributaries that (a) have point(s) of diversion upstream from the Pitkin County River Park Project stream reach, (b) are not senior to the water right decreed herein by virtue of their year of filing, appropriation dates, or both, and (c) are decreed by the Water Judge for Water Division No. 5 based upon applications filed between January 1, 2011 and the fifteenth anniversary of the entry of the decree herein (“Fifteenth Anniversary”). The following procedures shall be used to identify the water rights that are included in this subordination:
 - i The RICD Season volume of water assigned to a decreed water right for purposes of inclusion in the subordination shall be either (a) the volume of a water right in acre-feet specifically decreed for diversion and storage, refill of such storage, and refill to replace evaporation loss from such storage, during the RICD Season or (b) the RICD Season volume of depletions in acre-feet expressly authorized by the decree for a direct flow water right or, if no depletion volume is expressly authorized by the decree, the RICD Season volume obtained by (i) multiplying the decreed diversion rate in cubic feet per second (cfs) times 1.98 (to convert cfs to acre-feet) times 143 days per RICD Season, or (ii) dividing the decreed diversion rate in gallons per minute (gpm) by 449 (to convert gpm to cfs) and then multiplying the result times 1.98 (to convert cfs to acre feet) times 143. Water rights decreed as non-consumptive as to the upstream terminus of the Pitkin County River Park Project stream reach shall be included in the subordination and shall be assigned a RICD Season diversion volume of zero.

- ii On or before April 15 of each year, Pitkin County shall prepare and file with the Division Engineer a summary of all the water rights decreed in the preceding calendar year that meet the requirements of paragraph 24.F. above, all of which will be included in the subordination, as well as a summary of all decreed water rights included in the subordination for all prior years beginning 2011. The summary shall include the identity of each water right by decree number, name, and the annual volume of water assigned to each water right for purposes of the subordination. Pitkin County shall serve the summary on counsel of record for all opposers herein or any other person or entity requesting a copy of the summary; in addition, such summary shall be provided to all those who are on the Water Division No. 5 SWSP notice network. The opposers and any other person or entity, whether a party to this proceeding or not, shall have 45 days within which to file objections to the summary with the Division Engineer. If no objections are filed, the summary shall be deemed final for purposes of the subordination for that year, except as otherwise provided in subparagraph (3) below. If objections are filed and the parties are unable to resolve the objections, any party may file a petition with the Water Judge to hold a hearing to resolve objections.
- iii After the 3000 acre-feet per RICD Season limit on the subordination is reached or all applications filed between January 1, 2011 and the Fifteenth Anniversary are decreed or otherwise disposed of, whichever occurs first, no further action by Pitkin County shall be required under subparagraph (2) above. For purposes of administration, the priority date for water rights decreed herein shall be the earlier of the date when the RICD Season limit is reached or the Fifteenth Anniversary. In the event that the 3000 acre-feet RICD Season limit is reached by virtue of a water right that will exceed the 3000 acre-feet RICD Season limit if included in its entirety, only that portion of the water right needed to bring the RICD Season limit to 3000 acre-feet shall be included in the subordination, and the remaining portion of the water right shall be administered as junior to the Pitkin County RICD water right. If any conditional water rights included within the subordination are thereafter canceled by the Water Judge or otherwise abandoned prior to the Fifteenth Anniversary, Pitkin County shall notify the Division Engineer and the opposers of the identity and RICD Season volume of diversions of the additional water rights to be included in the subordination, if any, determined using the criteria in subparagraph (1) above, as a result of any such cancelation of conditional water rights.

- iv After the Fifteenth Anniversary or when the 3000 acre-feet RICD Season limit is reached, whichever is earlier as provided herein, and pursuant to C.R.S. § 37-92-103(10.3), the presumption that there will not be material injury to the Pitkin County RICD water right from subsequent appropriations or changes of water rights by any individual water right appropriations or water right changes shall be determined in accordance with the provisions of C.R.S. § 37-92-103(10.3).
 - v After the Fifteenth Anniversary or when the 3000 acre-feet limit RICD Season limit is reached, whichever is earlier as provided herein, Pitkin County shall notify the Water Court, the Division Engineer, and the opposers that no further action by Pitkin County shall be required under subparagraph (2) above, and that the priority date for purposes of administration has been established pursuant to subparagraph (3) above, subject to the cancellation or abandonment of conditional water rights prior to the Fifteenth Anniversary as allowed by subparagraph (3) above.
- F. Pitkin County will not claim injury to the Pitkin County RICD water right as the basis for filing a statement of opposition to any application for water use in Pitkin County that is filed under the 3000 acre feet per RICD Season subordination described in paragraph 24.F.
- G. Only Pitkin County employees or their representatives shall place a call for the Pitkin County RICD water right. Pitkin County shall designate the individuals who may place a call as part of its submission of accounting records to the Division Engineer.
25. Measurement and Administration. Pitkin County shall identify a stream gauge that will ensure that the Pitkin County RICD water right decreed herein can be adequately measured and administered through the proposed reach, as acceptable to the Division Engineer. The Division Engineer shall determine whether adjustment for any intervening inflows and diversions between the Pitkin County RICD water right and that gauge is required.
26. No Material Injury. The terms and conditions provided for in this decree are adequate to assure that no material injury to any water users will result from the operation of the Pitkin County RICD water right.
27. Measuring Devices. Pitkin County shall install and maintain, at Pitkin County's expense, such additional meters, gauges, or other measuring devices as are reasonably required by the Water Commissioner or Division Engineer, and shall report at reasonable times to the

Water Commissioner and/or Division Engineer the readings of such meters, gauges or other measuring devices pursuant to C.R.S. § 37-92-502(5)(a).

28. Accounting. Pitkin County shall provide accounting forms in a manner acceptable to the Division Engineer to incorporate the Pitkin County RICD water right decreed herein. Such accounting forms are not decreed herein, and may be changed from time to time with the approval of the Division Engineer, as may be appropriate under circumstances then existing. The accounting forms shall identify the individuals that may call for the Pitkin County RICD water right, as required by paragraph 24.J. The accounting forms shall be adequate to account for Pitkin County's use under this decree on a daily basis and shall be completed and provided to the Division Engineer at intervals reasonably required by the Division Engineer. Upon request and payment of reasonable reproduction costs, Pitkin County shall provide such accounting forms to opposers.
29. Priorities. The Pitkin County RICD water right and priority granted herein are based on the appropriation date contained herein and on the filing of the application in this case in the Water Court in the year of 2010, subject to the provisions set forth in paragraph 24.F. above. The Pitkin County RICD water right and priority shall be administered as having been filed in 2010, and shall be junior to all water rights granted pursuant to applications filed in previous years. As between all water rights applied for in the same calendar year, priorities shall be determined by historical dates of appropriation and shall not be affected by the date of application or the date of entry of ruling.
30. Diligence. The conditional Pitkin County RICD water right decreed herein is hereby continued in full force and effect until the last day of _____, 20__. To maintain the conditional Pitkin County RICD water right, an application for a finding of reasonable diligence shall be filed on or before the last day of _____, 20__, or a showing made on or before such date that such conditional right has become absolute by reason of the completion of the appropriation.
31. Notice of Transfer. Upon the sale or other transfer of the conditional water right decreed herein, the transferee shall file with the Water Court having jurisdiction a notice of transfer which shall state: (1) the title and case number of the case in which the conditional decree was issued, (2) the description of the conditional water right transferred, (3) the name of the transferor, (4) the name and mailing address of the transferee, and (5) a copy of the recorded deed or other transfer document. The owner of any conditional water right shall notify the Clerk of the Water Court having jurisdiction of any change in mailing address.
32. The Water Clerk shall file a copy of this Decree with the Division Engineer of Water Division No. 5 and the State Engineer.

Dated: _____

BY THE COURT

James B. Boyd
Water Judge
Water Division No. 5
State of Colorado

DISTRICT COURT, WATER DIVISION NO. 5, COLORADO 109 - 8th Street, Suite 104 Glenwood Springs, CO 81601-3361 (970) 947-3861 CONCERNING THE APPLICATION FOR WATER RIGHTS OF BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY, COLORADO IN PITKIN COUNTY Timothy J. Beaton, #10403 Anne D. Bensard, #45316 Moses, Wittemyer, Harrison and Woodruff, P.C. P. O. Box 1440 Boulder, Colorado 80306-1440 Telephone: (303) 443-8782 Facsimile: (303) 443-8796 tbeaton@mwhw.com; abensard@mwhw.com	▲ COURT USE ONLY ▲ Case Number: 10CW305
REBUTTAL STATEMENT OF PITKIN COUNTY	

The Board of County Commissioners of Pitkin County (“Pitkin County”) submits this Rebuttal Statement in response to the Prehearing Statements filed by other parties.

A. PITKIN COUNTY’S EXPERT AND EXHIBITS SUPPORT APPROVAL OF ITS RECREATIONAL IN-CHANNEL DIVERSION WATER RIGHT

In support of its claim for a recreational in-channel diversion water right (“RICD”) for its River Park, Pitkin County has submitted Exhibits A-S. These expert reports and related documents provide detailed analyses to support favorable findings for the RICD under the standards that the CWCB is to consider in its fact-finding role under C.R.S. § 37-92-102(6)(b). Neither Twin Lakes nor any other party has objected to Pitkin County’s exhibits. Upon review of these exhibits, including expert reports, the CWCB staff has proposed favorable findings of fact for the RICD.

Pitkin County emphasizes that since its initial presentation to the Board regarding this RICD in 2011, it has made the following significant changes to the RICD that support favorable findings of fact: (i) revised its claim from two RICD water rights to one RICD water

right; (ii) revised its flow rates to be less than 50% of the total average historical volume of stream flows during the RICD season for the RICD reach; (iii) included the following additional terms and conditions that will promote maximum utilization of the waters of the State: (1) Pitkin County cannot call for water under the RICD if such a call will not produce at least 60 cfs at the control structures; (2) Pitkin County will only place a call for the RICD when such a call will produce flows at the decreed control structures during daylight hours; and (3) Pitkin County has included a 3,000 acre feet carveout that grants additional protections to other water users. Pitkin County's water consultant, Louis T. Rozaklis, has provided an expert opinion that, based on the above-cited conditions, the claimed RICD will promote maximum utilization of waters of the State of Colorado and will not materially impair Colorado's ability to fully use its Colorado River Compact entitlements.

B. TWIN LAKES' DESIRE FOR FUTURE EXCHANGES

Pitkin County believes that the only remaining contested issue is language related to the Colorado River Compact entitlement and curtailment. Pitkin County has adopted compact compliance language approved by the CWCB staff, as set forth in paragraph 24.C. of the proposed decree, Exhibit S (attached hereto).

In its Pre-Meeting Statement, Twin Lakes Reservoir and Canal Company ("Twin Lakes") seeks to have the RICD subjected to future, undetermined exchanges that Twin Lakes may operate to its transbasin diversion points in the upper Roaring Fork basin. The language that Twin Lakes has proposed to Pitkin County is in the form of a selective subordination to yet-undefined exchanges. The Division Engineer for Water Division No. 5 has indicated to Pitkin County that he would treat such a selective subordination as a general subordination. This means that the RICD would be relegated to an extremely junior water right at some point in the future, which priority date could be the year 2050 or later. Taken to its extreme, Twin Lakes' request would prevent Pitkin County's RICD from ever obtaining a firm priority date.

Twin Lakes' position is undermined by the extensive terms and conditions described above that Pitkin County has incorporated into the proposed RICD decree in order to preserve the State's ability to fully use its Colorado River Compact entitlement. Pitkin County notes the "below 50% of total average historical volume" condition would leave on an average yearly basis 198,201 acre-feet available for diversion by other water rights holders above the RICD reach both within and outside the RICD season, including future exchanges by Twin Lakes.

