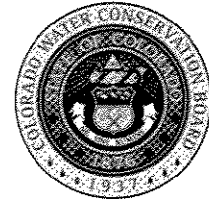


STATE OF COLORADO

Colorado Water Conservation Board Department of Natural Resources

1313 Sherman Street, Room 721
Denver, Colorado 80203
Phone: (303) 866-3441
Fax: (303) 866-4474
www.cwcb.state.co.us



Bill Ritter, Jr.
Governor

Mike King
DNR Executive Director

Jennifer L. Gimbel
CWCB Director

August 6, 2010

Diana D. McDonald
The Nature Conservancy
2424 Spruce Street
Boulder, CO 80302

**RE: Yampa White Basin Nonconsumptive Needs Assessment Watershed Flow
Evaluation Tool**

Dear Diana:

This letter is to inform you that the contract for your grant request to assist in the Yampa White Basin Nonconsumptive Needs Assessment Watershed Flow Evaluation Tool was signed on August 2, 2010. A signed original of the contract will be mailed to you.

With the executed contract, you are now able to proceed with the project and begin invoicing the State of Colorado for costs incurred through June 30, 2012. Upon receipt of your invoice(s), the State of Colorado will provide payment no later than 45 days. I wish you much success in your project.

Sincerely,

/s/

Jacob Bornstein
Colorado Water Conservation Board
Water Supply Planning Section
1580 Logan Street, Suite 200
Denver, CO 80203
Phone: 303-866-3441 x3248
Mobile: 720-214-3262
jacob.bornstein@state.co.us
www.cwcb.state.co.us and www.ibcc.state.co.us

STATE OF COLORADO
Colorado Water Conservation Board
Grant Agreement
with
The Nature Conservancy
Contract Number C150466

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1. PARTIES

This Grant Agreement (hereinafter called "Grant") is entered into by and between The Nature Conservancy, a District of Columbia non-profit corporation, (hereinafter called "Grantee"), and the STATE OF COLORADO acting by and through the Department of Natural Resources, Colorado Water Conservation Board (hereinafter called the "State or CWCB").

2. EFFECTIVE DATE AND NOTICE OF NONLIABILITY.

This Grant shall not be effective or enforceable until it is approved and signed by the Colorado State Controller or designee (hereinafter called the "Effective Date"). The State shall not be liable to pay or reimburse Grantee for any performance hereunder, including, but not limited to costs or expenses incurred, or be bound by any provision hereof prior to the Effective Date.

3. RECITALS

A. Authority, Appropriation, And Approval

Authority for the agency entering into this Contract arises from Colorado Revised Statutes (CRS) 39-29-109(2)(c), 37-75-102 and 37-75-104(2)(c) and Senate Bill 06-179 adopted by the 2006 General Assembly, and a sufficient unencumbered balance thereof remains available for payment. Required approvals, clearance and coordination have been accomplished from and with appropriate agencies.

B. Consideration

The Parties acknowledge that the mutual promises and covenants contained herein and other good and valuable consideration are sufficient and adequate to support this Grant.

C. Purpose

The Water Supply Reserve Account provides money for grants and loans to complete water activities, which are broadly defined and include water supply and environmental projects and/or studies. This Grant is for the Yampa-White Basin Nonconsumptive Needs Assessment Watershed Flow Evaluation Tool in the Yampa-White Basin.

D. References

All references in this Grant to sections (whether spelled out or using the § symbol), subsections, exhibits or other attachments, are references to sections, subsections, exhibits or other attachments contained herein or incorporated as a part hereof, unless otherwise noted.

4. DEFINITIONS

The following terms as used herein shall be construed and interpreted as follows:

A. Budget

"Budget" means the budget for the Work described in **Exhibit A**.

B. Evaluation

"Evaluation" means the process of examining Grantee's Work and rating it based on criteria established in §6 and **Exhibit A**.

C. Exhibits and other Attachments

The following are attached hereto and incorporated by reference herein: **Exhibit A**.

D. Goods

"Goods" means tangible material acquired, produced, or delivered by Grantee either separately or in conjunction with the Services Grantee renders hereunder.

E. Grant

"Grant" means this Grant, its terms and conditions, attached exhibits, documents incorporated by reference under the terms of this Grant, and any future modifying agreements, exhibits, attachments or references incorporated herein pursuant to Colorado State law, Fiscal Rules, and State Controller Policies.

F. Grant Funds

"Grant Funds" means available funds payable by the State to Grantee pursuant to this Grant.

G. Party or Parties

"Party" means the State or Grantee and "Parties" means both the State and Grantee.

H. Program

"Program" means the Water Supply Reserve Account grant program that provides the funding for this Grant.

I. Review

"Review" means examining Grantee's Work to ensure that it is adequate, accurate, correct and in accordance with the criteria established in §6 and **Exhibit A**.

J. Services

"Services" means the required services to be performed by Grantee pursuant to this Grant.

K. Sub-grantee

"Sub-grantee" means third-parties, if any, engaged by Grantee to aid in performance of its obligations.

L. Work

"Work" means the tasks and activities Grantee is required to perform to fulfill its obligations under this Grant and **Exhibit A**., including the performance of the Services and delivery of the Goods.

M. Work Product

"Work Product" means the tangible or intangible results of Grantee's Work, including, but not limited to, software, research, reports, studies, data, photographs, negatives or other finished or unfinished documents, drawings, models, surveys, maps, materials, or work product of any type, including drafts.

5. TERM and EARLY TERMINATION.

Initial Term-Work Commencement

The Parties respective performances under this Grant shall commence on the later of either the Effective Date or June 1, 2010. This Grant shall terminate on June 30, 2012 unless sooner terminated or further extended as specified elsewhere herein.

6. STATEMENT OF WORK

A. Completion

Grantee shall complete the Work and its other obligations as described herein and in **Exhibit A** on or before June 30, 2012. The State shall not be liable to compensate Grantee for any Work performed prior to the Effective Date or after the termination of this Grant.

B. Goods and Services

Grantee shall procure Goods and Services necessary to complete the Work. Such procurement shall be accomplished using the Grant Funds and shall not increase the maximum amount payable hereunder by the State.

C. Employees

All persons employed by Grantee or Sub-grantees shall be considered Grantee's or Sub-grantees' employee(s) for all purposes hereunder and shall not be employees of the State for any purpose as a result of this Grant.

