



Colorado River District

75 Years

Protecting Western Colorado Water



MEMORANDUM

JANUARY 5, 2012

TO: BOARD OF DIRECTORS
CC: ERIC KUHN, DAN BIRCH

FROM: TECHNICAL STAFF

SUBJECT: TECHNICAL STAFF ACTIVITIES AND NEAR TERM PRIORITIES

This memorandum provides a series of brief updates for the Board and management related to on-going activities involving the River District's technical staff. **No board action is requested.** This is intended to be a "revolving" memo which will be updated quarterly, or as necessary. As such, items may drop off or be added and/or changed, as appropriate. Where more detailed information on a specific topic is warranted, or action requested, supplemental and specific memos will be provided.

Index of topics covered in this memorandum:

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1. **WATER QUALITY – REGULATION #93, COLORADO'S SECTION 303(D) LIST OF IMPAIRED WATERS AND MONITORING AND EVALUATION LIST**
 - *Update since October. The Water Quality Control Commission adopted the 2012 Regulation #93 in December 2011. There is good news and bad news: Wolford has been de-listed for dissolved oxygen impairment. However, numerous stream segments within the River District have been listed as Impaired for Aquatic Life Use.*

Background

Regulation #93 establishes Colorado's List of Water-Quality-Limited Segments Requiring Total Maximum Daily Loads ("TMDLs") and Colorado's Monitoring and Evaluation List.

- (1) The list of Water-Quality-Limited Segments Requiring TMDLs fulfills requirements of section 303(d) of the federal Clean Water Act which requires that states submit to the U.S. Environmental Protection Agency a list of those waters for which technology-based effluent limitations and other required controls are not stringent enough to implement water quality standards.
- (2) Colorado's Monitoring and Evaluation List identifies water bodies where there is reason to suspect water quality problems, but there is also uncertainty regarding one or more factors, such as the representative nature of the data. Water bodies that are impaired, but it is unclear whether the cause of impairment is attributable to pollutants as opposed to pollution, are also placed on the Monitoring and Evaluation List. This Monitoring and Evaluation list is a state-only document that is not subject to EPA approval.

Once a segment is listed as impaired on the 303(d) list, the Commission has 13 years to develop a Total Maximum Daily Load (TMDL) which allocates a waste load allocation for the specific pollutant in future discharge permits. The TMDL development will also allocate a portion of the load allocation attributable to non-point sources. Once the TMDL is developed the segment is removed from the 303(d) List and placed on the 305(b) Integrated Water Quality Monitoring and Assessment Report which is utilized to inform Congress and the public about water quality conditions within Colorado.

Current Listings and Status Changes

There are a number of changes to reservoirs and stream segments within the River District boundaries and statewide.

A. Wolford Mountain Reservoir and Muddy Creek

IMPORTANT SUCCESS: The Water Quality Control Commission has delisted Wolford as impaired for the dissolved oxygen standard as the reservoir is now in attainment of the current standard. It is noteworthy that the Commission has delisted 24 of the 28 reservoirs statewide previously listed as impaired for dissolved oxygen. River District Staff worked closely with the Division to successfully amend the dissolved oxygen standard narrative and current listing methodology.

Muddy Creek below Wolford has previously been listed for non-attainment of the temperature standard. In 2010 River District Staff requested that the Division split the segment in two; From Wolford to Cow Creek and from Cow Creek to the Colorado River. The Commission has kept the upper segment on the Monitoring and Evaluation List while listing the lower segment as impaired on the 303(D) list.

B. New Stream Segments Listed as Impaired for Aquatic Life Use.

The Commission listed 27 new segments statewide as impaired for Aquatic Life Use on the 303(D) list and 16 new segments on the Monitoring and Evaluation List requiring more data. 20 are within the River District boundaries and 16 of these are “provisional” listings. Provisional means the Division is unable to determine whether the impairment is due to a “pollutant” or “pollution” or simply due to habitat limitations. The Division plans on collecting additional data for these segments in the next two years, but due to budgetary constraints and workload will most likely be unable to collect sufficient data to determine the causes of impairment for all these provisionally listed segments.

IMPORTANT POINTS: These new listings are of concern to the River District for two reasons:

- 1) Elkhead Creek below Elkhead Reservoir has been provisionally listed. This provisional listing, if maintained, may need to be considered when consulting with FERC regarding hydropower permitting;
- 2) Provisional listings are concerning since the Division lists segments based on the absence of expected biota and this can be *without a known impairment*. This adds another level of uncertainty to permitted dischargers.

The River District provided written and oral testimony at the Rulemaking Hearing regarding the validity of listing segments based on a single sampling event. The Commission adopted Policy 10-1 Aquatic Life Use Attainment which guides their use of the Multi-metric Index (MMI) in determining Aquatic Life Use impairments. While the Commission did not accept the River District’s advice regarding one sampling event, the River District committed to working with the Division on developing changes to Policy 10-1 and the 2014 Listing Methodology regarding proper sample size for determining impairments.