C. THE RIVER DISTRICT AND A NUMBER OF LOCAL USERS HAVE INDICATED SUPPORT FOR THE RICD PURSUANT TO THE CONDITIONS THAT PITKIN COUNTY HAS PROPOSED

The Colorado River Water Conservation District (“River District”) and Fall Line Properties, LLC, Mountain Valley Cabin, LLC, Warren Creek, LLC, and PT Ranch Barn, LLC (collectively the “Local Users”) also submitted Prehearing Statements that support the RICD in its current form. Contrary to Twin Lakes’ position, the River District has stated that the RICD “can be decreed while still protecting the state’s goals of maximum utilization and optimum use.” *River District’s Prehearing Statement*. The Local Users have indicated that the conditions in the proposed RICD decree “will protect numerous water rights from injury.” *Prehearing Statement of Local Users*.

The River District has also submitted a rebuttal statement, which expressed a concern with the compact compliance language. As described above, the revised proposed decree, attached as Exhibit S, includes language that addresses the River District’s concern and concerns of other opposers, with the exception of Twin Lakes. We understand that the River District has also expressed specific concerns with the CWCB Staff’s proposed Findings of Fact, and that it has worked out these concerns with the CWCB Staff.

CONCLUSION

Pitkin County has provided detailed analyses of how its RICD has been designed to narrowly target the recreational experiences for which the River Park is designed. Pitkin County has demonstrated that the RICD complies with the CWCB regulations and the requirements of C.R.S. § 37-92-102(6)(b). The CWCB staff has provided favorable proposed findings of fact, and the River District and Local Users have indicated that they have reached a settlement with Pitkin County, and the proposed decree addresses their concerns. For these reasons, Pitkin County respectfully requests that the CWCB enter the staff’s proposed favorable findings of fact for the RICD, since they are consistent with the expert reports and exhibits presented by Pitkin County.

Respectfully submitted this 16th day of January, 2014.

MOSES, WITTEMYER, HARRISON AND
WOODRUFF, P.C.

/s/ Timothy J. Beaton

Timothy J. Beaton, # 10403

Anne D. Bensard, #45316

Attorney for Applicant, Board of County
Commissioners of Pitkin County, Colorado

CERTIFICATE OF SERVICE
(Case No. 10CW305)

I HEREBY CERTIFY that the foregoing **REBUTTAL STATEMENT OF PITKIN COUNTY TO THE COLORADO WATER CONSERVATION BOARD** was served electronically through ICCES this 16th day of January, 2014, on the parties of record.

/s/ Carol Niland

Carol Niland

EXHIBIT S

DISTRICT COURT, WATER DIVISION NO. 5, COLORADO 109 - 8th Street, Suite 104 Glenwood Springs, CO 81601-3361 (970) 947-3861 CONCERNING THE APPLICATION FOR WATER RIGHTS OF BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY, COLORADO IN PITKIN COUNTY	1/15/2014 DRAFT ▲ COURT USE ONLY ▲ Case Number: 10CW305
FINDINGS OF FACT, CONCLUSIONS OF LAW, JUDGMENT AND DECREE	

This matter is before the Court on the application of the Board of County Commissioners of Pitkin County ("Pitkin County") for Surface Water Right Appropriations for Recreational In-Channel Diversion. The Court, having considered the application, the pleadings, and other materials and having become fully informed and advised with respect to the subject matter of the application, hereby makes the following decree in this matter:

FINDINGS OF FACT

1. Applicant. The applicant is Board of County Commissioners of Pitkin County, c/o John M. Ely, Pitkin County Attorney, 530 East Main Street, Third Floor, Aspen, Colorado 81611, (970) 920-5190.
2. Application, Notice and Jurisdiction. The application in this case was filed with the District Court, Water Division No. 5 on December 30, 2010. Timely and adequate notice of the application was given in the manner prescribed by law, and the Court has jurisdiction over the subject matter of this proceeding and over all persons and property affected hereby, whether those persons or owners of property have appeared or not. The

lands and water involved in this case are not within the boundaries of a designated groundwater basin.

3. Statements of Opposition. Statements of opposition were timely filed by Basalt Water Conservancy District, City of Aspen, Colorado River Water Conservation District and the Colorado River Water Conservation District, acting by and through its Colorado River Water Projects Enterprise, Colorado Water Conservation Board, Elk Mountain Lodge, LLC, Fall Line Properties, LLC, GRE II, LLP, Grand County Board of County Commissioners, Mountain Valley Cabin, LLC and Warren Creek LLC, PT RANCH BARN LLC, Southeastern Colorado Water Conservancy District, Starwood Metropolitan District, and Twin Lakes Reservoir and Canal Company. The City of Aspen withdrew its statement of opposition. The Basalt Water Conservancy District, Starwood Metropolitan District, and _____ have stipulated to the entry of this decree and such stipulations are incorporated into this decree.
4. Referral. The Application was referred to the Water Referee for Water Division No. 5 on January 3, 2011. The Application was re-referred to the Water Judge on August 31, 2012.
5. Report of the Division Engineer. The Division Engineer issued a Summary of Consultation on April 6, 2011. Pitkin County filed a Response to the Summary of Consultation on _____. The Court has considered the Summary of Consultation and Pitkin County's response.
6. CWCB Findings of Fact Considered. The Colorado Water Conservation Board ("CWCB") submitted its findings of fact to the Court on July 22, 2011 and revised/supplemental findings of fact on _____. The Court has duly considered the findings of fact as required by C.R.S. § 37-92-305.
7. General Description of Application. Pitkin County's application claimed two recreational in-channel diversion ("RICD") conditional water right appropriations for the Pitkin County River Park Project. When constructed, the Pitkin County River Park Project will consist of two in-channel diversion and control structures that divert, capture, possess, and/or control the flow of the Roaring Fork River in its natural course to create reasonable recreation experiences in and on the water for all non-motorized boating and recreational uses as described more fully below. Pitkin County has withdrawn the claim for one of the two RICD conditional water rights without prejudice. Therefore, this decree grants Pitkin County one RICD conditional water right for the Pitkin County River Park Project, as described herein.
8. Description of Water Right. The Pitkin County River Park Project is comprised of two recreational control structures: (1) the Pitkin County River Park Project Upper Control

Structure (“Upper Structure”) and (2) the Pitkin County River Park Project Lower Control Structure (“Lower Structure”) (collectively, “Structures”). One water right, the “Pitkin County RICD,” is claimed for both Structures.

A. Location of Structures. The Pitkin County River Park Project will be located on the Roaring Fork River downstream of the Highway 82 Upper Bypass Bridge, upstream of the confluence of the Fryingpan and Roaring Fork Rivers, within the channel of the Roaring Fork River in Sections 17 and 18, Township 8 South, Range 86 West of the 6th P.M., Pitkin County, Colorado. The Pitkin County River Park Project will consist of two structures within the Roaring Fork River. Each of the two structures are designed to control, concentrate, and direct the stream flows, creating hydraulic features on the river for the beneficial uses described below. A map depicting the upstream and downstream extent of the Pitkin County River Park Project, within which both Structures will be constructed, is attached as **Exhibit A**. Each of the two Structures will be constructed in the channel of the Roaring Fork River between the following two points:

- i The Pitkin County River Park Project Upstream Extent will be located in the SW¼ of the NW¼ of Section 17, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 320 feet from the west section line and 1480 feet from the north section line of said Section 17.
- ii The Pitkin County River Park Project Downstream Extent will be located in the NE¼ of the NE¼ of Section 18, Township 8 South, Range 86 West, 6th P.M., Pitkin County, Colorado, at a point 265 feet from the east section line and 560 feet from the north section line of said Section 18.

The precise location of the two Structures and the Pitkin County RICD, upon construction, may be located within this stretch of the Roaring Fork River and will be confirmed upon making the Pitkin County RICD water right absolute.

B. Source. Roaring Fork River, tributary to the Colorado River.

C. Appropriation Information.

- i Date of initiation of appropriation. December 30, 2010.
- ii How appropriation was initiated. By Pitkin County filing its application to appropriate the Pitkin County RICD water right in Water Court.
- iii Date water first applied to beneficial use. Not applicable.

D. Rates of Flow.

- i The amounts of water claimed are rates of flow during daylight hours for different levels of recreational use as follows:

Period	Flow Rate (cfs)	Experience Level
April 15 – May 17	240	Blue, Upper Structure
May 18 – June 10	380	Green, Lower Structure
June 11 – June 25	1,350	Blue, Lower Structure
June 26 – Aug. 20	380	Green, Lower Structure
Aug. 21 – Labor Day	240	Blue, Upper Structure

- ii Minimum Rate of Flow. As required by C.R.S. § 37-92-305(13)(d), the flow rate below which there is no longer any beneficial use of the Pitkin County RICD water right at the Structures is 60 cfs. As a result, Pitkin County cannot call for water if such call will not produce at least 60 cfs at the Structures.

- E. Uses. Recreational uses, including all beneficial uses associated with RICD water rights as permitted under Colorado law, including but not limited to non-motorized boating such as kayaking, canoeing, rafting, tubing, floating, and paddling.

9. Findings Pursuant to C.R.S. § 37-92-305(13)(a). As required by C.R.S. § 37-92-305(13)(a), the Court has considered the evidence presented by the parties, the CWCB's findings of fact dated July 22, 2011, and the CWCB's revised/supplemental findings of fact dated _____, and finds as follows:

- A. The Pitkin County RICD water right decreed herein will not materially impair the ability of the State of Colorado ("State") to fully develop and place to consumptive beneficial use its compact entitlements.
- B. The adjudication and administration of the water right decreed herein will promote maximum utilization of waters of the State. The Pitkin County RICD water right decreed herein controls water and places it to the intended beneficial

uses via a reasonably efficient means of diversion without waste. The Pitkin County RICD water right is non-consumptive and does not preclude all other water development opportunities.

- C. The reach of the Roaring Fork River in which the Pitkin County River Park Project will be located is an appropriate reach of stream for the intended recreational in-channel uses.
 - D. The Pitkin County River Park Project will be accessible to the public for recreational in-channel uses. Pitkin County owns and controls the property over which access will be allowed.
 - E. The CWCB holds instream flow water rights within and below this reach of the Roaring Fork River. Pitkin County shall consult with the Colorado Division of Parks and Wildlife (“CPW”) before and during any construction and repair of the Structures to ensure that the construction activities will not impact the natural environment that the instream flow water rights seek to protect. As a result, the Court finds that exercise of the Pitkin County RICD water right decreed herein will not cause material injury to instream flow water rights appropriated pursuant to C.R.S. § 37-92-102(3) and (4).
10. Volume of Water. Fifty percent of the sum of the total average historical volume of water for the reach of stream in which the Pitkin County River Park Project will be located has been calculated to be 125,729 acre-feet per year. As summarized in the table below, the total volume of water represented by the flow rates for the Pitkin County RICD water right decreed herein is less than fifty percent of the sum of the total average historical volume. Therefore, the requirements of C.R.S. § 37-92-305(13)(f) do not apply.

Period	Number of Days	Flow Rate (cfs)	Volume (AF)
April 15 – May 17	33	240	15,682
May 18 – June 10	24	380	18,058
June 11 – June 25	15	1,350	40,095
June 26 – Aug. 20	56	380	42,134
Aug. 21 – Labor Day ¹	14	240	6,653
		Total	122,622

¹ September 3 was selected as a representative date for Labor Day in the volume calculation.

