



Board of County Commissioners

Rena Brand
Moffat EIS Project Manager
U S Army Corps of Engineers
Omaha District
Denver Regulatory Office
9307 S. Wadsworth Blvd.
Littleton, CO 80128

July 1, 2014

RE: *Boulder County's Supplemental Comments on the Final Environmental Impact Statement for the Moffat Collection System Project*

Dear Ms. Brand;

Thank you for the Corps' agreement to consider substantive comments received before it renders any decision with respect to the Moffat Collection System Project FEIS, even though the formal comment period has expired. The purpose of this letter is to communicate to you supplemental comments on issues of substance that were raised to us during the 2.5 hours of public testimony we received at our public hearing on June 16, 2014. A video of the public hearing may be found at bit.ly/20140616moffat. We encourage you to view the hearing to see the full breadth and depth of issues raised by the public.

The Proposed Action Does Not Meet the Purpose and Need for the Project

The starting point for drafting and reviewing all environmental impact statements is the statement of the purpose and need of a project; for the FEIS for the Moffat Collection System Project, this is appropriately set forth as Chapter 1. The Corps has evaluated and accepted the following Purpose and Need statement as the basis for defining and evaluating alternatives as part of the Corps' decision-making process:

The purpose of the Moffat Collection System Project is to develop 18,000 acre-feet per year of new, firm yield to the Moffat Treatment Plant and raw water customers upstream of the Moffat Treatment Plant pursuant to the Board of Water Commissioners' commitment to its customers.

Denver Water determined that 18,000 acre-feet of new firm yield was needed based upon its predictions of a potential demand of 34,000 acre-feet greater than its supply and reliance upon 16,000 acre-feet of savings being realized from implementation of additional conservation efforts. According to the FEIS, the Corps independently reviewed Denver Water's Near-Term Strategy and concluded that the development of 18,000 acre-feet per year of new firm yield *is the only action to be analyzed in the EIS.* (1-23)

Cindy Domenico County Commissioner **Deb Gardner** County Commissioner **Elise Jones** County Commissioner

Boulder County Courthouse • 1325 Pearl Street • Boulder, Colorado 80302 • Tel: 303.441.3500 • Fax: 303.441.4525
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.org • commissioners@bouldercounty.org

Boulder County believes that the range of alternatives has been unreasonably restricted by its narrowly defined Purpose and Need, precluding the consideration of any alternative that would serve Denver Water's customers with a secure and reliable water supply, such as enhanced conservation and efficiency or a combination of other small projects throughout its system, but which would not bring 18,000 acre-feet of water per year through the Moffat Treatment Plant. Nonetheless, even if the stated Purpose and Need for the project are accepted, the Proposed Action fails to meet that Purpose and Need.

In explaining and analyzing the alternatives, the Corps, together with its contractors and cooperating agencies, analyzed historic stream flows for the 45 year period from 1947 through 1991 to determine the amount of supply that is estimated to be available to meet Denver Water's stated needs. The conclusion that there is enough water available to meet the firm yield criteria of the Purpose and Need is fundamentally flawed in two respects: 1) it does not recognize that historic flows fail to meet the Purpose and Need; and 2) it does not consider the impact to water supply that will be caused by predicted climate change.

The FEIS defines firm yield to be "the maximum average annual demand that can be met by Denver Water's system without shortages." (1.4.2). In order to meet the goal of providing 18,000 acre-feet per year of new firm yield, it has been determined in the FEIS that it is necessary for the enlarged reservoir to have a "savings account" of four times this amount of storage capacity so that it could supply 18,000 acre feet of water during a drought equivalent to the 1953-1957 drought. (1.4.3). Under the LP2 screening criteria, the firm yield goal of 18,000 acre-feet per year must be met 75% of the time. According to the Firm Yield Analysis conducted by Lisa Buchanan and attached to The Environmental Group's June 9, 2014, comments as Addendum IV, the Corps' firm yield criteria for the project is not met for the Proposed Action because, using the Corps' study period, the expanded reservoir would have only filled in 1 out of 44 years and 18,000 acre-feet would not have been available in 45% of the years. This is alarming to us; please give this analysis a hard look.

The FEIS says that, while climate change is reasonably foreseeable and that, as a result, it is likely that stream flow will peak earlier, evapotranspiration will increase, and droughts may be longer and more severe, anticipated climate change should be ignored when considering the impacts of the Proposed Action because there is no accepted scientific method for taking the impact of climate change into account when predicting future stream flows. We don't think this position is warranted.

We are not scientists and we are not experts at modeling the impacts of climate change on stream flows. However, it seems that the Corps' conclusion that there is no way to include climate change in its modeling is wrong, as there is a consensus in the scientific community that there are accepted scientific methods to predict future stream flows and there is a consensus that climate change will cause a reduction in runoff from streams, on both the east and west slope of Colorado, in measurable amounts, in the near future. Several studies that look at the effects of climate change on stream flows and reservoir levels are cited on pp. 92-93 of the comments submitted by The Environmental Group. In our cursory research, in addition to the articles cited by The Environmental Group, we have found others that reach similar conclusions (Christensen et al. (2004); Milly (2005); Hoerling and Eischeid (2006); Christiansen and Lettenmaier (2007); Seager et al. (2007); McCabe and Wolock (2008); Lazar and Williams, 2008; Wang

et al. (2009); Wang and Robertson (2011)). Each of these studies predicts that runoff will diminish as a result of climate change. The amounts of predicted reductions range from 6% to 45%, with the majority of the studies predicting a diminished flow of between 15-30%. Even if changes to stream flows are at the lower end of this range, this is a substantial issue that needs to be considered when analyzing the impacts of any alternative. We think that it is especially important that the impacts of climate change on anticipated future stream flows be considered by you in your decision about the FEIS in light of Section III of the Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions issued by the Council on Environmental Quality on February 18, 2010, which advocates for this type of consideration.¹

Most of the water for the enlarged Gross Reservoir would come from tributaries of the Colorado River. In the Corps' 2012 Colorado River Basin Water Supply and Demand Study, the Corps recognized that concerns regarding reliability of the Colorado River system to meet future basin resource needs are more apparent than in studies done over the past several decades "given the likelihood of increasing demand for water throughout the Basin coupled with projections of reduced supply due to climate change." (Executive Summary at p. 4). If the Corps accepted predictions of reduced supply due to climate change in this report about Colorado River water supply, why doesn't it accept it in the FEIS?