7. PAYMENTS TO GRANTEE

The State shall, in accordance with the provisions of this §7, pay Grantee in the following amounts and using the methods set forth below:

A. Maximum Amount

The maximum amount payable under this Grant to Grantee by the State is \$169,002.35, as determined by the State from available funds. Grantee agrees to provide any additional funds required for the successful completion of the Work. Payments to Grantee are limited to the unpaid obligated balance of the Grant as set forth in **Exhibit A**. The maximum amount payable by the State to Grantee during each State fiscal year of this Grant shall be:

\$169,002.35 in FY2010
\$169,002.35 in FY2011, minus any funds expended in FY2010
\$169,002.35 in FY2012, minus any funds expended in FY2010 and 2011

i. Advance, Interim and Final Payments

Any payment allowed under this Grant or in **Exhibit A** shall comply with State Fiscal Rules and be made in accordance with the provisions of this Grant or such Exhibit. Grantee shall initiate any payment requests by submitting invoices to the State in the form and manner set forth and approved by the State.

ii. Interest

The State shall fully pay each invoice within 45 days of receipt thereof if the amount invoiced represents performance by Grantee previously accepted by the State. Uncontested amounts not paid by the State within 45 days may, if Grantee so requests, bear interest on the unpaid balance beginning on the 46th day at a rate not to exceed one percent per month until paid in full; provided, however, that interest shall not accrue on unpaid amounts that are subject to a good faith dispute. Grantee shall invoice the State separately for accrued interest on delinquent amounts. The billing shall reference the delinquent payment, the number of day's interest to be paid and the interest rate.

iii. Available Funds-Contingency-Termination

The State is prohibited by law from making fiscal commitments beyond the term of the State's current fiscal year. Therefore, Grantee's compensation is contingent upon the continuing availability of State appropriations as provided in the Colorado Special Provisions, set forth below. If federal funds are used with this Grant in whole or in part, the State's performance hereunder is contingent upon the continuing availability of such funds. Payments pursuant to this Grant shall be made only from

otherwise become unavailable to fund this Grant, the State may immediately terminate this Grant in whole or in part without further liability in accordance with the provisions herein.

iv. Erroneous Payments

At the State's sole discretion, payments made to Grantee in error for any reason, including, but not limited to overpayments or improper payments, and unexpended or excess funds received by Grantee, may be recovered from Grantee by deduction from subsequent payments under this Grant or other Grants, grants or agreements between the State and Grantee or by other appropriate methods and collected as a debt due to the State. Such funds shall not be paid to any party other than the State.

B. Use of Funds

Grant Funds shall be used only for eligible costs identified herein and/or in the Budget. The State's total consideration shall not exceed the maximum amount shown herein.

8. REPORTING - NOTIFICATION

Reports, Evaluations, and Reviews required under this §8 shall be in accordance with the procedures of and in such form as prescribed by the State and in accordance with §19, if applicable.

A. Performance, Progress, Personnel, and Funds

Grantee shall submit a final report to the State upon expiration of this grant or sooner termination of this Grant, containing an Evaluation and Review of Grantee's performance and the final status of Grantee's obligations hereunder. In addition, Grantee shall comply with all reporting requirements, if any, set forth in Exhibit A.

B. Litigation Reporting

Within 10 days after being served with any pleading in a legal action filed with a court or administrative agency, related to this Grant or which may affect Grantee's ability to perform its obligations hereunder, Grantee shall notify the State of such action and deliver copies of such pleadings to the State's principal representative as identified herein. If the State's principal representative is not then serving, such notice and copies shall be delivered to the Executive Director of the Colorado Department of Natural Resources.

C. Noncompliance

Grantee's failure to provide reports and notify the State in a timely manner in accordance with this §8 may result in the delay of payment of funds and/or termination as provided under this Grant.

D. SubGrants

Copies of any and all subGrants entered into by Grantee to perform its obligations hereunder shall be submitted to the State or its principal representative upon request by the State. Any and all subGrants entered into by Grantee related to its performance hereunder shall comply with all applicable federal and state laws and shall provide that such subGrants be governed by the laws of the State of Colorado.

9. GRANTEE RECORDS

Grantee shall make, keep, maintain and allow inspection and monitoring of the following records:

A. Maintenance

Grantee shall make, keep, maintain, and allow inspection and monitoring by the State of a complete file of all records, documents and other evidence pertaining to all costs and expenses incurred and revenues acquired under this Grant to the extent and in such detail as will properly reflect all costs and expenses for which reimbursement is claimed.) or Goods hereunder. Grantee shall maintain such records (the Record Retention Period) until the last to occur of the following: (i) a period of three years after the date this Grant is completed or terminated, or (ii) final payment is made hereunder, whichever is later, or (iii) for such further period as may be necessary to resolve any pending matters, or (iv) if an audit is occurring, or Grantee has received notice that an audit is pending, then until such audit has been completed and its findings have been resolved (the "Record Retention Period").

B. Inspection

Grantee shall permit the State, the federal government and any other duly authorized agent of a governmental agency to audit, inspect, examine, excerpt, copy and/or transcribe Grantee's records related to this Grant during the Record Retention Period for a period of three years following termination of this Grant or final payment hereunder, whichever is later, to assure compliance with the terms hereof or to evaluate Grantee's performance hereunder. The State reserves the right to inspect the Work at all reasonable

times and places during the term of this Grant, including any extension. If the Work fails to conform to the requirements of this Grant, the State may require Grantee promptly to bring the Work into conformity with Grant requirements, at Grantee's sole expense. If the Work cannot be brought into conformance by re-performance or other corrective measures, the State may require Grantee to take necessary action to ensure that future performance conforms to Grant requirements and exercise the remedies available under this Grant, at law or inequity in lieu of or in conjunction with such corrective measures.

C. Monitoring

Grantee shall permit the State, the federal government, and other governmental agencies having jurisdiction, in their sole discretion, to monitor all activities conducted by Grantee pursuant to the terms of this Grant using any reasonable procedure, including, but not limited to: internal evaluation procedures, examination of program data, special analyses, on-site checking, formal audit examinations, or any other procedures. All monitoring controlled by the State shall be performed in a manner that shall not unduly interfere with Grantee's performance hereunder.

D. Final Audit Report

If an audit is performed on Grantee's records for any fiscal year covering a portion of the term of this Grant, Grantee shall submit a copy of the final audit report to the State or its principal representative at the address specified herein.

10. CONFIDENTIAL INFORMATION-STATE RECORDS

Grantee shall comply with the provisions on this §10 if it becomes privy to confidential information in connection with its performance hereunder. Confidential information, includes, but is not necessarily limited to, state records, personnel records, and information concerning individuals. The State shall notify the Grantee in writing and notate any State records and information that are classified by the State as being "Confidential" and given to the Grantee in connection with its performance hereunder. The provisions of this Section 10 shall only apply to such notated records and information.

A. Confidentiality

Grantee shall keep all State records and information confidential at all times and to comply with all laws and regulations concerning confidentiality of information. Any request or demand by a third party for State records and information in the possession of Grantee shall be immediately forwarded to the State's principal representative.

B. Notification

Grantee shall notify its agent, employees, Sub-grantees, and assigns who may come into contact with State records and confidential information that each is subject to the confidentiality requirements set forth herein, and shall provide each with a written explanation of such requirements before they are permitted to access such records and information.