11. Availability of Unappropriated Water. With respect to the conditional water right and priority that is awarded herein, Pitkin County has shown that unappropriated water is available for appropriation.
12. Intent to Appropriate. Pitkin County has effected the appropriation of water by demonstrating a specific plan and intent to capture and control the claimed amounts of water at the claimed time periods and to place such water to beneficial uses, specifically recreational in-channel non-motorized boating use in the Pitkin County River Park Project. C.R.S. § 37-92-103(3)(a). Pitkin County has completed the "first step" toward the conditional appropriation by showing the requisite intent to appropriate accompanied by an open, physical demonstration of that intent.

CONCLUSIONS OF LAW

13. Incorporation of Findings of Fact. The foregoing Findings of Fact are incorporated herein.
14. Notice and Jurisdiction. The Water Court for Water Division No. 5 has jurisdiction over the subject matter of these proceedings and over all persons, owners of property and water rights that may be affected hereby, whether or not they have chosen to appear. The application in this matter and the resume publication of the application placed such persons on notice of the relief requested by the application and granted by this decree.
15. RICD Water Right Contemplated by Law. The application for approval of the Pitkin County RICD water right described in paragraph 8 of this decree is contemplated by law and satisfies the requirements of C.R.S. §§ 37-92-101, *et seq.*, including, but not limited to, C.R.S. §§ 37-92-102(6)(b), 37-92-103(10.3), 37-92-302, 37-92-305(13), 37-92-305(15) and 37-92-305(16).
16. Can and Will. The water right decreed herein can and will be diligently completed and water can and will be diverted and beneficially used for the purposes adjudicated by this decree within a reasonable time.
17. Control Structures. The amounts of water claimed and decreed herein will be controlled in the water's natural course in the Roaring Fork River during the claimed time periods by means of the Upper and Lower Structures as described in paragraph 8 above. *See* C.R.S. § 37-92-103(7). Flow rates up to 1,350 cfs will be efficiently controlled, concentrated, and diverted, without waste, to create waves, hydraulic holes, large changes in current direction, and whitewater features that are used by kayakers and other boaters for the intended recreational experiences.

18. Diversion and Use. Controlling the claimed amounts of water during the claimed time periods by the proposed in-channel structures and devices and the use of such water for the intended recreational in-channel boating purposes:
 - A. Represents a reasonably efficient practice of diversion and beneficial use, *Alamosa-La Jara Water Users Protection Ass'n v. Gould*, 674 P.2d 914, 934-5 (Colo. 1983); C.R.S. §§ 37-92-102(2)(b), and 37-92-103(4) and (7);
 - B. Represents the use of the minimum amounts of water that are reasonable and appropriate under reasonably efficient practices to accomplish without waste the purpose for which the appropriations were lawfully made by Pitkin County, C.R.S. § 37-92-103(4) and (10.3); and
 - C. Will create opportunities for the intended recreational experiences to occur, at the minimum stream flows needed to provide the identified recreational experiences. C.R.S. § 37-92-103(10.3).
19. Reasonable Recreational Experience. The proposed recreation experiences are reasonable. By using the proposed in-channel structures and devices in a reasonably efficient manner to control the amount of water that is reasonable and appropriate to accomplish without waste the intended recreational in-channel non-motorized boating purposes, and by thereby providing opportunities for reasonable recreation experiences to occur with the minimum amounts of water for each recreational opportunity, the proposed appropriation of water meets the beneficial use standards historically applied to water rights, which standards, as recognized by Senate Bill 01-216, are to be applied to "recreational in-channel diversions." See C.R.S. § 37-92-103(4) and (10.3). See also *Santa Fe Ranches Property Owners Assoc. v. Simpson*, 990 P.2d 46, 53-54 (Colo. 1999).
20. No Injury to Instream Flow Rights and Flood Control. Decreed instream flow water rights exist in and below the reach of the Pitkin County RICD water right decreed herein. Pitkin County shall consult with CPW before and during any construction or maintenance of the Structures to ensure that such activities will not impact the natural environment that the instream flow water rights seek to protect. As a result, exercise of the water right decreed herein will not cause material injury to any CWCB instream flow water rights. The CWCB maintains no liability for any damages, injury, or other issues related to or arising from Pitkin County's control structures.
21. No Injury. Operation of the Pitkin County RICD water right decreed herein will not injuriously affect any owner of or person entitled to use water under a vested water right or decreed conditional water right so long as administered in accordance with this decree.

JUDGMENT AND DECREE

22. Incorporation of the Findings of Fact and Conclusions of Law. The Findings of Fact and Conclusions of Law set forth in paragraphs 1 through 21 above are incorporated herein.
23. Approval of RICD Water Right. The Pitkin County RICD water right described in paragraph 8 above is hereby confirmed, approved and decreed, subject to the terms and conditions contained in this decree.
24. Terms and Conditions. The following terms and conditions are necessary to prevent injury to other water rights from the operation of the Pitkin County RICD water right decreed herein:
 - A. Pitkin County shall provide to CPW, the Division Engineer, and the Water Court final design documents for the Pitkin County River Park Project control structures that are signed and sealed by a professional engineer. Pitkin County will ensure that the design of the control structures will comply with applicable floodplain management requirements. Pitkin County shall consult with CPW before and during any construction or maintenance of the Structures to ensure that such activities will not impact the natural environment that the CWCB's instream flow water rights seek to protect.
 - B. Pitkin County shall maintain and repair the control structures to conform to the original design.
 - C. During any period identified by the Upper Colorado River Commission in a finding issued pursuant to Article VIII(d)(8) of the Upper Colorado River Basin Compact of 1948 for curtailment of Colorado River basin water uses within Colorado, which the State of Colorado has agreed to implement in a manner that impacts water diversions within Water Division 5, the Pitkin County RICD water right will be administered in accordance with the compact curtailment rules adopted by the State Engineer or such other state agency as may, in the future, be empowered to adopt rules or otherwise act to assure compliance with interstate water compacts that are then in effect, if any, including any such rules intended to avoid, delay, or limit the severity of such a compact curtailment. If no such compact curtailment rules are then in effect, Pitkin County shall not exercise the Pitkin County RICD water right during the period of any such Compact curtailment, or during any time period where the State is attempting to avoid, delay or limit the severity of a compact curtailment, unless the State Engineer or Division Engineer determines in writing that the exercise of the Pitkin County RICD water right will not affect Colorado's ability to comply with the Compact.

The Pitkin County RICD water right shall be administered in accordance with any rules promulgated by the State of Colorado related to Colorado River compact compliance. The Pitkin County RICD water right decreed herein is not intended to materially impair the ability of Colorado to fully develop and place to consumptive beneficial use those waters available by law and interstate compact.

- D. Pursuant to C.R.S. § 37-92-103(10.3), Pitkin County may not call for water that has been lawfully stored by another appropriator.
- E. The hours and days of operation of the Pitkin County River Park Project are daylight hours between April 15 and Labor Day of each year. Pitkin County may place a call for the Pitkin County RICD water right only when such call will produce flows at the decreed control structures during daylight hours between April 15 and Labor Day, subject to other terms and conditions decreed herein.
- F. Pitkin County shall not place a call on, and the water right decreed herein shall be administered as subordinate in priority to up to 3,000 acre feet of depletions between April 15 and Labor Day (the latest date for Labor Day being September 7) ("RICD Season") on the Roaring Fork River and its tributaries that (a) have point(s) of diversion upstream from the Pitkin County River Park Project stream reach, (b) are not senior to the water right decreed herein by virtue of their year of filing, appropriation dates, or both, and (c) are decreed by the Water Judge for Water Division No. 5 based upon applications filed between January 1, 2011 and the fifteenth anniversary of the entry of the decree herein ("Fifteenth Anniversary"). The following procedures shall be used to identify the water rights that are included in this subordination:
 - i The RICD Season volume of water assigned to a decreed water right for purposes of inclusion in the subordination shall be either (a) the volume of a water right in acre-feet specifically decreed for diversion and storage, refill of such storage, and refill to replace evaporation loss from such storage, during the RICD Season or (b) the RICD Season volume of depletions in acre-feet expressly authorized by the decree for a direct flow water right or, if no depletion volume is expressly authorized by the decree, the RICD Season volume obtained by (i) multiplying the decreed diversion rate in cubic feet per second (cfs) times 1.98 (to convert cfs to acre-feet) times 143 days per RICD Season, or (ii) dividing the decreed diversion rate in gallons per minute (gpm) by 449 (to convert gpm to cfs) and then multiplying the result times 1.98 (to convert cfs to acre feet) times 143. Water rights decreed as non-consumptive as to the upstream terminus of the Pitkin County River Park Project stream reach shall be

included in the subordination and shall be assigned a RICD Season diversion volume of zero.

- ii On or before April 15 of each year, Pitkin County shall prepare and file with the Division Engineer a summary of all the water rights decreed in the preceding calendar year that meet the requirements of paragraph 24.F. above, all of which will be included in the subordination, as well as a summary of all decreed water rights included in the subordination for all prior years beginning 2011. The summary shall include the identity of each water right by decree number, name, and the annual volume of water assigned to each water right for purposes of the subordination. Pitkin County shall serve the summary on counsel of record for all opposers herein or any other person or entity requesting a copy of the summary; in addition, such summary shall be provided to all those who are on the Water Division No. 5 SWSP notice network. The opposers and any other person or entity, whether a party to this proceeding or not, shall have 45 days within which to file objections to the summary with the Division Engineer. If no objections are filed, the summary shall be deemed final for purposes of the subordination for that year, except as otherwise provided in subparagraph (iii) below. If objections are filed and the parties are unable to resolve the objections, any party may file a petition with the Water Judge to hold a hearing to resolve objections.
- iii After the 3,000 acre-feet per RICD Season limit on the subordination is reached or all applications filed between January 1, 2011 and the Fifteenth Anniversary are decreed or otherwise disposed of, whichever occurs first, no further action by Pitkin County shall be required under subparagraph (ii) above. For purposes of administration, the priority date for water rights decreed herein shall be the earlier of the date of when the RICD Season limit is reached or the Fifteenth Anniversary. In the event that the 3,000 acre-feet RICD Season limit is reached by virtue of a water right that will exceed the 3,000 acre-feet RICD Season limit if included in its entirety, only that portion of the water right needed to bring the RICD Season limit to 3,000 acre-feet shall be included in the subordination, and the remaining portion of the water right shall be administered as junior to the Pitkin County RICD water right. If any conditional water rights included within the subordination are thereafter canceled by the Water Judge or otherwise abandoned prior to the Fifteenth Anniversary, Pitkin County shall notify the Division Engineer and the opposers of the identity and RICD Season volume of diversions of the additional water rights to be included in the subordination, if any, determined using the criteria in

subparagraph (i) above, as a result of any such cancelation of conditional water rights or abandonment.

- iv After the Fifteenth Anniversary or when the 3,000 acre-feet RICD Season limit is reached, whichever is earlier as provided herein, and pursuant to C.R.S. § 37-92-103(10.3), the presumption that there will not be material injury to the Pitkin County RICD water right from subsequent appropriations or changes of water rights by any individual water right appropriations or water right changes shall be determined in accordance with the provisions of C.R.S. § 37-92-103(10.3).
- v After the Fifteenth Anniversary or when the 3,000 acre-feet limit RICD Season limit is reached, whichever is earlier as provided herein, Pitkin County shall notify the Water Court, the Division Engineer, and the opposers that no further action by Pitkin County shall be required under subparagraph (ii) above, and that the priority date for purposes of administration has been established pursuant to subparagraph (iii) above, subject to the cancellation or abandonment of conditional water rights prior to the Fifteenth Anniversary as allowed by subparagraph (iii) above.

