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Via e-mail and U.S. Mail

Mr. Scott Franklin, Moffat EIS Project Mgr
U.S. Army Corps of Engineers
9307 South Wadsworth Blvd.
Littleton, CO 80128
Moffat.eis@usace.army.mil

Re: Comments regarding Moffat Project Collection System DEIS submitted by the Board of County Commissioners of Summit County

Dear Mr. Franklin:

This firm represents the Summit County Board of County Commissioners (“Summit County”), and submits the following comments on the Draft Environmental Impact Statement (“DEIS”) for the Moffat Collection System Project (“Project”) on behalf of Summit County. Summit County appreciates the opportunity to provide these comments to the United States Army Corps of Engineers (“Corps”). The County is currently involved in long-term negotiations with Denver Water on a wide range of issues, including Denver’s compliance with the Blue River Decree and the impacts of the Moffat Project. The County is hopeful that these negotiations will be successful, however, no agreement is yet in place that would address the County’s concerns about the Moffat Project. Accordingly, Summit County submits this comment letter to identify omissions and inaccuracies in the DEIS for the Moffat Project and to highlight the environmental impacts that would result from the Project. Should Summit County reach an agreement with Denver Water, Summit County shall inform the Corps of any change in its position regarding the Moffat Project.

Based on available information, Summit County believes that the Moffat Project is not in the public interest and that Denver Water cannot satisfy the requirements necessary to obtain a § 404 permit pursuant to the Clean Water Act. If the Corps determines that Denver Water may be able to obtain a permit, a supplemental DEIS is necessary to correct the errors in the initial DEIS, to satisfy the procedural requirements mandated by NEPA and to accurately identify expected environmental impacts and appropriate mitigation terms.

In addition to the following comments, Summit County has joined the Joint Rebuttal Report submitted on behalf of West Slope entities which provides additional technical comments challenging the DEIS’s factual conclusions as to expected environmental impacts of the Project.

1. The Purpose and Need Statement

The purpose of the Moffat Collection System Project is to develop 18,000 acre feet per year of new, annual 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.*¹

The Moffat Project DEIS provides an insufficient analysis of the purpose and need for the Project. The Purpose and Need statement effectively narrows the alternatives considered in the DEIS to alternatives that include the transbasin diversion and storage of upward of 60,000 acre-feet of water. Other viable alternatives such as non-structural alternatives that would not involve transbasin diversions from the West Slope are excluded from further consideration. For example, the DEIS does not adequately consider conservation and reuse as viable alternatives to the Moffat Project. The degree of specificity built into the Purpose and Need statement violates NEPA's warning that agencies may not "defin[e] the objectives of their actions in terms so unreasonably narrow they can be accomplished by only one alternative (*i.e.*, the applicant's proposed project)."² "The stated goal of a project necessarily dictates the range of 'reasonable' alternatives and an agency cannot define its objectives in unreasonably narrow terms."³ An appropriately defined purpose and need statement and comparison of all reasonable alternatives would show that Denver Water can meet its 2030 demands through conservation, reuse, and provision of additional sources of raw water for its Moffat Treatment Plant without increasing diversions from the West Slope.

The Purpose and Need statement overstates Denver Water's raw water needs. The conclusion that Denver Water will face a shortfall of 18,000 acre-feet of water by 2016 does not take into account conservation that Denver Water has already achieved or plans to achieve in the near future, and includes 3,000 acre-feet of raw water deliveries to Arvada which Denver Water may never be obligated to supply. In spite of the deficiencies of the Purpose and Need statement, the Corps has accepted the statement in its entirety. To satisfy NEPA, the Moffat Project Purpose and Need statement must be based on the Corp's independent assessment of Denver Water's needs and consideration of a range of reasonable alternatives to meet those needs.⁴ A federal agency may give deference to a private party applicant's stated purpose and need, but the agency is also required to consider the interests of the public as a whole and ensure that all reasonable alternatives are considered.⁵

In addition to the procedural requirements imposed by NEPA for establishing a purpose and need statement, the Clean Water Act imposes a substantive requirement that the Corps' "decision whether to issue a permit . . . be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest."⁶ In conducting a public interest review, the Corps balances the "benefits which reasonably may be expected to accrue from the proposal" against the "reasonably foreseeable detriments."⁷ Pursuant to this substantive standard, the Moffat Project Purpose and Need statement is inappropriate as it does not accurately reflect the public interest by misstating the needs of Denver Water's customers.

1.1 Purpose and Need Statement

¹ U.S. Army Corps of Engineers Omaha Division (USACE). 2009. Moffat Collection System Project Draft Environmental Impact Statement (DEIS), p. 2-1.

² *Colorado Environmental Coalition v. Dombeck*, 185 F.3d 1162, 1174-75 (10th Cir. 1999).

³ *City of Carmel-by-the-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142, 1155 (9th Cir. 1997).

⁴ See 33 C.F.R. 325, App. B, §§ (9)(b)(5), (4).

⁵ *Citizens Committee to Save our Canyons v. United States Forest Service*, 297 F.3d 1012, 1030-31 (10th Cir. 2002).

⁶ 33 C.F.R. § 320.4(a)(1).

⁷ *Id.*

The DEIS assumptions regarding Denver Water's future shortfalls in supply and the timing of those shortfalls upon which the Purpose and Need statement is based are inaccurate. First, conservation and natural replacement savings that have already been achieved by Denver Water are not applied in the DEIS to reduce estimated demand. Second, Denver Water's conservation commitments as of 2006 are not considered in formulating expected water supply shortfalls and the timing of those shortfalls. Denver Water has stated that it intends to conserve an additional 29,000 acre-feet by 2016 – 13,000 acre-feet more than the conservation estimate included in the DEIS.⁸ Third, the need for 18,000 acre-feet of additional firm yield includes 3,000 acre-feet of demand by Arvada. Denver Water's contractual obligation to supply this water to Arvada is only triggered in the event that Denver Water develops additional firm yield for its North System. If Denver addresses its supply shortfall by means other than additional yield to the Moffat Treatment Plant, such as by conservation, this demand would not be triggered. The inclusion of the 3,000 acre-foot Arvada Contract in the Purpose and Need statement assumes that the solution to this need will be to create additional firm yield to the North System. The EIS also fails to consider Denver's ability to use groundwater as a source of emergency supply, thereby negating the need for the 30,000 acre-foot strategic water reserve which is built into Denver's estimated demand.

1.2 Unrestricted Demand

The demand assumptions included in the DEIS are based on the estimated unrestricted demand of Denver Water's customers. Unrestricted demand is a poor metric for future demand planning, because among other flaws, it is difficult to measure. For example, the DEIS states that Denver Water's PACSM model predicts four years in which the current Moffat Collection System would have run out of water, and several "other years when the Moffat Collection System would have been close to running out of water."⁹ In fact, the Moffat System has never run out of water, even during the severe drought of 2002. At a minimum, the DEIS should include modeling of future demands with drought response measures in place. Denver Water customers expect to decrease their water demands during times of drought. To model "unrestricted demand" for future drought periods is unrealistic and contrary to the Board's current policies.