C. Use, Security, and Retention

Confidential information of any kind shall not be distributed or sold to any third party or used by Grantee or its agents in any way, except as authorized by this Grant or approved in writing by the State. Grantee shall provide and maintain a secure environment that ensures confidentiality of all State records and other confidential information wherever located. Confidential information shall not be retained in any files or otherwise by Grantee or its agents, except as permitted in this Grant or approved in writing by the State.

D. Disclosure-Liability

Disclosure of State records or other confidential information by Grantee for any reason may be cause for legal action by third parties against Grantee, the State or their respective agents. Grantee shall indemnify, save, and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees and related costs, incurred as a result of any act or omission by Grantee, or its employees, agents, Sub-grantees, or assignees pursuant to this §10.

11. CONFLICTS OF INTEREST

Grantee shall not engage in any business or personal activities or practices or maintain any relationships which conflict in any way with the full performance of Grantee's obligations hereunder. Grantee acknowledges that with respect to this Grant, even the appearance of a conflict of interest is harmful to the State's interests. Absent the State's prior written approval, Grantee shall refrain from any practices, activities or relationships that

reasonably appear to be in conflict with the full performance of Grantee's obligations to the State hereunder. If a conflict or appearance exists, or if Grantee is uncertain whether a conflict or the appearance of a conflict of interest exists, Grantee shall submit to the State a disclosure statement setting forth the relevant details for the State's consideration. Failure to promptly submit a disclosure statement or to follow the State's direction in regard to the apparent conflict constitutes a breach of this Grant.

12. REPRESENTATIONS AND WARRANTIES

Grantee makes the following specific representations and warranties, each of which was relied on by the State in entering into this Grant.

A. Standard and Manner of Performance

Grantee shall perform its obligations hereunder in accordance with the highest standards of care, skill and diligence in the industry, trades or profession and in the sequence and manner set forth in this Grant.

B. Legal Authority – Grantee and Grantees Signatory

Grantee warrants that it possesses the legal authority to enter into this Grant and that it has taken all actions required by its procedures, by-laws, and/or applicable laws to exercise that authority, and to lawfully authorize its undersigned signatory to execute this Grant, or any part thereof, and to bind Grantee to its terms. If requested by the State, Grantee shall provide the State with proof of Grantee's authority to enter into this Grant within 15 days of receiving such request.

C. Licenses, Permits, Etc.

Grantee represents and warrants that as of the Effective Date it has, and that at all times during the term hereof it shall have, at its sole expense, all licenses, certifications, approvals, insurance, permits, and other authorization required by law to perform its obligations hereunder. Grantee warrants that it shall maintain all necessary licenses, certifications, approvals, insurance, permits, and other authorizations required to properly perform this Grant, without reimbursement by the State or other adjustment in Grant Funds. Additionally, all employees and agents of Grantee performing Services under this Grant shall hold all required licenses or certifications, if any, to perform their responsibilities. Grantee, if a foreign corporation or other foreign entity transacting business in the State of Colorado, further warrants that it currently has obtained and shall maintain any applicable certificate of authority to transact business in the State of Colorado and has designated a registered agent in Colorado to accept service of process. Any revocation, withdrawal or non-renewal of licenses, certifications, approvals, insurance, permits or any such similar requirements necessary for Grantee to properly perform the terms of this Grant shall be deemed to be a material breach by Grantee and constitute grounds for termination of this Grant.

13. INSURANCE

Grantee and its Sub-grantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

A. Grantee

i. Public Entities

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Sub-grantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Sub-grantee's liabilities under the GIA.

ii. Non-Public Entities

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in §13(B) with respect to sub-Grantees that are not "public entities".

B. Sub-Grantees

Grantee shall require each Grant with Sub-grantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

i. Worker's Compensation

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Sub-grantee employees acting within the course and scope of their employment.

ii. General Liability

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent Grantees, products and completed operations, blanket Grantual liability, personal injury, and advertising liability with minimum limits as follows: **(a)** \$1,000,000 each occurrence; **(b)** \$1,000,000 general aggregate; **(c)** \$1,000,000 products and completed operations aggregate; and **(d)** \$50,000 any one fire. If any aggregate limit is reduced below \$1,000,000 because of claims made or paid, Sub-grantee shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

iii. Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of \$1,000,000 each accident combined single limit.

iv. Additional Insured

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

v. Primacy of Coverage

Coverage required of Grantee and Sub-grantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

vi. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and the State by certified mail.

vii. Subrogation Waiver

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Sub-grantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

C. Certificates

Grantee and all Sub-grantees shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Sub-grantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any sub-grant, Grantee and each Sub-grantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this §13.

14. BREACH

A. Defined

In addition to any breaches specified in other sections of this Grant, the failure of either Party to perform any of its material obligations hereunder in whole or in part or in a timely or satisfactory manner, constitutes a breach. The institution of proceedings under any bankruptcy, insolvency, reorganization or similar law, by or against Grantee, or the appointment of a receiver or similar officer for Grantee or any of its property, which is not vacated or fully stayed within 20 days after the institution or occurrence thereof, shall also constitute a breach.

B. Notice and Cure Period

In the event of a breach, notice of such shall be given in writing by the aggrieved Party to the other Party in the manner provided in §16. If such breach is not cured within 30 days of receipt of written notice, or if a cure cannot be completed within 30 days, or if cure of the breach has not begun within 30 days and pursued with due diligence, the State may exercise any of the remedies set forth in §15. Notwithstanding anything to the contrary herein, the State, in its sole discretion, need not provide advance notice or a cure period and may immediately terminate this Grant in whole or in part if reasonably necessary to preserve public safety or to prevent immediate public crisis.

15. REMEDIES

If Grantee is in breach under any provision of this Grant, the State shall have all of the remedies listed in this §15 in addition to all other remedies set forth in other sections of this Grant following the notice and cure period set forth in §14(B). The State may exercise any or all of the remedies available to it, in its sole discretion, concurrently or consecutively.