G. Pitkin County will not claim injury to the Pitkin County RICD water right as the basis for filing a statement of opposition to any application for water use in Pitkin County that is filed under the 3,000 acre feet per RICD Season subordination described in paragraph 24.F.

H. Only Pitkin County employees or their representatives shall place a call for the Pitkin County RICD water right. Pitkin County shall designate the individuals who may place a call as part of its submission of accounting records to the Division Engineer.

- 25. Measurement and Administration. Pitkin County shall identify a stream gauge that will ensure that the Pitkin County RICD water right decreed herein can be adequately measured and administered through the proposed reach, as acceptable to the Division Engineer. The Division Engineer shall determine whether adjustment for any intervening inflows and diversions between the Pitkin County RICD water right and that gauge is required.
- 26. No Material Injury. The terms and conditions provided for in this decree are adequate to assure that no material injury to any water users will result from the operation of the Pitkin County RICD water right.

27. Measuring Devices. Pitkin County shall install and maintain, at Pitkin County's expense, such additional meters, gauges, or other measuring devices as are reasonably required by the Water Commissioner or Division Engineer, and shall report at reasonable times to the Water Commissioner and/or Division Engineer the readings of such meters, gauges or other measuring devices pursuant to C.R.S. § 37-92-502(5)(a).
28. Accounting. Pitkin County shall provide accounting forms in a manner acceptable to the Division Engineer to incorporate the Pitkin County RICD water right decreed herein. Such accounting forms are not decreed herein, and may be changed from time to time with the approval of the Division Engineer, as may be appropriate under circumstances then existing. The accounting forms shall identify the individuals that may call for the Pitkin County RICD water right, as required by paragraph 24.H. The accounting forms shall be adequate to account for Pitkin County's use under this decree on a daily basis and shall be completed and provided to the Division Engineer at intervals reasonably required by the Division Engineer. Upon request and payment of reasonable reproduction costs, Pitkin County shall provide such accounting forms to opposers.
29. Priorities. The Pitkin County RICD water right and priority granted herein are based on the appropriation date contained herein and on the filing of the application in this case in the Water Court in the year of 2010, subject to the provisions set forth in paragraph 24.F. above. The Pitkin County RICD water right and priority shall be administered as having been filed in 2010, and shall be junior to all water rights granted pursuant to applications filed in previous years. As between all water rights applied for in the same calendar year, priorities shall be determined by historical dates of appropriation and shall not be affected by the date of application or the date of entry of ruling.
30. Diligence. The conditional Pitkin County RICD water right decreed herein is hereby continued in full force and effect until the last day of _____, 20___. To maintain the conditional Pitkin County RICD water right, an application for a finding of reasonable diligence shall be filed on or before the last day of _____, 20___, or a showing made on or before such date that such conditional right has become absolute by reason of the completion of the appropriation.
31. Notice of Transfer. Upon the sale or other transfer of the conditional water right decreed herein, the transferee shall file with the Water Court having jurisdiction a notice of transfer which shall state: (1) the title and case number of the case in which the conditional decree was issued, (2) the description of the conditional water right transferred, (3) the name of the transferor, (4) the name and mailing address of the transferee, and (5) a copy of the recorded deed or other transfer document. The owner of any conditional water right shall notify the Clerk of the Water Court having jurisdiction of any change in mailing address.

32. The Water Clerk shall file a copy of this Decree with the Division Engineer of Water Division No. 5 and the State Engineer.

Dated: _____

BY THE COURT

James B. Boyd
Water Judge
Water Division No. 5
State of Colorado

OBJECTORS' SUBMITTALS

BEFORE THE COLORADO WATER CONSERVATION BOARD STATE OF COLORADO CONCERNING THE APPLICATION FOR WATER RIGHTS OF THE BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY IN PITKIN COUNTY, COLORADO. Attorneys for the Twin Lakes Reservoir and Canal Company: CARLSON, HAMMOND & PADDOCK, L.L.C. Mary Mead Hammond, Reg. No. 9851 Karl D. Ohlsen, Reg. No. 32497 1900 Grant Street, Suite 1200 Denver, Colorado 80203 Phone: (303) 861-9000; Fax: (303) 861-9026 Email: mhammond@chp-law.com kohlsen@chp-law.com	▲ COURT USE ONLY ▲ Case Number: 10CW305
PRE-MEETING STATEMENT OF THE TWIN LAKES RESERVOIR AND CANAL COMPANY	

Objector, the Twin Lakes Reservoir and Canal Company (“Twin Lakes”), by its undersigned counsel, submits this Pre-Meeting Statement for consideration pursuant to the Colorado Water Conservation Board’s (“CWCB”) Notice of Prehearing Conference and Deadlines for Submissions dated December 20, 2013.

I. Twin Lakes Reservoir and Canal Company

Twin Lakes is the owner and claimant of decreed water rights on the Roaring Fork River and its tributaries. Twin Lakes seeks to protect its senior decreed water rights from the repercussions that may arise from administration or curtailment of water use in Colorado to comply with Colorado’s obligation under the Colorado River Compact or the Upper Colorado River Basin Compact, and seeks to ensure flexibility in the administration of water rights in the Colorado River and its tributaries in order to minimize injury and negative impacts on senior water rights resulting from such compact administration or curtailment of water use.

II. Standard of Review

When an applicant files an application for a recreational in-channel diversion (“RICD”), it must submit a copy of the application to the CWCB for review. C.R.S. § 37-92-102(5). Pursuant to C.R.S. § 37-92-102(6)(b), the CWCB must consider the following three factors and make written findings as to each:

I. Whether the adjudication and administration of the recreational in-channel diversion would materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements;

...

IV. Whether exercise of the recreational in-channel diversion would cause material injury to instream flow water rights appropriated pursuant to subsections (3) and (4) of this section; and

...

V. Whether adjudication and administration of the recreational in-channel diversion would promote maximum utilization of waters of the state.

III. List of Disputed Factual and Legal Issues and Twin Lakes’ Position on these Issues

Twin Lakes asserts the following concerns regarding Pitkin County’s RICD application that relate to the first (I) and third (V) factors listed above. Twin Lakes requests that the CWCB consider the following disputed issues when evaluating Pitkin County’s proposed RICD.

A. RICDs and Compact Development, Including Risk Management

The water court cannot decree a proposed RICD that will “materially impair the ability of Colorado to fully develop and place to consumptive beneficial use its compact entitlements.” C.R.S. § 37-92-305(13)(c). Pitkin County maintains that its proposed RICD water right will not impair Colorado’s development of its compact entitlements. However, the facts indicate that Pitkin County’s proposed RICD may impair the State’s development of its compact entitlements by (1) by reducing the State’s flexibility to manage its water entitlements under the Colorado and Upper Colorado River Compacts, and (2) restricting future upstream consumptive uses and water development potential.

In order to minimize injury to senior water rights during periods of compact administration and curtailment, Twin Lakes believes that as-yet undecreed junior exchanges of water acquired below the proposed RICD by upstream senior diverters to replace compact restricted senior rights will be necessary. However, downstream RICDs, including the one applied for in Case No. 10CW305, which will be senior to any exchanges currently contemplated to address compact curtailment, may limit or prohibit the exercise of such exchanges and effectively eliminate the benefit of such exchanges.

Twin Lakes, along with others who own water rights that may be subject to compact-related curtailment under the Colorado and Upper Colorado River Compacts, remains concerned that the RICD might impair its ability to operate a junior exchange in the limited situation of a curtailment of Twin Lakes' senior upstream water rights by state water officials in order to meet Colorado's obligations under the Colorado River Compact or the Upper Colorado River Basin Compact. In that limited situation, Twin Lakes may seek to operate an exchange, whether administrative or appropriative, through Pitkin County's proposed RICD reach in order to replace diversions from its curtailed water rights by using senior water rights located below the RICD reach or on the main stem of the Colorado River. Thus, in order to address that specific situation, Twin Lakes seeks terms and conditions in the decree preventing Pitkin County from operating the RICD in a manner that would preclude or limit the operation of such junior exchanges operating for the sole purpose of replacing curtailed Twin Lakes' diversions. This may be accomplished by including terms and conditions in the decree allowing operation of a junior exchange for that limited purpose through the RICD, or, alternatively, requiring Pitkin County not to place a call under the RICD water right when such an exchange is being operated.

In addition, Twin Lakes asserts that Pitkin County must agree that the RICD will be administered according to any rules promulgated by the State Engineer or other such state agency to avoid, delay, implement or recover from any compact-related curtailments of Twin Lakes' water rights.

Further, Pitkin County's proposed RICD will restrict the State's ability to develop its remaining compact entitlements in an efficient, cost effective manner. Pitkin County's proposed RICD, alone and in combination with other decreed and pending RICDs in Water Division No. 5, will restrict future water development in the headwater areas where the primary demand for such development exists. While water allocated to Colorado by the compacts may remain available for development at downstream locations, there may be limited demand for additional development at these downstream sites because of cost, engineering and technical issues, environmental issues, and an absence of regional demands for water. Pitkin County's proposed RICD could adversely impact Colorado's efforts to implement projects and processes to most effectively develop its remaining compact entitlements at the upstream locations where demand is the greatest, and the water is most needed. Although the carve-out provision proposed by Pitkin County may alleviate this concern to some degree, its limited duration (10 years) and scope (3,000 acre-feet of depletions) may not be sufficient to fully develop Colorado's compact allocation. It effectively eliminates any large-scale development due to both the quantity limitation and the short planning period allotted. A longer period of time, such as the 20 years proposed by the CWCBC, may reduce the RICD's substantial adverse impact on the state's ability to fully develop its compact allocation.

IV. Witnesses

Twin Lakes may call the following witnesses:

A. Kevin Lusk, President, Twin Lakes Reservoir and Canal Company, c/o Colorado Springs Utilities, P.O. Box 1103, MSC 1300, Colorado Springs, Colorado 80947-1325. Phone: (719) 668-8719. Mr. Lusk has knowledge regarding the ownership, operation, and administration of Twin Lakes' existing, decreed, and claimed water rights and exchanges, the potential water rights impacts of the Application on Twin Lakes' water rights, the water rights of the Colorado River basin and its tributaries, the plans for future water development in the Colorado River basin, compliance with the Colorado River Compact and the Upper Colorado River Compact, demand for water rights and exchanges in the Colorado River basin, nonconsumptive water needs, and anything identified in this pre-meeting statement.

B. Scott Campbell, General Manager, The Twin Lakes Reservoir and Canal Company, 331 Main Street, P.O. Box 8, Ordway, Colorado 81063. Phone: (719) 668-4617. Mr. Campbell may present information regarding the ownership, operation, and administration of Twin Lakes' existing, decreed, and claimed water rights.

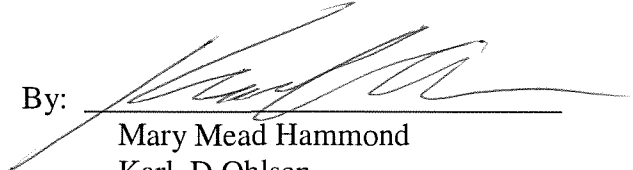
C. Kerry Sundeen, Hydrologist, Grand River Consulting. Mr. Sundeen has knowledge regarding the same matters as Mr. Lusk.

V. Exhibits

Twin Lakes does not intend to present exhibits at the meeting of the CWCB. Twin Lakes reserves the right to offer exhibits in rebuttal and to comment on exhibits tendered to the CWCB.

Respectfully submitted this 27th day of December, 2013.

CARLSON, HAMMOND & PADDOCK, L.L.C.

