



Meeting Minutes Big Dry Creek Watershed Association

Date/Time: March 17, 2011, 1:00 to 3:00 p.m.

Location: Broomfield Water Treatment Plant, 4395 W. 144th Avenue

Meeting Minutes

1. **Results of Annual Water Quality Analysis**—Jane Clary, WWE, provided a summary of findings from the annual water quality analysis. This analysis can be downloaded from www.bigdrycreek.org. Highlights included:
 - Big Dry Creek meets currently applicable stream standards, with the exceptions of *E. coli* and selenium. Segment 1 (the main stem) of Big Dry Creek is listed on the 2010 303(d) List for Colorado for non-attainment of stream standards for *E. coli* and selenium. (This was also the case for the 2008 303(d) List.) The 2010 Big Dry Creek data are consistent with these listings, showing attainment of all currently applicable standards with the exception of selenium and *E. coli*. A brief synopsis of these two issues includes:
 - Selenium: At the December 2007 Colorado Water Quality Control Commission (CWQCC) Rulemaking Hearing, irrigation and non-irrigation season site-specific standards were assigned to Big Dry Creek. A specific standards assessment method was also developed that is to be based on data collected at monitoring locations bdc1.5, bdc2.0, and bdc4.0 (i.e., the three instream locations upstream of each of the three WWTP discharges). The 2010 Big Dry Creek data set meets the non-irrigation season (winter) chronic and acute standards and the irrigation season acute standard; however, the 2010 irrigation season data slightly exceed the chronic irrigation season standard. Attainment of the stream standard is based on evaluation of five years of data. When considering the last five years of data (2006-2010), the stream does not attain the chronic irrigation season standard by a small margin of 0.5 µg/L. Review of Standley Lake release patterns indicates that the “fringe” month of October is more comparable to the non-irrigation season. If October selenium data are analyzed with the non-irrigation season data set, then both the irrigation and non-irrigation standards would be obtained.
 - *E. coli*: Big Dry Creek does not meet the *E. coli* standard for 2010 using current Colorado Water Quality Control Division (CWQCD) assessment procedures. *E. coli* exceeds the stream standard during the recreational season bimonthly evaluation

periods of May-June, July-August and September-October. A Total Maximum Daily Load (TMDL) process has been initiated by the CWQCD and the U.S. Environmental Protection Agency (EPA) for Big Dry Creek with regard to *E. coli*. BDCWA is working cooperatively with the CWQCD and EPA to ensure that the most complete and scientifically sound data set and assumptions are used in this process. Special studies related to sources of *E. coli* in the watershed were conducted by Wright Water Engineers and BDCWA during 2007 and 2008 and provided to the CWQCD. A draft TMDL is anticipated during 2011.

- Nutrients: Nationally, statewide and locally, control of nutrient loading to streams is a significant issue. Water quality criteria and standards continue to emerge and are becoming more stringent. Although Big Dry Creek currently attains nutrient standards (i.e., ammonia) assigned in Regulation 38, it is likely to be affected by a downstream TMDL for Barr Lake and Milton Reservoir that is targeting reductions in phosphorus loading. Additionally, the initially proposed warm water nutrient criteria for Colorado streams as reported by the Colorado Nutrient Standards Work Group on February 2, 2011 include total phosphorus of 0.16 mg/L and 2 mg/L of total nitrogen for warm water streams. As currently envisioned, attainment of the standard would be based on the 50th percentile (median) value with an allowable exceedance of once every three years. Under current conditions, Big Dry Creek would not attain either of these standards. Big Dry Creek data for ammonia, nitrate and phosphorus are discussed in the technical memo. Substantial reductions in phosphorus loading are evident in 2010, particularly for discharges from the Broomfield and Westminster WWTPs.
- Flow: A more detailed evaluation of flow conditions was completed for this annual report. This evaluation characterized the spatial and temporal influences on the flow regime, focusing on Standley Lake releases, various ditch diversions and the influence of the WWTPs. Highlights include:
 - In particular, the relative percentage of Standley Lake flows in Big Dry Creek at the USGS Westminster gauge was quantified, showing significant seasonal variation in release patterns. During April through September, Standley Lake releases comprise 30 to 70 percent of the flows measured at the USGS gauge. October is a “fringe” month for irrigation, but is more similar to the non-irrigation season than the irrigation season. During October through March, Standley Lake releases comprise approximately 5-10 percent of the flows at the Westminster gauge.
 - Relative percentages of WWTP discharges at bdc6.0 from 2005-2009 were summarized. During the winter months, WWTP flows comprise roughly half of the flows present at bdc6.0. During April to August, this relative balance decreases down to approximately 25 percent of the flows at bdc6.0, with the exception of May.
 - The relative water balance for the creek during different seasons is critical to understand water quality issues in Big Dry Creek. For example, in the absence of Standley Lake releases, the selenium standard is exceeded in the upper watershed. With regard to nutrient loading, it is important to recognize that winter months are dominated by wastewater contributions and relatively low flow conditions. Summer months have higher flows with lower relative contributions from wastewater.

