

**Colorado River: 15-Mile Reach Programmatic Biological Opinion
Depletion Accounting Pursuant to Appendix B
Report Period 2001-2005**

December 2008



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**Attachment A: Individual Consultations under the Colorado River
15-Mile Reach PBO (PBO Appendix B List)**

**Attachment B: Summary of September 4, 2008 Technical Group
Meeting**

Colorado River: 15-Mile Reach Programmatic Biological Opinion Depletion Accounting Pursuant to Appendix B Report Period 2001-2005

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I. Background

The Endangered Species Act (ESA) as amended directs Federal agencies to work with State and local agencies to resolve water resource issues in concert with the conservation of endangered species. In 1984, the U.S. Department of the Interior, the States of Colorado, Wyoming, and Utah, water users, power customers and environmental groups formed a committee to discuss a process to recover the Colorado River endangered fishes while new and existing water developments proceed in the Upper Colorado River Basin in compliance with Federal and State law and interstate compacts. After four years of negotiations, the Recovery Implementation Program for the Endangered Fish Species in the Upper Colorado River Basin was initiated.

In order to further the Recovery Program, a Section 7 Agreement and a Recovery Implementation Program Recovery Action Plan (RIPRAP) were developed (USFWS 1993). The Agreement established a framework for conducting Section 7 consultations on depletion impacts related to new projects and impacts associated with existing projects in the Upper Basin. Procedures outlined in the Section 7 Agreement are used to determine if the Recovery Program is making “sufficient progress” toward the recovery of the Colorado River endangered fishes to enable the Recovery Program to serve as a reasonable and prudent alternative (RPA) to avoid the likelihood of jeopardy and/or adverse modification of critical habitat. The RIPRAP is reviewed and updated annually.

On March 11, 1996, the Recovery Program’s Implementation Committee directed the Management Committee to develop a strategy to provide and protect flows in the 15-Mile Reach of the Colorado River upstream of the Gunnison River confluence. The Management Committee formed a workgroup to further identify the issues and recommend a strategy for their resolution. In late 1996, the workgroup recommended that the issues could be best resolved through a programmatic biological opinion on Recovery Program activities in and above the 15-Mile Reach. The 15-Mile Reach Programmatic Biological Opinion (**PBO**) represents the U.S Fish & Wildlife Service’s (Service) consideration of Federal actions upstream of the Gunnison confluence (USFWS 1999).

II. Scope of the 15-Mile Reach Programmatic Biological Opinion

The PBO addresses impacts related to water depletions that occur above the confluence with the Gunnison River and impact critical habitat from Rifle, Colorado to Lake Powell and the recovery actions designed to offset these impacts. Issuance of the PBO does not create an administrative priority concerning Upper Colorado River Basin depletions. The

PBO neither prejudices nor determines the amount of depletions allowable under the Colorado River Compact or in other subbasins of the Upper Colorado River Basin.

III. Description of the Proposed Action

The Bureau of Reclamation (Reclamation) projects included in the PBO consultation are the past, existing, and continued operations of the Colorado-Big Thompson Project, Fryingpan-Arkansas Project, Collbran Project, Grand Valley Project, and Silt Project, and all existing, historical, and authorized depletions associated with these projects. The PBO also provides ESA compliance for Reclamation's use of a portion of the additional 120,000 acre-feet/year (AF/yr) of depletions provided for in the PBO. These Federal projects are operated in accordance with various laws, including the authorizing legislation for each project, operating policies, operating criteria and principles, and various court decrees.

Non-Reclamation projects included in the PBO consultation are associated with the continuation of existing depletions and the 120,000 AF/yr of additional depletions above the confluence with the Gunnison River which have or are likely to have a Federal nexus and are anticipated to choose to rely on the implementation of the RIPRAP, which is the responsibility of all of the Program participants, to avoid the likelihood of jeopardy and adverse modification of critical habitat. The Federal nexus will likely come in the form of facility repairs requiring U.S. Army Corps of Engineers (USACE) permits, Federal Energy Regulatory Commission (FERC) re-licensing, Federal agency authorization of right-of-ways, or some other Federal involvement. Therefore, the PBO treats all these projects as interrelated.

IV. Depletions and Depletion Accounting

Pursuant to the PBO, existing depletions, as of September 30 1995, are to be estimated using Colorado River Decision Support System (CRDSS) models; CRDSS is a part of Colorado's Decision Support Systems (CDSS). Model results show existing depletions are approximately 1 million AF/yr (MAF/yr). This estimate is the approximate average annual depletion value modeled for water years 1975 to 1991. The minimum depletion value was approximately 877,000 AF/yr during water year 1973 and the maximum was approximately 1,228,700 AF/yr during water year 1978, the year following the 1977 drought.

“The 120,000 AF/yr of additional depletions represents the amount of additional water that the Service believes could be depleted from the Upper Colorado River Basin above the confluence with the Gunnison River using new or existing facilities (including depletions that have already occurred since September 1995) and not result in the likelihood of jeopardy or adverse modification of critical habitat.” This additional depletion depends in part on the implementation of the recovery actions described in the RIPRAP producing positive benefits for the endangered fish and their critical habitat.

The 120,000 AF/yr reduction in flows is expected to have the same effect on endangered fish and their critical habitat whether removed by existing or new projects. However, a judgment on exactly where this 120,000 AF/yr of additional depletion will come from

cannot be made at this time, but it is anticipated that some will come from facilities that have yet to be constructed.

In recognition of the extreme variability of hydrology and water use demand patterns, the 120,000 AF/yr of additional depletions will be calculated as a 10-year moving average as determined by the Colorado Water Conservation Board (CWCB) in consultation with Reclamation and concurred with by the Service. The PBO requires that an accounting of depletions occurring above the Gunnison River confluence be made every five years beginning in 2006 for the period 2001-2005 in order to monitor the development or increase in depletions that is occurring. The purpose of this document is to provide that accounting.

A. PBO Appendix B Accounting and Reporting Procedures

Appendix B of the PBO lays out the accounting principles and options for determining changes in water depletions addressed in the PBO. The selected accounting process must quantitatively measure increases in water depletions as they actually occur and identify when 60,000 and 120,000 AF/yr of additional depletions have actually occurred. Water depletions are defined as the reduction in the quantity of water reaching critical habitat of the Colorado River endangered fishes, more specifically in the 15-Mile Reach upstream of the Gunnison River confluence. The process identified in Appendix B of the PBO is as follows:

- 1) *Every 5 years beginning in 2005, the Service and the State of Colorado will jointly collect consumptive use data and other data necessary to update either the State's CRDSS Consumptive Use Model or the State's CRDSS Colorado River Mainstem Water Right Planning Model "C1 run" as described in Appendix F of the PBO. Data collected would include irrigated acres, climatic data needed to run the "Modified Blaney-Criddle" consumptive use model, as well as data on evaporation, municipal and industrial uses, and other consumptive uses identified in the Bureau of Reclamation's consumptive uses and losses report. The Service would also provide a list of projects and new depletions consulted on during each 5 year period. The updated information will be submitted to a "technical group" (the Water Acquisition Committee of the UCRIP has been identified as the technical group or TG) for peer review. The TG will determine if the modeling accurately identifies the depletions that have actually occurred, because **only those depletions which have actually occurred will count against the 120,000 AF/yr of additional depletions** provided for in the PBO. Once the TG and any other interested entity have verified the depletion accounting, the accounting will be submitted to the Recovery Program for final review and distribution as appropriate.*
- 2) *Beginning in 2005, the State of Colorado's CRDSS Consumptive Use Model for the Colorado Mainstem will be run and a consumptive use and losses report will be developed. This report would verify the present level of depletions. Pursuant to the PBO, if it is determined that, with implementation of recovery actions and*

an appropriate fish population response, additional depletions of up to 120,000 AF/yr are not likely to jeopardize the endangered fishes or destroy or adversely modify critical habitat, then additional depletions totaling 120,000 AF/yr will be permitted. The accounting system for determining when depletions reach 120,000 AF/yr will avoid penalizing entities that implement water conservation and reuse practices (for example, entities will maintain their present level of demand in the model). The PBO does not mandate water conservation or reuse. However, if water conservation and reuse practices are implemented it will take longer to deplete the additional 120,000 AF/yr. Therefore, if all recovery actions are implemented and there is an appropriate fish population response, the PBO could provide Endangered Species Act compliance for a longer period of time. The TG believes that as actual depletions approach critical accounting thresholds it will be necessary to run both the State of Colorado's CRDSS Consumptive Use Model for the Colorado Mainstem and the State of Colorado's CRDSS Water Rights Planning Model for the Colorado Mainstem in order to avoid potential problems associated with annual fluctuations due to variable climatic factors, as well as model and data changes.

- 3) This provision of Appendix B **was not performed** for this reporting period. It is referenced here because it is part of the accounting procedures identified in Appendix B. The reasons for this provision, and the reasons it was not used for this reporting period, are discussed in the summary of the September 4, 2008 TG meeting in Attachment B. When the State of Colorado's CRDSS Colorado River Mainstem Water Right Model is used for determining the increases in depletions, Appendix B of the PBO requires the two model runs described below.

RUN 1.

The C_1 scenario will be run for the updated study period (e.g., 1975 to year n , where year n would be 2005, 2010, 2015, etc.) at the 1995 level of demand for the entire study period.

RUN 2.

A second model run (C_2) would be made for the same updated study period using year n demand levels over the entire period. Comparing the difference between the long-term averages of the two model runs (C_1 & C_2) will identify the increase or decrease in depletions over that time period. Model calibration and verification will be done with each update. There are no "cap" amounts identified in the process; the trigger is whether or not the difference between the two model runs exceeds either the 60,000 AF/yr or the 120,000 AF/yr level identified in this PBO.