C. TMDL Development in the Gunnison Basin

There are a number of segments in the Gunnison Basin which recently have had TMDL’s developed and approved. The development of TMDL results in a waste load allocation for specific constituents. This is of particular concerns for the sand and gravel pit operators and wastewater treatment plants along the Gunnison River. These operations are intercepting selenium laced groundwater and some may have difficulty in meeting future discharge requirements for selenium.

IMPORTANT POINT: The Commission **de-listed** 10 segments in the Gunnison Basin for Selenium and 4 segments for Cadmium.

2. GUNNISON BASIN ACTIVITIES

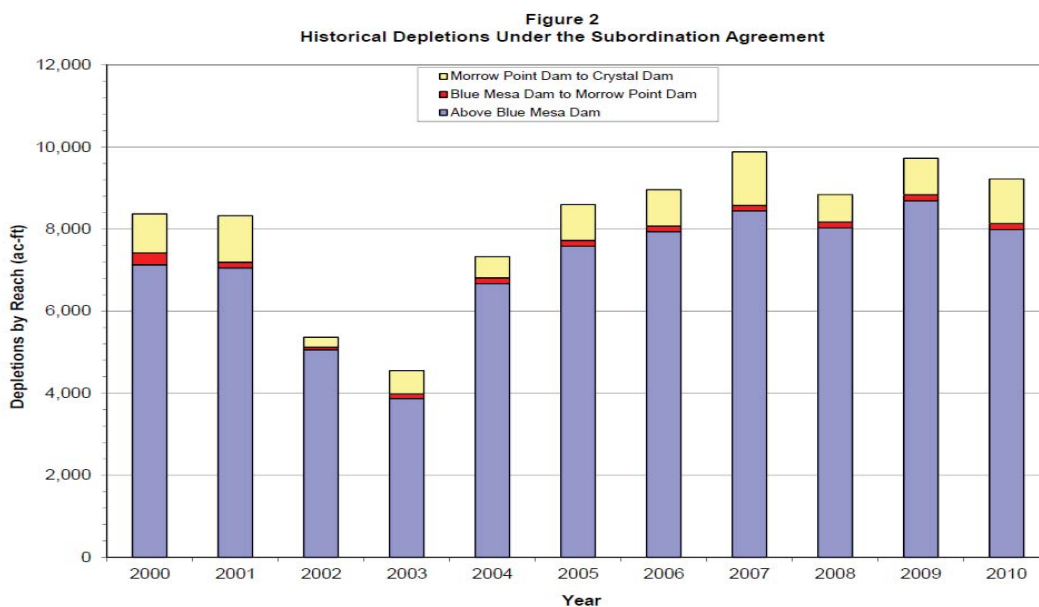
A. Aspinall Unit Operations Preliminary Final Environmental Impact Statement (EIS)

- *Update since October. Although there have not been any overt activities under the cooperating agency process, it appears that the EIS continues to move towards finality and a record of decision...*

A two year logjam broke free in December 2010, when Reclamation finally released the Preliminary Final EIS on Aspinall Unit Operations. The delay was primarily related to the language related to the Black Canyon National Park Decree. This decree was not finalized and therefore not fully addressed when the Draft EIS was originally released in January of 2009. The River District is a cooperating agency in the EIS process and, as such, was able to obtain the Preliminary Final EIS in advance of its public release. Early indications are that the changes are mostly narrative and descriptive in nature but staff is currently reviewing this draft. Staff will be providing formal input to Reclamation and may have additional comment at the Board meeting. After the Cooperating Agencies comment and the public review period expires, it will again be routed through the Department of Interior where a Record of Decision with implementation guidelines will be written and signed by the Secretary. It is unlikely that this will occur before the end of 2011.

B. Aspinall Unit Subordination Report

- *Update since October. At the end of December 2011, the Districts (Colorado River and Upper Gunnison) delivered the Subordination Report that summarized the diversions and depletions for Irrigation Year 2010. The graph below summarizes the depletion results. It can be seen that since the drought broke in 2005, water availability does not appear to limit depletions above the Aspinall Unit.*



TECHNICAL STAFF ACTIVITIES AND NEAR TERM PRIORITIES

Each year the beneficiaries of the Aspinall Subordination agreement are required to document and report the total qualifying, in-basin, upstream diversions and depletions that are junior to the adjudication date of the Aspinall Unit. Such uses were recently tabulated and summarized for Irrigation Year 2009. Recent depletions are consistent to the recent past (excluding the early drought years of 2002-04) at just under 10,000 acre-feet. A significant amount of additional development in the three tributary areas is still allowable under the total 60,000 acre-foot depletion allowance.

