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Sangre de Cristo Group

P.O. Box 8924 Pueblo, CO 81008-8924

Reply to:

140 West 29th Street, #348 Pueblo, CO 81008-1002

719-561-3117 415-946-3442 (fax)

ross.vincent@sierraclub.org

December 11, 2008

Board of County Commissioners
Pueblo County Courthouse
215 West 10th Street
Pueblo, CO 81003

Gentlemen:

Enclosed is a copy of the Sierra Club's comments for the record of the public hearing on the application for a 1041 permit submitted by the sponsors of the proposed Southern Delivery System project.

We regret that we have another long-planned meeting scheduled for this evening, December 11th, and we will be unable to present these comments in person at that time.

Please include these comments and the attachments in the hearing record and let me know if you have any questions.

Thank you for your consideration.

Sincerely,

Ross Vincent
Vice Chair





Sangre de Cristo Group

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Comments by

Ross Vincent

Vice Chair, Sangre de Cristo Group

Sierra Club

on the

Application for a 1041 Permit

for the

Proposed Southern Delivery System

December 11, 2008

On behalf of the Sierra Club and our members, allow me to express our gratitude to Pueblo County and to the Board of County Commissioners for this opportunity to express our views on matters that are clearly critical to the future of this entire region. The task before you is formidable, but we are confident that you will find a path forward that is both protective of the interests of those of us who will be affected by this project and fair to its proponents.

The Sierra Club is dedicated to the protection and preservation of the natural and human environment, including the lands and resources that will be impacted by this proposed project. The Sierra Club's purpose is "to explore, enjoy and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environments."

The Sierra Club is a national organization, with a statewide chapter in Colorado known as the Rocky Mountain Chapter, and 13 local Groups in the state including the Pikes Peak Group, which serves El Paso, Elbert & Teller counties, and the Sangre de Cristo Group which serves most of southeastern Colorado, including the Arkansas valley from the headwaters to Kansas.

The Sierra Club has approximately 25,000 members in Colorado, including many in El Paso County, Colorado Springs, Pueblo County and Pueblo. The Sierra Club has members who use the Arkansas River and Fountain Creek, as well as the lakes and reservoirs associated with these water bodies, for recreation, aesthetic, scientific and business purposes, and thus stand to be affected by the action that

is being proposed.

The Sierra Club recognizes that communities have a right to attempt to put water rights they own to beneficial use, provided that they do so lawfully and responsibly. We have no objection in concept to pipelines as a mechanism for delivering water from existing reservoirs to communities in need. However, we are committed to protection of human health and the environment and to full compliance with applicable environmental laws and regulations. We have a long-standing interest in the protection and restoration of Fountain Creek and in realizing its potential to become an asset for this community and for all of the communities it touches.

It is no exaggeration (even if it is a play on words) to suggest that we are at a watershed moment for Fountain Creek. The work that we have been doing for the last several years, much of it with this County's active participation and support, some with valuable participation by some of the sponsors of this project as well, are critical pieces in the effort to revive Fountain Creek. So is the permit review process you begin in earnest with these hearings.

It has been obvious for years that Fountain Creek is in serious trouble. Water quality is poor and made worse by illegal discharges. Stormwater discharges add even more pollution and contribute to erosion and flooding, much of which could and should be prevented. And those problems are destined to get worse with time, in part as a result of this project, especially if the continued urban sprawl that this project is intended to serve is allowed to occur in the careless and poorly managed manner that has been common in the watershed heretofore.

It is equally obvious that we can't solve all of the problems of Fountain Creek here in Pueblo. We will need a great deal of help from others, including -- indeed, in particular -- from our neighbors to the north. Mobilizing people and institutions to deliver a better future for Fountain Creek will require significant improvement in three areas:

- communication,
- cooperation, and
- accountability.

Just a few years ago, effective mechanisms to allow those things to happen didn't exist. Since then, primarily as a result of hard work of the Fountain Creek Vision Task Force, communication has improved and there is evidence of increased cooperation as well. If we are successful in creating and sustaining the new Fountain Creek watershed district recommended by the Vision Task Force as it fades out of existence, there is reason to hope that communication and cooperation can continue to improve.

Still missing from both the current reality and the future promise of these evolving relationships are the mechanisms for mutual accountability. That's why this process and the permit you are currently considering are so important. Where accountability mechanisms are well established and effective, communication and cooperation tend to follow.

I see only three near-term opportunities for beginning to build accountability into this evolving set of relationships.