The criteria for determining a positive or negative fish population response is presented in the reinitiation notice of the biological opinion and in Appendix D. As described in the reinitiation notice, the status of fish populations will be reviewed prior to new depletions reaching 60,000 AF/yr. This review will begin when actual new depletion levels reach 50,000 AF/yr or the year 2015,

whichever comes first. Therefore, every five years it will be determined if new depletions are approaching 50,000 AF/yr.

- 4) *A report will be prepared documenting the assumptions used and changes in depletions and other model results. The report will be prepared on a water year basis, October 1 to September 30. The report will also document any changes made to the model such as updated demand information.*
- 5) *Reports will be provided on a five-year basis. The report covering the period 2001-2005 will be completed by December 31, 2006. The report covering the period 2006-2010 will be completed by December 31, 2011. The reason for the one year lag is to allow the data for the previous year to be reduced and finalized.*
- 6) *This process as currently envisioned has the potential to become labor intensive depending on the number of model changes and degree of “backcasting” involved with the Water Rights Planning Model. Costs or appropriate cost-share arrangements will be worked out during the development of the Recovery Program’s annual work plan. A Scope of Work will be prepared for the FY 2005 Recovery Program’s work planning process to fund the development of the depletion report and model runs. Furthermore, because of cost considerations, the process identified above is subject to change with the agreement of the Recovery Program’s participants through the current management process.*

V. Methods

As outlined in Appendix B of the PBO there are two different modeling methods in Colorado’s Decision Support Systems (CDSS) that can be used to evaluate whether there have been increased depletions over the intervening period since the last accounting update. The first method is the CDSS water rights planning model, or StateMod. The second is the CDSS consumptive use model, or StateCU. Both methods share common elements, e.g., the use of irrigated acreage, crop types, and actual diversions associated with those irrigated lands. Appendix B is somewhat ambiguous over whether or not StateMod is required and has preference over StateCU or whether one or the other or both methods must be used. The summary of the September 4, 2008 TG meeting in Attachment B discusses this matter in some detail.

A. CDSS Water Rights Planning Model (StateMod) [NOT USED]

This accounting method was considered but **was not used** in developing the 2005 depletion estimates reported herein. It is discussed here because it is part of the accounting procedures described in Appendix B of the PBO. The purpose of this section is to describe certain changes made to StateMod and some of the data limitations encountered during the consideration of whether or not to use StateMod.

StateMod, the State of Colorado’s Stream Simulation Model, is a water allocation and accounting model capable of making comparative analyses for the assessment of various historical and future water management policies in a river basin. It can be run on either

monthly or daily time steps and is designed for application to any river basin with appropriate input data.

StateMod's operation, like the stream itself, is governed by its hydrology, water rights, and the associated structures and operating rules. It recognizes five types of water rights: direct flow rights, instream flow rights, reservoir storage rights, well rights, and operational rights. Each of the water rights is given an administration number (rank) and location in the stream system. The model then sorts the water rights by rank and simulates their operation by priority using the Prior Appropriation Doctrine (first in time, first in right). The water right categories are self-explanatory with the possible exception of the operational rights, which generally pertain to reservoir operating policies, exchanges and carrier ditch systems. Please see the CDSS website for more information: <http://cdss.state.co.us>.

i. Backcasted Demands

For purposes of the PBO accounting, "backcasting" is defined as taking a demand level for each relevant entity for a certain year, e.g., 2005, and using that demand back in time in the modeling for the entire study period, which is 1971-2005 in this case. For most of the water systems involved, the demands for the hydrologic study period are obtained through an entity's own records or their own modeling.

Had backcasting actually been completed for this PBO accounting period, backcasting for the study period for demand levels representative of both 1995 and 2005 would have been required from the major transmountain diverters. These include the Denver Water Department (Roberts and Moffat Tunnels), Northern Colorado Water Conservancy District (CBT-Adams Tunnel, CBT-Windy Gap), Colorado Springs/Aurora (Homestake Project, Independence Pass and Hoosier Pass Tunnels), and Southeastern Colorado Water Conservancy District (Fry-Ark). At this time, backcasted demands are not available for all of these entities.

ii. Changes in StateMod Since the Original PBO Application

StateMod has been revised since it was implemented in the PBO in 1996. Key changes include the following:

- The end of the period of record has been extended from 1991 to 2005.
- Operations relating to Green Mountain Reservoir and the Blue River decree have been revised according to the interim agreement.
- High-altitude growth coefficients for pasture grass have been incorporated, to represent the increased consumptive use demonstrated at lysimeters at altitudes greater than 6500 feet MSL.
- Reservoir releases for the endangered fishes are represented more accurately.
- A daily model is available (although not required for accounting in the PBO).

iii. Changes in Natural Flow Data

As StateMod is enhanced and updated for more accurate representation of actual gage flows, diversion records and current conditions, these modifications result in changes to

the natural flow data set, which is calculated from the gage records by removing man's effects. For example, diversions and reservoir evaporation are added back to the gage records, return flows and basin imports are subtracted, and changes in storage are added or subtracted depending on whether they are a positive or negative change.

StateCU, on the other hand, does not include natural flows as a component of the modeling process. For the 15-Mile Reach PBO depletion accounting, StateCU provides a more straightforward procedure to estimate depletions.

B. CDSS Consumptive Use Model (StateCU) [USED]

The StateCU model was selected for use in developing the consumptive use estimates reported herein. StateCU, the State of Colorado's consumptive use model, was developed to estimate/report both crop and non-crop consumptive uses within the state. It consists of a FORTRAN-based computer program and an associated graphical user interface. The crop consumptive use methods employed in the program and the interface are the modified Blaney-Criddle, the original Blaney-Criddle, and the Pochop (for bluegrass only) consumptive use methods with calculations on a monthly basis and the ASCE Standardized Penman-Monteith method with calculations on a daily basis. Other crop consumptive use methods available when the FORTRAN program is operated independently of the interface include the Penman-Monteith and Modified Hargreaves methods, operated on a daily time step. Please see the CDSS website for more information: <http://cdss.state.co.us>

StateCU performs an historical agricultural consumptive use analysis for the basin using irrigated acreage, crop types, available water supply via diversion records, and temperature and precipitation data from neighboring climate stations. For PBO accounting purposes, the modified Blaney-Criddle method is used on a monthly basis with the incorporation of high-altitude growth coefficients for pasture grass over 6500 feet. Irrigated acreage is determined from satellite imagery; updates are made approximately every five years. Potential consumptive use is calculated for the crop type, effective precipitation is taken into account, and the irrigation water requirement is calculated. Ditch conveyance loss, irrigation application method (flood or sprinkler), and soil moisture balance are taken into account in order to determine how much of the irrigation water requirement is met.

The other non-crop consumptive use components are obtained from other information: exports and mineral use are obtained from relevant diversion records; municipal and livestock use is calculated from population estimates and daily water usage estimates; and stockpond and reservoir evaporation is determined from estimated surface area and monthly evaporation rates.

VI. Consultations

The 15-Mile Reach PBO covers up to an average of approximately 1 MAF/yr of historical depletions. If those projects are involved in a federal action (e.g., permit, grant, contract, right-of-way approvals, etc.) requiring ESA compliance, the project proponents/owners must sign a recovery agreement in order for the Recovery Program to be considered the reasonable and prudent alternative (RPA) for the project. Most eligible

projects within this 1 MAF have never been consulted on or underwent consultation prior to January 1, 1993, and thus, are not reflected in the list of consultations attached hereto as Attachment A. Attachment A reflects all the projects that have undergone Section 7 consultation since the inception of the Program in 1988.

As shown in Attachment A, since the implementation of the Recovery Program, there have been consultations on more than 350 new and historical projects in and above the 15-Mile Reach. The Recovery Program and implementation of the Recovery Action Plan have served as the RPA for the jeopardy opinions issued on these projects. While the list of consultations reflects more than 49,000 AF/yr of depletions from these projects, the list is not an accurate reflection of the depletions that are actually occurring. It should be noted that many of the depletions consulted on have not yet been developed or fully utilized. Therefore, it should be emphasized that only the impacts of actual depletions are shown in the accounting.

The Service has also consulted on over 331,000 AF/yr of historical or pre-Recovery Program projects (since 1988). Additional information about Section 7 consultations can be found at the following website: <http://www.fws.gov/mountain-prairie/crrip/index.htm>

VII. Results

This accounting update only reports the consumptive uses and consumptive use trends indicated by the StateCU approach for several reasons. First, the StateCU model is somewhat simpler to set up and run for consumptive use accounting purposes than the StateMod modeling scenarios. Second, preliminary runs with the StateCU model indicated that total depletions in the Upper Colorado River Basin during the 2001-2005 accounting period were overall slightly lower than the long-term average. Furthermore, difficulties were encountered in obtaining backcasting demand levels for various entities for the StateMod application. The preliminary StateCU results were shared with the Water Acquisition Committee of the UCRIP, which was identified as the Technical Group (TG) for peer review. The TG had no significant concerns with using only StateCU for this accounting update. StateCU shows that the present level of depletions has remained relatively constant or is slightly less when compared to consumptive uses in previous years and over various time periods.

Figure 1 illustrates the total consumptive uses and losses (CU&L) computed from StateCU for the period 1971-2005. The different components of CU&L are shown on the figure. As can be seen on the graph, the two largest components of depletions in the Colorado River Basin are irrigated agricultural consumptive use and exports, which account for over 90 percent of the total CU&L. Please note that the agricultural CU&L value includes incidental losses of water associated with irrigation, e.g., phreatophytes that receive tailwater from irrigated fields. In StateCU, incidental losses are currently estimated to be 10 percent of agricultural CU.

The average total CU&L for the 1971-2005 time period, for the Colorado River Basin is 1,029,000 AF/yr. The values vary between 877,000 AF/yr in 1973 and 1,228,700 AF/yr in 1978.