C. Selenium Management Program (SMP)

- *Update since October. The Final Selenium Management Program Formulation Document (PFD) was transmitted to the USFWS at the end of December 2011 in compliance with the Gunnison Basin PBO. In 2012, SMP efforts will focus on prioritizing and implementing portions of the PFD Action Plan*
- *Update since July. The Final Draft of the SMP is due in December of 2011; the Draft is now undergoing development and review by stakeholders. Several public meetings are scheduled (10/17 in Hotchkiss and 10/20 and in Montrose) to obtain public input.*
- *Update since April. Pursuant to the Programmatic Biological Opinion, Reclamation transmitted the first Draft of the Program Formulation Document (PFD) of the SMP to the US Fish and Wildlife on June 30th. This draft document represents a consensus effort amongst the signatories of the MOU, includes a draft Action Plan and is designed to form the basis for selenium control activities over the next 15 years. At present no annual state or federal appropriated funds have been identified for these activities.*

Now that the MOU amongst participating agencies has been signed, the development of the SMP is underway. The SMP Formulation Document is slated to be completed by December of 2011. It will outline priorities, potential activities and funding to achieve a two-step set of objectives: to comply with Clean Water Act standards for dissolved selenium and to aid in the recovery of the endangered fishes of the Lower Gunnison Basin. The River District is the contracting entity (up to \$40,000 in 2011) for the Selenium Task Force Facilitator, Sonja Chavez de Baca, and Reclamation is the primary agency responsible for the SMP development with help from the MOU signatories. Implementation of the SMP is projected to be up to 15 years. Although this effort is anticipated to take considerable River District resources, it is recognized that there are considerable rewards to water users (and risks if not addressed).

The SMP is moving along in spite of recent significant changes in management and administration of the Uncompahgre Valley Water Users Association, a very important partner in the program. Marc Catlin has left the post of General Manager, and new officers have assumed Board leadership after a very long tenure of President Keith Catlin, who also left the Board. A soon-to-be published USGS study (sponsored by the CRWCD) that quantifies a significant decreasing trend in dissolved selenium in the Gunnison River will guide the development and activities of the SMP.

3. UPPER COLORADO RIVER BASIN FUND MOA

- *No update since October*

As of October 1, 2011, the *Memorandum of Agreement Concerning the Upper Colorado River Basin Fund* (Basin Fund MOA, signed Jan 24, 2011) became effective, allowing Upper Basin States to propose projects for funding. As such, River District technical staff developed and provided a list of qualifying projects to the CWCB and USBOR. For federal fiscal years of 2012 and 2013, there are four significant project areas in the CRD that qualify under operations, maintenance and replacement (O,M&R) criteria with a focus upon:

- i. Replacements, Additions and Extraordinary Maintenance
- ii. Water Conservation Activities
- iii. Environmental Compliance Activities
- iv. Stream Gaging
- v. Consumptive Use and Quality of Water

The following projects within the CRD have been proposed and accepted for 2012-13:

- **Support for Selenium Management Program (SMP) activities in Lower Gunnison Basin** - *2012 Request; a total of \$3MM including \$350k for Comprehensive System-wide Optimization Study of the Uncompahgre Valley Water Users Association (UVWUA) water delivery system with a focus on the east side of the valley and \$2.65MM for a water efficiency improvement and salinity/selenium control project in the area of the East Canal system. This project consists of the replacement of two East Canal open laterals (GF and GFA) with buried pipelines. For 2013, an additional \$1.8MM was approved to help UVWUA replace 5 miles of earthen laterals in an adjacent lateral system with buried pipelines. Additionally, up to \$70,000 per year was approved to support selenium water quality monitoring. This is a direct benefit to the CRD as it will offset over \$40,000 currently being invested annually by the general fund.*
- **Support for activities related to Silver Jack Reservoir and Bostwick Park WCD** – *2013 approved request: \$150,000 to support the design, permitting and implementation of remote control and automation at the outlet of Silver Jack Reservoir to help manage / bypass early season Cimarron River flows to help meet spring peak flow recommendations on mainstem (and thereby conserve water in the Aspinall Unit).*
- **Support for activities related to Crawford Reservoir and Crawford WCD** - *2013 approved request: \$800,000 to support the modernization of related collection and delivery structures for Crawford Reservoir project water.*
- **Support for activities related to Paonia Reservoir and North Fork WCD** - *2013 approved request: \$300,000 to support the design and implementation of a low level outlet with sediment control capability to evacuate and/or manage sediment input/thru-put from Muddy Creek and the Paonia Reservoir basin to the North Fork River.*