2. Regulatory Updates

- a. Mary Fabisiak provided an update on the Colorado Nutrient Criteria process, which has been and continues to be a very complex process. A series of meetings on special topics is underway to follow-up numerous comments received on the Colorado Water Quality Divisions proposed draft nutrient criteria. Rather than summarize information in these meeting minutes, readers are directed to the Colorado Water Quality Forum webpage: <http://www.cwqf.org/>, then access Workgroups and the Nutrient Criteria link.

3. Big Dry Creek Monitoring Plan Discussion

- a. **Monitoring Locations:** A decision was made to relocate bdc4.0 downstream due to heavy traffic and safety concerns at the current monitoring location. Additionally, bdc2.0 is being moved slightly upstream. Both of these changes will be communicated to the Colorado Water Quality Control Division since these locations are referenced in the site-specific selenium standard. The Cities will provide Jane Clary with GPS coordinates so the locations can be updated in the water quality database and in mapping.
- b. **WWTP Grab Samples:** Grab samples from the WWTPs are being discontinued since a more comprehensive data set is available from the Discharge Monitoring Reports (DMRs).
- c. **Staffing for Future Biological Monitoring:** Jane reported that the additional cost for Aquatic Associates to conduct biological monitoring without volunteer staff would be approximately \$6,100-6,800. Additionally, MMI analysis is currently outside of Aquatics Associates' scope, but could be added-in for an additional fee, if desired.

4. Progress Report on Big Dry Creek Watershed Management Plan Update

- a. Jane reported that the Watershed Management Plan update is proceeding well. Primary progress to date involves updating mapping/figures, deletion of outdated material, updating WWTP discharge permit summaries and characterization of basin hydrologic influences.

5. Content for Future 2011 Meetings

- a. May 5, 2011: Budget meeting and tour of the Broomfield Wastewater Treatment Plant Upgrades
- b. September 13, 2011: Officer Elections and additional topic (to be determined)
- c. December 13, 2011: Tami Schneck of Aquatics Associates will provide results of the 2010 biological monitoring at the December meeting.

6. Treasurer's Report

- a. David Carter, provided a brief Treasurer's report, including reimbursement for the \$10 filing fee for the non-profit paperwork with the State and a report that CD

rates remain very low. All dues have been received by financially supporting members, with the exception of Weld County, which is in progress.

Attendance*

David Bauer, Weld County
David Carter, City of Westminster
Jane Clary, Wright Water Engineers
Mary Fabisiak, City of Westminster
Kelly Hargadin, Adams County
Laura Hubbard, City and County of Broomfield
Lesa Julian, City and County of Broomfield
Dave Myer, City of Westminster
Shelley Stanley, City of Northglenn
Erika Shioya, Colorado Watershed Assembly
Connie O'Neill, North Front Range Water Quality Planning Association

These minutes of action constitute the record of the meeting of the General Membership and Board of Directors of the Corporation and any officer of the Corporation is hereby authorized to certify any action taken by these minutes of action as having been duly taken or ratified by the Board of Directors of the Corporation on March 17, 2011, notwithstanding the date of actual signing. Meeting minutes were prepared for the Secretary by Watershed Coordinator, Jane Clary.

By: _____
BDCWA Secretary

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