Figure 1

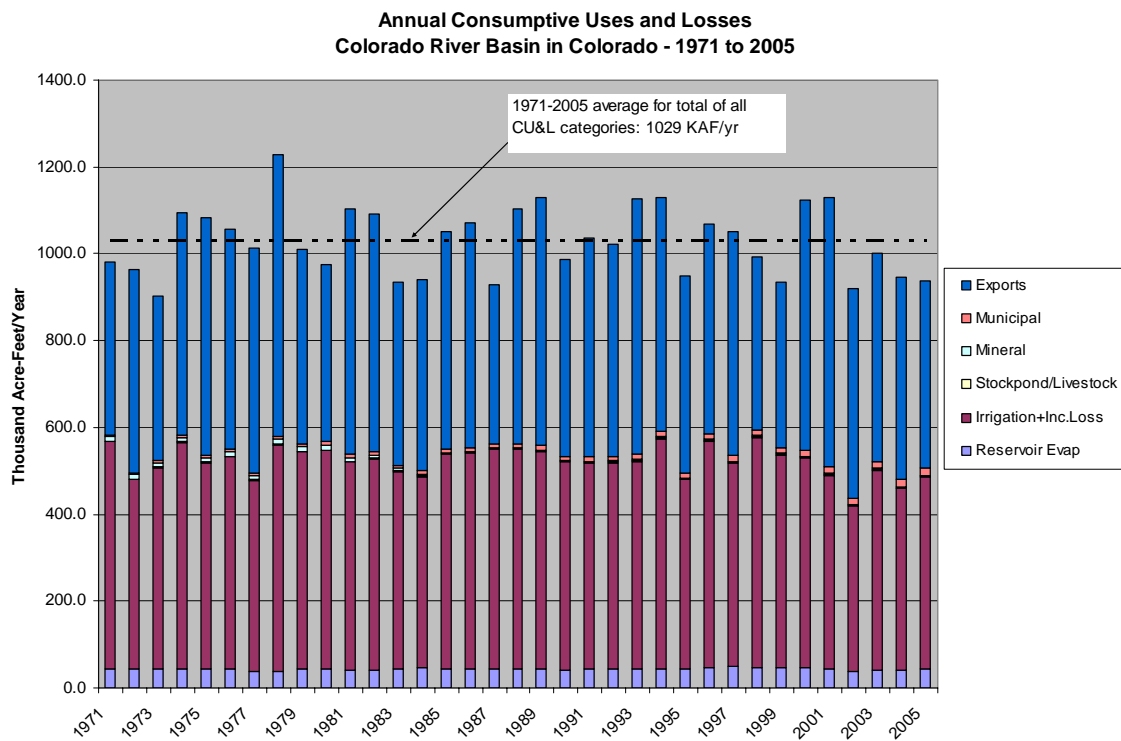


Figure 2 illustrates the total CU&L by year for the 1996-2005 time period. The average total CU&L for the 1996-2005 time period is 1,010,500 AF/yr. The 1996-2005 average is slightly less than the longer term 1971-2005 average of 1,029,000 AF/yr. The average for 2001-2005 is 987,200 AF/yr, and each of the last four years of the period, 2002-2005, have had total depletions less than the long-term average, presumably the result of the drought that began in 1999. The results noted in Figures 1 and 2 clearly illustrate that the total CU&L has not increased in the 10 years from 1996 to 2005.

Figure 2

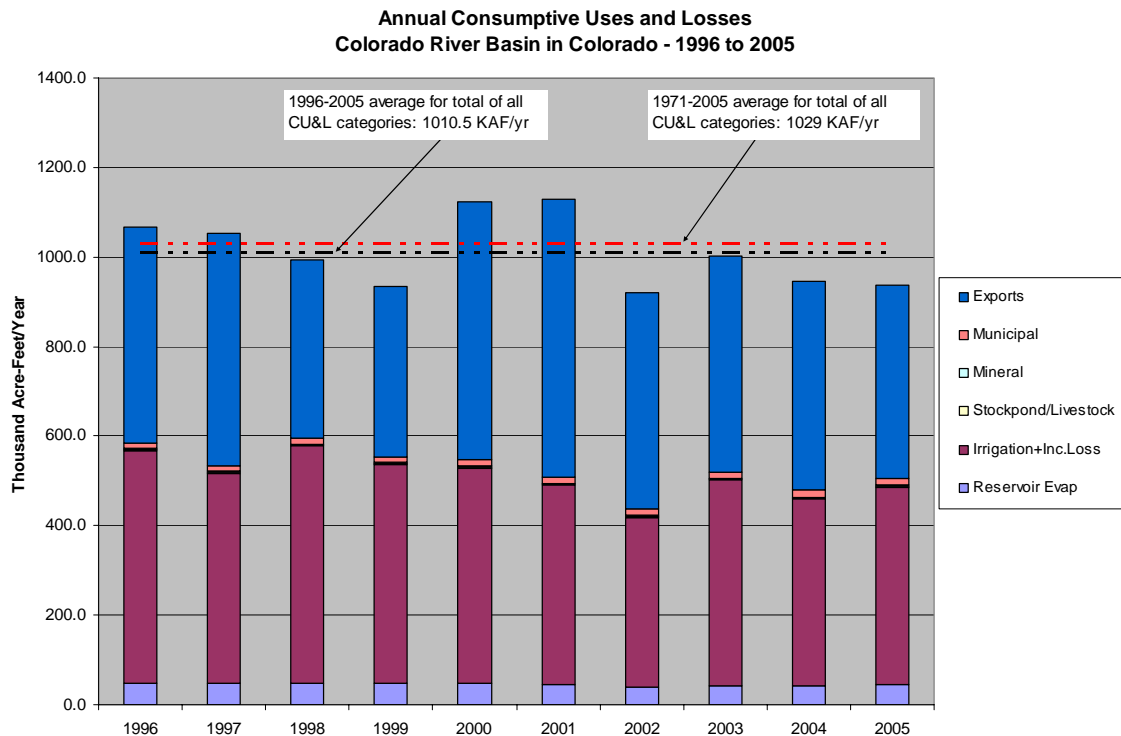


Figure 3 takes a closer look at the CU&L resulting from irrigated agriculture. The 1971-2005 CU&L from agriculture averaged 478,100 AF. The 1996-2005 average is 463,100 AF, and the 2001-2005 average is 428,400 AF. There were two years since 1996 (522,500 AF in 1996 and 531,800 AF in 1998) that notably exceeded the 1971-2005 CU&L average. Aside from these two years the agricultural use of water from 1996-2005 is below average, again presumably in part because of the drought conditions, but it may also be partly in response to the reduction in irrigated acres caused by urban development. Irrigated acreage estimates have been made by CWCB from satellite imagery for the Colorado River Basin for 1993 (271,000 acres), 2000 (238,000 acres) and 2005 (209,000 acres). Clearly there has been a significant decrease in irrigated acreage during recent years.

Figure 3

**Agricultural Consumptive Uses and Incidental Losses
Colorado River Basin in Colorado 1971-2005**

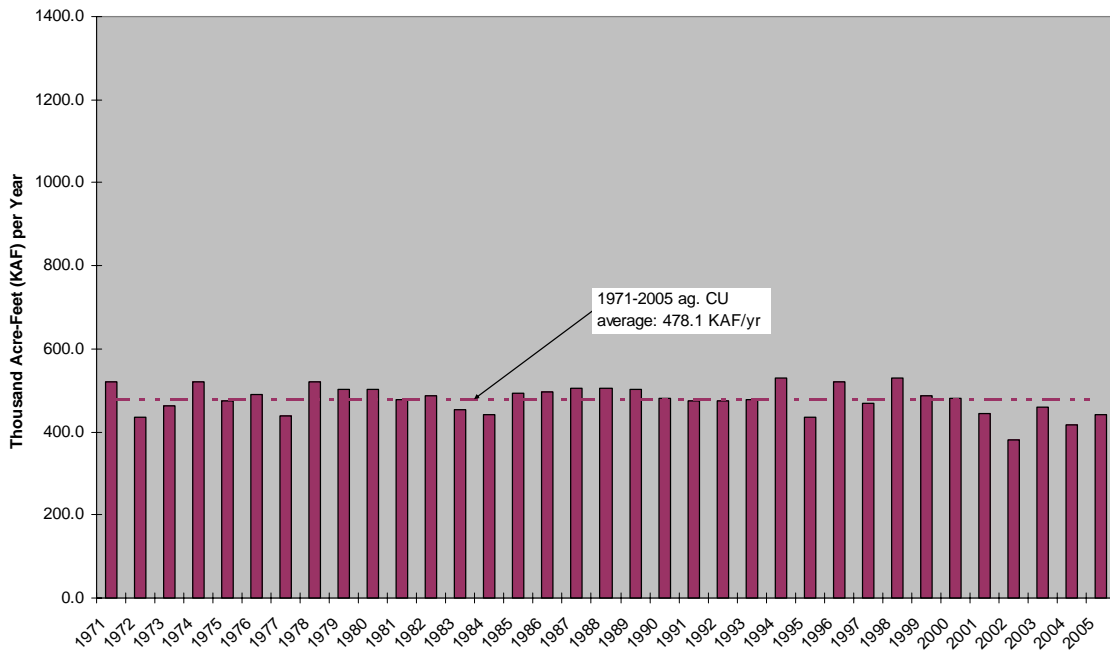


Figure 4 takes a closer look at exports, or transmountain diversions. The transmountain diversions between 1971 and 2005 averaged 490,500 AF, ranging in value from 365,700 AF in 1987 to 649,500 AF in 1978. The average for 1996-2005 is 483,800 AF, and the average for 2001-2005 is 497,000 AF. There is no apparent trend in transmountain diversions since 1971, but there is much variability, the extent of which has not changed noticeably through the time period. This variability is a function of hydrologic conditions and demands on the east slope and hydrologic conditions on the west slope. For example, if it is wet on the east side of the continental divide, there may be less water than average diverted even though it is available on the west side, because there is no vacant storage on the east side. And if it is dry on the west side, there may not be enough water available even though there is demand and storage available on the east side. Also, the degree to which new development on the east slope is being offset by conservation measures cannot be easily quantified.