In 2002, Denver Water employed its Drought Response Plan and took pre-determined actions to reduce water use. Denver Water's Drought Plan describes different stages of drought based on July 1st reservoir levels, and provides several recommended responses aimed at reducing water use for each stage of drought.¹⁰ For instance, the goal in a Stage 3 drought, with reservoir storage at 40% or lower on July 1st, is to reduce water use by 50% through measures such as limiting outdoor lawn watering. Such restrictions can be expected to decrease demand by as much as 30% below average year demand.¹¹

In addition, the DEIS describes the "emergency measures" enacted during the 2002 drought, such as mandatory watering restrictions, as inefficient and expensive. Prior to accepting such a conclusion, an economic evaluation or "willingness to pay" study would be appropriate to determine how much Denver Water customers value their unrestricted demand before reaching a conclusion as to the purported expense or economic hardship of enacting drought response measures. Customers may be willing to sacrifice lawn watering during occasional seasons rather than paying for a large and expensive public works project with significant environmental impacts.

⁸ See Denver Water, Tap-Smart: The Conservation Master Plan, April 30, 2007.

⁹ USACE. 2009. DEIS Chapter 1 – Purpose and Need, p. 1-19.

¹⁰ Denver Water. 2004. Drought Response Plan. May. http://www.denverwater.org/docs/assets/DD1F807E-BCDF-1B42-D5B4FD4EB681A7B3/drought_response_plan1.pdf

¹¹ *Id.*

In addition, the DEIS takes other intergovernmental agreements for water service by Denver Water as firm demands for fixed amounts. In reality, most of these leases include provisions for reduction of the delivery obligations in times of shortage; commitments to comply with Denver Water's conservation programs; and means for Denver Water to terminate the agreements. Several of the leases specifically provide that Denver Water can reduce its delivery obligations by 5% upon imposition of voluntary restrictions on water use, 15% upon imposition of mandatory watering restrictions, and 50% upon prohibition of all irrigation. Such reductions provide Denver Water with an additional buffer in times of shortage. A 5% reduction in raw water contracts would reduce Denver Water's demands by 2,329 acre-feet, and a 5% reduction in all of Denver Water's contracts (including treated water and recycled water) would reduce Denver Water's demands by 3,359 acre-feet. A 15% reduction would decrease Denver Water's demand by about 10,000 acre-feet. This factor ought to have been considered throughout the DEIS, but in particular, ought to have been incorporated into the No Action Alternative. Rather than drawing on the strategic water reserve, Denver Water would be expected to impose drought restrictions which would allow Denver to meet its demand without increasing diversions from the West Slope.

1.3 Total Demands

The model used by Denver Water to estimate future demands was created almost a decade ago. It is based on water use statistics from the 1970's through 1990's and the demographic data on which it relies is now ten years old. Denver Water should recalculate future demands using an updated model that incorporates conservation funding increases and utilizes more recent Denver Regional Council of Governments ("DRCOG") demographic projections that take into account the current economic downturn.

Denver Water's current demand model includes a statistically significant water conservation variable which accounts for monetary spending on conservation. In Denver Water's demand projections, conservation spending is held constant at \$1,116,000 for all years between 2000 and 2050.¹² Denver Water currently spends more than \$10,000,000 per year on conservation.¹³ Denver Water is also likely to continue to increase spending on conservation through the near-term.

The review of the demand models by Harvey Economics notes two potential problems with the demographic and economic data developed by the DRCOG and relied upon by the model. First, a comparison of new data acquired from the 2000 Census and corresponding revisions of the DRCOG's demographics to that used by Denver Water in its model "suggest higher future population levels, comparable household projections, and employment projections that are generally higher to the year 2020 and then less for the year 2030. Although no formal analysis of the impact of these changes upon Denver Water's demand projections has been made, it is likely that these new projections might have increased slightly water demand projections from 2000 to 2020 and **held stable or slightly reduced water demand projections by the year 2030.**"¹⁴ (emphasis added). Second, the demographic and economic forecasts assume a Federal budget surplus.¹⁵ It is not clear from the Harvey Economics Memo whether this now inaccurate assumption was corrected in Denver Water's 2004 draft projections. Likewise, the current economic downturn will have a far-reaching impact on future population growth in Colorado. Because

¹² USACE. 2009. DEIS Appendix A2: Supplemental Evaluation of Denver Water Demand Projections, Exhibit 3.

¹³ Fisher, G., Manager of Demand Planning & Elliot, M., Manager of Water Conservation, Denver Water. Personal Communication. December 7, 2009.

¹⁴ Draft EIS, Appendix A, Harvey Economics Memorandum, August 12, 2004, "Review of Denver Water's IRP," p.8.

¹⁵ Draft EIS, Appendix A, Harvey Economics Memorandum, January 15, 2004, "Review of Denver Water's IRP," p.8.

population projections are the primary driver for increased future water demands, it is critical to have accurate and up-to-date population projections for planning efforts. The success of such projections are also heavily dependent on accuracy of the initial rates of population growth because errors in the first few years are compounded over time.

The demand model also shows a dramatic shift in annual increases in water demands from 2006 to 2016 (at 6,000 acre-feet per year, a 17% increase), as compared to the period from 2016 to 2030 (at 1,286 acre-feet per year, a 5% increase). This “frontloading” shifts a substantial portion of increases in demand, and therefore increases in diversion from the West Slope, to the 2016 “Full Use of Existing System” baseline against which the Project alternatives are compared. The environmental impacts with the Project scenarios appear smaller when compared to these inflated baselines. First, it seems unlikely that demand will increase by 17% from 2006 through 2016, given the economic downturn. Second, if there is a 23% increase in demand by 2030, it seems unlikely that 17% will occur in the first 10 years and only 5% will occur in the following 14 years.

1.4 Cooperative Actions

Denver Water’s estimate of 440 acre-feet of water supply from near-term cooperative actions likely underestimates actual future yield from cooperative projects, given Denver Water’s recent forward progress with the WISE Partnership. The Partnership allows Denver Water to utilize excess capacity in Aurora’s Prairie Waters pipeline and water treatment plant to transport and treat reusable return flows in the South Platte. Denver Water estimates the Partnership could provide 20,000 – 30,000 acre-feet of water supply in dry years.¹⁶

The Appendix to Denver Water’s 2002 IRP also provides a lengthy list of possible cooperative projects totaling a yield of more than 11,000 acre-feet which are not specifically addressed in the DEIS. It is not clear why these alternatives are not considered either as possible cooperative efforts some of which would be expected to provide additional yield, or as alternatives to the Moffat Project. A chart summarizing these cooperative actions is attached as Appendix A.

