BIG DRY CREEK WATERSHED ASSOCIATION
MEETING MINUTES

Meeting Time/Location: Thursday March 16, 2006, 1:00-3:00 p.m.
Broomfield Water Treatment Plant, 4395 W. 144th Avenue

1. Results of Annual Water Quality Data Analysis for 2005

Jane Clary, Wright Water Engineers, provided a handout summarizing the 2005 water quality data analysis and presented the key findings to the group. The memorandum summarizing the findings will be posted to the Big Dry Creek Watershed Association website and can be downloaded for more detail (www.bigdrycreek.org). A few findings of particular interest include:

- Over 4,000 records for data collected in 2005 were added to the BDCWA water quality database.

- Segment 1 (the main stem) of Big Dry Creek is listed on the 2006 303(d) List for Colorado for non-attainment of stream standards for *E. coli* and selenium. Each of these constituents has a temporary modification to the stream standard currently in place. Additionally, a portion of the stream downstream of the Weld County line is listed on the Monitoring and Evaluation (M&E) portion of the 303(d) list for total recoverable iron.

- Based on review of the 2005 BDCWA data set, Segment 1 of Big Dry Creek does not attain the currently assigned acute or chronic standards for dissolved selenium at bdc1.5. Although the stream segment as a whole attained the temporarily modified chronic stream standard for dissolved selenium, it did not meet the underlying chronic standard at any monitoring location on the stream. Although the overall stream segment met both the underlying and temporarily modified *E. coli* standards, several individual monitoring locations (i.e., bdc1.5, bdc2.0 and bdc6.0) exceeded the underlying standard. One location on the stream, bdc6.0, does not meet the stream standard for total recoverable iron; however, the stream as a whole meets the standard. All other constituents attained the stream standards during 2005.

- Seasonal variation in selenium concentrations during 2005 were present with lower concentrations during the irrigation season (April-October) and higher concentrations during the non-irrigation season (November-March).

- As has been the case since 2003, the highest concentrations of selenium were present at monitoring location bdc1.5, located just downstream of Front Range Community College, upstream of both the wastewater discharges and agricultural influences. The area upstream of this monitoring location has been the focus of follow-up field sampling and investigations.

- The highest concentrations of both *E. coli* and fecal coliform are present at bdc2.0, below the Broomfield WWTP. Monitoring station bdc6.0 in the agricultural area upstream of the confluence with the South Platte River also has concentrations above stream standards for both *E. coli* and fecal coliform.

- Relative to the overall 2005 bacteria data set, geometric mean concentrations for both *E. coli* and fecal coliform are consistently the lowest in grab samples from the Broomfield and Westminster WWTP effluent. For the six-year time period, wastewater grab samples were well below the stream standard. For this reason, elevated geometric mean concentrations at in-stream locations below the discharges cannot be attributed to WWTP discharges, during the vast majority of the sampling events.

- Seasonal variation is evident for the six-year *E. coli* data set, with geometric mean concentrations above the underlying stream standard during April through November and above the temporarily modified standard for June through October. Although bdc6.0 also exhibits a seasonal trend, concentrations in the winter months still remain above the underlying stream standard at this location.

- Total recoverable iron is strongly correlated to total suspended solids concentrations and increase in a downstream direction. Elevated total recoverable iron concentrations in 2005 generally corresponded to storm events during April, May and June.

- The technical memorandum should be downloaded and reviewed for more information on specific constituents.

- Additional field investigations and sample collection between bdc1.0 and bdc2.0 were completed by Hallie Mahan and Jane Clary in March 2006. The purpose of this field investigation was to identify potential sources of bacteria (at a reconnaissance level) upstream of bdc2.0 and to collect additional selenium samples, based on recommendations in a fall 2005 technical memorandum.

2. Routine Business Items and Open Discussion

- City of Westminster Parks staff, Vinnie Ficco and Alfred Ledesma, brought a notebook of photos showing large beaver dams at several locations on Big Dry Creek in the

Westminster Open Space. They requested input on whether the BDCWA thought that controls on the beaver population were needed. In general, the BDCWA does not have a strong opinion on this issue and for the most part, sees the beavers as part of the natural ecosystem. BDCWA suggested that the Parks staff may want to consult with the city engineering and stormwater staff to determine whether the dams post a risk to human health and safety in terms of large flow events breaking the dams, potentially causing culvert plugging and flooding. In the event that the beaver dams are causing accelerated bank erosion that endangers infrastructure (e.g., utility lines, USGS gage), then site-specific controls on the beaver population may be needed. The BDCWA sees this issue best controlled by the cities/counties in which the dams are located.

- Bob Fiehweg announced a free one-day workshop on "Biosolids and Watershed Protection" sponsored by the City of Westminster (organized by Fiehweg Environmental Consulting). The seminar will be held from 8:00 to 5:00 on June 7, 2006. This day-long event features experts from the fields of biosolids, watershed management, soil science, GIS, endangered species and related areas. The workshop is designed to aid local, state and special district employees who are involved in the production, treatment, and management of biosolids. For more information, see http://www.westminsterworkshop.com/.

- Jane Clary reported that the "Big Dry Creek North Area Tributaries Outfall Systems Plan Alternatives Analysis" report had been completed in draft form and has been distributed for Project Sponsors for review. She noted that several recommendations from the BDCWA-sponsored "Lower Big Dry Creek Hydrologic Study" had been incorporated into the plan. For example, the full-spectrum detention concept and buffer zones at tributary outfalls to Big Dry Creek have been included in the consultant's recommended alternative on key tributaries. The next phases of the project include the Project Sponsors selecting the final alternative and completion of a Preliminary Design Report.

- Robin Reilly of Denver Regional Council of Governments requested that BDCWA provide an overview of activities at the April 21 WEPC meeting. Jane Clary will do this on behalf of the BDCWA.

- The focus of the June 2006 BDCWA meeting will be follow-up work related to selenium and bacteria source identification activities. The date for this meeting has not yet been established.

Attendance at March 16, 2005 Big Dry Creek Watershed Association Meeting

Last Name	First Name	Organization Name
Bauer	David	Weld County
Byers	Robin	Attorney
Carter	David	City of Westminster
Clary	Jane	Wright Water Engineers, Inc.
Fiehweg	Bob	Fiehweg Environmental Consulting
Ficco	Vinnie	City of Westminster
Hand	Brittney	City of Thornton-Water Quality
Hargadin	Kelly	City of Thornton
Julian	Lesa	City of Broomfield
Ledesma	Alfred	City of Westminster
Mahan	Hallie	City of Broomfield-Environmental Lab
McKee	Bill	Colorado Water Quality Control Division
Meyer	David	City of Westminster
O'Neill	Connie	North Front Range Water Quality Planning Authority
Reilley	Robin	Denver Regional Council of Governments
Stanley	Shelley	City of Northglenn