A. Termination for Cause and/or Breach

If Grantee fails to perform any of its obligations hereunder with such diligence as is required to ensure its completion in accordance with the provisions of this Grant and in a timely manner, the State may notify Grantee of such non-performance in accordance with the provisions herein. If Grantee thereafter fails to promptly cure such non-performance within the cure period, the State, at its option, may terminate this entire Grant or such part of this Grant as to which there has been delay or a failure to properly perform. Exercise by the State of this right shall not be deemed a breach of its obligations hereunder. Grantee shall continue performance of this Grant to the extent not terminated, if any.

i. Obligations and Rights

To the extent specified in any termination notice, Grantee shall not incur further obligations or render further performance hereunder past the effective date of such notice, and shall terminate outstanding orders and sub-Grants with third parties. However, Grantee shall complete and deliver to the state all work products performed under this Grant not cancelled by the termination notice and may incur obligations as are necessary to do so within this Grant's terms. At the sole discretion of the State, Grantee shall assign to the State all of Grantee's right, title, and interest under such terminated orders or sub-Grants. Upon termination, Grantee shall take timely, reasonable and necessary action to protect and preserve property in the possession of Grantee in which the State has an interest. All materials owned by the State in the possession of Grantee shall be immediately returned to the State. All Work Product, at the option of the State, shall be delivered by Grantee to the State and shall become the State's property.

ii. Payments

The State shall reimburse Grantee only for accepted performance up to the date of termination. If, after termination by the State, it is determined that Grantee was not in breach or that Grantee's action or inaction was excusable, such termination shall be treated as a termination in the public interest and the rights and obligations of the Parties shall be the same as if this Grant had been terminated in the public interest, as described herein.

iii. Damages and Withholding

Notwithstanding any other remedial action by the State, Grantee also shall remain liable to the State for any damages sustained by the State by virtue of any breach under this Grant by Grantee and the State may withhold any payment to Grantee for the purpose of mitigating the State's damages, until such time as the exact amount of damages due to the State from Grantee is determined. The State may withhold any amount that may be due to Grantee as the State deems necessary to protect the State, including loss as a result of outstanding liens or claims of former lien holders, or to reimburse the State for the excess costs incurred in procuring similar goods or services. Grantee shall be liable for excess costs incurred by the State in procuring from third parties replacement Work, Services or substitute Goods as cover.

B. Early Termination in the Public Interest

The State is entering into this Grant for the purpose of carrying out the public policy of the State of Colorado, as determined by its Governor, General Assembly, and/or Courts. If this Grant ceases to further the public policy of the State, the State, in its sole discretion, may terminate this Grant in whole or in part.

Exercise by the State of this right shall not constitute a breach of the State's obligations hereunder. This subsection shall not apply to a termination of this Grant by the State for cause or breach by Grantee, which shall be governed by §15(A) or as otherwise specifically provided for herein.

i. Method and Content

The State shall notify Grantee of such termination in accordance with §16. The notice shall specify the effective date of the termination and whether it affects all or a portion of this Grant.

ii. Obligations and Rights

Upon receipt of a termination notice, Grantee shall be subject to and comply with the same obligations and rights set forth in §15(A)(i).

iii. Payments

If this Grant is terminated by the State pursuant to this §15(B), Grantee shall be paid an amount which bears the same ratio to the total reimbursement under this Grant as the Services satisfactorily performed bear to the total Services covered by this Grant, less payments previously made. Additionally, if this Grant is less than 60% completed, the State may reimburse Grantee for a portion of actual out-of-pocket expenses (not otherwise reimbursed under this Grant) incurred by Grantee which are directly attributable to the uncompleted portion of Grantee's obligations hereunder; provided that the sum of any and all reimbursement shall not exceed the maximum amount payable to Grantee hereunder.

C. Remedies Not Involving Termination

The State, its sole discretion, may exercise one or more of the following remedies in addition to other remedies available to it:

i. Suspend Performance

Suspend Grantee's performance with respect to all or any portion of this Grant pending necessary corrective action as specified by the State without entitling Grantee to an adjustment in price/cost or performance schedule. Grantee shall promptly cease performance and incurring costs in accordance with the State's directive and the State shall not be liable for costs incurred by Grantee after the suspension of performance under this provision.

ii. Withhold Payment

Withhold payment to Grantee until corrections in Grantee's performance are satisfactorily made and completed.

iii. Deny Payment

Deny payment for those obligations not performed, that due to Grantee's actions or inactions, cannot be performed or, if performed, would be of no value to the State; provided, that any denial of payment shall be reasonably related to the value to the State of the obligations not performed.

iv. Removal

Demand removal of any of Grantee's employees, agents, or Sub-grantees whom the State deems incompetent, careless, insubordinate, unsuitable, or otherwise unacceptable, or whose continued relation to this Grant is deemed to be contrary to the public interest or not in the State's best interest.

v. Intellectual Property

If Grantee infringes on a patent, copyright, trademark, trade secret or other intellectual property right while performing its obligations under this Grant, Grantee shall, at the State's option (a) obtain for the State or Grantee the right to use such products and services; (b) replace any Goods, Services, or other product involved with non-infringing products or modify them so that they become non-infringing; or, (c) if neither of the foregoing alternatives are reasonably available, remove any infringing Goods, Services, or products and refund the price paid therefore to the State.

16. NOTICES and REPRESENTATIVES

Each individual identified below is the principal representative of the designating Party. All notices required to be given hereunder shall be hand delivered with receipt required or sent by certified or registered mail to such Party's principal representative at the address set forth below. In addition to, but not in lieu of a hard-copy notice, notice also may be sent by e-mail to the e-mail addresses, if any, set forth below. Either Party may from time to time designate by written notice substitute addresses or persons to whom such notices shall be sent. Unless otherwise provided herein, all notices shall be effective upon receipt.

A. State:

Todd Doherty, Program Manager, Water Supply Planning Section
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
Todd.doherty@state.co.us

B. Grantee:

Diana McDonald, Grants Manager
The Nature Conservancy
2424 Spruce Street
Boulder, CO 80302
dmcDonald@tnc.org

17. RIGHTS IN DATA, DOCUMENTS, AND COMPUTER SOFTWARE

Any software, research, reports, studies, data, photographs, negatives or other documents, drawings, models, materials, or Work Product of any type, including drafts, prepared by Grantee in the performance of its obligations under this Grant shall be the nonexclusive property of the State and, all Work Product shall be delivered to the State by Grantee upon completion or termination hereof. The State's nonexclusive rights in such Work Product shall include, but not be limited to, the right to copy, publish, display, transfer, and prepare derivative works.

18. GOVERNMENTAL IMMUNITY

Notwithstanding any other provision to the contrary, nothing herein shall constitute a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended. Liability for claims for injuries to persons or property arising from the negligence of the State of Colorado, its departments, institutions, agencies, boards, officials, and employees is controlled and limited by the provisions of the Governmental Immunity Act and the risk management statutes, CRS §24-30-1501, et seq., as amended.

19. STATEWIDE GRANT MANAGEMENT SYSTEM

If the maximum amount payable to Grantee under this Grant is \$100,000 or greater, either on the Effective Date or at anytime thereafter, this §19 applies.

Grantee agrees to be governed, and to abide, by the provisions of CRS §24-102-205, §24-102-206, §24-103-601, §24-103.5-101 and §24-105-102 concerning the monitoring of vendor performance on state Grants and inclusion of Grant performance information in a statewide Grant management system.