1.5 Conservation Savings

The analysis of Denver Water’s existing conservation savings in the DEIS omits much of the conservation savings already achieved. First, the DEIS appears to understate Denver Water’s conservation between 1980 and 1997 by 2,500 acre-feet without explanation for the reduction. The DEIS assumes 27,500 acre-feet of conservation achieved by 1997, while the Appendix to the 2002 IRP states 29,000 acre-feet of conservation. Second, the DEIS does not address 10,000 acre-feet of conservation and natural replacement assumed by Denver Water to have been achieved between 2001 and 2005 in other Denver Water planning documents such as the Tap-Smart Plan.¹⁷ “Staff assumed that 10,000 AF of permanent demand reductions was achieved during the drought through hardware and behavioral changes in water use.” Part of this 10,000 acre-feet may have been incorporated within the natural replacement forecasts, but there is no analysis or discussion provided in the DEIS or supporting documents as to what portion can be attributed to natural replacement. The portion of the 10,000 acre-feet that is due to “behavioral changes” was omitted from consideration in the DEIS and would reduce Denver’s forecasted demand.

The DEIS does include a natural replacement estimate of 24,000 acre-feet per year by 2030,

¹⁶ Bennett, D. 2009. WISE Partnership presentation at AWRA Monthly Meeting. Denver Water Board Room, November 24.

¹⁷ Tap-Smart: The Conservation Master Plan, April 30, 2007, p.8.

derived from Denver Water's estimate of 39,000 acre-feet of natural replacement savings per year by 2050. As Harvey Economics points out in their review, if Denver Water's calculations are correctly applied, the estimate of 39,000 acre-feet of savings by 2050 should result in an estimate of 27,000 acre-feet of savings by 2030. It is not clear how Denver Water arrived at the estimate of 24,000 acre-feet for inclusion in the DEIS. No explanation is provided in the DEIS or the Appendices.

1.6 Denver Water's Four "Needs"

Denver Water describes its need for the proposed Moffat Project as having four separate elements: reliability, flexibility, vulnerability, and firm-yield. The DEIS does not take into account that satisfaction of these four needs need not be accomplished by a single project. These four needs also require further investigation and explanation if they are to be used as the justification for the Project.

The first three of Denver Water's needs require access to additional sources of raw water for the North System and the Moffat Treatment Plant. In contrast, the need for additional yield can be satisfied by cultivating new sources of water anywhere within Denver's system. A reduction in Denver's water demands could also eliminate the need for additional firm yield. By requiring that one alternative satisfy all four elements Denver Water unnecessarily narrows its scope of considered alternatives and fails to evaluate portfolios of projects that could satisfy all four of the needs. For example, the DEIS ought to consider an alternative in which the Moffat Treatment Plant is supplied with additional raw water from existing East Slope sources by construction of a pipeline or other infrastructure. Such a connection would solve the reliability, vulnerability, and flexibility problems articulated by Denver Water by utilizing available capacity in the Moffat Treatment Plant and providing an additional source of raw water supplies to the North System. Independently, a project to provide new firm yield to Denver Water could be developed anywhere within the Denver Water system. Denver Water's participation in the WISE Partnership is one example of a source of additional firm yield. Pursuant to the WISE Partnership, Denver Water can utilize excess capacity in the Aurora Prairie Waters Project to collect and treat unused reusable effluent and agricultural water.

1.6.1 Reliability

In support of its reliability need, Denver Water reports that PACSM modeling and 2002 operations indicate that existing water demands would exceed available supplies from the Moffat Collection System during a severe drought, putting the Moffat Water Treatment Plant at a "significant level" of risk of running out of water. A thorough assessment of the risk of water supply shortages and description of what a "significant level" of risk means to Denver Water customers; as well as an analysis of how and to what extent the proposed project would address this risk, is necessary to justify reliability as a need.¹⁸

PACSM modeling indicates that treated water shortages would have occurred in water years similar to 1955, 1971, 1973, and 1974; however, these treated water shortages would also occur under any of the action alternatives.¹⁹ The treated water shortages are due to conveyance capacity constraints as opposed to lack of supply. A description of the conveyance capacity upgrades required to eliminate the treated water shortage, including their timeline for completion, environmental impacts, and cost is necessary to claim that any given alternative satisfies the reliability need. As currently proposed, neither the proposed project nor any of the alternatives will reduce the risk of water shortage to Denver Water's treated water customers.

¹⁸ USACE. 2003. Scoping Summary – Moffat Collection System Project, p. 3-2. December.

¹⁹ USACE. 2009. DEIS Appendix K – Preliminary Section 404(b)(1) Guidelines Compliance, p. K-13.

1.6.2 Vulnerability

Denver Water reports that their overall water supply system is vulnerable to man-made and natural disasters because 90% of storage and 80% of available water supply is located in their South System. However, a simple analysis shows that storage and supply concerns are hardly changed with the addition of 18,000 AF of firm yield to the North System. Adding the proposed Moffat Expansion barely decreases Denver Water’s reliance on the South System; decreasing South System dependence from approximately 80% of water supply to 77% (Table 1).

Table 1. Yield of Denver Water’s Systems in AF (adapted from DEIS Table 1-3).

Source	Existing System			With Moffat Expansion		
	Supply	Percent	S. Supply	Supply	Percent	S. Supply
Roberts Tunnel	93,000	27%	81%	93,000	26%	77%
South Platte	141,000	41%		141,000	39%	
Exchange/Reuse	47,000	14%		47,000	13%	
Moffat Tunnel	64,000	19%		82,000	23%	
TOTAL	345,000			363,000		

An evaluation of the improvements to system vulnerability afforded by the proposed alternatives would show that the Moffat Project does not address this need in a meaningful way. Improvements to system-wide security, maintenance, forest health, and fire prevention may prove to be more economic, and reduce vulnerability more than any of the proposed project alternatives.

1.6.3 Flexibility

Denver Water suggests that its system is subject to outages caused by routine maintenance, pipe failures, treatment plant problems, and unpredictable occurrences that stress its ability to meet customer demands, and that to meet such occurrences the Denver Water system requires added flexibility. Unlike many water providers, however, Denver Water already has three large independently functioning water treatment plants, any one of which is capable of meeting the vast majority of Denver Water’s needs. Even summer-time demands of the entire combined service area can be served by any two plants in times of drought as evidenced by operations during the 2002 drought.

Some analysis or quantification of the benefits attributable to the additional flexibility provided by the proposed Moffat Project seems appropriate to support the claim that the proposed project meets the flexibility need. There is no clear indication that 18,000 acre-feet of additional supply would provide substantive benefits to system flexibility sufficient to justify the large economic and environmental costs of the Project. One proposal for such an analysis would be to pinpoint past customer service interruptions attributable to the planned and non-planned outages described in Appendix C of the Purpose and Need Report²⁰ and determine (1) whether any of those outages led to supply interruption at the customer level, and (2) whether the Moffat Project would have prevented such interruptions.