4. COLORADO RIVER BASIN SALINITY CONTROL FORUM

- Update since October. *Public scoping pursuant to NEPA has begun for a pilot evaporation pond project in the Paradox Valley to assess the issues related to implementing evaporation as a salinity control technique. The next Salinity Control Forum Meeting is scheduled for May of 2012 in or near Midway, Utah.*
- Update since July *the Salinity Control Forum workgroup met in August and continues to focus on two areas of River District interest: Lower Gunnison Salinity Planning Study and an alternatives analysis to potentially replace the Paradox injection well which is approaching its design life. This is very important as this well is the single largest salt control project in the entire Colorado River Basin.*
- Update since April. *Salinity Control Forum meetings hosted by the River District were widely considered to be very successful. Attendees reported that they enjoyed the field tour and dinner and that the meetings were informative and effective. The next meeting of the Forum and Advisory Council is scheduled for October in Santa Fe.*

This federal program, administered by Reclamation's Upper Colorado regional office, involves representatives from all seven basin states and the US Department of Agriculture. It was originally authorized by congress in the early 70's, amended twice in recent years, and has been quite successful in reducing salinity concentrations and loads in the Colorado River basin all the way down to the international boundary with Mexico. Within the River District boundaries, the Grand Valley and Lower Gunnison have been the main areas of focus for salinity control efforts, Millions have been spent on such efforts that are predominately focused on improving agricultural water use efficiency. These efforts have significant ancillary benefits for selenium control and have helped reduced dissolved selenium by approximately 20% since the mid-1980's. This is essential to help meet some of the water quality objectives of the Gunnison Basin Programmatic Biological Opinion. On May 23-26, 2011, Glenwood Springs will host the Salinity Control Forum, its workgroup and Advisory Council for 4 days of meetings. There will be an opportunity for Board members to interact with Salinity Program representatives and States' representatives on the evening of May 24 for dinner and drinks, hosted, in part, by the River District.

5. YELLOW JACKET WCD PROJECT REVIEW

Update since October. *The Phase I draft report has been issued and is being reviewed. Phase II should start in the next month.*

As discussed in the July legal memorandum, *several of the water rights held by Yellow Jacket and included in the study were dismissed by the court. Yellow Jacket has filed an appeal of the judge's ruling canceling the rights. The Strawberry Creek and Wray Gulch water rights held by the River District and included in the study have merit and will be considered further in Phase II.*

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A fundamental error in the CWCB DSS model for the White River basin was discovered by the project team. The CWCB DSS model for the White River basin did not include the 704 cfs direct flow right for the Taylor Draw Dam power plant. This omission caused modeled scenarios for both the Yellow Jacket study and the previously completed energy needs study to overstate water development opportunities and understate the potential importance of storage as well as the importance of water rights senior to the Taylor Draw power right. The effect on the conclusions in the energy needs study are being assessed by that project team. Initial analysis suggests as much as 300,000 acre-feet of storage may be necessary to serve the potential oil shale demand in the face of the Taylor Draw power right call. The Yellow Jacket team will be evaluating the change in potential storage demand right in Phase II of the study.

The Yellow Jacket Water Conservancy District (YJWCD) has received a \$220,800 grant from the CWCB Water Supply Reserve Account through the Yampa/White Roundtable to evaluate their water rights and to recommend and pursue development of a project. The River District is acting as fiscal agent for the project, a role the Board previously approved. This arrangement includes evaluation of the River District's water rights within the YJWCD. This will assist with the River District project development efforts. The three phase project is expected to take two years to complete. Ray Tenney is the River District's liaison between the CWCB and YJWCD. The project is scheduled to begin in mid-April.

6. OLD DILLON RESERVOIR EXPANSION

- Update since October. The contractor was able to get the project about 70% complete this fall with 3 weeks of 24/7 work before weather made progress difficult. The project is closed down for the winter until about June 1. The delay in the project is resulting in additional costs to the Old Dillon Reservoir Authority which should be passed on to the contractor. Negotiations surrounding the responsibility for additional costs are ongoing with the contractor.

The River District is acting as Owner's Representative on behalf of the Old Dillon Reservoir Water Authority during construction of the Old Dillon Reservoir Expansion. The Authority has signed an agreement for construction of the reservoir expansion with Fiore and Sons, Inc. of Denver for \$3,642,242 with the construction slated to begin this spring.

There are some unique aspects to this project that may be of interest to Board members. The old open ditch that fed ODR is being converted to a pressure pipe which allows the reservoir high water elevation to be raised. This includes lining an existing 1100 foot siphon under I-70. There will be a Coanda screen intake at the headgate. A steep slope from ODR to Denver Water's Dillon Reservoir will require soil nailing and trenching the pipe into the hillside. The project will need to go quickly as it must be completed in one Summit County construction season. If you are interested in observing the construction or have any questions please contact Ray Tenney by cell phone at (970)379-1492 or rttenney@crwcd.org.