Grantee's performance shall be subject to Evaluation and Review in accordance with the terms and conditions of this Grant, State law, including CRS §24-103.5-101, and State Fiscal Rules, Policies and Guidance. Evaluation and Review of Grantee's performance shall be part of the normal Grant administration process and Grantee's performance will be systematically recorded in the statewide Grant Management System. Areas of Evaluation and Review shall include, but shall not be limited to quality, cost and timeliness. Collection of information relevant to the performance of Grantee's obligations under this Grant shall be determined by the specific requirements of such obligations and shall include factors tailored to match the requirements of Grantee's obligations. Such performance information shall be entered into the statewide Grant Management System at intervals established herein and a final Evaluation, Review and Rating shall be rendered within 30 days of the end of the Grant term. Grantee shall be notified following each performance Evaluation and Review, and shall address or correct any identified problem in a timely manner and maintain work progress.

Should the final performance Evaluation and Review determine that Grantee demonstrated a gross failure to meet the performance measures established hereunder, the Executive Director of the Colorado Department of Personnel and Administration (Executive Director), upon request by the CWCB, and showing of good cause, may debar Grantee and prohibit Grantee from bidding on future Grants. Grantee may contest the final Evaluation, Review and Rating by: (a) filing rebuttal statements, which may result in either removal or

correction of the evaluation (CRS §24-105-102(6)), or (b) under CRS §24-105-102(6), exercising the debarment protest and appeal rights provided in CRS §§24-109-106, 107, 201 or 202, which may result in the reversal of the debarment and reinstatement of Grantee, by the Executive Director, upon showing of good cause.

20. GENERAL PROVISIONS

A. Assignment and SubGrants

Unless otherwise specified in Exhibit A, Statement of Work, Grantee's rights and obligations hereunder are personal and may not be transferred, assigned or subGranted without the prior, written consent of the State. Any attempt at assignment, transfer, subGranting without such consent shall be void. All assignments, subGrants, or Sub-grantees approved by Grantee or the State are subject to all of the provisions hereof. Grantee shall be solely responsible for all aspects of subGranting arrangements and performance.

B. Binding Effect

Except as otherwise provided in §20(A), all provisions herein contained, including the benefits and burdens, shall extend to and be binding upon the Parties' respective heirs, legal representatives, successors, and assigns.

C. Captions

The captions and headings in this Grant are for convenience of reference only, and shall not be used to interpret, define, or limit its provisions.

D. Counterparts

This Grant may be executed in multiple identical original counterparts, all of which shall constitute one agreement.

E. Entire Understanding

This Grant represents the complete integration of all understandings between the Parties and all prior representations and understandings, oral or written, are merged herein. Prior or contemporaneous additions, deletions, or other changes hereto shall not have any force or affect whatsoever, unless embodied herein.

F. Indemnification-General

Grantee shall indemnify, save, and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees and related costs, incurred as a result of any act or omission by Grantee, or its employees, agents, Sub-grantees, or assignees pursuant to the terms of this Grant; however, the provions hereof shall not be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. 2671 et seq., as applicable, as now or hereafter amended.

G. Jurisdiction and Venue

All suits, actions, or proceedings related to this Grant shall be held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

H. Modification

i. By the Parties

Except as specifically provided in this Grant, modifications of this Grant shall not be effective unless agreed to in writing by both parties in an amendment to this Grant, properly executed and approved in accordance with applicable Colorado State law, State Fiscal Rules, and Office of the State Controller Policies, including, but not limited to, the policy entitled MODIFICATIONS OF GRANTS - TOOLS AND FORMS.

ii. By Operation of Law

This Grant is subject to such modifications as may be required by changes in Federal or Colorado State law, or their implementing regulations. Any such required modification automatically shall be incorporated into and be part of this Grant on the effective date of such change, as if fully set forth herein.

I. Order of Precedence

The provisions of this Grant shall govern the relationship of the State and Grantee. In the event of conflicts or inconsistencies between this Grant and its exhibits and attachments including, but not limited to, those

provided by Grantee, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

- i. Colorado Special Provisions,
- ii. The provisions of the main body of this Grant,
- iii. Exhibit A.

J. Severability

Provided this Grant can be executed and performance of the obligations of the Parties accomplished within its intent, the provisions hereof are severable and any provision that is declared invalid or becomes inoperable for any reason shall not affect the validity of any other provision hereof.

K. Survival of Certain Grant Terms

Notwithstanding anything herein to the contrary, provisions of this Grant requiring continued performance, compliance, or effect after termination hereof, shall survive such termination and shall be enforceable by the State if Grantee fails to perform or comply as required.

L. Taxes

The State is exempt from all federal excise taxes under IRC Chapter 32 (No. 84-730123K) and from all State and local government sales and use taxes under CRS §§39-26-101 and 201 et seq. Such exemptions apply when materials are purchased or services rendered to benefit the State; provided however, that certain political subdivisions (e.g., City of Denver) may require payment of sales or use taxes even though the product or service is provided to the State. Grantee shall be solely liable for paying such taxes as the State is prohibited from paying for or reimbursing Grantee for them.

M. Third Party Beneficiaries

Enforcement of this Grant and all rights and obligations hereunder are reserved solely to the Parties, and not to any third party. Any services or benefits which third parties receive as a result of this Grant are incidental to the Grant, and do not create any rights for such third parties.

N. Waiver

Waiver of any breach of a term, provision, or requirement of this Grant, or any right or remedy hereunder, whether explicitly or by lack of enforcement, shall not be construed or deemed as a waiver of any subsequent breach of such term, provision or requirement, or of any other term, provision, or requirement.

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21. COLORADO SPECIAL PROVISIONS

The Special Provisions apply to all Grants except where noted in italics.

A. 1. CONTROLLER'S APPROVAL. CRS §24-30-202 (1).

This Grant shall not be deemed valid until it has been approved by the Colorado State Controller or designee.

B. 2. FUND AVAILABILITY. CRS §24-30-202(5.5).

Financial obligations of the State payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

C. 3. GOVERNMENTAL IMMUNITY.

No term or condition of this Grant shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. §§1346(b) and 2671 et seq., as applicable now or hereafter amended.

D. 4. INDEPENDENT CONTRACTOR

Grantee shall perform its duties hereunder as an independent Grantee and not as an employee. Neither Grantee nor any agent or employee of Grantee shall be deemed to be an agent or employee of the State. Grantee and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for Grantee or any of its agents or employees. Unemployment insurance benefits shall be available to Grantee and its employees and agents only if such coverage is made available by Grantee or a third party. Grantee shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Grant. Grantee shall not have authorization, express or implied, to bind the State to any Grant, liability or understanding, except as expressly set forth herein. Grantee shall (a) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, (b) provide proof thereof when requested by the State, and (c) be solely responsible for its acts and those of its employees and agents.

E. 5. COMPLIANCE WITH LAW.

Grantee shall strictly comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

F. 6. CHOICE OF LAW.

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this grant. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. Any provision incorporated herein by reference which purports to negate this or any other Special Provision in whole or in part shall not be valid or enforceable or available in any action at law, whether by way of complaint, defense, or otherwise. Any provision rendered null and void by the operation of this provision shall not invalidate the remainder of this Grant, to the extent capable of execution.