1.6.4 PACSM

Denver Water’s near-term water resource strategy identifies a need for 18,000 acre-feet of new firm yield by 2030. Denver Water has not, however, substantiated the need for this volume of additional

²⁰ Denver Board of Water Commissioners, Purpose and Need Statement for the Moffat Collection System Project (April 2004).

firm yield within the time frame addressed by the Moffat Project DEIS. In addition to the failure to adequately consider conservation and cooperative projects as discussed, supra, Denver Water's yield model incorporates sources of error within the yield estimate. The Platte and Colorado Simulation Model ("PACSM") relies on data that has not been updated in almost twenty years to provide firm yield estimates. The backbone data set for the model only runs through 1991, and does not include some of the driest and wettest years for the Upper Colorado River Basin.²¹ Adding precipitation data from 1992 through the present would (1) increase the scope of the data set and thereby increase accuracy regarding average expectations, and (2) include the five wettest and driest years on record for the Upper Colorado River Basin. The Memorandum by Bishop-Brogden Associates, Inc., attached as Appendix B, and the Joint Rebuttal Report provide additional technical criticisms of PACSM.

1.7 Summary of Purpose and Need

The Moffat Project Purpose and Need statement is overly narrow, includes unsubstantiated needs, and is based on outdated data. There is no demonstrated need for 18,000 acre-feet of additional yield in light of documented demand reduction through conservation efforts and Denver Water's overstatement of its contractual obligations. PACSM and Denver Water's demand model are also unreliable bases on which to base predictions of future firm yield and demand. The following figure illustrates the lack of a need for additional supply when conservation and elimination of the 3,000 acre-feet of contractual obligations to Arvada are considered. Figure 1 illustrates that when Denver Water's current conservation goals of 16,000 acre-feet by 2016 are taken into account, and the demand for the Arvada Contract is eliminated, there is at most 2,000 acre-feet of remaining demand. Given discrepancies in Denver Water's estimate of conservation savings that have already been achieved, supply may exceed demand through 2030. Figure 1 is intended to be compared with Table 1-1 that appears on page 1-10 of the DEIS.

²¹ Jeff Clark, Memo, "Hydrology Review of the Moffat Collection System Project DEIS," March 17, 2010, Appendix A.

Figure 1. System Shortfall.

Category	2002 IRP	2030
	(AF/Year)	
Demand		
Unrestricted Demand	312,500	427,500
Less:		
Conservation Savings Since 1980	(27,500 to 29,000)	(27,500 to 29,000)
Future Natural Replacement Savings	N/A	(24,000 to 27,000)
Conservation and Natural Replacement (2001-2005)		(0 to 10,000)
Plus:		
1999 Arvada Contract	N/A	N/A Only applicable if Moffat Project constructed.
Total System Demand	283,500 to 285,000	361,500 to 376,000
Supply		
System Supply	315,000	315,000
Plus:		
Cooperative Action	N/A	440
System Refinements	N/A	13,000
Non-Potable Reuse	N/A	17,000
Total System Supply (Nearest 1,000)	315,000	345,000
Shortfall	N/A	16,500 to 31,000
Plans to Meet Shortfall		
Additional Conservation		29,000
New Water Supply		0 to 2,000

The time frame of Denver Water’s predicted supply shortfall is also unsubstantiated. The DEIS relies on the assumption that demand will exceed available supply in 2016. This assumption is obviously inaccurate, however, as even the DEIS acknowledges that Denver Water expects to meet a significant portion of its demand through additional conservation efforts. Some of this conservation will be realized before 2016, so demand will not actually meet available supply until sometime after 2016. Unaccounted for in the DEIS are Denver Water’s commitment to additional conservation efforts and participation in the WISE Partnership. These unaccounted for sources of demand reduction and additional supply will likely meet Denver’s water needs well beyond 2030.

3. Failure to consider reasonable alternatives.

NEPA regulations require that an EIS “rigorously explore and objectively evaluate all reasonable alternatives.”²² The consideration of alternatives is “the heart of the environmental impact statement,”²³ because such review promotes NEPA’s twin aims of “informed agency decision-making” and “public access to information.”²⁴ “Without substantive, comparative environmental impact information regarding other possible courses of action, the ability of an EIS to inform agency deliberation and facilitate public

²² 40 CFR § 1502.14[a].

²³ 40 C.F.R. § 1502.14.

²⁴ See *New Mexico ex rel. Richardson v. Bureau of Land Management*, 563 F.3d 683, 703, 707 (10th Cir. 2009).

involvement [is] greatly degraded.”²⁵ The Moffat Project DEIS does not consider a sufficient range of alternatives because alternatives were eliminated based on the inadequate Purpose and Need statement and unsubstantiated cost estimates, and non-structural alternatives were not considered in a meaningful way if at all.

In determining the range of reasonable alternatives to be considered, the U.S. Council on Environmental Quality has stated that “the emphasis is on what is reasonable, rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint using common sense, rather than simply desirable from the standpoint of the applicant.”²⁶ Under NEPA, the comparison of a full spectrum of alternatives should provide “a clear basis for choice among options for the decision maker and the public.”²⁷ Although the DEIS claims that “[t]he five alternatives to be carried forward for EIS analysis represent a reasonable cross-section of practical alternatives, which encompass a broad range of potential water supplies and storage sites,”²⁸ all of the alternatives rely on transmountain diversions and large storage facilities. Strategies other than new supply projects are, however, feasible alternatives to address Denver Water’s demands.

In addition to the procedural standards set by NEPA, the Clean Water Act requires the Corps to consider the least environmentally damaging practical alternative (“LEDPA”) prior to issuing a § 404 permit.²⁹ Under the § 404 Guidelines, “no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.”³⁰ Because the screens applied to the alternatives initially considered in the Moffat DEIS were based on an overly narrow Purpose and Need statement, the least environmentally damaging alternatives were prematurely eliminated from further consideration. The DEIS also fails to adequately consider, at any stage in its review, non-structural alternatives such as conservation and reuse. The artificially narrow range of alternatives considered by the Corps does not consist of the thorough review mandated by NEPA and necessary to determine the LEDPA.

3.1 Proposed Alternatives

The DEIS begins its review with a pool of over 300 potential projects. Alternatives are then eliminated from further consideration through a series of “screens.” These screens remove alternatives from further consideration that do not meet the Purpose and Need statement, that are assessed to be significantly higher in cost, or that are determined to have other flaws such as relatively greater environmental impacts.

One of the significant flaws with the alternative screening process, however, is that the alternatives are not sufficiently described to allow the public to determine whether the alternatives were appropriately eliminated. For example, the indirect potable reuse alternatives are described as including a water treatment plant and storage capacity. It is unclear, however, why substantial storage capacity is necessary – whether the storage is intended to provide carryover capabilities across years or to store reusable effluent from winter months to summer months. One advantage of the use of reusable effluent to

²⁵ *Id.* at 708.