By: 

Mary Mead Hammond
Karl. D Ohlsen

**ATTORNEYS FOR THE TWIN LAKES RESERVOIR
AND CANAL COMPANY**

CERTIFICATE OF SERVICE

I hereby certify that on this 27th day of December 2013 I electronically filed by LexisNexis File and Serve a true and correct copy of the foregoing **PRE-HEARING STATEMENT OF THE TWIN LAKES RESERVOIR AND CANAL COMPANY** in Case No. 10CW305, and that copies of the same, addressed as follows, were served on the following parties by LexisNexis File and Serve, or by U.S. mail, first-class postage prepaid, for all parties not enrolled to receive electronic filings:

Party Name	Party Type	Party Status	Attorney Name
Aspen, City Of	Opposer	WDRN	Cynthia Covell, Andrea Benson
Basalt Water Conservancy District	Opposer		David Hallford, Christopher Geiger
Colorado River Water Conservation Distri	Opposer		Jason Turner, Peter Fleming
Colorado Water Conservation Board	Opposer		Susan Schneider, Ema Schultz
Div. 5 Engineer	Division Engineer		Division 5 Water Engineer
Elk Mountain Lodge LLC	Opposer		Paul Noto, Danielle Van Arsdale
Fall Line Properties LLC	Opposer		Mark Hamilton, William Caile, Alison Eastley
Grand County Board Of County Commission	Opposer		Mitra Pemberton, David Taussig, Matthew Merrill
Gre II Llp	Opposer		Kevin Patrick, Danielle Van Arsdale

Mountain Valley Cabin LLC	Opposer		Mark Hamilton, William Caile, Alison Eastley
Pitkin County Board Of County Commission	Applicant		Timothy Beaton, Patricia Dechristopher, Anne Bensard
Pt Ranch Barn LLC	Opposer		Meghan Winokur, Arthur Ferguson
Southeastern Colorado Water Conservancy	Opposer		Alix Joseph
Starwood Metropolitan District	Opposer		Sara Dunn, Scott Balcomb
State Engineer	State Engineer		Colorado Division Of Water Resources
Twin Lakes Reservoir And Canal Company	Opposer		Mary Hammond, Karl Ohlsen
Warren Creek LLC	Opposer		Mark Hamilton, William Caile, Alison Eastley


 THIS DOCUMENT WAS E-FILED PURSUANT TO RULE 121.
 DULY-SIGNED ORIGINAL IS ON FILE AT THE OFFICES OF
 CARLSON, HAMMOND & PADDOCK, L.L.C.

DISTRICT COURT, WATER DIVISION 5, COLORADO Court Address: 109 Eighth Street, Ste. 104 Glenwood Springs, CO 81601	SERVED ONLY: December 23, 2013 6:26 PM FILING ID: B8BF2A0C8F426 CASE NUMBER: 2010CW305
CONCERNING THE APPLICATION FOR WATER RIGHTS OF: BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY IN PITKIN COUNTY, COLORADO	
Attorneys for PT Ranch Barn LLC, Fall Line Properties, LLC, Mountain Valley Cabin, LLC, & Warren Creek, LLC: Name: Arthur B. Ferguson, Jr., #6041 Mark E. Hamilton, # 24585 Meghan N. Winokur, #35973 Address: HOLLAND & HART LLP 600 East Main Street, Suite 104 Aspen, Colorado 81611-1991 Telephone: (970) 925-3476 Facsimile: (866) 784-7682 E-mail: aferguson@hollandhart.com mehamilton@hollandhart.com mwinokur@hollandhart.com	▲ COURT USE ONLY ▲ Case Number: 10CW305
PREHEARING STATEMENT OF FALL LINE PROPERTIES, LLC, MOUNTAIN VALLEY CABIN, LLC, WARREN CREEK, LLC AND PT RANCH BARN, LLC	

Opposers, Fall Line Properties, LLC, Mountain Valley Cabin, LLC, Warren Creek, LLC and PT Ranch Barn, LLC (“Opposers”) by and through their attorneys, Holland & Hart LLP, respectfully submit this prehearing statement for consideration in connection with the Colorado Water Conservation Board’s (“CWCB”) deliberation on the recreational in-channel diversion water right (“RICD”) for which Pitkin County seeks approval in this Case No. 10CW305.

I. Introduction

Opposers are owners and users of water rights of various priorities that are tributary to the Roaring Fork River, upstream of the location of the RICD, including without limitation water rights that have been diverted and placed to beneficial use but that have either been the subject of an application for water rights junior to the RICD applied for priority or are not yet the subject of such an application.

II. Comments regarding RICD

Opposers have worked with other opposers in this case and have collectively been involved in settlement discussions with counsel for Pitkin County in this case. We believe that a settlement has been reached and a proposed decree has been negotiated that will address the primary concerns of Opposers.

The primary concerns of Opposers have related to whether the RICD as applied for is in contravention of the doctrine of maximum utilization and optimum use of the state's water supply including whether the RICD is excessive in amounts and whether it is properly located.

The settlement proposal and proposed decree negotiated with Pitkin County includes a "carve out," allowing for additional depletions above the RICD reach on the Roaring Fork River and for additional exchanges through such reach. This will protect numerous water rights from injury and address the primary concerns stated above.

Opposers request the opportunity to comment at the CWCB hearing on the RICD application, the proposed settlement, and such other matters that may be relevant both in support of and rebuttal to comments of Pitkin County and others at the hearing.

III. Witnesses that may be called

Michael Erion, P.E. Resource Engineering, Inc.

IV. Exhibits that may be introduced

1. The Application, Statements of Opposition, and other pleadings and Documents of record in this case.
2. Any pleadings or documents submitted to the CWCB pursuant to C.R.S. §37-92-101(6)(b).
3. Decrees, stipulations, and other documents of record pertaining to the water rights that are the subject of the Application in this case and pertaining to the water rights owned by Opposers.
4. Water rights, tabulations, gage or stream flow records, diversion records and other public documents pertaining to water rights and their administration on the Roaring Fork River, Colorado River and their tributaries.

District Court, Water Division No. 5

Case No.: 10CW305 / Application of Board of County Commissioners Pitkin County
***Prehearing Statement of Fall Line Properties, LLC, Mountain Valley Cabin, LLC,
Warren Creek, LLC & PT Ranch Barn, LLC***

Page 3 of 5

39818.0002 / 54154.0001

5. Engineering and engineering letters or reports or both that pertain to the Application or to the water rights of Opposers.

Dated: December 23, 2013

/s/ Meghan N. Winokur

Arthur B. Ferguson, Jr.

Mark E. Hamilton

Meghan N. Winokur

HOLLAND & HART LLP

**ATTORNEYS FOR OPPOSERS, FALL LINE PROPERTIES,
LLC, MOUNTAIN VALLEY CABIN, LLC, WARREN
CREEK, LLC & PT RANCH BARN, LLC**

CERTIFICATE OF SERVICE

This is to certify that the undersigned on this 23rd day of December 2013, served a true and correct copy of the foregoing document on the parties via ICCES:

Party Name	Party Type	Attorney	Firm
BASALT WATER CONSERVANCY DISTRICT	Opposer	Geiger, Christopher L	Balcomb & Green PC
BASALT WATER CONSERVANCY DISTRICT	Opposer	Hallford, David C	Balcomb & Green PC
COLORADO RIVER WATER CONSERVATION DISTRICT	Opposer	Fleming, Peter C	Colorado River Water Conservation District
COLORADO RIVER WATER CONSERVATION DISTRICT	Opposer	Turner Esq, Jason V	Colorado River Water Conservation District
COLORADO WATER CONSERVATION BOARD	Opposer	Schneider, Susan J	CO Attorney General
COLORADO WATER CONSERVATION BOARD	Opposer	Steinbrecher, Scott	CO Attorney General
DIV. 5 ENGINEER	Division Engineer	Division 5 Water Engineer	Division 5 Engineer
ELK MOUNTAIN LODGE LLC	Opposer	Noto, Paul L	Patrick Miller & Kropf PC
ELK MOUNTAIN LODGE LLC	Opposer	Van Arsdale, Danielle L	Patrick Miller & Kropf PC
FALL LINE PROPERTIES LLC	Opposer	Caile, William H	Holland & Hart LLP-Denver
FALL LINE PROPERTIES LLC	Opposer	Hamilton, Mark E	Holland & Hart LLP-Denver
FALL LINE PROPERTIES LLC	Opposer	Eastley, Alison E	Holland & Hart LLP-Denver
GRAND COUNTY BOARD OF COUNTY COMMISSION	Opposer	Taussig, David C	White & Jankowski LLP
GRAND COUNTY BOARD OF COUNTY COMMISSION	Opposer	Pemberton, Mitra M	White & Jankowski LLP
GRAND COUNTY BOARD OF COUNTY COMMISSION	Opposer	Merrill, Matthew L	White & Jankowski LLP
GRE II LLP	Opposer	Patrick, Kevin Land	Patrick Miller & Kropf PC
GRE II LLP	Opposer	Van Arsdale,	Patrick Miller &

		Danielle L	Kropf PC
MOUNTAIN VALLEY CABIN LLC	Opposer	Caile, William H	Holland & Hart LLP-Denver
MOUNTAIN VALLEY CABIN LLC	Opposer	Hamilton, Mark E	Holland & Hart LLP-Denver
MOUNTAIN VALLEY CABIN LLC	Opposer	Eastley, Alison E	Holland & Hart LLP-Denver
PITKIN COUNTY BOARD OF COUNTY COMMISSION	Applicant	Beaton, Timothy J	Moses Wittemyer Harrison & Woodruff PC
PITKIN COUNTY BOARD OF COUNTY COMMISSION	Applicant	DeChristopher, Patricia M	Moses Wittemyer Harrison & Woodruff PC
PITKIN COUNTY BOARD OF COUNTY COMMISSION	Applicant	Ladd Esq, Aaron S	Moses Wittemyer Harrison & Woodruff PC
SOUTHEASTERN COLORADO WATER CONSERVANCY	Opposer	Joseph, Alix L	Burns Figa & Will PC
SOUTHEASTERN COLORADO WATER CONSERVANCY	Opposer	Smith, Nathaniel R	Burns Figa & Will PC
STARWOOD METROPOLITAN DISTRICT	Opposer	Balcomb, Scott M	Balcomb & Green PC
STARWOOD METROPOLITAN DISTRICT	Opposer	Dunn, Sara M	Balcomb & Green PC
STATE ENGINEER	State Engineer	State Water Engineer, Colorado	State Engineers Office
TWIN LAKES RESERVOIR AND CANAL COMPANY	Opposer	Ohlsen, Karl D	Carlson Hammond & Paddock LLC
TWIN LAKES RESERVOIR AND CANAL COMPANY	Opposer	Hammond, Mary Mead	Carlson Hammond & Paddock LLC
WARREN CREEK LLC	Opposer	Caile, William H	Holland & Hart LLP-Denver
WARREN CREEK LLC	Opposer	Hamilton, Mark E	Holland & Hart LLP-Denver
WARREN CREEK LLC	Opposer	Eastley, Alison E	Holland & Hart LLP-Denver

/s/ Leann Record

In accordance with C.R.C.P. 121 § 1-26(9), this document has been electronically filed via ICCES. A printed copy of this document with original signatures is maintained by the filing party and will be made available for inspection by other parties or by the Court upon request.