Figure 4

**Exports
Colorado River Basin in Colorado 1971-2005**

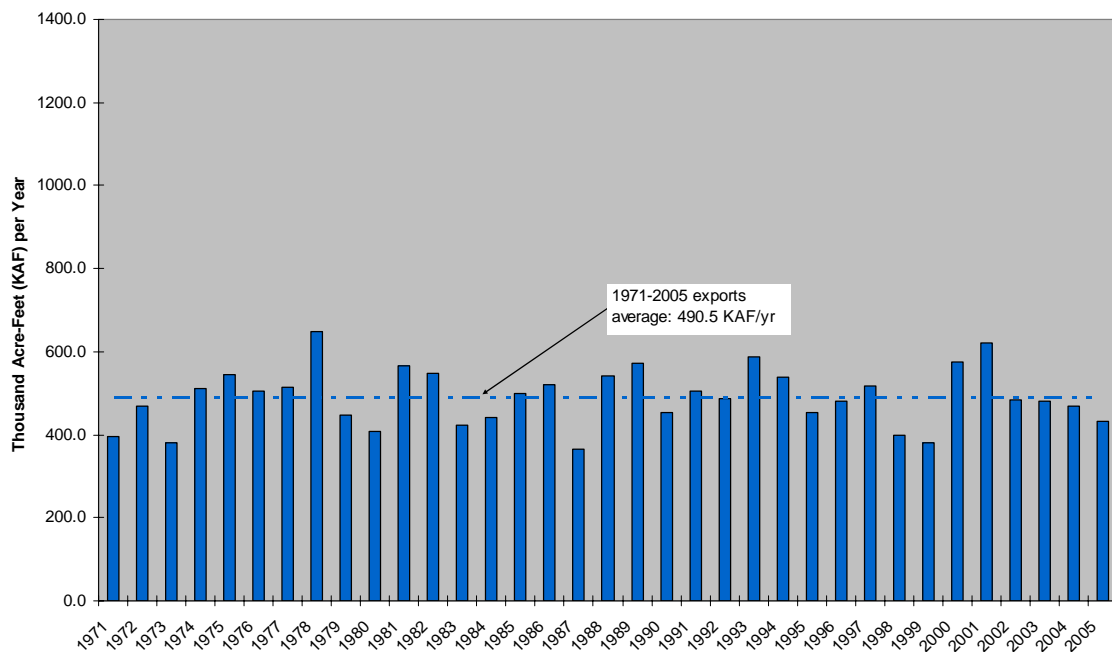
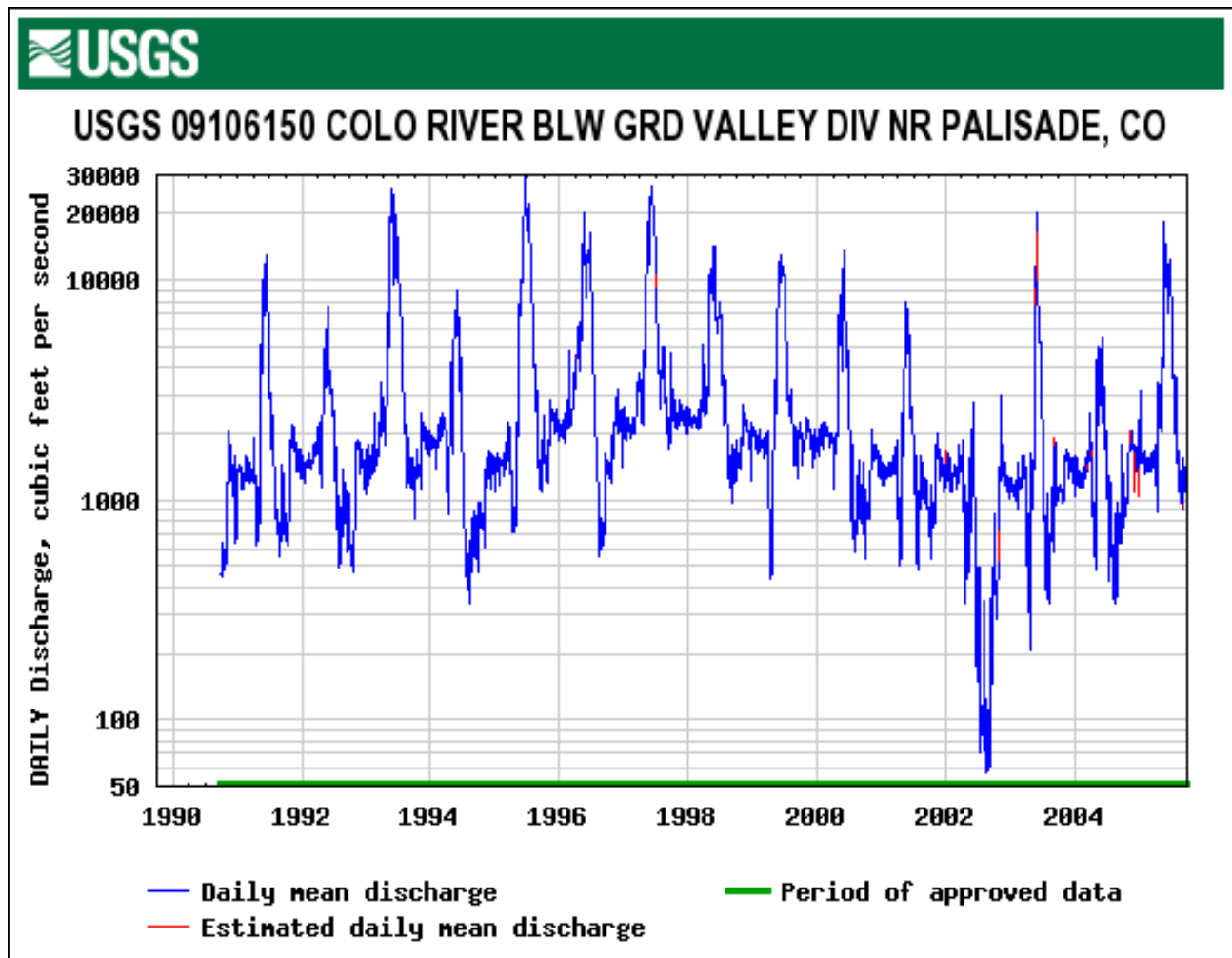


Figure 5 illustrates the mean monthly flows at the Colorado River near Palisade gage for the period 1990 to 2005. This figure is included to help address the question of whether or not diversions above the 15-Mile Reach were increasing even though consumptive uses may not be increasing. This figure shows that base flows remain fairly constant at between 500 and 600 cfs. It also shows that actions taken to try and meet flow recommendations seem to be working and have been able to maintain approximately 500 cfs or more in the 15-Mile Reach. The flows were considerably less than 500 cfs in 2002 and 2003 because of the extreme drought conditions that existed in those years. Flows significantly less than the minimum flow recommendation of 580 cfs would likely not be sustainable if the depletive impacts were increasing even if the overall CU&L were remaining fairly constant.

Figure 5



VIII. Conclusions

a. No increase in consumptive uses during 2001-2005

This report only accounts for the consumptive uses and consumptive use trends indicated by the StateCU model. The StateCU results show that average depletions above the 15-Mile Reach have not increased in recent years when compared to the average depletions for a longer period of record. Figures 1 through 4 above illustrate there has not been an increase in the consumptive uses and losses in the Colorado River Basin upstream of the Gunnison River confluence during the period 2001-2005 when compared to the uses between 1971 and 2000. Particularly with respect to transmountain diversions and uses by irrigated agriculture, the two major components, there were no significant increases or decreases. The average total consumptive use for the 2001-2005 time period was 987,200 AF/year, while the average for the 1971-2005 period was 1.029 MAF/year, and the average for 1971-2000 was 1.0359 MAF/year.

b. Only actual uses, not conditional uses or consultations, are reflected in this report and the StateCU computations

Since the implementation of the Recovery Program, there have been consultations on more than 350 actual projects in and above the 15-Mile Reach. The list of consultations in Attachment A was developed consistent with the specific requirements described in the PBO. Many of the projects consulted on have not yet been developed or fully utilized and therefore that tabulation is not reflective of the actual depletions and consumptive uses reported herein. Because the amounts consulted on in the future may significantly outpace actual depletions the PBO provides for a reinitiation process (see pages 75-77 of the PBO). That process triggers a review of the status of the endangered fish in 2015 or when actual depletions reach 50,000 AF/yr, whichever occurs first. This process helps factor the potential disparity between the two into the PBO accounting process so that the amounts consulted on do not so significantly outpace actual depletions that both the consultations and the 120,000 AF/yr of additional depletion provision become meaningless.

c. September 4, 2008 Technical Group Meeting

There were several ambiguities identified during the development of this report. The TG discussed these ambiguities and the meeting summary in Attachment B records the various understandings and interpretations of what was intended. It is critical that this meeting summary be reviewed and considered during the development of the next accounting. Perhaps the most important discussion involves obtaining “backcasted” demands so that StateMod can be run to determine depletion increases in accordance with Appendix B of the PBO.

IX. Acknowledgements

This report was prepared by Randy Seaholm and Andy Moore with the Colorado Water Conservation Board.

The Upper Colorado River Recovery Program – Water Acquisition Committee served as the Technical Peer Review Group. In particular, the authors would like to acknowledge the review and input of the following individuals:

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Robert Muth George Smith
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Water User Representative

Tom Pitts

Environmental Representative

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Colorado River Water Conservation District

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ATTACHMENT A
Individual Consultations under the Colorado 15-Mile Reach PBO
(PBO Appendix B List)

APPENDIX B LIST: Projects consulted on after Recovery Implementation Program Initiation (January 1988) which are eligible to participate in the 15-Mile Reach Programmatic Biological Opinion.