²⁶ U.S. Council on Environmental Quality. NEPA’s 40 Most Asked Questions, #2a. Accessed January 8, 2010: <http://ceq.hss.doe.gov/nepa/regs/40/40p3.htm>.

²⁷ 40 CFR § 1502.14.

²⁸ USACE. 2009. DEIS Chapter 2: Proposed Action and Alternatives, p. 2-19.

²⁹ See, Clean Water Act (“CWA”) § 404(b)(1) Guidelines, 40 C.F.R. pt. 230 (“§ 404 Guidelines”).

³⁰ 40 C.F.R. § 230.10(a).

meet demand is that more reusable water is available in dry years, precisely when there is a need, such that carryover storage is not necessary. The inclusion of additional storage capacity drives up the relative cost of the reuse alternatives, though there is no explanation for the necessity for storage.

The initial screening of alternatives based on the Purpose and Need statement resulted in inappropriate elimination of alternatives because of the flaws inherent in the statement. One of the initial eliminating criteria included in the DEIS is that an alternative must “produce a solution within the necessary near-term timeframe (by 2016),” which requirement is based on Denver Water’s overstated water supply shortfall and flawed expectation that the shortfall will occur by 2016. In fact, Denver Water should not expect a shortfall in supply, if at all, until some point well after 2016. Fifteen alternatives were eliminated, however, on the basis that they could not produce a solution within the necessary time frame.

Another eliminating criterion is that an alternative including a storage facility must be capable of storing at least 15,000 acre-feet in a surface impoundment. The rationale for this criterion is based in part on the unsubstantiated assumption that Denver Water has a need for additional firm yield of 18,000 acre-feet, which would require about 72,000 acre-feet of new storage. In addition, the justification for this screen is that too many storage vessels would prove “unmanageable. “A minimum storage volume for any one component is needed to reduce the number of possible storage elements to a manageable and practical combination.”³¹ There is no justification for the assumption that more than five storage facilities would necessarily prove unmanageable. In addition, because 18,000 acre-feet is an overstatement of Denver Water’s actual needs smaller storage vessels could be utilized to meet Denver Water’s shortage without exceeding five in number. Ninety-four alternatives were inappropriately eliminated on this basis.

A similar criterion is that the alternative must provide water “in amounts sufficient to be practically developed,” which is defined as providing at least 20% of the needed additional firm yield (or 3,600 acre-feet).³² There is no justification as to why Denver Water’s source of supply for the Moffat Project must be made up of options that supply greater than 3,600 acre-feet. This criterion eliminates possible alternatives to the Moffat Project which would consist of portfolios of smaller projects having less environmental impact.

At the Screen 1C stage, the relative costs of remaining alternatives were compared. Several alternatives relying upon reuse were eliminated from further review based on their high relative cost. The DEIS does not provide sufficient information about how these cost estimates were developed, to allow the public to determine whether these alternatives were appropriately rejected. For example, there is no evidence that the economies of scale that might be obtained from constructing a treatment plant with excess capacity were considered. The additional capacity could be used to offset Denver Water’s needs from other components of its system, or could be developed as part of a cooperative effort with other water supply entities similar to or in conjunction with the WISE Partnership. As an illustration, Alternative 8a states that the AWT Plant would be expected to operate for 2-3 years and then stand idle for 6-7 years. The DEIS does not provide a justification for this mode of operation given that some reusable effluent would be available in most years. Excess capacity could be used to treat available water to reduce Denver Water’s West Slope diversions as required by the Blue River Decree.

3.2 No Action Alternative

The definition of the No Action Alternative included in the DEIS inflates expected environmental impacts and deflates, in comparison, the environmental impacts of the preferred alternative because it does not adequately capture the status quo baseline for comparison. “In requiring consideration of a no-

³¹ USACE. 2009. DEIS Chapter 2: Proposed Action and Alternatives.

³² Moffat Project, Alternatives Screening Report, p. 28.

action alternative, the Council on Environmental Quality intended that agencies compare the potential impacts of the proposed major federal action to the known impacts of maintaining the status quo.”³³ “[T]he current level of activity is used as a benchmark.”³⁴ By inappropriately defining the “benchmark” the DEIS provides a distorted comparison of impacts. The No Action Alternative does not capture the status quo because it does not include appropriate drought management measures that Denver Water has and plans to employ in drought circumstances; relies on flawed assumptions about the expected shortfall in demand and the timing of that shortfall; and relies on the strategic water reserve to satisfy demand contrary to Denver Water Board policies.

Many of the flaws embedded within the framing of the No Action Alternative are flaws that have already been highlighted with respect to the other alternatives or the framing of the purpose and need for the project. These problems include the overstatement of Denver Water’s demand by failing to consider past and future conservation and inclusion of the contractual obligation with Arvada even though that obligation would not be triggered by the No Action Alternative.

Non-structural demand management solutions are inappropriately excluded from the No Action Alternative even though conservation and drought measures are and will continue to be essential elements of Denver Water’s drought response policies. The No Action Alternative therefore does not realistically capture the actions that actually will be taken by Denver Water if a § 404 permit is not granted by the Corps. Although the No Action Alternative purports to include drought restrictions, the qualitative description of restrictions that might be enacted is insufficient and misleading. Denver Water has established water use reduction targets for various stages of drought, and has data which show reductions accomplished during the most recent 2002-2005 drought.³⁵ This data can, and should, be utilized in the DEIS to perform a more rigorous and quantitative evaluation of the impact drought response measures will likely have on drought demand. For example, in the 1977 drought, Denver Water achieved 33,000 acre-feet of savings by imposing mandatory watering restrictions. The 2002 IRP also provides a list of drought response measures that could be used rather than relying on the strategic water reserve such as reducing deliveries to Englewood under the 1995 agreement, drilling wells, pumping dead storage, and reducing deliveries to potable and nonpotable contract holders.³⁶

Instead, to satisfy predicted demand, the No Action Alternative relies on Denver Water’s 30,000 acre-foot strategic reserve, which is intended to be an emergency source of supply. The 30,000 acre-foot strategic water reserve “is not included in the total system supply because it is not considered available for meeting the total system demand under normal operating conditions”³⁷ This policy statement contradicts the use of the strategic water reserve to meet demand under the No Action Alternative. If the strategic water reserve is not included as a source of supply for the considered alternatives, and is not considered available supply as a matter of Denver Water Board policy, it should not be included as a source of supply under the No Action Alternative. Doing so distorts the environmental impact baseline against with the Project alternatives are compared.

3.3 Conservation Alternative

One of the essential shortfalls of the DEIS is the omission of conservation as a means to reduce Denver Water’s demands under the No Action Alternative or as an independent alternative to the Moffat Project. Prior to committing large financial resources to expanding the Moffat Collection System and

³³ *Custer County Action Ass’n v. Garvey*, 256 F.3d 1024, 1040 (10th Cir. 2001).

³⁴ *San Juan Citizens’ Alliance v. Salazar*, WL 824410, 17-18 (D.Colo. 2009).