G. 7. BINDING ARBITRATION PROHIBITED.

The State of Colorado does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in this contract or incorporated herein by reference shall be null and void.

H. 8. SOFTWARE PIRACY PROHIBITION. Governor's Executive Order D 002 00.

State or other public funds payable under this Grant shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Grantee hereby certifies and warrants that, during the term of this Grant and any extensions, Grantee has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that Grantee is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Grant, including, without limitation, immediate termination of this Grant and any remedy consistent with federal copyright laws or applicable licensing restrictions.

I. 9. EMPLOYEE FINANCIAL INTEREST. CRS §§24-18-201 and 24-50-507.

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Grant. Grantee has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of Grantee's services and Grantee shall not employ any person having such known interests.

J. 10. VENDOR OFFSET. CRS §§24-30-202 (1) and 24-30-202.4.

[*Not Applicable to intergovernmental agreements*] Subject to CRS §24-30-202.4 (3.5), the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: (a) unpaid child support debts or child support arrearages; (b) unpaid balances of tax, accrued interest, or other charges specified in CRS §39-21-101, et seq.; (c) unpaid loans due to the Student Loan Division of the Department of Higher Education; (d) amounts required to be paid to the Unemployment Compensation Fund; and (e) other unpaid debts owing to the State as a result of final agency determination or judicial action.

K. 11. PUBLIC GRANTS FOR SERVICES. CRS §8-17.5-101.

[Not Applicable to Agreements relating to the offer, issuance, or sale of securities, investment advisory services or fund management services, sponsored projects, intergovernmental Agreements, or information technology services or products and services] Grantee certifies, warrants, and agrees that it does not knowingly employ or Grant with an illegal alien who shall perform work under this Grant and shall confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Grant, through participation in the E-Verify Program or the State program established pursuant to CRS §8-17.5-102(5)(c), Grantee shall not knowingly employ or Grant with an illegal alien to perform work under this Grant or enter into a Grant with a Sub-grantee that fails to certify to Grantee that the Sub-grantee shall not knowingly employ or Grant with an illegal alien to perform work under this Grant. Grantee (a) shall not use E-Verify Program or State program procedures to undertake pre-employment screening of job applicants while this Grant is being performed, (b) shall notify the Sub-grantee and the Granting State agency within three days if Grantee has actual knowledge that a Sub-grantee is employing or Granting with an illegal alien for work under this Grant, (c) shall terminate the subGrant if a Sub-grantee does not stop employing or Granting with the illegal alien within three days of receiving the notice, and (d) shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to CRS §8-17.5-102(5), by the Colorado Department of Labor and Employment. If Grantee participates in the State program, Grantee shall deliver to the Granting State agency, Institution of Higher Education or political subdivision, a written, notarized affirmation, affirming that Grantee has examined the legal work status of such employee, and shall comply with all of the other requirements of the State program. If Grantee fails to comply with any requirement of this provision or CRS §8-17.5-101 et seq., the Granting State agency, institution of higher education or political subdivision may terminate this Grant for breach and, if so terminated, Grantee shall be liable for damages.

L. 12. PUBLIC GRANTS WITH NATURAL PERSONS. CRS §24-76.5-101.

Grantee, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that he or she (a) is a citizen or otherwise lawfully present in the United States pursuant to federal law, (b) shall comply with the provisions of CRS §24-76.5-101 et seq., and (c) has produced one form of identification required by CRS §24-76.5-103 prior to the effective date of this Grant.

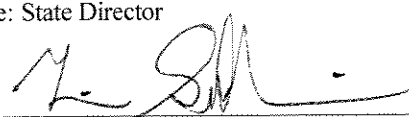
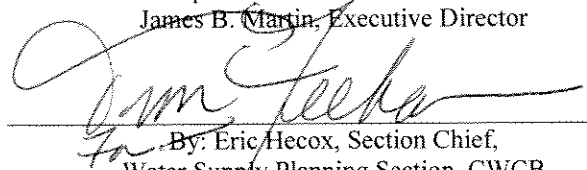
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22. SIGNATURE PAGE

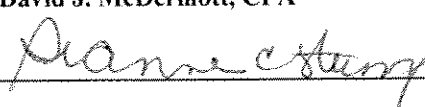
THE PARTIES HERETO HAVE EXECUTED THIS GRANT

* Persons signing for Grantee hereby swear and affirm that they are authorized to act on Grantee's behalf and acknowledge that the State is relying on their representations to that effect.

<p>GRANTEE The Nature Conservancy, a District of Columbia non-profit corporation</p> <p>By: Tim Sullivan Title: State Director</p> <p> _____ *Signature</p> <p>Date: <u>7-23-10</u></p>	<p>STATE OF COLORADO Bill Ritter, Jr. GOVERNOR Department of Natural Resources James B. Martin, Executive Director</p> <p> _____ By: Eric Hecox, Section Chief, Water Supply Planning Section, CWCB</p> <p>Signatory avers to the State Controller or delegate that Grantee has not begun performance or that a Statutory Violation waiver has been requested under Fiscal Rules</p> <p>Date: <u>7-26-10</u></p>
	<p>LEGAL REVIEW John W. Suthers, Attorney General</p> <p>By: _____ Signature - Assistant Attorney General</p> <p>Date: _____</p>

ALL GRANTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Grants. This Grant is not valid until signed and dated below by the State Controller or delegate. Grantee is not authorized to begin performance until such time. If Grantee begins performing prior thereto, the State of Colorado is not obligated to pay Grantee for such performance or for any goods and/or services provided hereunder.

<p>STATE CONTROLLER David J. McDermott, CPA</p> <p>By:  _____</p> <p>Date: <u>8-2-10</u></p>

Statement of Work

WATER ACTIVITY NAME – YAMPA WHITE BASIN NONCONSUMPTIVE NEEDS ASSESSMENT WATERSHED FLOW EVALUATION TOOL

GRANT RECIPIENT – THE NATURE CONSERVANCY

FUNDING SOURCE – YAMPA-WHITE BASIN ROUNDTABLE WATER SUPPLY RESERVE ACCOUNT BASIN FUNDS

INTRODUCTION AND BACKGROUND

The Yampa-White Basin has completed Phase I of its nonconsumptive needs assessments as required by HB05-1177. Phase I was a focus area map showing areas in the Yampa-White Basin where environmental and recreational activity occur. The effort described in this statement of work will utilize the Watershed Flow Evaluation Tool (WFET) that was piloted by the Colorado Water Conservation Board (CWCW) during 2009 to further assess and quantify the Yampa-White Basin's nonconsumptive needs. The WFET uses hydrologic modeling, literature information relating flow conditions to environmental and recreational attributes, and Geographic Information System (GIS) software to examine flow conditions at the a watershed or regional level and relates the flow conditions to environmental or recreational attributes similar to what were identified as part of the focus area mapping effort. After relating flow conditions to the environmental or recreational attribute, the WFET allows stakeholders to characterize the ecological or recreational "risk" that a given attribute may or may not be degraded based on flow conditions. The risk levels can be translated into a range of flows for a given attribute. Not all of the attributes identified by the Yampa-White Basin Roundtable as part of its mapping effort have flow relationships. A summary of the attributes identified by the Yampa-White Basin and whether there is a flow relationship available for the attribute is listed below. In general, flow relationships exist for the following attributes: trout, some of the warm water fish, riparian, and whitewater boating. The attributes where there are not flow relationships available will not be included in this study except for instream flows, natural lake levels and RICDS. These attributes will not be modeled but information about the flow levels will be catalogued for the focus area reaches.