Updated through 6/30/2008

Every 5 years, beginning in water-year 2005 (this was delayed until 2007), Colorado will report to the Program estimated average annual volumes of depletions from the Colorado River basin in Colorado.

The 15-Mile Reach Programmatic Biological Opinion covers up to 1 million acre-feet of historic depletions whose project proponents sign a recovery agreement. Most eligible projects within this 1MAF have never been consulted on or underwent consultation prior to January 1, 1988, and thus, are not reflected in this list.

* An asterisk in the "Federal Agency" column denotes a consultation added or information modified in the last quarter.

For purposes of any future reinitiation of consultation, depletions have been divided into two categories:

Category 1 depletions consist of: a) existing depletions, both Federal and non-Federal as described in the project description, from the Upper Colorado River Basin above the confluence with the Gunnison River that had actually occurred on or before September 30, 1995 (average annual of approximately 1 million acre-feet/year); b) depletions associated with the total 154,645 acre-feet/year volume of Green Mountain Reservoir, including power pool (which includes but is not limited to the all of the 20,000 acre-feet contract pool and historic user's pool), the Colorado Big-Thompson replacement pool; and c) depletions associated with Ruedi Reservoir including Round I sales of 7,850 acre-feet, Round II sales of 6,135 acre-feet/year as discussed in the Service's biological opinion to Reclamation dated May 26, 1995, and as amended on January 6, 1999, and the Fryingpan Arkansas Project replacement pool as governed by the operating principles for Ruedi Reservoir, but excluding 21,650 acre-feet of the marketable yield. Category 1 depletions shall remain as Category 1 depletions regardless of any subsequent change, exchange, or abandonment of the water rights resulting in such depletions.

Category 1 depletions associated with existing facilities may be transferred to other facilities and remain in Category 1 so long as there is no increase in the amount of total depletions attributable to existing depletions. However, section 7 consultation is still required for Category 1 depletion projects when a new Federal action occurs which may affect endangered species except as provided above under "Individual Consultation Under the Umbrella of this Programmatic Biological Opinion." Reinitiation of this consultation will be required if the water users fail to provide 10,825 acre-feet/year on a permanent basis.

Category 2 is defined as all new depletions up to 120,000 acre-feet/year; this includes all depletions not included in Category 1 that occur after 1995 regardless of whether section 7 consultation has been completed. This category is further divided into two 60,000 acre-feet/year blocks of depletions.

Federal Agency	Project Name	State	River	No. of Projects	Date Opinion Finalized	Footnote	Depletion Charge	Rec. Agr.	Date Paid	Amount Paid	Avg. Annual Depletion (af) Cited in Individual Project Opinion	
											NOT a depletion accounting New	Historic
BLM	Muddy Creek	CO	Colorado	1	7-Feb-90		\$80,324.00		06/01/1992	\$8873.4 &	7716	
BLM	Trans-Colorado Gas Pipeline	CO	Colorado	1	30-Nov-92		\$149.00		& 10/20/92	\$79860.6	13	
BLM	Dowler Pipeline	CO	Colorado	1	27-Aug-93	2,7	\$0.00					29
BLM	Wilcoxson Water Supply	CO	Colorado	1	27-Sep-93	2,7	\$0.00					0.55
BLM	Cason Irrigation Pipeline	CO	Colorado	1	13-Jan-94	7	\$169.00		19-Feb-97	\$187.74	14	
BLM	Hastings Pipeline	CO	Colorado	1	28-Jan-94	2,7	\$0.00					44
BLM	JQS Pit Reservoirs	CO	Colorado	1	22-Feb-94	7	\$31.00				2.55	
BLM	Taylor Grazing Pond	CO	Colorado	1	22-Feb-94	7	\$16.00				1.28	
BLM	Vasten Homestead Waterfowl	CO	Colorado	1	22-Feb-94	7	\$79.00		29-Mar-94	\$126.00	6.38	
BLM	Jolly-Potter	CO	Colorado	1	3-Mar-94	2,7	\$0.00					125
BLM	Schenk Water Tank	CO	Colorado	1	7-Apr-94	2,7	\$0.00					30.4
BLM	Greenhorn Stock Pond	CO	Colorado	1	7-Apr-94	7	\$31.00				2.55	
BLM	North Northwater Spring	CO	Colorado	1	31-May-94	7	\$20.00				1.61	
BLM	Clough-Alber Ponds	CO	Colorado	1	31-May-94	7	\$16.00				1.28	
BLM	New Castle Water Tank	CO	Colorado	1	31-May-94	2,7	\$0.00					446.22
BLM	Jolley Irrigation	CO	Colorado	1	31-May-94	2,7	\$0.00					393
BLM	Rocky Mt. Natural Gas	CO	Colorado	1	27-Sep-94	7	\$108.00		18-May-94	107.82	9	
BLM	Jerry Creek/Ute Water/BLM Land Exch.	CO	Colorado	1	15-Apr-97	2,7	\$0.00					670
BLM	Ute Water Pipeline	CO	Colorado	1	2-Feb-98	2,7	\$14,555.74		23-Dec-98	\$14,893.02	1054	4628
BLM	Wolford Mtn. Resv.	CO	Colorado	1	4-Mar-98	7	\$79,670.00		07/31/1998	\$79,670	5769	
BLM	Trans-Colorado Gas Pipeline 2	CO	Colorado	1	18-May-98	7	\$1,712.44		& ?4/5/01?	?\$17,777.88?	124	
									27-Aug-98	\$1,712.44		

Federal Agency	Project Name	State	River	No. of Projects	Date Opinion Finalized	Footnote	Depletion Charge	Rec. Agr.	Date Paid	Amount Paid	NOT a depletion accounting	
											New	Historic
BLM	Palisade Water Pipeline Replacement	CO	Colorado	1	25-Feb-99	2,7	\$2,232.54				158	190
BLM	America Soda Nacholite Mine	CO	Colorado	1	22-Jun-99	2,7	\$0.00	Y				1095
BLM	Ute Water Pipeline Reinitiation	CO	Colorado	1	12-May-00	7	\$30,744.76	Y	31-Jan-00	\$30,744.76	2141	
BR	Collbran Project Amendment	CO	Colorado	1	29-Jun-92	2,7	Exempt					746
BR	Grand Valley BLM Stk Ponds	CO	Colorado	1	10-Nov-93	7	Exempt				21	
BR	Ruedi Rsrvr Round 2 Water Sale	CO	Colorado	1	26-May-95	7	Exempt				17000	
BR	Basalt Water Conserv. Water Sale Contr.	CO	Colorado	1	13-Feb-97	7	Exempt				1000	
BR	West Divide Conserv. Water Sales Contr.	CO	Colorado	1	11-Feb-97	7	Exempt				200	
BR	Green Mtn. Resv. Water Service Contr.	CO	Colorado	1		7	Exempt				1000	
BR	Silt WCD Diversion Replacement	CO	Colorado	1	2-Sep-98	2,7	\$0.00					2400
BR	GVIC Fish Screen	CO	Colorado	1	4-Feb-02	2,7	\$0.00	Y				58515
BR	DeBeque Growout Ponds	CO	Colorado	1	18-Apr-02	7	Exempt	NA			58	
BR	Grand Valley Fish Passage & Screen	CO	Colorado	1	6-Nov-02	2,7	Exempt	Y				62508
COE	Town of New Castle	CO	Colorado	1	27-Jul-90		\$22.00		29-Sep-92	\$24.15	2	
COE	Colorado DOW Crystal Hatchery	CO	Colorado	1	14-Nov-90	2	\$21.00		29-Sep-92	\$21.97		2
COE	Bluestone/Roan Creek	CO	Colorado	1	11-Mar-91		\$21,820.00		25-Nov-91	\$21,820.00	2000	
COE	Everist Gravel	CO	Colorado	1	31-May-91		\$45.00		18-Sep-92	\$47.15	4	
COE	Snowmountain Ranch	CO	Colorado	1	15-Jun-91		\$908.00		22-May-91	\$907.71	83	
COE	Frei & Sons	CO	Colorado	1	16-Aug-89		\$3,881.00				388	
COE	Indian Meadows	CO	Colorado	1	24-Mar-92		\$1,599.00				139	
COE	Snowmountain Amend	CO	Colorado	1	3-Jun-92		\$64.00		23-Jul-92	\$64.00	6	
COE	Eagle Golf Course	CO	Colorado	1	4-Sep-92		\$2,702.00		15-Sep-92	\$270.25	235	
COE	Colorado DOT	CO	Colorado	1	8-Dec-92		\$36.00		9-Mar-93	\$40.25	3	
COE	Flannery Reservoir	CO	Colorado	1	2-Jul-93	7	\$1,598.00		12-Dec-93	\$1,598.13	133	
COE	Pat.-Jacobson Ditch	CO	Colorado	1	29-Jul-93	2,7	\$0.00					103
COE	Clifton Diversion	CO	Colorado	1	2-Sep-93	2,7	\$0.00					994
COE	Evans/McKenzie Ponds	CO	Eagle	1	1-Nov-93	7	\$5.00				0.39	
COE	West Pond	CO	Colorado	1	13-Jan-94	7	\$2.00		27-Jan-94	\$1.97	0.16	
COE	Palmer Creek	CO	Colorado	1	28-Mar-94	7	\$12.00				0.94	
COE	Dry Hollow Creek	CO	Colorado	1	4-Apr-94	7	\$28.00		29-Oct-93	\$27.55	2.3	
COE	Town of Granby	CO	Colorado	1	11-Apr-94	2,7	\$0.00				41	
COE	Avon Metro	CO	Colorado	1	31-May-94	2,7	\$14.00		8/4/94?	\$13.50?	1.1	38.3
COE	Upper Eagle Diversion	CO	Eagle	1	26-Jul-95	7	\$7,664.00	Y	10-Aug-95	\$7,664.13	603	
COE	Cotton Ranch	CO	Colorado	1	19-Sep-95	2,7	\$0.00					250.3
COE	City of Glenwood Emerg. H2O Intake	CO	Colorado	1	17-Sep-96	2,7	\$0.00					450
COE	Highline Dam Maintenance Project	CO	Colorado	1	4-Sep-96	2,7	\$0.00					620
COE	Maryland Creek Gravel Mine (Everist)	CO	Colorado	1	15-Apr-97	2,7	\$0.00					272.7
COE	Silver Creek Golf, Lodge, & Housing	CO	Colorado	1	3-Sep-97	2,7	\$0.00					399.2
COE	CDOW Deep Spring Creek Project	CO	Colorado	1	2-Oct-98	2,7	\$0.00					797
COE	Eagle Ranch Development Project	CO	Colorado	1	1-Oct-98	2,7	\$0.00					809
COE	Joufflas Ranch Golf Course	CO	Colorado	1	14-Jun-99	2,7	\$0.00					202.39
COE	The Summit Golf & Res. Dev. Project	CO	Eagle	1	11-Apr-00	2,7	\$0.00	Y				173.18
COE	Park E. Subd. Pumping Station Project	CO	Colorado	1	11-Apr-00	2,7	\$1,657.14	Y			115.4	
COE	Red Sky Ranch Golf Course Project	CO	Eagle	1	15-May-00	2,7	\$0.00	Y				80.7
COE	Summerset Land Group Project	CO	Colorado	1	21-Jun-00	7	\$0.00	Y			1.6	
COE	Upper Eagle Reg'l Water Auth. Intake	CO	Eagle	1	30-Jun-00	7	\$0.00	Y			43	
COE	Dr. James Bolen F&W Pond Project	CO	Colorado	1	21-Aug-00	7	\$0.00	Y			1.9	
COE	Stillwater Ranch Dev., Carruth Properties	CO	Colorado	1	15-Nov-00	2,7	\$0.00	Y				1290
COE	Eagle Co. School Cross Creek Diversion	CO	Colorado	1	10-Oct-00	2,7	\$0.00	Y				9.3
COE	Swan River Water Diversion Project	CO	Colorado	1	3-Nov-00	2,7	\$0.00	Y				26
COE	CDOW Kelley Springs Pipeline Project	CO	Colorado	1	9-Nov-00	2,7	\$0.00	NA				72
COE	Michael Berkeley Pond Project	CO	Colorado	1	16-May-01	7	\$0.00	Y			5.6	
COE	Jack Bestall Maryvale East Dev. Project	CO	Colorado	1	17-Jul-01	7	\$0.00	Y			3.56	