³⁵ USACE. 2009. DEIS Chapter 2: Proposed Action and Alternatives, Table 2-23.

³⁶ 2002 IRP, Drought Response Plan Appendix, p. 12.

³⁷ Moffat Project DEIS, Purpose & Need, 1-14.

inflicting significant environmental costs, Denver Water ought to further consider demand management. Furthermore, Denver Water has already implemented conservation goals that will meet most, and possibly all, of predicted shortfalls in demand.

The DEIS relies on the 2002 IRP to conclude that Denver Water plans to reduce its demand by 16,000 acre-feet per year by 2030 through the application of conservation measures. Although this statement of Denver Water's conservation goals was accurate at the time the 2002 IRP was issued, the Denver Water Board resolved in 2005 to accelerate its conservation plans. Pursuant to this resolution and as documented in the Tap-Smart Plan,³⁸ Denver Water now intends to reduce its demand by 29,000 acre-feet by 2016. This conservation is in addition to 10,000 acre-feet of reduction in demand that Denver Water calculates had already been achieved between 2001 and 2005.³⁹ There is a 13,000 acre-foot difference between the 2002 conservation goal of 16,000 acre-feet and the 2006 Tap-Smart Plan goal of 29,000 acre-feet. Because meeting demand through conservation would not trigger the 3,000 acre-foot obligation to Arvada, the remaining shortfall is at most 2,000 acre-feet according to Denver Water's estimates. This 2,000 acre-feet of shortfall does not justify the construction of the Moffat Project with its resultant environmental impacts. Rather, Denver Water could meet this remaining demand through reuse projects, additional conservation efforts, or acceleration of natural replacement.

Even assuming that there is an 18,000 acre-foot shortfall, the DEIS fails to consider conservation as a means to eliminate that shortfall. Conservation is likely to be less expensive than the Moffat Project and would certainly produce fewer environmental impacts. Denver Water estimates in its TapSmart Plan that conservation will cost an average of \$4,540 per acre-foot to the Denver Water Board and \$12,600 per acre-foot total, when costs to the public are considered. The 2002 IRP also provides a list of conservation measures, the estimated reduction in demand that would result, and their costs, attached hereto as Appendix C. The list illustrates the numerous conservation measures available to Denver Water to reduce demand. In comparison, the Moffat Project is estimated to cost about \$7,777 per acre-foot of firm yield. The Moffat Project cost estimates do not include the socioeconomic and environmental impacts that are expected to result. When those costs are factored in, the cost of the Moffat Project per acre-foot significantly exceeds the cost of additional conservation. The Corps has an obligation to take into account the total impacts of the project on the public, and therefore, to consider the entire cost of the Moffat Project including socioeconomic and environmental impacts.

A related means of demand management to reduce water use is to raise rates. The advantage of raising rates to promote conservation as compared to imposing mandatory financial contributions towards construction of a large new water supply project, is that individuals can make their own determinations as to the costs and benefits of water use. The \$140 million cost of the Moffat Project would ultimately be paid for by Denver Water users. An equivalent increase in rates would impose the same costs on the public, but would likely result in much more than 18,000 acre-feet of demand reduction per year. One report estimates that a 10% increase in water rates can be expected to result in a 6% decrease in water use over the long term.⁴⁰ Denver Water's 2008 annual report states that it received \$205,941,000 in revenue from customers for water. A 10% increase would cost consumers \$20,594,100 and would be expected to result in 22,740 acre-feet of savings (6% of expected system demand of 379,000 acre-feet). This approach would meet Denver Water's needs at about 15% of the cost of the Moffat Project to the public. Such an alternative is not, however, considered in the DEIS.

³⁸ Resolution and Tap-Smart Plan.

³⁹ See Moffat Project DEIS, Section 1.4.1.2.

⁴⁰ Sheila M. Olmstead & Robert M. Stavins, "Comparing Price and Non-Price Approaches to Urban Water Conservation," September 2008, p.8.

3.4 System Integration Alternative and Existing East Slope Supplies

System integration is another alternative to the Moffat Project that is omitted from the DEIS. The integration of Denver Water with other water supply systems would provide opportunities for agricultural-urban cooperative water sharing agreements (AUA's). Through integration, several water supply systems can be cooperatively used in a manner designed to increase or maximize total combined yields. In mature river basins like the South Platte, with a large number of urban and agricultural water users that are linked but not fully combined, system integration would enhance the opportunities for conjunctive use of surface and groundwater systems, coordinated approaches to effluent management and re-use, and Ag/Urban supply arrangements like rotational land fallowing and water leasing.

Denver Water must also consider whether it has fully utilized its existing East Slope supplies. For example, Denver Water has an interest in the City Ditch which would be capable of delivering approximately 5,500 acre-feet per year and which appears to be unused by Denver Water.⁴¹ Although some expense may be involved in cultivating existing water rights and putting them to use, these are sources of supply appropriate for consideration in the DEIS.

3.5 Reuse Alternatives

Indirect potable reuse is a cost effective water shortfall solution and is rapidly spreading in use across the nation, with dozens of projects already operating in California, Florida, Georgia, Virginia, Texas, New Mexico and Arizona. Availability of technology is no longer a barrier to indirect potable reuse.⁴² Reuse has proven to provide a highly competitive and cost-effective means of augmenting water supplies. "Indeed, in some situations, indirect potable reuse may be the next best alternative to make beneficial use of the resource."⁴³ The City of Aurora's Prairie Water Project illustrates how a major water utility in Colorado has legally, technically, and environmentally developed an indirect potable reuse project. The Prairie Waters Project is currently ahead of schedule and \$100 million under budget.⁴⁴ Yet the DEIS only superficially considers alternatives involving indirect potable reuse, rejecting reuse as a reasonable means to meet the majority of Denver Water's predicted supply shortfall. The elimination of meaningful reuse alternatives from the DEIS is justified by underestimates of available unused reusable effluent and misstatement of the costs of such alternatives.

Denver Water is required by federal law to maximize the reuse of Colorado River return flows so as to alleviate the need for additional diversions from the West Slope. The Blue River Decree mandates that Denver "undertake[] to exercise due diligence, within legal limitations and subject to economic feasibility," to "utilize such [transmountain] return flow by exchange or otherwise . . . so as to reduce or minimize the demands of [Denver] upon Blue River water."⁴⁵ The Colorado Supreme Court has relied on the Blue River Decree in holding that Denver has the right to reuse and make successive use of foreign waters and that it should do so "to the maximum extent feasible."⁴⁶ Denver Water is required to adopt reuse measures before constructing West Slope supply projects as long as such alternatives are "economically feasible;" reuse need not be the least expensive alternative. As a "trustee responsible for

⁴¹ See, Memo, Bishop-Brogden Associates, Inc, March 17, 2010.