- 1. Enforceable orders.** These can be produced by courts as a result of relevant lawsuits or by regulators as a result of permitting or enforcement actions.
- 2. Contracts between the Bureau of Reclamation and the project sponsors/operators.** If the Bureau of Reclamation (the Bureau) decides to allow storage and withdrawal of water at the Pueblo Reservoir for delivery through the proposed SDS pipeline, they must then negotiate contracts with the project's "owners" that will include enforceable design and operating conditions for the project. Those conditions will be based in part on the information contained in the Final EIS.
- 3. Pueblo County's 1041 permit** – the subject of these proceedings – and the conditions that you may include in any such permit.

The first two of these accountability mechanisms are important, but limited both in scope and in opportunities for execution.

Litigation is usually very expensive and the courts can be agonizingly slow. For example, it has been three years since District Attorney Bill Thiebaut and the Sierra Club filed suit in federal court seeking to stop illegal sewage spills by Colorado Springs Utilities. The trial in that case was held in late January and early February of this year and we still await a decision from the court.

If the Court decision includes enforceable requirements, as we hope it will, it is likely that they will address only measures intended to reduce or eliminate sewage spills that violate the Clean Water Act, and it is likely that only the plaintiffs will have standing to return to the court to seek their enforcement.

In the meantime, the illegal sewage spills continue. Attached to these comments for your information is a list of spills so far this year that we know about. To the best of our knowledge, there has been no enforcement action taken by either state or federal regulators as a result of these illegal spills. That is ample demonstration of the perils of reliance on the regulatory system to provide accountability in Fountain Creek.

The Bureau of Reclamation may be the only party with standing to enforce the provisions of their contracts with the project sponsors and the conditions in those contracts may well be limited by the explicit legal authority granted to the Bureau in federal law.

The County's 1041 permit process offers greater flexibility and would give clear authority for enforcement to the people of Pueblo County through their county government. That's why this process is so critical to the future of Fountain Creek.

It's extremely important that any permit you craft cover the issues and impacts that the the federal court decision and the Bureau's contracts miss, and it is important that it provide a reliable basis for accountability as relationships within the watershed continue to develop.

WE RECOMMEND that, in addition to any other requirements you may decide to include in a County 1041 permit, that you incorporate the requirements of those other key documents – viz., court decisions as they emerge and the contracts with the Bureau – so that the County will have the ability to assure compliance, even if the other parties do not.

WE RECOMMEND that you include as a condition of the permit full compliance with all applicable federal, state and local laws and regulations, particularly those that affect water quality and quantity in Fountain Creek.

WE RECOMMEND in addition that you explore ways to extend to citizens of Pueblo County who may be affected by violations of the 1041 permit the ability to seek appropriate remedies based on those violations, so that the entire burden does not fall on County government.

It is important to recognize that the application under consideration here is clearly premature and incomplete.

At this point in time, the applicants have no project for which to seek a permit. There can be no reliable description of the project until the Bureau of Reclamation approves it and sets the parameters that define its design and operational limitations.

The application you have before you asks you to issue a permit for a dream – a fantasy. Parts of that dream may well come true. Parts of it very likely will not.

Until the Bureau of Reclamation issues a fully adequate Final Environmental Impact Statement (EIS) and a final Record of Decision (ROD), and until those documents are fully vetted and finally approved, there is no project to review.

And until the Bureau and the project proponents enter into contracts, based on the Final EIS and the ROD, that specify where the project will be located and how the project will be designed and operated, no one, including the applicants, knows exactly what this project will look like.

Without the information contained in those three sets of documents – a fully adequate and vetted Final EIS, a final ROD, and approved contracts – the County can't possibly complete an adequate analysis of the project. You can't possibly know what the impacts of the proposed project on Fountain Creek and the rest of Pueblo County will be. You can't possibly know whether and how to craft a fair and responsible permit.

The vetting of the Final EIS and the ROD is especially significant in this case. Thus far the Bureau of Reclamation appears determined to produce a woefully inadequate Final EIS. That concern is reinforced by news reports that the Bureau is rushing to release its Final EIS as early as this Friday.

If they continue on that course, they will deprive the County – and all of us – of information that the EIS is supposed to contain and that is essential to understanding the impacts of the project. They will be effectively thumbing their noses at the law and at all of us who will have to live with the consequences of the proposed action.

Why is beyond my comprehension. Without a fully adequate Final EIS, we all lose – including the project sponsors.

If I were one of those sponsors, I would be all over the Bureau, insisting that they produce a legally unassailable Final EIS. I would be pleading with our Senators and Representatives in Washington for help in assuring that the Bureau produce the best possible Final EIS.