Federal Agency	Project Name	State	River	No. of Projects	Date Opinion Finalized	Footnote	Depletion Charge	Rec. Agr.	Date Paid	Amount Paid	NOT a depletion accounting	
											New	Historic
COE	Michael Short Pond Project	CO	Colorado	1	13-Dec-01	7	\$0.00	Y			28.8	
COE	Ashback Sheep Mountain Estates Pond	CO	Colorado	1	28-Dec-01	7	\$0.00	Y			0.53	
COE	Hamilton Creek Metro Water Supply	CO	Colorado	1	21-Dec-01	7	\$0.00	Y			16	
COE	Traer Creek Village @ Avon Project	CO	Colorado	1	17-Dec-01	2,7	\$0.00	Y				135.3
COE	Town of Eagle Water Line Project	CO	Colorado	1	4-Jan-02	2,7	\$2,043.50	Y	9-Jul-02	\$2,043.50	134	126
COE	Roaring Fork Res. Mamm Cr. Sand/Grav.	CO	Colorado	1	15-May-02	7	\$2,417.12	Y			158.5	
COE	Breckenridge Sawmill Gulch Reservoir	CO	Colorado	1	11-Apr-02	2,7	\$0.00	Y				6.16
COE	Christopher Smith Pond Creek Diversion	CO	Colorado	1	5-Sep-02	7	\$0.00	Y			0.12	
COE	Resource Eng. Roaring R. Ranch Div.	CO	Colorado	1	28-Feb-03	7	\$0.00	Y			1.61	
COE	Bill Hegberg Wildcat Ranch Pond	CO	Colorado	1	19-Feb-03	7	\$0.00	Y			0.265	
COE	Columbo Lakoda Canyon Ranch Golf Course	CO	Colorado	1	15-Apr-03	2,7	\$0.00	Y				246
COE	New Castle Water Line, Well, & Diversion	CO	Colorado	1	22-Aug-03	2,7	\$0.00	Y				400
COE	Rendezvous Colorado West Mountain Proj.	CO	Colorado	1	24-Feb-04	2,7	\$0.00	Y			19.63	126
COE	Gypsum Partners Golf Ponds	CO	Colorado	1	13-Jan-04	7	\$0.00	Y			78.8	
COE	Kremmling Emergency Water Diversion	CO	Colorado	1	27-Apr-04	7	\$0.00	Y			27	
COE	Vail Assoc. Vail Mtn. Snowmaking	CO	Colorado	1	8-Jul-04	2,7	\$0.00	Y				603
COE	Town of Silt Water Intake	CO	Colorado	1	21-Dec-04	2,7	\$0.00	Y			82	40
COE	Tom Backhus 4 Eagle Ranch	CO	Colorado	1	29-Oct-04	7	\$0.00	Y			2	
COE	Sam Gary Jr. Mt. Powell Ranch Pond	CO	Colorado	1	27-Jan-05	7	\$0.00	Y				1.42
COE	David Garton Poark Partners Buckhorn Valley Irrigation	CO	Colorado	1	7-Jan-05	7	\$0.00	Y			19.6	
COE	CDOW Lake Christine Dam Reconstruction	CO	Colorado	1	11-Feb-05	7	\$0.00	NA			11.65	
COE	Brush Creek Dev. Co. LLC Snowmass Base Village & Fanny Hills PUD	CO	Colorado	1	29-Jul-05	7	\$0.00	Y			22.3	
COE	Kummer Dev. Co. Frost Creek Residential Subdivision	CO	Eagle	1	27-Sep-05	7	\$0.00	Y			37.74	
COE	Brightwater Club Golf Course	CO	Eagle	1	14-Dec-05	7	\$1,790.36	Y	19-Dec-05	\$1,750.62	107.4	
COE	City of Rifle Water Intake	CO	Colorado	1	21-Dec-05	2,7	\$0.00	Y			66	350
COE	Lewerenz Saddle Ridge Golf Club Ponds	CO	Eagle	1	22-Dec-05	7	\$0.00	Y			70	
COE	Orvis Shorefox Dev.	CO	Colorado	1	21-Jun-06	2,7	\$5,651.13	Y			339	233
COE	David Beine Pond Project	CO	Colorado	1	5-Dec-06	7	\$0.00	Y			0.48	
COE	EnCana Oil and Gas Parachuute Creek Dam and Well Pads	CO	Colorado	1	24-Jan-07	7	\$0.00	Y			26.3	
COE	Lafarge North America Mamm Creek Gravel Pit	CO	Colorado	1	14-Mar-07	7	\$4,017.00	Y			233	
COE	Craig Meyers for Intra West Placemaking Landscape Pond	CO	Fraser	1	27-Mar-07	7	\$0.00	Y			0.49	
COE	Galloway Inc's Blue Valley Ranch Stream & Wetland Restoration Proj.	CO	Blue	1	27-Mar-07	2,7	\$0.00	Y				29.38
COE	Eagle Park Reservoir	CO	Eagle	1	15-Oct-07	7	\$21,953.00	Y			1234	
COE	KIWA Associates Vines @ Vail	CO	Colorado	1	15-Oct-07	7	\$0.00	Y			8.56	
COE	High Lonesome Ranch Restoration	CO	Colorado	1	14-Dec-07	2,7	\$0.00	Y				84
*COE	WER Lake Creek Pond Project	CO	Colorado	1	8-May-08	7	\$0.00				1.17	
DOE	Uranium Mill Tailings - Rifle	CO	Colorado	1	14-Aug-89		\$2,150.00				215	
DOE	Uran Mill Tailings-Grnd Jnctn	CO	Colorado	1	10-Jan-92		\$209.00		27-Dec-91	\$208.73	18	
DOE	Naval Oil Shale Res #3	CO	Colorado	1	1-Jun-94	7	\$60.00		22-Jun-94	\$60.10	4.87	
EPA	Ginn Battle North Superfund Site	CO	Eagle	1	29-Aug-07	2,7	\$0.00				82	48
FERC	Gross Reservoir Hydro. - Denver Water	CO	Colorado	1	12-Oct-00	2,7	\$83,474.68	Y	4/18/2005 6/14/05	\$77,167.57 \$8,109.14	5813	22.36