COLORADO WATER CONSERVATION BOARD Address: 1313 Sherman Street, Suite 721 Denver, CO 80203 (303) 866-3441		SERVED ONLY: December 23, 2013 3:25 PM FILING ID: B6605A9339CDB CASE NUMBER: 2010CW305
CONCERNING THE APPLICATION FOR WATER RIGHTS OF: BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY, COLORADO, in Pitkin County, Colorado		
<i>Attorneys for Colorado River Water Conservation District and the Colorado River Water Conservation District, acting by and through its Colorado River Water Projects Enterprise:</i> Name: Peter C. Fleming, #20805 Jason V. Turner, #35665 Address: P.O. Box 1120 Glenwood Springs, CO 81602 Phone #: (970) 945-8522 Fax #: (970) 945-8799 E-mail: pfleming@crwcd.org jturner@crwcd.org	Case No.: 10CW305, Division 5	
COLORADO RIVER WATER CONSERVATION DISTRICT'S PREHEARING STATEMENT		

The Colorado River Water Conservation District and the Colorado River Water Conservation District acting by and through its Colorado River Water Projects Enterprise (“River District”) respectfully requests that you consider the following comments in your deliberation on the recreational in-channel diversion (“RICD”) proposed by Pitkin County.

I. Introduction.

The River District is a political subdivision of the State formed by the Colorado Legislature (See C.R.S. § 37-46-101, *et seq.*) in 1937 for the purpose of safeguarding that portion of the waters of the Colorado River apportioned to the state by interstate compact and for promoting the welfare of the inhabitants of the River District. Geographically, the River District encompasses an area of approximately 29,000 square miles, including all of twelve and parts of three western Colorado counties. Included in that area are the headwaters and tributaries of the Colorado River mainstem and its principal tributaries, the Gunnison, the White and the Yampa Rivers.

The general powers of the River District, set forth in C.R.S. § 37-46-107, *inter alia*, direct the River District to make appropriations “for the use and benefit of the ultimate appropriators” This statute further directs the River District “to perform all acts and things

necessary or advisable to secure and insure an adequate supply of water, present and future, for irrigation, mining, manufacturing, and domestic purposes within said districts.”

II. Comments regarding the Pitkin County RICD.

River District counsel and staff have been involved in settlement discussions with staff and counsel for Pitkin County regarding the RICD claim. At a staff level, we believe we have reached a settlement and proposed decree that will address the primary concerns of the River District regarding the proposed RICD. It is important to note that respective governing boards of the River District and Pitkin County have not yet approved the conceptual settlement. However, the River District Board will consider the settlement proposal at its January 20-21, 2014, meeting. It is our understanding that the Pitkin County Board of Commissioners will consider the settlement proposal on January 7, 2014.

The River District’s primary concern with the Pitkin County RICD has been whether the RICD, as originally proposed, conflicts with maximum utilization and optimum use of the state’s water supply. The River District operates a water marketing enterprise that leases “wholesale” water supply within the Colorado River basin. The River District’s water marketing supply includes sources available to it by virtue of its contractual interest in Ruedi Reservoir. Ruedi Reservoir is located on the Fryingpan River, a tributary of the Roaring Fork River. The confluence of the Fryingpan and Roaring Fork Rivers is located just downstream from the proposed Pitkin County RICD. Numerous water users in the Colorado River basin have entered contracts with the River District or have contracts of their own for water released from Ruedi Reservoir. The supplies from Ruedi Reservoir allow beneficial uses of water on the upper Roaring Fork by satisfying calls from downstream senior rights lower on the Roaring Fork or on the mainstem of the Colorado River (primarily the Cameo call). This beneficial use occurs by exchange. The claimed RICD water right has the potential to constrain the ability of upstream water users in the Roaring Fork River basin to use Ruedi Reservoir supplies by exchange.

The settlement proposal to be considered by the River District and Pitkin County includes a “carve out” which would allow for additional depletions above, and exchanges through, the Pitkin County RICD reach of the Roaring Fork River. If the “carve out” is approved, we believe that the Pitkin County RICD can be decreed while still protecting the state’s goals of maximum utilization and optimum use.

The River District requests the opportunity to comment at the CWCB Hearing on Pitkin County’s RICD proposal, the proposed settlement, as well as in support or rebuttal of statements made by any other party to the proceeding.

III. Witnesses that may be called.

John Currier, P.E., Colorado River Water Conservation District, Chief Engineer.

IV. Exhibits that may be introduced.

- A. The Application, Statements of Opposition, and other pleadings and Documents of record in Case No. 10CW305.
- B. Any pleadings or documents submitted to the CWCB pursuant to C.R.S. §37-92-101(6)(b).
- C. Decrees, stipulations and other documents of record, if any, pertaining to the water rights that are the subject of the Application in Case No. 10CW305.
- D. Public documents related to contract supplies in Ruedi Reservoir and the River District's water marketing program.
- E. Water rights tabulations, gage or stream flow records, diversion records and other public documents pertaining to water rights and water rights administration in Water Division No. 5.

Respectfully submitted on December 23, 2013.

/s/*

Peter C. Fleming, General Counsel, #20805

Jason V. Turner, Associate Counsel, #35665

*Attorneys for the Colorado River Water
Conservation District and the Colorado River
Water Conservation District, acting by and through
its Colorado River Water Projects Enterprise*

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing **COLORADO RIVER WATER CONSERVATION DISTRICT PREHEARING STATEMENT** was transmitted electronically and 12 hard copies were mailed to Suzanne Sellers at Suzanne.sellers@state.co.us, Colorado Water Conservation Board, 1313, Sherman Street, Suite 721, Denver, CO 80203, and will be e-served upon the following parties through <https://www.jbits.courts.state.co.us> within twenty-four (24) hours of this date, December 23, 2013, or deposited in the United States Mail, first class, postage prepaid, as follows:

Name	Type	Attorney	Organization	Method
Basalt Water Conservancy District	Opposer	David Carl Hallford	Balcomb & Green PC	E-Service
Basalt Water Conservancy District	Opposer	Christopher L Geiger	Balcomb & Green PC	E-Service
Colorado Water Conservation Board	Opposer	Susan J Schneider	CO Attorney General	E-Service
Colorado Water Conservation Board	Opposer	Ema I.g. Schultz	CO Attorney General	E-Service
Div. 5 Engineer	Division Eng	Division 5 Water Engineer	State of Colorado DWR Division 5	E-Service
Elk Mountain Lodge LLC	Opposer	Paul L Noto	Patrick, Miller & Kropf, P.C.	E-Service
Elk Mountain Lodge LLC	Opposer	Danielle L. Van Arsdale	Patrick, Miller & Kropf, P.C.	E-Service
Fall Line Properties LLC	Opposer	Mark Edward Hamilton	Holland & Hart LLP	E-Service
Fall Line Properties LLC	Opposer	William H Caile	Holland & Hart LLP	E-Service
Fall Line Properties LLC	Opposer	Alison Elizabeth Eastley	Holland & Hart LLP	E-Service
Grand County BOCC	Opposer	Mitra Marie Pemberton	White & Jankowski, LLP	E-Service
Grand County BOCC	Opposer	David C Taussig	White & Jankowski, LLP	E-Service
Grand County BOCC	Opposer	Matthew Lake Merrill	White & Jankowski, LLP	E-Service
Gre II Llp	Opposer	Kevin Land Patrick	Patrick, Miller & Kropf, P.C.	E-Service
Gre II Llp	Opposer	Danielle L. Van Arsdale	Patrick, Miller & Kropf, P.C.	E-Service
Mountain Valley Cabin LLC	Opposer	Mark Edward Hamilton	Holland & Hart LLP	E-Service
Mountain Valley Cabin LLC	Opposer	William H Caile	Holland & Hart LLP	E-Service
Mountain Valley Cabin LLC	Opposer	Alison Elizabeth Eastley	Holland & Hart LLP	E-Service
Pitkin County BOCC	Applicant	Timothy James Beaton	Moses, Wittenmyer, Harrison & Woodruff, PC	E-Service
Pitkin County BOCC	Applicant	Patricia M Dechristopher	Moses, Wittenmyer, Harrison & Woodruff, PC	E-Service
Pitkin County BOCC	Applicant	Anne D. Bensard	Moses, Wittenmyer, Harrison & Woodruff, PC	E-Service
Pt Ranch Barn LLC	Opposer	Meghan N Winokur	Holland & Hart LLP	E-Service
Pt Ranch Barn LLC	Opposer	Arthur Barlow Ferguson Jr.	Holland & Hart LLP	E-Service
Southeastern Colorado Water Cons.	Opposer	Alix L Joseph	Burns Figa and Will P C	E-Service
Starwood Metropolitan District	Opposer	Sara Marie Dunn	Balcomb & Green PC	E-Service
Starwood Metropolitan District	Opposer	Scott M Balcomb	Balcomb & Green PC	E-Service
State Engineer	State Eng	CO Division Of Water Resources	State of Colorado - Division of Water Resources	E-Service
Twin Lakes Reservoir & Canal Co.	Opposer	Mary Mead Hammond	Carlson, Hammond & Paddock, L.L.C.	E-Service
Twin Lakes Reservoir & Canal Co.	Opposer	Karl David Ohlsen	Carlson, Hammond & Paddock, L.L.C.	E-Service
Warren Creek LLC	Opposer	Mark Edward Hamilton	Holland & Hart LLP	E-Service
Warren Creek LLC	Opposer	William H Caile	Holland & Hart LLP	E-Service
Warren Creek LLC	Opposer	Alison Elizabeth Eastley	Holland & Hart LLP	E-Service

/s/

* Lorra Nichols

COLORADO WATER CONSERVATION BOARD Address: 1313 Sherman Street, Suite 721 Denver, CO 80203 (303) 866-3441	Case No.: 10CW305, Division 5
CONCERNING THE APPLICATION FOR WATER RIGHTS OF: BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY, COLORADO, in Pitkin County, Colorado	
<i>Attorneys for Colorado River Water Conservation District and the Colorado River Water Conservation District, acting by and through its Colorado River Water Projects Enterprise:</i> Name: Peter C. Fleming, #20805 Jason V. Turner, #35665 Address: P.O. Box 1120 Glenwood Springs, CO 81602 Phone #: (970) 945-8522 Fax #: (970) 945-8799 E-mail: pfleming@crwcd.org jturner@crwcd.org	
COLORADO RIVER WATER CONSERVATION DISTRICT’S REBUTTAL STATEMENT	

The Colorado River Water Conservation District and the Colorado River Water Conservation District acting by and through its Colorado River Water Projects Enterprise (“River District”) respectfully requests that the Colorado Water Conservation Board consider the following rebuttal comments in its deliberation on the recreational in-channel diversion (“RICD”) proposed by Pitkin County.

On December 23, 2013, the River District submitted its prehearing statement regarding the Pitkin County RICD. As identified in the River District’s prehearing statement, at a staff level, the River District and Pitkin County have reached a conceptual settlement of the Pitkin County RICD claim. The River District Board will consider this settlement proposal at its January 20-21, 2014 meeting.

On January 9, 2014, Pitkin County provided a revised proposed decree (“Proposed Decree”) and on January 10, 2014, staff for the CWCB provided the parties with a copy of staff’s Recommended Amended Comprehensive Findings of Fact (“Findings of Fact”). The River District provides the following comments in rebuttal to the Proposed Decree and the Findings of Fact.

The Findings of Fact at page 4, section ii provides in relevant part:

- ii. In the case of compact curtailment under the "Law of the River", it may be necessary to exchange water through the proposed RICD reach in order for the beneficiaries of post-compact water rights to realize necessary beneficial use of water yielded from pre-compact water rights or other water sources not affected by compact administration. *Such exchanges would be necessary for Colorado to place to consumptive beneficial use its compact entitlements.* (Emphasis added).