It isn't all that hard to do. The National Environmental Policy Act doesn't require the project's sponsors to do anything about the impacts their project will cause. It only requires that the impacts be disclosed. Federal decision-makers have to do their homework, they have to be thorough, and they have to tell the truth. For some reason, the Bureau doesn't seem to want to do that in this case.

But you – all of us – will need the information that a fully adequate Final EIS should contain. We have attached to these comments copies of the comments that we submitted to the Bureau on the Draft EIS and, along with the Rocky Mountain Environmental and Labor Coalition, on the subsequent Supplemental Information Report, both released as part of the process leading to a Final EIS. The attached comments, along with those submitted by a number of others, describe

some of the serious deficiencies in those documents.

WE RECOMMEND that you advise the applicants for this permit as soon as possible that the County will be unable to complete its review of their application until they submit copies of:

- a fully adequate Final EIS issued and vetted by the Bureau,
- a final Record of Decision issued by the Bureau, and
- fully executed contracts with the Bureau that cover the project and related activities.

They can't begin construction until all of those documents are finalized and you can't craft a fair and responsible permit without them.

WE RECOMMEND that you keep the record of these hearings open for additional written comments as more information about the project becomes available and that you reconvene these hearings at a reasonable time after the above-mentioned documents are submitted, giving the applicants time to modify their application consistent with those documents, and allowing time for your staff and the public to review the actual approved project design.

We will welcome an opportunity to supplement these comments at the appropriate time when we all know what the proposed project actually looks like.

Thank you for your consideration and for your attention to the complexities of the decisions before you.

Attached: #1-List of sewage spills – 2008 to date
#2-DEIS Comments, 6/12/08
#3-SIR Comments, 11/24/08

Known Recent Illegal Sewage Spills by Colorado Springs Utilities

- (1) 10/28/08 Filmore and Sage Street
255 gallon spill into Monument Cr. via storm drain, due to blockage from roots
- (2) 10/24/08 2501 Chamberlin South
100 gallon spill into Fisher Creek to Fountain Creek from 8 in. main, due to blockage from grease, mud and debris
- (3) 7/25/08 Space Center Drive
10 gallon spill into unnamed drainage from 8 in main, due to blockage from gravel, sand and mud (alleged upset)
- (4) 6/17/08 1307 Parkview Blvd.
1,500 gallons spilled from 8 in. main due to blockage from roots and debris, no surface water impacted but groundwater may have been impacted
- (5) 6/18/08 Old Ranch Rd. and Otero Ave.
1,060 gallon spill into Kettle Creek, from 8 in. main due to grease blockage (alleged upset)
- (6) 3/26/08 5475 Mark Dabbling Blvd.
350 gallon spill into Monument Creek from 18 in. main (on a two year cleaning cycle and last cleaned 7/19/08)(alleged upset)
- (7) 3/18/08 21st St. and Rio Grande Ave.
20 gallon spill into Bear Creek from 8 in. main, due to grease blockage (this pipe was on 4 year cleaning cycle and last cleaned 6/1/06)
- (8) 3/15/08 40,100 gallon (also reported as 1.2 mil. gal.) wastewater spill at sewage treatment plant into parking lot, approx. 100 gallons of which reached Fountain Creek (due to equipment failure in the bar screen room)
- (9) 1/25/08 approx. 40 gallons at Austin Bluffs Parkway
traffic cone in 8 in. main
- (10) 1/12/08 25-50 gallons into storm drain into Fountain Creek, grease blocking flow into Las Vegas plant



SIERRA
CLUB
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Ms. Kara L. Lamb
Bureau of Reclamation
11056 West County Road 18E
Loveland, CO 80537

Dear Ms. Lamb:

On behalf of the Sierra Club, I am pleased to submit the enclosed comments on the February 2008 Draft Environmental Impact Statement on the proposed Southern Delivery System project. We appreciate the opportunity to offer these comments and sincerely hope that they prove helpful.

Questions and other follow-up communication concerning the enclosed comments should be directed to:

Jenny Kedward
1021 West 15th Street
Pueblo, CO 81003
(719) 582-0249
blueufoshow@yahoo.com

and/or to...

Ross Vincent
140 West 29th Street, #348
Pueblo, CO 81008
719-561-3117
ross.vincent@sierraclub.org

Sincerely,

s/Susan LeFever

Susan LeFever, Director
Rocky Mountain Chapter

Sierra Club Rocky Mountain Chapter
1536 Wynkoop Street, 4-C, Denver, CO 80202
303-861-8819

Sierra Club Comments
on the
February 2008 Draft Environmental Impact Statement
for the
Proposed Southern Delivery System
Submitted to the Bureau of Reclamation
June 12, 2008

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Introduction

These comments are submitted on behalf of the Sierra Club, 85 Second Street, Second Floor, San Francisco, CA 94105, and its Rocky Mountain Chapter, 1536 Wynkoop Street, 4th floor, Denver CO 80202. Sierra Club was founded in 1892 and is the nation's oldest grass-roots environmental organization. It has more than 700,000 members nationwide.