Federal Agency	Project Name	State	River	No. of Projects	Date Opinion Finalized	Footnote	Depletion Charge	Rec. Agr.	Date Paid	Amount Paid	NOT a depletion accounting New	Historic
FERC	Denver Williams Fork Reservoir	CO	Williams Fork	1	7-Jul-06	2,7	\$0.00	Y				27475
FERC	Williams NW Pipeline Parachute Lateral	CO	Colorado	1	18-Aug-06	7	\$0.00	Y			4.9	
FERC	Williams NW Pipeline Co Skinner Ridge Meter Sta	CO	Colorado	1	9-Aug-07	7	\$0.00	Y			0.03	
FHWA	CDOT I-70 to MM 147 Project	CO	Eagle	1	21-Jul-05	7	\$0.00	NA			0.02	
FS	White Banks Alabaster	CO	Colorado	1	24-Jul-92		\$12.00		11-Aug-92	\$5.06	1	
FS	Wolf Creek Gas Wells	CO	Colorado	1	9-Sep-92		\$30.00				3	
FS	White River Oil & Gas Lease	CO	Colorado Colo,	1	2-Feb-93	4					1	
FS	Routt Oil & Gas	CO	Yampa	1	8-Mar-93	4					62	
FS	Vidler Tunnel	CO	Colorado	1	6-Jul-93	2,7	\$0.00					2000
FS	Smith-Ermele Pipe	CO	Colorado	1	2-Aug-93	2,7	\$0.00					0.2
FS	Overton to Terrell Ditch	CO	Colorado	1	5-Aug-93	2,7	\$0.00					48.1
FS	7 Natl Forests Small Dep	CO	Colorado	1	7-Sep-93	2,7	\$2,937.00		Various		245	1085
FS	Alsbury Res. Enlargement	CO	Colorado	1	10-Feb-94	2,7	\$1,641.00		20-Jul-95	\$1,684.07	133	13
FS	Porter Ditch	CO	Colorado	1	15-Aug-94	7	\$5,553.00				450	
FS	Lapadakis Special Use Permit	CO	Colorado	1	13-Jan-95	2,7	\$0.00					260.3
FS	Snowmass Ski Devel	CO	Colorado	1	10-Feb-95	2,7	\$1,218.00		01/27/94, \$1218.40, 9/30/94 & \$866.27 & 5/19/98 \$1186.00		70	14
FS	ChemStar Lime CO	CO	Colorado	1	24-May-95	2,7	\$0.00					250
FS	Rudolph Irrigation Ditch	CO	Colorado	1	12-Oct-95	2,7	\$0.00					1785.2
FS	Carbondale Water Trtmt.	CO	Colorado	1	12-Dec-95	2,7	\$0.00					295.5
FS	Yampa Ranger District	CO	Colorado	1	8-Dec-97	7	\$3,797.75				275	
FS	White River NF 5 SUP's (Summit Co.)	CO	Colorado	1	16-Jun-98	2,7	\$0.00					700.97
FS	White River NF SUP's (Pitkin, Eagle Co)	CO	Colorado	1	18-Sep-98	2,7	\$0.00					95.67
FS	Winter Park Water & San. District SUP	CO	Colorado	1	19-May-99	2,7	\$1,835.77		30-Sep-00	\$1,835.77	129.92	5.83
FS	Maryland Creek Ranch Ditches Project	CO	Colorado	1	24-Sep-99	2,7	\$0.00					546
FS	Twin Lakes Reservoir & Canal SUP	CO	Colorado	1	26-Jul-99	2,7	\$0.00	Y				201.7
FS	Arapahoe Ski Basin Expansion Project	CO	Colorado	1	30-Aug-99	7	\$1,500.32		18-Oct-02	\$1,660.90	106.18	
FS	Glenwood Municipal Water Line Repair	CO	Colorado	1	23-Sep-99	2,7	\$0.00	Y				450
FS	Grand Co. Water & San. District #1 Proj.	CO	Colorado	1	19-Apr-00	2,7	\$0.00	Y			33	58
FS	Will Source Exploration Well 1-13 Proj.	CO	Colorado	1	29-Jun-00	7	\$0.00	Y			0.125	
FS	Mun. Subdistrict NCWCD Easement	CO	Colorado	1	18-May-00	2,7	\$0.00	Y				18779
FS	Warren Lakes Reclamation Project	CO	Colorado	1	12-Jul-00	7	\$0.00	NA			34.5	
FS	Werhonig & Gardner Resv. Rehab. Proj.	CO	Colorado	1	16-Oct-00	7	\$0.00	Y			16	
FS	Ashcroft Nordic Center Project	CO	Colorado	1	1-Dec-00	7	\$0.00	Y			0.34	
FS	Buttermilk Ski Snowmaking & Domestic	CO	Colorado	1	5-Mar-01	7	\$0.00	Y			48	
FS	WRNF Silvers ... Campground Projects	CO	Colorado	1	8-Aug-01	2,7	\$0.00	NA				107
FS	WRNF Battlement Reservoirs Project	CO	Colorado	1	17-Oct-01	7	\$0.00	NA			62	
FS	WRNF Multiple Applicants Project	CO	Colorado	1	19-May-02	2,7	\$0.00	Y				1521
FS	Copper Mtn. Resort Kokomo Lift	CO	Colorado	1	21-Jun-02	7	\$0.00	NA			7.4	
FS	WRNF Spring Creek Fire Supression	CO	Colorado	1	3-Sep-02	7	\$0.00	NA			1.0	
FS	WRNF Thompson Creek Fire Sup.	CO	Colorado	1	9-Dec-02	7	\$0.00	NA			0.02	
FS	CSUtil. Aurora Homestake Otero Exp.	CO	Colorado	1	3-Apr-03	2,7	\$0.00	Y				29538
FS	26 Batched EA's, Rocky Mtn. Region Seismic 21 Inc. Trace Energy Svcs.	CO	Colorado	1	14-Oct-03	7	\$0.00	NA			0.75	
FS	Seismic Testing	CO	Colorado	1	25-Nov-03	7	\$0.00	Y			0.02	
FS	Robert F. Levine Casteel Creek Ranch Brereton Ditch	CO	Colorado	1	6-Jul-04	7	\$0.00	Y			7.91	
FS	Copper Mountain Resort Trails & Facilities Imp.	CO	Colorado	1	8-Jul-04	7	\$0.00	Y			44.10	

Federal Agency	Project Name	State	River	No. of Projects	Date Opinion Finalized	Footnote	Depletion Charge	Rec. Agr.	Date Paid	Amount Paid	NOT a depletion accounting	
											New	Historic
FS	Routt NF/Yampa RD Krauss Dom Water	CO	Colorado	1	20-Dec-04	7	\$0.00	Y			0.09	
FS	GMUG Numerous Mineral Dev. Projects	CO	Colorado	1	25-May-05	7	\$0.00	NA			25.00	
FS	ARNF Grand Co. Water & Sanitation Dist.	CO	Colorado	1	23-Jun-05	7	\$2,053.80	Y			126.00	58
	ARNF Williams Peak Ranch & Climax											
FS	Molybdenum Co. Ditch Bill Easements (for 7 ditch facilities)	CO	Colorado	7	29-Nov-05	7	\$0.00	Y				1179
FS	WRNF/GMUG Ditch Bill Easements (for 184 ditch facilities)	CO	Colorado	184	12-Apr-06	2.7	\$0.00	NA			0.00	99858
FS	Intrawest/Winter Park Phase I Master Plan	CO	Colorado	1	19-May-06	2.7	\$2,192.11	Y			131.50	3.5
FS	WRNF/Eagle & Holy Cross RD Sunnyside Cattle & Horse Allotment	CO	Colorado	1	11-May-06	7	\$0.00	NA			0.00	0.5
FS	MB-RNF Ditch Bill Easements (for 2 ditch facilities)	CO	Colorado	2	12-May-06	2.7	\$0.00	NA				2573
FS	WRNF-Eagle/Dillon RD Various Projects	CO	Colorado	8	31-Oct-06	2.7	\$0.00	NA			2.00	3516
FS	Eagle R. Water & San. Dist. Black Lake #1 Enlg.	CO	Eagle	1	19-Mar-07	7	\$0.00	Y			2.24	
FS	WRNF Tea Cup Well, Vail Ski Area	CO	Colorado	1	20-Sep-07	7	\$0.00	Y			1.00	
FS	WRNF Rifle RD Four Pit Ponds	CO	Colorado	1	11-Dec-07	7	\$0.00	NA			0.23	
FS	WRNF No Name Water Treatment Plant	CO	Colorado	1	26-Dec-07	2.7	\$0.00	Y				80.25
NRCS	Tom Phillips Pond Project	CO	Colorado	1	3-Oct-00	7	\$0.00	Y			1.1	
NRCS	Neil Guard Marsh Project	CO	Colorado	1	18-Jan-02	7	\$0.00	Y			3.15	
NRCS	Glenwood Irrigation Ditch Co. Headgate	CO	Colorado	1	9-Apr-02	2.7	\$0.00	Y				1625
NRCS	Ken Hambel Wildlife Ponds Project	CO	Colorado	1	24-Dec-02	7	\$0.00	NA			4.5	
NRCS	Nancy & David Orient Wildlife Pond	CO	Colorado	1	4-Feb-03	7	\$0.00	Y			1.35	
NRCS	Armstrong Wildlife Pond Project	CO	Colorado	1	18-Dec-03	7	\$0.00	Y			3.6	
NRCS	Ed Neilson Pond Project	CO	Colorado	1	12-Nov-04	7	\$0.00	NA			25	
NRCS	Fred Strothman Pond Project	CO	Colorado	1	14-Oct-04	7	\$0.00	Y			0.9	
OSM	Munger Canyon Mine	CO	Colorado	1	8-Aug-89		\$20.00				2	
OSM	Munger/McCane Mine	CO	Colorado	1	16-Apr-92		\$40.00				4	
OSM	Salt Creek Mine	CO	Colorado	1	2-Jun-92		\$40.00		30-Dec-92	\$41.93	3.5	
OSM	Snowcap Coal Co. Roadside & Cameo Mines	CO	Colorado	1	4-Jan-07	2.7	\$0.00	Y				22.1
State of CO & CO/Eagle river basin totals:				382			\$398,573.16				51,038.78	335,004.68

ATTACHMENT B
Summary of September 4, 2008 Technical Group Meeting

Water Acquisition Committee Meeting Summary
September 4, 2008
(Summary revised and made final on October 27, 2008)

Participants: Dan Luecke, Jana Mohrman, Robert Muth, Angela Kantola, Andy Moore, Tom Pitts, Randy Seaholm, and Ray Tenney.

Assignments indicated by a > and at the end of the document.

Convene: 9:00 a.m.