The River District maintains that the language emphasized above incorrectly characterizes the purpose of the possible exchanges and misstates the manner in which the State's compact entitlement is used. More specifically, the exchanges described above are not necessary for Colorado to make beneficial consumptive use of its compact entitlement. In the event of compact administration, Colorado would, by definition, already be making beneficial use of its full compact entitlement. If it was not, there would be no need for compact administration. The exchanges described above may be necessary to allow *post* compact water rights to continue to divert, in the event of compact administration, through the use of consumptive use from *pre* compact water rights as the source of replacement water. In other words, no additional consumptive use of water by Colorado would be made in the face of a compact curtailment. Instead, the theoretical exchanges would shift the consumptive use from pre-compact rights to post-compact rights. The River District recommends that the last sentence of section ii. be stricken from the Findings of Fact to prevent any confusion, and because the sentence is not necessary. In the alternative, the sentence could be revised to read more accurately, as follows:

"Such exchanges could allow benefitted post-compact water rights to continue to divert during a compact curtailment."

In multiple locations, the Findings of Fact identify that the proposed RICD is in close proximity to potentially suitable upstream points of diversion and upstream storage (the examples listed are Aspen, Snowmass or the Fryingpan Arkansas Project) that may be adversely impacted by the RICD (*e.g.*, Findings of Fact, pg. 5, section iv; pg. 6, section c.i.). There are numerous other suitable upstream points of diversion and storage that may be adversely impacted by the RICD. In the interest of removing any confusion, we would suggest that the references to Snowmass, Aspen, and the Frying Pan Arkansas Project be removed throughout the Findings of Fact.

Likewise, the Findings of Fact states that "[e]xchange opportunities (such as water released from Ruedi Reservoir exchanged upstream on the Roaring Fork River to Aspen, Snowmass, or to the Fryingpan-Arkansas Project) within the State may be adversely impacted by the proposed RICD." Findings of Fact, pg. 5. Section vi. While this is factually true for Snowmass Village and the City of Aspen (both entities have existing contracts for Ruedi

Reservoir water that can be used by exchange), the same is not accurate with regards to the Fryingpan-Arkansas Project. Water in Ruedi Reservoir is fully subscribed. Use of water from Ruedi Reservoir outside the Colorado River basin, in accordance with the operating principles of the Fryingpan-Arkansas Project, requires the approval of the Colorado River District. Moreover, there are numerous water users, upstream of the RICD that could benefit by the exchange of Ruedi Reservoir water. To eliminate any confusion, we would recommend that the reference to Aspen, Snowmass, and the Fryingpan-Arkansas Project be removed from page 5 section vi. of the Findings of Fact.

Paragraph 24.C. of the Proposed Decree states in relevant part that the “Pitkin County RICD water right shall be administered in accordance with any rules promulgated by the State Engineer or the CWCB related to Colorado River Compact compliance.” Proposed Decree at ¶24.C.; Findings of Fact at pg. 4. We are not aware of any statutory authority for the CWCB to promulgate Compact compliance rules. *See, C.R.S. §§ 37-60-104 et seq.* In order to avoid confusion, the River District proposes that paragraph 24.C. of the Proposed Decree and the condition identified on page 4 of the Findings of Fact be replaced with the following:

During any period identified by the Upper Colorado River Commission in a finding issued pursuant to Article VIII(d)(8) of the Upper Colorado River Basin Compact of 1948 for curtailment of Colorado River basin water uses within Colorado, which the State of Colorado has agreed to implement in a manner that impacts water diversions within Water Division 5, the Pitkin County RICD water right will be administered in accordance with the compact curtailment rules adopted by the State Engineer or such other state agency as may, in the future, be empowered to adopt rules or otherwise act to assure compliance with interstate water compacts that are then in effect. If no such compact curtailment rules are then in effect, Pitkin County shall not exercise the Pitkin County RICD water right during the period of any such Compact curtailment unless the State Engineer or Division Engineer determines that exercise of the Pitkin County RICD water right will not affect Colorado’s ability to comply with the Compact. The Pitkin County RICD water right shall be administered in accordance with any rules promulgated by the State of Colorado related to Colorado River compact compliance. The Pitkin County RICD water right decreed herein is not intended to materially impair the ability of Colorado to fully develop and place to consumptive beneficial use those waters available by law and interstate compact.

The above language is consistent with other RICD decrees approved by the CWCB. Subject to the clarifications described above, we will recommend that the River District consent to the proposed Decree and Findings of Fact for the Pitkin County's RICD.

Respectfully submitted on January 15, 2014.

/s/

Peter C. Fleming, General Counsel, #20805

Jason V. Turner, Associate Counsel, #35665

*Attorneys for the Colorado River Water
Conservation District and the Colorado River
Water Conservation District, acting by and through
its Colorado River Water Projects Enterprise*

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing **COLORADO RIVER WATER CONSERVATION DISTRICT REBUTTAL STATEMENT** was transmitted electronically and 5 hard copies were mailed to Suzanne Sellers at Suzanne.sellers@state.co.us, Colorado Water Conservation Board, 1313, Sherman Street, Suite 721, Denver, CO 80203, and will be e-served upon the following parties through <https://www.jbits.courts.state.co.us> within twenty-four (24) hours of this date, January 15, 2014, or deposited in the United States Mail, first class, postage prepaid, as follows:

Name	Type	Attorney	Organization	Method
Basalt Water Conservancy District	Opposer	David Carl Hallford	Balcomb & Green PC	E-Service
Basalt Water Conservancy District	Opposer	Christopher L Geiger	Balcomb & Green PC	E-Service
Colorado Water Conservation Board	Opposer	Susan J Schneider	CO Attorney General	E-Service
Colorado Water Conservation Board	Opposer	Ema I.g. Schultz	CO Attorney General	E-Service
Div. 5 Engineer	Division Eng	Division 5 Water Engineer	State of Colorado DWR Division 5	E-Service
Elk Mountain Lodge LLC	Opposer	Paul L Noto	Patrick, Miller & Kropf, P.C.	E-Service
Elk Mountain Lodge LLC	Opposer	Danielle L. Van Arsdale	Patrick, Miller & Kropf, P.C.	E-Service
Fall Line Properties LLC	Opposer	Mark Edward Hamilton	Holland & Hart LLP	E-Service
Fall Line Properties LLC	Opposer	William H Caille	Holland & Hart LLP	E-Service
Fall Line Properties LLC	Opposer	Alison Elizabeth Eastley	Holland & Hart LLP	E-Service
Grand County BOCC	Opposer	Mitra Marie Pemberton	White & Jankowski, LLP	E-Service
Grand County BOCC	Opposer	David C Taussig	White & Jankowski, LLP	E-Service
Grand County BOCC	Opposer	Matthew Lake Merrill	White & Jankowski, LLP	E-Service
Gre II Llp	Opposer	Kevin Land Patrick	Patrick, Miller & Kropf, P.C.	E-Service
Gre II Llp	Opposer	Danielle L. Van Arsdale	Patrick, Miller & Kropf, P.C.	E-Service
Mountain Valley Cabin LLC	Opposer	Mark Edward Hamilton	Holland & Hart LLP	E-Service
Mountain Valley Cabin LLC	Opposer	William H Caille	Holland & Hart LLP	E-Service
Mountain Valley Cabin LLC	Opposer	Alison Elizabeth Eastley	Holland & Hart LLP	E-Service
Pitkin County BOCC	Applicant	Timothy James Beaton	Moses, Wiltemyer, Harrison & Woodruff, PC	E-Service
Pitkin County BOCC	Applicant	Patricia M Dechristopher	Moses, Wiltemyer, Harrison & Woodruff, PC	E-Service
Pitkin County BOCC	Applicant	Anne D. Bensard	Moses, Wiltemyer, Harrison & Woodruff, PC	E-Service
Pt Ranch Barn LLC	Opposer	Meghan N Winokur	Holland & Hart LLP	E-Service
Pt Ranch Barn LLC	Opposer	Arthur Barlow Ferguson Jr.	Holland & Hart LLP	E-Service
Southeastern Colorado Water Cons.	Opposer	Alix L Joseph	Burns Figa and Will P C	E-Service
Starwood Metropolitan District	Opposer	Sara Marie Dunn	Balcomb & Green PC	E-Service
Starwood Metropolitan District	Opposer	Scott M Balcomb	Balcomb & Green PC	E-Service
State Engineer	State Eng	CO Division Of Water Resources	State of Colorado - Division of Water Resources	E-Service
Twin Lakes Reservoir & Canal Co.	Opposer	Mary Mead Hammond	Carlson, Hammond & Paddock, L.L.C.	E-Service
Twin Lakes Reservoir & Canal Co.	Opposer	Karl David Ohlsen	Carlson, Hammond & Paddock, L.L.C.	E-Service
Warren Creek LLC	Opposer	Mark Edward Hamilton	Holland & Hart LLP	E-Service
Warren Creek LLC	Opposer	William H Caille	Holland & Hart LLP	E-Service
Warren Creek LLC	Opposer	Alison Elizabeth Eastley	Holland & Hart LLP	E-Service

/s/

Lorra Nichols

BEFORE THE COLORADO WATER CONSERVATION BOARD STATE OF COLORADO CONCERNING THE APPLICATION FOR WATER RIGHTS OF THE BOARD OF COUNTY COMMISSIONERS OF PITKIN COUNTY IN PITKIN COUNTY, COLORADO. Attorneys for the Twin Lakes Reservoir and Canal Company: CARLSON, HAMMOND & PADDOCK, L.L.C. Mary Mead Hammond, Reg. No. 9851 Karl D. Ohlsen, Reg. No. 32497 1900 Grant Street, Suite 1200 Denver, Colorado 80203 Phone: (303) 861-9000; Fax: (303) 861-9026 Email: mhammond@chp-law.com kohlsen@chp-law.com	SERVED ONLY: January 16, 2014 4:08 PM FILING ID: 80EC0D237F4FD CASE NUMBER: 2010CW305 ▲ COURT USE ONLY ▲ Case Number: 10CW305
REBUTTAL STATEMENT OF THE TWIN LAKES RESERVOIR AND CANAL COMPANY	

Objector, the Twin Lakes Reservoir and Canal Company (“Twin Lakes”), by its undersigned counsel, submits this Rebuttal Statement for consideration pursuant to the Colorado Water Conservation Board’s (“CWCB”) Notice of Prehearing Conference and Deadlines for Submissions dated December 20, 2013.

I. Disputes and Concerns on Rebuttal

In its pre-hearing statement filed with the CWCB, Twin Lakes asserted two main concerns regarding Pitkin County’s RICD application: that the RICD, when operated pursuant to the proposed decree submitted by the Applicant, may reduce the State’s flexibility to manage the waters of the State; and may restrict future upstream consumptive uses and water development potential. After review of the Staff’s Recommended Amended Comprehensive Findings of Fact dated January 10, 2014 (“Amended Findings of Fact”), as well as the revised proposed decree submitted by the Applicant on January 9, 2014, Twin Lakes remains concerned regarding each of these issues.

A. Management of the waters of the State

Twin Lakes asserts that, in order to minimize injury to senior post-compact water rights during periods of compact administration and curtailment, those senior water rights holders may need to develop as-yet undecreed junior exchanges of pre-compact water acquired below the proposed RICD for exchange upstream of the proposed RICD, in order to replace compact restricted post-compact senior rights. Such exchanges will enable the maximum utilization of the waters of the state by allowing water rights holders in the most developed areas of the state to continue to deliver water for beneficial consumptive use. These concepts may be used in conjunction with certain “water banking” concepts and “risk mitigation” concepts that are currently being discussed in numerous forums including the CWCB, IBCC, and Sate Water Planning processes, as well as in relation to other high level discussions on the Colorado River Compact. These discussions indicate a statewide recognition and concern related to preserving the ability to continue to meet critical water demands on both sides of the Continental Divide during periods of curtailment.