The Sierra Club is dedicated to the protection and preservation of the natural and human environment, including the public lands and resources that are the subject of the proposed action. The Sierra Club's purpose is "to explore, enjoy and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environments."

The Sierra Club is a national organization, with a statewide chapter in Colorado known as the Rocky Mountain Chapter, and 13 local Groups in the state including the Pikes Peak Group, which serves El Paso, Elbert & Teller counties, and the Sangre de Cristo Group which serves most of southeastern Colorado, including the Arkansas valley from the headwaters to Kansas.

The Sierra Club has approximately 25,000 members in Colorado, including many in El Paso County, Colorado Springs, Pueblo County and Pueblo. The Sierra Club has members who use the Arkansas River and Fountain Creek, as well as the lakes and reservoirs associated with these water bodies, for recreation, aesthetic, scientific and business purposes, and thus stand to be affected by the action that is being proposed.

The Sierra Club recognizes that communities have a right to attempt to put water rights they own to beneficial use, provided that they do so lawfully and responsibly. We have no objection in concept to pipelines as a mechanism for delivering water from existing reservoirs to communities in need. We are committed to protection of human health and the environment and to full compliance with applicable environmental laws and regulations, in particular in this context with the National Environmental Policy Act (NEPA) and associated rules.

The Sierra Club appreciates the opportunity to comment on the Draft Environmental Impact Statement (hereinafter DEIS) for the Southern Delivery System (hereinafter SDS) project. We hope these comments will be seriously considered by the Bureau of Reclamation (hereinafter Reclamation) prior to issuing a final decision on the SDS project. These comments were drafted for the Sierra Club by a team of staff and volunteer leaders in Pueblo, El Paso, Denver, Boulder & Larimer counties.

Summary Overview

The Draft Environmental Impact Statement (DEIS) fails to present a legitimate No Action Alternative.

A responsible No Action Alternative would involve some combination of increased water reuse, aggressive water conservation, and responsible growth management. Such alternatives would substantially reduce, perhaps eliminate, and certainly postpone the need for additional imported water. They could reduce the environmental impacts of the project, reduce mitigation costs and reduce the externalized costs that will otherwise be imposed on innocent bystanders.

Reclamation must present a credible No Action Alternative. Until one is presented, it is and will continue to be virtually impossible for the public to understand and comment on the real impacts of the proposed project.

The DEIS fails to present a reasonable range of Action Alternatives.

The Action Alternatives presented are all minor variations on the same theme. Reclamation must recognize and discuss in a valid DEIS a reasonable range of alternatives, compared to an objective baseline, such as current conditions, not to some contrived and undesirable possible project configuration. Until that happens, the public will be effectively deprived of a meaningful opportunity to understand and comment on the real impacts of the proposed project.

The DEIS explicitly declines to discuss some of the most significant impacts of the proposed project.

By omitting analysis from the DEIS of the secondary impacts caused by the new development and increased population that the project is intended to facilitate, Reclamation has further deprived the public of the ability to understand and comment on the real impacts of the proposed project.

Reclamation has an obligation to recognize and discuss those impacts in a valid DEIS and to assure that the Frying Pan-Arkansas Project does not become the vehicle for further degrading water quality and increasing flood risks for communities along Fountain Creek and the lower Arkansas River.

The serious deficiencies of the subject DEIS, compounded by the regrettable barriers to communication built into Reclamation's public comment meetings, have deprived the public of a meaningful opportunity to understand and comment on the proposed project and its impacts.

The deficiencies in the document and in the process are so serious and pervasive that they almost certainly cannot be cured by simply editing and amending the current DEIS.

Considerable amounts of new information and analysis will be required. New alternatives and new issues will have to be discussed. The public has a right to see and to comment on that new material after adequate time for review and before the EIS is finalized.

Reclamation should go back to the drawing board and produce a new DEIS that covers all of the legitimate issues, analyzes a reasonable range of legitimate alternatives and provides

meaningful opportunities for public participation in the development of a fully adequate Final EIS.