1. 15-Mile Reach PBO Depletion Accounting Report, 2001-2005 (including discussion of future depletion accounting) – CWCB has revised the draft report based on comments provided by Tom Pitts and Dan Luecke. Tom said he would like an opportunity for water users to review a draft revised after this meeting. Any remaining comments on this draft are due to Randy Seaholm by September 17; Randy will provide a revised, final draft by September 30. Committee members will send that final draft out to their colleagues for review, with final comments due back to Randy and the Committee by October 15. Randy will finalize the report and provide a pdf version to the Recovery Program to post on the web. >Angela will send the revised consultation list (through June '08) to Andy Moore for inclusion in the report.

Tom noted that in several places in the report, it's not made clear that we're talking about new, net depletions (which account both for reductions in depletions and additional depletions [whether they are consulted on or not]). Dan agreed, but suggested that the report use the exact language in the PBO to reflect that. The group agreed. >Tom will find the appropriate language in the PBO and provide that to Randy.

With regard to recommendation b, Tom noted that this report answers the question about what's been consulted on versus what's actually being depleted. Dan asked how to address the situation that may be developing where the 60,000/yr depletion ceiling is not reached in terms of actual depletions until considerably more depletions have been consulted on (and projects permitted). For example, what if 150,000 – 200,000 af/yr of new depletions are permitted (but not actually depleted) before we reach 60,000 af/yr of actual depletions? Tom pointed out that one safeguard is that the review of the status of the fish will begin when actual depletions reach 50,000 or the year 2015, whichever comes first (see pages 75-77 of the PBO). This addresses the concern raised in the initial discussions of the PBO re: depletions occurring which are not consulted on. These are the depletions accounted for in the 5 year PBO depletion report. >Angela will split out the consultation table by opinions occurring on or before September 30 1995 (all of which are Category 1 depletions) and those after (which are Category 2 and whose actual depletions will be included in the 60,000 and 120,000 AF ceilings). > Randy will reference the reinitiation clause and Appendix B where the report talks about the depletion accounting.

Ray Tenney asked how the population assessment contemplated in the PBO differs from the Service's population assessment as part of the annual sufficient progress assessment. Bob

Muth said it may not differ much at all, and would be based on the Program's ongoing population monitoring efforts.

Ray revisited the issue of depletions vs. demands discussed at the last meeting: demands are what is expected or otherwise allowed or permitted to occur. When ample water is available on the East slope, depletions (diversions from the West slope) should be less than the actual needs or the uses allowed or permitted. When the demands are modeled, they may vary considerably, resulting in more or less depletion. Therefore, as we get better information, we need to look at both the demands or actual needs and the actual amount of transmountain diversion required to meet those needs or demands, rather than assuming that transmountain diversion depletions equal their demands. Andy said that demand (e.g., in the case of Denver Water) is demand at the tunnel. Ray said all we have at this point are tunnel diversion records; as more information is available on actual use, that information needs to be reflected in back casting to historic hydrology (as our modeling tools improve)

Dan expressed concern about the language "two methods *may* be used," which is not what the PBO says. Tom suggested revising the report to say something like "In this case, only the CU model was used since it showed there was no significant or identifiable increase in depletions. In fact it showed there was a small decline. As actual new depletions approach the 50,000 AFY target in the PBO, the need to run both models will be required..." >Dan will provide recommended language to the group by the end of the week. (Note: Dan provided suggested report language, which Randy did not fully incorporate into the report. The report as revised by Randy left open the question of when it would be necessary to run StateMod for depletion accounting.

>Randy also will revise the recommendations at the end of the report, since they've been addressed in these discussions.

2. Future depletion accounting

- a. *Review Appendix B; update as appropriate:* The group agreed that it was not appropriate to revise or update Appendix B. This meeting summary will serve to answer the questions raised about the procedures described in Appendix B of the PBO.
- b. *PBO, Appendix B, Paragraph 1, 2nd to last sentence:* *Should this sentence be modified to also reflect that the Technical Group (TG) will review the accounting report for consistency with the procedures spelled out in Appendix B and for accuracy? As discussed in item 2a above, this was deemed inappropriate and unnecessary. The report should describe exactly what the TG did in its review and this certainly should be part of that review.*
- c. *Clarify in Appendix B which model will be used, the consumptive use model (StateCU) or the CRDSS Colorado River Mainstem Water Right Planning Model (StateMod). It is unclear whether or not both must be run for each reporting period or if only one or the other can be used. Are there circumstances under which only*

one needs to be run? What if sufficient data cannot be obtained from the entities or otherwise to run a model? Dan is still concerned about the need for data from all transmountain diverters, thus he wants to be sure the report does not imply that they are not required to provide the data and as noted above will provide recommended language. Tom suggested appending this meeting summary to the report. The Committee agreed. >When Jana posts the summary to the Water Acquisition Committee, she will ask for comments on the meeting summary by a date certain, after which the summary will be finalized so that it can be appended to the report. >By the September 17 report comment deadline, Dan Luecke will propose language for this report regarding the models, and also propose how we deal with this in the future. (Note: Proposed language was received and incorporated in the report.)

- d. *Should the USFWS require an annual report from a permitted project describing progress in development and use to assist in assessing actual depletions by new projects? Is the water to be used a new depletion or a change of existing use?* The group agreed that NO such report should be required. The group again made reference to discussions in item #1 above regarding “net depletions” and the “re-initiation process”.
- e. *Consider a contingency provision in each Section 7 consultation, such as; This permit is being issued after 60 KAF of new depletions have already been previously consulted on, pursuant to the PBO and _____, you may be asked to curtail uses if depletions consulted on previously exceed 60,000 AF and ____.* The group agreed that NO such contingency was necessary and again referenced the “Net Depletion” and re-initiation language and process discussed in item #1.
- f. *If the model accounting costs become too high would the Recovery Program’s participants make changes? Perhaps increase monitoring of transmountain diversions and other M&I projects and uses as opposed to obtaining increased back casted demands for the StateMod approach. Can the Service, in consultation with the Management Committee, make changes to Appendix B through that process?* As for increased accounting costs, the group agreed to wait and see how the modeling process goes in future years. As for modifying Appendix B, again the group agreed the answer should be NO.
- g. *How do we factor the New Depletions into the accounting process in the future? The significance of the number of new depletions that have been consulted on is recognized. What happens if more than 60,000 AF is consulted on but that 60,000 AF of depletion doesn’t materialize for a number of years and as a result consultations continue and become significantly more than 60,000 AF and then all are subsequently developed resulting in depletions to the 15-Mile Reach significantly in excess of 60,000 AF? While the accounting procedures have been followed, the opportunity for problems in the future may be significant.* The group again agreed that this is addressed in the PBO and more specifically in the re-initiation provisions.

- h. Consider double checking the New Depletion accounting system for duplications.* The Group again agreed this was NOT necessary. Project proponents identify whether a depletion should be considered new or historic. The Service will review the information provided, but usually the consultation is based on the information provided to them. Randy said that if a project proponent has identified the depletions as new depletions but the project is in fact relying on an augmentation plan that is utilizing historic (pre-1988) water rights, then the depletions should not be considered new but rather should be identified as historic. The group agreed that there is no reference to augmentation plans in the PBO. The group agreed it's the responsibility of the project proponent to describe historic and/or new depletions in their project description in accordance with the definitions in the 15MRPBO. The Group recognizes that the Service's Section 7 Consultation List (which explicitly states it is "NOT a depletion accounting" in the heading over the average annual depletion columns) is not an accounting of actual or current project depletions. It is a listing of depletions consulted on that may be depleted by the project at full development, whenever that occurs.
3. The Yampa PBO states we are required to "quantify annual water demand from the Yampa River Basin in Colorado and Wyoming, and estimate average annual depletions." Specifically, Appendix D of the PBO (which may be found at <http://www.fws.gov/mountain-prairie/crrip/doc/yampa/YPBOAppendixD.PDF>) says: "Every 5 years, beginning in water-year (WY) 2010, the States of Colorado and Wyoming will report to the Program estimated average annual volumes of depletions from the Yampa and Little Snake rivers and their tributaries. The reports are to be completed by July 1 every 5 years beginning in 2010. Currently there is no mention of this in a scope of work. >By September 30, Randy will amend CWCB's FY 09 CRDSS scope of work to address the work that will begin on this task in FY 09. (Note: Wyoming's quantification and reporting may still need to be addressed. Need to bring this up with John Shields and define how this will be done. If a scope of work is needed for Wyoming portion, need to state here, like Colorado.)"
 4. Next meeting: The Committee will need to meet or hold a conference call or web conference in mid-February to provide comments on draft FY 2010-2011 Program guidance, RIPRAP revisions, and RIPRAP assessment. >Jana will work with Committee members to schedule this meeting after the beginning of the year.

Adjourn: 12:00 p.m.

ASSIGNMENTS

1. Angela Kantola will split out the consultation table by opinions occurring on or before September 30 1995 (all of which are Category 1 depletions) and those after (which are category 2 and whose actual depletions will be included in the 60,000 and 120,000 AF ceilings). Angela will send the revised consultation list (through June '08) to Andy Moore for inclusion in the report.

2. Tom Pitts will find the appropriate language in the PBO to refer to “additional depletions” and provide that to Randy.
3. Where the report talks about the depletion accounting, Randy Seaholm will reference the reinitiation clause and Appendix B.
4. Dan Luecke will provide recommended language to the group regarding use of the two modeling approaches by the end of the week. By the September 17 report comment deadline, Dan Luecke will propose language for this report regarding the models, and also propose how we deal with this in the future.
5. Randy Seaholm will revise the recommendations at the end of the report, since they’ve been addressed in these discussions.
6. When Jana Mohrman posts the meeting summary to the Water Acquisition Committee, she will ask for comments on the meeting summary by a date certain, after which the summary will be finalized so that it can be appended to the report.
7. By September 30, Randy Seaholm will amend CWCB’s FY 09 CRDSS scope of work to address the work that will begin on this task in FY 09.
8. Jana Mohrman will work with Water Acquisition Committee members to schedule the next meeting (or conference call or web conference) for mid-February.