Attribute	Will the Study Develop Flow Relationship for Attribute Based on Literature and Expert Opinion?
<u>Attribute 1 – Federal & Endangered Fish</u>	
Bonytail Chub	Yes (Management Plan for Endangered Fishes in the Yampa River Basin and other studies)

Attribute	Will the Study Develop Flow Relationship for Attribute Based on Literature and Expert Opinion?
Razorback Sucker	Yes (Management Plan for Endangered Fishes in the Yampa River Basin and other studies)
Humpback Chub	Yes (Management Plan for Endangered Fishes in the Yampa River Basin and other studies)
Colorado Pikeminnow	Yes (Management Plan for Endangered Fishes in the Yampa River Basin and other studies)
<u>Attribute 2 – State Threatened & Endangered Species</u>	
Bluehead Sucker	Yes
Roundtail Chub	Yes
Flannelmouth Sucker	Yes
Colorado River Cutthroat Trout	Yes
River Otter	No
Northern Leopard Frog	No
Boreal Toad	No
<u>Attribute 3 – Important Riparian Habitat</u>	
Riparian/Wetland - Dependent Rare Plants	Yes (riparian not wetlands)
Significant Riparian/Wetland Plant Communities	Yes (riparian not wetlands)
Audubon Important Bird Areas	No
<u>Attribute 4 - Instream Flows and Natural Lake Levels</u>	
CWCB Instream Flow Water Rights	No (Instream Flow water rights decreed amounts will be catalogued for focus area reach where they exist)
CWCB Natural Lake Level Water Rights	No (Natural Lake level decree will be catalogued for focus area reach where they exist)
<u>Attribute 5 - Fishing</u>	
Gold Metal Trout Streams	Yes
Gold Metal Trout Lake	No
Significant Fishing Waters (based on local knowledge)	No
<u>Attribute 6 – Boating</u>	
Rafting/kayaking/flatwater Reaches	Yes (whitewater only)
Recreational In-Channel Diversion Structures	No (RICD flows will be summarized for focus area reach where they exist)
<u>Attribute 7 – Waterfowl Hunting</u>	
Waterfowl Hunting	No

OBJECTIVES

The Nature Conservancy (TNC) will subcontract with Camp, Dresser and McKee (CDM) to complete the following objectives:

The objectives of the study are as follows:

- Develop the Watershed Flow Evaluation Tool (WFET) in the Yampa-White Basin

- Develop ecological and recreational risk mapping and the associated range of flow for the attributes listed in Table 1 for locations mapped previously by the Yampa-White Basin Roundtable
- Include results from the Colorado River Water Availability Study in WFET results
- Assess whether water that is being delivered as part of existing water rights and Colorado River Compact deliveries in the Yampa-White Basin supports nonconsumptive needs in the basin

TASKS

Task 1 - Stakeholder Meeting and Facilitation

Description of Task

The primary means of coordinating on project activities will take place through the Yampa-White Basin Nonconsumptive Needs Assessment Subcommittee. The Consultant Team (John Sanderson, TNC, Nicole Rowan, CDM, Thomas Wilding, Colorado State University, Brian Bledsoe, Colorado State University and LeRoy Poff, Colorado State University, will meet with the Subcommittee during four workshops during the project.

Method/Procedure

There will be four workshops with the Yampa-White Basin Nonconsumptive Needs Assessment Subcommittee during the project. Following is a summary of discussion topics at each workshop.

Workshop No. 1:

- Review scope of work and schedule
- Review information developed as part of Task 2
- Review information that has been developed as part of Task 4

Workshop No. 2:

- Review schedule
- Review draft modeling results from Task 3
- Review draft final information from Task 4
- Review preliminary risk mapping

Workshop No.3:

- Review draft final risk mapping for attributes
- Review draft flow ranges for attributes
- Review draft information from Task 6
- Review draft report from project

Workshop No. 4:

- Review finalized project deliverables

In addition to the workshops, the Consultant Team's project manager, will be available for 2 additional meetings with the subcommittee to address project progress and schedule. The Consultant Team will also be available for three conference calls with the Yampa-White Basin Subcommittee between workshops to follow-up on action items from the workshops.

Deliverable

Provide meeting agendas and summaries of action items from each meeting.

Task 2 – Confirmation of CDSS WFET Locations

Description of Task

Work the Yampa-White Basin Subcommittee to finalize the CDSS nodes in the basin where the WFET will be applied. The Yampa-White Basin Roundtable Focus Area Map will be basis for where the WFET will be applied.

Method/Procedure

Present mapping and CDSS model nodes that are located on the Yampa-White's environmental and recreational focus area map. Work with Yampa-White Nonconsumptive Subcommittee to confirm locations where the WFET will be applied. Identify if there is any redundancy in the information from the nodes on a given segment. Figure 1 shows the preliminary CDSS nodes to be included in the WFET. Table 2 at the end of the Statement of Work shows is an update version of the Roundtable's Focus Area Mapping table with the potential node(s) that could be used in each reach as well as the attribute(s) that have flow relationships that could be used in the WFET analysis. This will be updated based on feedback from the Yampa-White's Nonconsumptive Subcommittee as part of implementing this task.

Deliverable

Prepare a technical memorandum summarizing what CDSS nodes will be used in the WFET and will provide GIS files to the Subcommittee. The technical memorandum will be submitted to CWCB in electronic form.

Task 3 – Run CDSS to Develop Pre-managed and Managed Hydrologic Datasets and Metrics

Description of Task

The Consultant Team will use the CDSS to develop pre-managed and managed hydrologic data sets and metrics. The CDSS can be run in baseflow mode to predict river conditions that existed prior to river management. The CDSS will not be modified to generate the hydrology as the model can be run in "baseflow" mode to predict the pre-managed data sets. Similarly, the CDSS current conditions simulation will be used to generate the managed data sets.