However, downstream RICDs such as the one proposed by Pitkin County will be senior to such exchanges contemplated to address compact curtailment, may limit or prohibit the exercise of such exchanges, and may effectively eliminate the benefit of such exchanges. Further, the proliferation of RICDs frustrates the statewide efforts to find a workable solution to meeting critical demands during a curtailment. Moreover, the terms and conditions proposed to address compact curtailment in this case are inconsistent with those agreed to in other recent RICD applications, and will further complicate administration.

CWCB Staff, in the Amended Findings of Fact, acknowledge the potential need for such exchanges in Section II.a.ii. and vi., and further in proposed term and condition 24.C. CWCB Staff also acknowledge that the RICD as proposed may adversely affect future changes, transfers, and exchanges of water through the reach of the RICD, including exchanges such as that contemplated by Twin Lakes (Amended Findings of Fact, Section I.c.ii). In response, CWCB Staff proposes terms and conditions that are intended to limit these adverse effects. See Amended Findings of Fact, Sections I.c.ii and iii, and proposed terms and conditions set forth in Section I.a.ii.

Twin Lakes asserts that the Amended Findings of Fact and the proposed terms and conditions are insufficient to address these concerns. The main term and condition proposed to address compact curtailment appears in Paragraph 24.C. of the proposed decree. That term and condition states as follows¹:

24.C. During any period identified by the Upper Colorado River Commission in a finding issued pursuant to Article VIII(d)(8) of the Upper Colorado River Basin Compact

¹ Twin Lakes is aware that there have been several changes proposed to this paragraph for portions other than the portion underlined herein. Twin Lakes agrees with the changes set forth in the revised paragraph to be submitted by the Applicant in the first and third sentence.

of 1948 for curtailment of Colorado River basin water uses within Colorado, which the State of Colorado has agreed to implement in a manner that impacts water diversions within Water Division 5, the Pitkin County RICD water right will be administered in accordance with the compact curtailment rules adopted by the State of Colorado that are then in effect, if any, including any such rules intended to avoid, delay, or limit the severity of such a compact curtailment. If no such compact curtailment rules are then in effect, Pitkin County shall not exercise the Pitkin County RICD water right during the period of any such Compact curtailment, or during any time period where the State is attempting to avoid, delay or limit the severity of a compact curtailment, unless the State Engineer or Division Engineer determines in writing that the exercise of the Pitkin County RICD water right will not affect Colorado's ability to comply with the Compact. The Pitkin County RICD water right shall be administered in accordance with any rules promulgated by the State of Colorado, or its agencies authorized to promulgate such rules related to Colorado River compact compliance. The Pitkin County RICD water right decreed herein is not intended to materially impair the ability of Colorado to fully develop and place to consumptive beneficial use those waters available by law and interstate compact.

(Emphasis added).

As proposed, Paragraph 24.C. allows the Applicant to place a call on the RICD during periods of compact curtailment, when other senior upstream water rights may be curtailed. In placing a call at such times, the RICD would essentially eliminate, or at least diminish, the ability of upstream diverters senior to the RICD to exercise an exchange of pre-compact water rights upstream to replace curtailed post-compact water rights. The only limit placed on the Applicant's ability to place such a call would a determination by the State or Division Engineer that an exercise of the RICD would not affect the State's ability to comply with the Compact. The language does not address whether the exercise will affect the State's ability to use, to the maximum extent, the waters of the State.

Twin Lakes asserts that the appropriate solution is to include language within the term and condition that prohibits the Applicant from placing a call on the RICD when compact curtailment is in place, and no rules have been put into effect to address compact curtailment. This may be accomplished by making the following change to Paragraph 24.C. as proposed:

If no such compact curtailment rules are then in effect, Pitkin County shall not exercise the Pitkin County RICD water right during the period of any such Compact curtailment, or during any time period where the State is attempting to avoid, delay or limit the severity of a compact curtailment, unless the State Engineer or Division Engineer determines in writing that the exercise of the Pitkin County RICD water right will not affect Colorado's ability to comply with the Compact.

The modification to the language in Paragraph 24.C. is consistent with the final proposed decrees delivered to the water court in two recent RICD applications. In Grand County's RICD application, Case No. 10CW298, Paragraph 45.b. states as follows:

The RICD Water Rights decreed herein are not intended to deprive the people of the State of Colorado of the beneficial use of those waters available pursuant to interstate compact. The County agrees that the RICD Water Rights will be administered by the State Engineer in accordance with rules duly promulgated by the State Engineer in accordance with C.R.S. § 37-80-104 and § 37-92-501 related to the curtailment of Colorado River basin water uses within Colorado in order to comply with the Colorado River Compact of 1922 and the Upper Colorado River Basin Compact of 1948, including any such rules intended to avoid, delay, or limit the severity of such a compact curtailment. If no such compact curtailment rules have been promulgated, the County will not place a call for the RICD Water Rights during any specific period of time identified by the Upper Colorado River Commission in a finding issued pursuant to Article VIII(d)(8) of the Upper Colorado River Basin Compact of 1948 for curtailment of Colorado River basin water uses within Colorado, which the State of Colorado implements in a manner that curtails water diversions within Water Division 5, but shall otherwise be administered in accordance with this decree and Colorado law.

(Emphasis added).

Similarly, in the Carbondale application in Case No. 06CW77, Paragraph 9. A. and B. of the final proposed decree submitted to the water court states as follows:

A. During any period when the state of Colorado implements a finding of the Upper Colorado River Commission pursuant to Article VIII(d)(8) of the Upper Colorado River Basin Compact of 1948 (Article VIII(d)(8) Finding) that calls for curtailment of water uses (Compact Curtailment) in a manner that affects water diversions in Water Division No. 5, the Boating Park RICD water right decreed herein will be administered in accordance with Compact Curtailment rules adopted by the State Engineer or such other state agency as may, in the future, be empowered to adopt rules or otherwise act to assure compliance with interstate compacts then in effect. If no such Compact Curtailment rules are then in effect, Carbondale will not place an administrative call for water on the Boating Park RICD water right decreed herein during the period that implementation of an Article VIII(d)(8) Finding affects water diversions in Water Division No. 5; but the rights shall otherwise be administered in accordance with this decree and Colorado law.

B. In addition, pursuant to its Stipulation with Colorado Springs Utilities dated February 6, 2013, Carbondale agrees that it will not exercise the Boating Park RICD water right herein in a manner that will limit or prevent the operation of a junior appropriative right of exchange (adjudicated or un-adjudicated) that may be operated by the Twin Lakes Reservoir and Canal Company ("Twin Lakes") to exchange-to points at facilities of Twin Lakes upstream of the RICD Reach described herein and that may reduce the stream flow

through the RICD Reach; provided that any such exchange is operated for the sole purpose of allowing the continuation of upstream diversions pursuant to the senior water rights decreed to the Independence Pass Transmountain Diversion System that would otherwise be curtailed at that time by the State Engineer or other state agency with jurisdiction in order to assure compliance by the State of Colorado with the Colorado River Compact or the Upper Colorado River Basin Compact.

(Emphasis added).

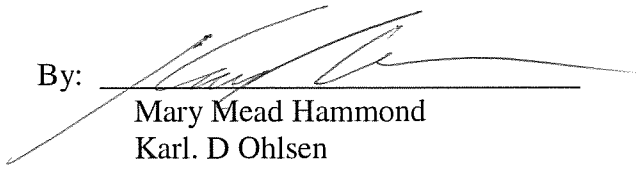
Twin Lakes asserts that the modification to Paragraph 24.C. proposed above, or language similar to that included in Cases No. 10CW298 and 06CW77, will aid in maintaining the necessary flexibility to use to maximum extent the waters of the state under compact curtailment conditions. Further, it will allow upstream post-compact water rights holders to continue to supply water to their decreed beneficial uses in the headwater areas where the primary demand for such beneficial use exists. Finally, it will maintain consistency in administration between RICDs in Water Division No. 5.

B. Future Development of Upstream Water Rights.

Twin Lakes asserts, as a matter of general State interest, that the RICD may adversely impact the ability to develop additional waters of the state upstream of the RICD diversion structures in the future. The Amended Findings of Fact address this concern identified by Twin Lakes by proposing a 3,000 acre-foot carve-out, essentially setting off the priority date for the RICD until 15 years have passed or the 3,000 acre-feet of consumptive use has been identified and decreed. While this may aid future smaller development upstream, it does not address the effect of this RICD, and the cumulative effect of this and existing RICDs, on large-scale development in the headwaters where primary demand for such development exists. Water allocated to Colorado by the compacts may remain available for development, but due to the pull of water by this and other existing RICDs, the water may, in the future, be only available for development at downstream locations. Historically, there may be limited demand for additional development at these downstream sites because of cost, engineering and technical issues, environmental issues, and an absence of regional demands for water. Hence, this RICD, when considered individually and in conjunction with those RICDs previously decreed and applied for, may negatively impact Colorado's efforts to fully develop its compact entitlements. The Board must consider these effects prior to making a final determination regarding the application in this matter.

Respectfully submitted this 16th day of January, 2014.

CARLSON, HAMMOND & PADDOCK, L.L.C.

By: 

Mary Mead Hammond

Karl. D Ohlsen

**ATTORNEYS FOR THE TWIN LAKES RESERVOIR
AND CANAL COMPANY**

CERTIFICATE OF SERVICE

I hereby certify that on this 16th day of January 2014 I electronically filed by ICCES a true and correct copy of the foregoing **REBUTTAL STATEMENT OF THE TWIN LAKES RESERVOIR AND CANAL COMPANY** in Case No. 10CW305, and that copies of the same, addressed as follows, were served on the following parties by LexisNexis File and Serve, or by U.S. mail, first-class postage prepaid, for all parties not enrolled to receive electronic filings:

Party Name	Party Type	Party Status	Attorney Name
Aspen, City Of	Opposer	WDRN	Cynthia Covell, Andrea Benson
Basalt Water Conservancy District	Opposer		David Hallford, Christopher Geiger
Colorado River Water Conservation District	Opposer		Jason Turner, Peter Fleming
Colorado Water Conservation Board	Opposer		Susan Schneider, Ema Schultz
Div. 5 Engineer	Division Engineer		Division 5 Water Engineer
Elk Mountain Lodge LLC	Opposer		Paul Noto, Danielle Van Arsdale
Fall Line Properties LLC	Opposer		Mark Hamilton, William Caile, Alison Eastley
Grand County Board Of County Commission	Opposer		Mitra Pemberton, David Taussig, Matthew Merrill
Gre II Llp	Opposer		Kevin Patrick, Danielle Van Arsdale
Mountain Valley Cabin LLC	Opposer		Mark Hamilton, William Caile,

			Alison Eastley
Pitkin County Board Of County Commission	Applicant		Timothy Beaton, Patricia Dechristopher, Anne Bensard
Pt Ranch Barn LLC	Opposer		Meghan Winokur, Arthur Ferguson
Southeastern Colorado Water Conservancy	Opposer		Alix Joseph
Starwood Metropolitan District	Opposer		Sara Dunn, Scott Balcomb
State Engineer	State Engineer		Colorado Division Of Water Resources
Twin Lakes Reservoir And Canal Company	Opposer		Mary Hammond, Karl Ohlsen
Warren Creek LLC	Opposer		Mark Hamilton, William Caile, Alison Eastley



THIS DOCUMENT WAS E-FILED PURSUANT TO RULE 121.
DULY-SIGNED ORIGINAL IS ON FILE AT THE OFFICES OF
CARLSON, HAMMOND & PADDOCK, L.L.C.