⁴² H.P. Jansen, et al., *Development of Indirect Potable Reuse in Impacted Areas of the United States*, 55 WATER SCIENCE & TECH. 357 (2007).

⁴³ U.S. EPA Guidelines for Water Reuse, 2004.

⁴⁴ Denver Post, Front Page, "Aurora Water Project Ahead of Schedule, Below Budget," March 15, 2010.

⁴⁵ Decree in Consolidated Case Nos. 2782, 5016, and 5017, § 4(f) (D. Colo. Oct. 12, 1955) ("Blue River Decree"), ratified by Congress, Colorado River Storage Project Act of 1956, 43 U.S.C. § 620(j) and Senate Doc. No. 80, 75th Congress, 1st Session (1937).

⁴⁶ *City & County of Denver v. Fulton Irrigating Ditch Co.*, 506 P.2d 144, 148 (Colo. 1972).

the protection of western slope interest,”⁴⁷ the United States is required to consider Denver’s obligations pursuant to the Blue River Decree in making permitting decisions. As a result, the Corps has a heightened obligation to scrutinize Denver Water’s current reuse practices and the potential for additional reuse. The DEIS omits any reference or discussion of the obligations imposed on Denver Water by the Blue River Decree.

Denver Water claims that there is insufficient reusable effluent to meet its predicted supply shortfalls. This position is unsubstantiated and requires additional analysis. The flaws inherent to PACSM, which have already been discussed, bring into question the estimates of available reusable effluent included in the DEIS. Contrary to Denver Water’s estimate of average available reusable effluent of 7,600 acre-feet, Denver Water reported an average of 19,300 acre-feet of unused reusable effluent from 1998 to 2008.⁴⁸ During the drought of 2002, over 47,000 acre-feet of unused reusable effluent was available. When multiplied by a factor of 1.5, to account for the fact that reusable effluent can be reused multiple times, there is nearly 29,000 acre-feet of unused reusable effluent available on average, and as much as 70,000 acre-feet available in drought years. It is not clear whether DEIS Table 2-9 showing Denver Water’s calculation of its unused reusable return flows includes “second generation” reuse. If the 1.5 multiplier was not included within Denver Water’s estimates of available reusable flows, even Denver Water’s own estimate of 7,600 acre-feet of reusable effluent would produce about 11,400 acre-feet of usable supplies.

The DEIS also relies on average unused return flows rather than dry year return flows. A greater supply of reusable return flows are available in dry years when Denver Water makes larger diversions from the West Slope, and precisely when Denver Water has the greatest need. It is misleading to state, as does the DEIS, that the “average” unused return flows are 7,600 acre-feet when PACSM predicts up to 37,500 acre-feet of unused reusable effluent in a dry year.⁴⁹ The alternatives in the DEIS that include nonpotable reuse explicitly state that the advanced water treatment plants would only be used during dry years, approximately three out of every nine or ten years, precisely when available unused reusable return flows would be at their maximum.

The DEIS relies on a capital cost estimate of \$5.25 per gallon per day of treatment capacity for an advanced wastewater treatment plant (for example, a plant with a capacity to treat 10,000,000 gallons per day would cost \$52,500,000). Of that cost, \$3.50 is attributed to treatment costs and \$1.75 for concentrate disposal. The “Moffat Project Collection System Project EIS Denver Water Alternatives Screening Report” (URS 2007) recognizes that the unit cost of \$3.50 for treatment is high compared to costs of constructed plants with similar treatment processes.⁵⁰ However, even according to this estimate, a plant with the capacity to treat 18,000 acre-feet of water per year would cost approximately \$84 million. It is not clear, therefore, why such an option was rejected as more than five times more expensive than the preferred alternative,⁵¹ which has an estimated total construction cost of \$81.6 million. The cost breakdown shows that the treatment plants considered in the DEIS were designed to treat upwards of 49,000,000 gallons per day. If run 365 days per year, this capacity would be sufficient to treat almost 55,000 acre-feet of water per year. Given that Denver Water’s own estimate of shortfall is only 18,000 acre-feet, there seems to be no basis for the considered alternatives to include a plant with such extensive excess capacity and corresponding additional costs.

⁴⁷ *United States v. Northern Colorado Water Conservancy District*, 608 F.2d 422, 429 (10th Cir. 1979).

⁴⁸ Denver Board of Water Commissioners, Colorado River Water Reports to U.S. Bureau of Reclamation, 1998 – 2008.

⁴⁹ Moffat Project Collection System DEIS, Table 2-9, “Denver Water’s Estimated Reusable Water.”

⁵⁰ “Moffat Project Collection System Project EIS Denver Water Alternatives Screening Report” (URS 2007), Appendix C.

⁵¹ The cost screen, Screen 1C, eliminated alternatives that had a cost ratio as compared to the least expensive alternative greater than 5.

The consideration of reuse alternatives also does not take into account the opportunity for cooperative action to fully utilize the available water treatment capacity. If the plant is to be used for approximately three years and allowed to sit idle for six, that unused capacity can be utilized by neighboring communities. The WISE Partnership is planned to operate in exactly this way, with South Metro utilizing the unused capacity of Aurora's water treatment plant in wet seasons and returning to their wells for drought supplies.

If Denver Water is to reject reuse as an alternative to the Moffat Project based on cost, the public must be provided with more information about the bases for those cost estimates. Particularly when the costs to the public of environmental impacts that will result from the Moffat Project are considered, the cost of indirect potable reuse seems favorable in comparison. Indeed, communities throughout the country have concluded that indirect potable reuse is a preferable alternative to the development of new water supplies. Aurora's Prairie Water Project is just such an example. If Aurora, the second largest water provider in the Denver Metro area has determined that indirect potable reuse is an economically and environmentally sound water source, Denver Water cannot reject such an alternative without substantial justification. The Blue River Decree mandates that Denver Water adopt such measures if economically feasible.

4 Environmental Impacts and Mitigation.

The Moffat Project will have significant impacts on water, water quality, environmental resources, and local economies throughout the Colorado River Basin, including impacts to the Blue River, Dillon Reservoir, and Summit County. All of the 2030 water supply scenarios modeled in the DEIS show increased diversions through the Roberts Tunnel as compared to the 2016 "Full Use" scenario, resulting in corresponding reductions in water levels in Dillon Reservoir and flows in the Blue River. Under the preferred alternative, increased diversions through the Roberts Tunnel would be concentrated during the months of May through September which are the prime recreational seasons for Dillon Reservoir and the Blue River. Reservoir water levels and streamflows will be expected to decline during these periods in most years of the study period with construction of the Project. Reductions in flows in the Blue River will result in reductions in the wetted land adjacent to the River between Dillon and Green Mountain Reservoir, destroying riparian habitat. There will also be permanent adverse impacts to boating opportunities on the Blue River by decreasing the number of days with minimum and optimal flows for kayaking and rafting. Because of deficiencies in PACSM for purposes of modeling the impacts to flows on the West Slope, which deficiencies are outlined in the Joint Rebuttal Report and in the Memo by Bishop Brogden Associates, Inc., Appendix B, the Project may have adverse impacts significantly greater than those explicitly acknowledged in the DEIS. A more detailed analysis of the environmental impacts to Summit County is provided in the Joint Rebuttal Report to which Summit County is a signatory.