Method/Procedure

The Consultant Team will complete the following elements for the hydrologic modeling:

- Utilizing CDSS model, run baseline and current conditions hydrology for nodes agreed upon in Task 2
- Daily and Monthly flow data will be generated from model for agreed upon nodes from Task 2. The White River CDSS model does not have the capability of predicting daily flow.
- Quality Assurance/Quality Control review of model output specifically checking to see if daily predicted flows match monthly flows for pre-managed conditions.

For baseline and current conditions, the Consultant Team will calculate the following flow statistics that are related to aquatic ecology using IHA software or other methods in Excel:

- mean annual flow (MAF) for each year and per record
- mean of August and September flow for each year and per record
- 30 day high flow (moving average across average daily flow series) for each year and average per record
- annual peak flow (daily average) for each year and average per record
- additional statistics may be developed based on geomorphic conditions in the watershed

Deliverable

Prepare a technical memorandum that describes the model simulation conditions, model output and flow statistics. The memorandum will also address any quality assurance issues or concerns with the model simulation. The technical memorandum will be submitted to CWCB in electronic form.

Task 4 - Further Refine Flow-Ecology Relationships

Description of Task

Identify the areas where various flow-ecology relationships apply in the basin and refine the flow-ecology relationships if needed based on studies that have been conducted in the Yampa-White Basin. This task will be based on existing data and literature and not field studies. The flow-ecology relationships were developed as part of the pilot study developed by CWCB (<http://cwcb.state.co.us/IWMD/COsWaterSupplyFuture/>). The flow ecology relationships are associated with various ecological and recreational indicators in the Yampa-White Basin that are trout, riparian, warm-water fish, and whitewater boating.

Method/Procedure

The Consultant Team will use the existing environmental and recreation focus area mapping and the GIS map layers that were used in preparing the focus area mapping to identify where the flow-ecology relationships apply. Using the matrix that was developed as part of the Yampa-White's focus area mapping effort, the flow-ecology relationship that applies to each reach will be summarized for Subcommittee review. This task will utilize information on flow relationships

for riparian and whitewater boating that will be improved during the Colorado River Basin's application of WFET. Flow ecology relationships for the riparian attribute will focus on the riparian area along channel margins where active processes of plant establishment related to flow dynamics occur. The riparian flow ecology relationship will not pertain to the broad expanse of the floodplain. For the fishing and whitewater boating flow relationships, literature information will be confirmed with local experts on these subjects in the Yampa-White Basin through a one-day workshop and through working with the Nonconsumptive Committee members.

Deliverable

Prepare a technical memorandum summarizing the matrix describing the flow-ecology relationship will be applied to each segment of Yampa-White Basin's environmental and recreational focus area mapping. The technical memorandum will be submitted to CWCB in electronic form.

Task 5 - Develop Ecological Risk Mapping, Verify Risk Mapping and Develop Range of Flows for Attributes for Nodes Identified in Task 2

Description of Task

Based on information generated in Task 2, Task 3 and Task 4, prepare ecological risk mapping for the CDSS nodes identified in Task 2. The mapping will be prepared using GIS and will be based on the CDSS modeling of pre-managed and managed hydrology in combination with the flow-ecology curves associated with the flow metrics described in Task 3. Maps will be created for the various ecological and environmental indicators as described in Task 4. Use existing quantification studies in the basin to verify the risk mapping. Finalize the risk mapping based on any updates from the verification and develop a range of flow ranges associated with the risk levels.

Method/Procedure

The Consultant Team will complete the following steps:

- For the stream reaches identified as part of the focus area mapping and the associated flow-ecology relationships, develop GIS risk mapping for the pre-managed and managed flow sets for each ecological and recreational indicator
- Provide a written summary to the Subcommittee summarizing the risk mapping.
- Based on assistance from the Subcommittee, gather existing quantification studies that have been conducted in the Yampa-White basin for comparison with the risk mapping results. These studies could include information developed by the Colorado Division of Wildlife and other state agencies in developing instream flow information for the CWCB, studies related to endangered species, and other studies identified by local biologists.
- The existing studies will be used to verify if the ecological risk levels determined are similar to information generated in existing studies.

- Based on the verification, revise the flow-ecology curves and resulting ecological and recreational mapping if needed.
- Develop ranges of seasonal flows based on model and metric calculations developed as part of Task 3 and finalized flow ecology relationships. Flow ranges will be associated with the ecological and recreational risk levels.

Deliverable

Prepare a technical memorandum that describes the procedures used to generate the risk mapping and an overview of the risk mapping. Provide GIS files for use by the Basin Roundtable. The technical memorandum will also describe the procedures used to verify the risk mapping. Provide a summary of if the verification resulted in any changes to the flow-ecology relationships. The technical memorandum team will also include a description of the procedures used to generate the range of flows and summarize and changes to the risk mapping. The technical memorandum will be submitted to CWCB in electronic form.

Task 6 - Create Additional Ecological and Recreational Risk Mapping Based on CRWAS Phase I and Phase II Flows and Compare with Flow Ranges Associated with Risk Levels

Description of Task

Create additional ecological risk mapping based results from CRWAS Phase I and Phase II. Streamflow results from CRWAS can also be compared to the range of ecological flows developed as part of Task 5. Coordinate with CWCB CRWAS PM and CRWAS Contractor on data developed from Phase I and Phase II. This coordination will focus on data from Phase I and Phase II that could be used in this study and information from this study that could be utilized in CRWAS Phase II.

Method/Procedure

Request that CRWAS team provide results for the nodes identified in Task 2. The results from CRWAS Phase I and Phase II can then be used to compare if there will be additional ecological and recreational risk created by future depletions and climate change in the Yampa-White Basin.

Deliverable

Prepare a technical memorandum that describes the additional ecological risk mapping based on CRWAS. This memorandum will also describe any comparison the range of ecological and recreational flows developed as part of this task. The technical memorandum will be submitted to CWCB in electronic form.

Task 7 – Existing Water Rights and River Management for Yampa-White Basin and Comparison with Nonconsumptive Needs

Description of Task

This task will provide a general assessment of whether or not current river management to meet existing water rights and Colorado River Compact deliveries from the Yampa-White Basin support nonconsumptive needs.

Method/Procedure

This task will examine in general how current river management to meet existing water rights and compact deliveries support nonconsumptive needs. Using results from Task 5, examine whether the attributes described in Task 2 are at low or high ecological or recreational risk. If the attributes are at low risk, it can be assumed that current river management, water rights and compact deliveries are in support of nonconsumptive needs. Identify areas that are at low risk and will work with the Yampa-Basin Nonconsumptive Subcommittee to identify what water rights or compact deliveries may be associated with these areas.

Deliverable

Prepare a technical memorandum that summarizes results from this task. The technical memorandum will be submitted to CWCB in electronic form.

Final Deliverable

Final Deliverable: At the completion of the project, provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs. The final report will summarize each of the technical memorandums developed as part of Tasks 2 through 7. The final report is due no later than **June 30, 2012**.