Denver Water has told Boulder County that if stream flows are reduced because of climate change it will increase its need for the Proposed Action. It is undoubtedly true that the demand for water use by Denver Water's customers will go up as a result of climate change,^{*} but demands by other interests, including the natural environment, will also go up and these impacts have not been studied in the FEIS.

If stream flows diminish by 15-30% within the next 35 years, as predicted in the scientific literature cited above and in The Environmental Group's (TEG) FEIS comments, Denver Water will not be able to fill an enlarged Gross Reservoir, an enlarged Gross Reservoir will not provide a firm yield of 18,000 acre feet per year and the Proposed Action will not meet the stated Purpose and Need for the project. If an alternative doesn't meet the Purpose and Need set forth at the outset for the project, it must be rejected by the Corps.

If these predictions about the reduction of stream flows are correct, using the past as a prediction of what future stream flows will be is not good science and decisions made upon bad information are bad decisions. We urge you to take a hard look at the most recent and reliable climate change studies to

¹ "Climate change can increase the vulnerability of a resource, ecosystem, or human community, causing a proposed action to result in consequences that are more damaging than prior experience with environmental impacts analysis might indicate. . . . The level of detail in the analysis and NEPA documentation of these effects will vary among affected resource values. For example if a proposed project requires the use of significant quantities of water, changes in water availability associated with climate change may need to be discussed in greater detail than other consequences of climate change. . . [A]gencies need not undertake exorbitant research or analysis of projected climate change impacts in the project area or on the project itself, but may instead summarize and incorporate by reference the relevant scientific literature." Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions issued by the Council on Environmental Quality on February 18, 2010, Section III.

determine whether the FEIS's supposition that there is no accepted scientific method for taking climate change into account in predicting future stream flows is factually and legally defensible.

Transportation Impacts Have Not Been Thoroughly Studied

In our prior comments, we questioned the lack of specifics on the impacts of construction-related traffic upon our local roads and requested that mitigation measures be enumerated and made mandatory. After our recent hearing, we are even more worried about the impacts that construction of the Proposed Action and attendant tree removal will have on our roads and our citizens' safety.

Denver Water conducted a traffic study during the summer of 2013 related to the feasibility of driving laden trucks on local roads that will be used during construction of the project and impacts. Last summer, we were told that this study was done to provide additional information to help inform development of the FEIS. However, there is no reference to the truck study in the FEIS. We were told at our public hearing that video from the study was initially on Denver Water's web site but has been taken down. Why isn't this study a part of the FEIS?

At our hearing we heard evidence from those who observed the study that Denver Water's trucks were only hauling half the load that trucks would actually have to haul materials to the site during actual construction. While the trucks only travelled one way, after morning commuter traffic was completed, and were only half-way laden, the trucks had a hard time staying within their lanes or negotiating turns, and observers noted that the trucks repeatedly crossed double yellow lines and violated state and county noise standards. We were also told by a professional truck driver that it is unsafe to drive fully laden semis on Gross Dam Road, that there is not enough room for these trucks to pass each other on Gross Dam Road or on turns on SH 72, and that truck brakes will not be able to slow descending trucks (especially if they are laden with trees being removed), meaning that jake brakes will be required, which will violate noise standards. The FEIS assumes that truck traffic will obey laws and be operated safely. We don't believe these assumptions are warranted.

A Record of Decision considering the Proposed Action cannot be issued until we know more about how many trips construction will generate, on which roads, in what types of vehicles, at what times of day, hauling loads of what dimension and weight, and what modifications will be made to which roads for safety and efficiency of travel. We also need to know what is happening with the 200,000 trees over four inches in diameter being removed from the site so that we know whether and how often fully laden trucks will need to descend the roads. The impacts of Tree removal will also have tremendous impacts to the environment, neighbors and roads west of the Reservoir. Trucking routes, times of day, loads, etc. have not been analyzed in those areas. If road improvements or construction is required for tree removal the full extent of environmental impacts needs to be evaluated. Once this information is known, the Corps needs to commission traffic studies that replicate actual conditions under which truck traffic will go to and from the construction site so we have real knowledge as to whether this type of traffic can be handled by the affected roads in a safe manner that doesn't violate noise state and local safety and noise regulations. Without this knowledge, the Corps cannot have the information upon which to make a decision as to whether the impacts of the Proposed Action will have upon the people who live and work in the vicinity.


For the forgoing reasons, we reaffirm our request, on behalf of all of Boulder County's citizens, to reject the Proposed Action unless and until it is proven that the Proposed Action meets the Purpose and Need the Corps has established for the project and our other concerns are sufficiently addressed. Thank you.

Sincerely,

THE BOARD OF COUNTY COMMISSIONERS OF BOULDER COUNTY

By: 
Cindy Domenico, Chair

By: 
Deb Gardner, Vice-Chair

By: 
Elise Jones, Commissioner