The DEIS does not adequately address cumulative impacts of the Project, because it does not consider the total effect of diversions by Denver Water from the West Slope and the past, present, and future anticipated diversions by West Slope entities. An EIS must include "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."⁵² One example is the DEIS failure to quantitatively consider the impact of the Shoshone Agreement between Denver Water and Excel Energy which will reduce the call of the Shoshone Power Plant during dry years. Although the DEIS admits that such a reduction in the call is likely to occur once every six or seven years, this factor was not included in PACSM and therefore is not reflected in the environmental impact analyses in the DEIS. The reduction in the call would be expected to impact flows upstream of the Power

⁵² 40 C.F.R. § 1508.7 (1991).

Plant in years in which limited or no replacement water is available.

The DEIS concludes that there will be minimal or no environmental impacts to Summit County, and therefore, does not propose mitigation terms. Because the DEIS relies on the conclusion that there will be no impacts, an appropriate condition for any permit issued for the Project is that any environmental impacts or change in the assumptions upon which the environmental impact analyses in the DEIS were based, must be mitigated. Such a permit term would require monitoring by Denver Water to identify, track, and address or mitigate the environmental impacts. If the Project does result in reductions in flows, modification of water treatment plant permits, impacts to water quality, temperature, fisheries, or other adverse effects, then Denver Water should be accountable for those effects as it would have been had those impacts been documented in the DEIS. For example, the DEIS assumes that Dillon Reservoir outflows shall remain at or above 50 c.f.s., and evaluates environmental impacts based on this assumption. Summit County believes that an appropriate permit term would require Denver Water to maintain a 50 c.f.s. outflow, or to provide other mitigation should flows on the Blue River fall below 50 c.f.s. Likewise, the DEIS assumes that levels in Dillon Reservoir will not drop below certain minimum volumes. Denver Water should be prohibited from dropping levels below these volumes, or be required to engage in mitigation if further releases or pumping from Dillon Reservoir is absolutely necessary. Such permit terms would only hold Denver Water to the assumptions pursuant to which the environmental impacts of the Project was evaluated and upon which the Corps relied when making the permitting decision.

5 Public Comment and Factual Conclusions.

As a general matter, a proper review of the DEIS was made difficult by the lack of or limited availability of information to the public, including but not limited to access to an executable model of PACSM, Denver Water's operating memoranda for PACSM, and supporting memoranda related to cost estimates for the Project alternatives. One of the essential elements of the NEPA process is to promote "informed decisionmaking and informed public comment."⁵³ To provide such informed comment, the public must have access to documents referenced in and supporting conclusions included in the DEIS, including documents referenced in the supporting memoranda. Denver Water claimed that operating criteria for PACSM, which model was used to support virtually all of the conclusions in the DEIS, were "proprietary materials." Based on this assertion, the Corps did not post the memoranda on its website with the other technical supporting documents. Without access to the operating criteria for the central hydrology model of the DEIS and an executable copy of the model, the public has no means to assess the adequacy of predictions regarding water availability and expected impacts on streamflow. "The safety valves in the use of such sophisticated methodology are the requirement of public exposure of the assumptions and data incorporated into the analysis and the acceptance and consideration of public comment. . . ."⁵⁴ As a general matter, "any supporting data or studies expressly relied upon in an EIS must be available and accessible to the public."⁵⁵

One of the gravest informational shortfalls in the DEIS impacts analysis is the use of averages throughout the document, masking the actual range of environmental impacts that are likely to result.⁵⁶ For example, rather than utilizing the driest year on record as a baseline scenario, the DEIS employs the "average dry year" to determine and compare dry year impacts. Such a comparison is not helpful in determining the most significant impacts that may result from the Project alternatives and does not allow appropriate public comment regarding mitigation terms.

⁵³ *Utahns for Better Transp. v. United States Dep't of Transp.*, 305 F.3d 1152, 1163 (10th Cir. 2002).

⁵⁴ *Natural Resources Defense Council, Inc. v. Herrington*, 768 F. 2d 1355, 1391 (D.C. Cir. 1985).

⁵⁵ *California v. Block*, 690 F.2d 753 (9th Cir. 1982).

⁵⁶ See Memo, Bishop-Brogden Associates, March 17, 2010.

The DEIS also includes factual and scientific conclusions that do not satisfy the legal requirement that an agency's conclusions have "substantial basis in fact."⁵⁷ At a minimum, an agency must "consider[] the relevant factors and articulate[] a rational connection between the facts found and the choice made."⁵⁸ If the agency fails to "make a reasonably adequate compilation of relevant information and [the DEIS] sets forth statements that are materially false or inaccurate" the DEIS cannot provide the basis for an informed evaluation or a reasoned decision as required by NEPA.⁵⁹ The DEIS's assumption that Denver will face an 18,000 acre-foot shortfall in demand, without considering Denver Water's current conservation goals; that there will be only negligible environmental impacts to resources, when the impacts on those resources were not quantitatively analyzed; and that drought restrictions are expensive and undesirable without providing any basis for such a finding, are examples of conclusions without a "substantial basis in fact."

6 Conclusion

Based on the above comments, the attached Appendices, and the Joint Rebuttal, Summit County believes that the Moffat Project proposed by Denver Water is not in the public interest. Denver Water has not demonstrated a demand sufficient to justify the Project, and Denver Water has an obligation to engage in reuse if such an alternative is economically feasible. Given the technological developments in water treatment plants and the success of the Prairie Waters Project, Denver Water has not shown that reuse and conservation are not the least environmentally damaging practical alternative to address future shortfalls in water supply. However, if the Moffat Project is to proceed, a supplemental DEIS is necessary to correct the errors in the initial DEIS for satisfaction of NEPA's procedural requirements, to accurately identify expected environmental impacts, and to define appropriate mitigation terms to limit the impact of this project on Summit County and other West Slope entities.

Sincerely,

/s/ Nicole L. Johnson

Nicole L. Johnson
Attorney for Summit County

NLJ

cc: Mr. Gary Martinez, Summit County Commissioner
Mr. Thomas Davidson, Summit County Commissioner

⁵⁷ *Izaak Walton League of America v. Marsh*, 655 F.2d 346, 371-72 (D.C.Cir.), cert. denied, 454 U.S. 1092, 102 S.Ct. 657, 70 L.Ed.2d 630 (1981).

⁵⁸ *Selkirk Conservation Alliance v. Forsgren*, 336 F.3d 944, 953-54 (9th Cir.2003).

⁵⁹ *Sierra Club v. U.S. Army Corps of Engineers*, 701 F.2d 1011, 1030 (2d Cir. 1983).