No one – not Reclamation, nor the SDS project proponents, nor the taxpayers and ratepayers of the communities that hope to benefit from the project, and certainly not others who may be adversely affected by the project – will benefit from trying to force the National Environmental Protection Act (NEPA) process forward to a Final EIS from the unfortunate position in which we find ourselves now.

DEIS Structure and Content

Many issues arise from the layout of the DEIS, from the alternatives chosen for consideration and from those ignored, and from the basis used for analysis of alternatives.

No Action Alternative is Not Appropriate

The No Action Alternative posited in the DEIS is a speculative projection framed by the project participants and used in the DEIS in a manner that obfuscates the environmental impacts of the Action Alternatives. The project configuration designated as the No Action Alternative allegedly “represents the *most likely* future in the absence of a major federal action by Reclamation.” (*Statement Summary* at 13; emphasis added). As the DEIS acknowledges, the nominal No Action Alternative is highly speculative and, tellingly, it results in increased environmental harm.

For example, the alleged No Action Alternative results in the greatest impact on wetlands (*Id.* at 33), has major effects on native grasslands (*Id.* at 34), and is the only alternative to impact threatened or endangered species (*Id.* at 35).

It has all of the characteristics of a “give the proponents what they want, or else” alternative.

Basis for Comparison Is Inappropriate

The basis used for analysis of all alternatives should be an objective, well documented baseline, not some abstract future projection.

All of the alternatives – including a legitimate “no action” alternative -- should be compared to current conditions instead of to some imagined future conditions. The project participants were essentially allowed to define an artificial baseline against which all other alternatives would be compared. The so-called No Action Alternative involves similar storage, conveyance, and treatment options to the Action Alternatives, adding duplication of effort since the four municipalities would not be coordinating their water efforts. Thus, the baseline DEIS No Action Alternative improperly presumes activity similar to the actions being proposed, just without the federal action. (*See e.g. Friends of Yosemite Valley v. Kempthorne* 520 F.3d 1024,

1037 -1039; 9th Cir. 2008; case remanded, in part, because the baseline alternative improperly assumed the existence of the very plan being proposed).

By allowing the project participants to present a worst-case scenario in their projections for No Action, the DEIS presents a skewed picture of the environmental consequences of the Action Alternatives. The Action Alternatives should have been compared to existing conditions today – an objective baseline for comparison. In the Council on Environmental Quality's (CEQ) Forty Questions, Question No. 3 discusses the No Action Alternative in an EIS:

“No action” . . . would mean the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity.

46 Fed. Reg. 18026, 18027 (March 16, 1981). The DEIS is inherently flawed because the Action Alternatives are compared to the environmental impacts of an artificial projection with inflated environmental harm.

DEIS Offers an Unreasonably Narrow Range of Alternatives

The DEIS presents an unreasonably narrow range of alternatives for consideration. “The existence of a viable but unexamined alternative renders an environmental impact statement inadequate.” (*Friends of Yosemite Valley v. Kempthorne* 520 F.3d 1024, 1037 -1039; 9th Cir. 2008; finding the range of alternatives unreasonably narrow and remanding where the alternatives were virtually indistinguishable).

Several viable alternatives were improperly eliminated from consideration in the DEIS, including indirect potable reuse, expanded water conservation, responsible management of new development, and alternatives and mitigation measures that would address water quality, flooding and stormwater control.

Cumulative Impacts Are Not Fully Analyzed

A meaningful analysis of cumulative impacts must identify: (1) the area in which effects of the proposed project will be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions – past, proposed, and reasonably foreseeable – that have had or are expected to have impact in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the individual impacts are allowed to accumulate. (See e.g., *Fittiofson v. Alexander*, 772 F.2d 1225, 1245; 5th Cir. 1985; holding this level of detail is necessary even at the EA stage).

Reclamation's perfunctory and conclusory references to an alleged lack of cumulative impacts from the actions to be covered by the DEIS do not even begin to meet these five elements. The organization of the DEIS unlawfully obscures the cumulative impacts analysis.

A glance through the Table of Contents reveals only two sections where “cumulative effects” are mentioned: (1) Page 121 where the term is defined; and (2) Page 527 where the

cumulative effects for the years 2046-2050 are discussed. Upon closer review, the cumulative impacts analysis is not a “cumulative” discussion; rather, Reclamation has partitioned the analysis under the environmental resource headings in Chapter 3 and never provides a comprehensive picture of the cumulative impacts across all resources.

At a minimum, a summary of the cumulative impacts across all resources should have been included in the DEIS to provide the public with a complete, rather than fragmented, picture of the environmental harm resulting from the project.

In discussing cumulative effects, the DEIS states (pp.340, 341) that the No Action Alternative would have “major adverse cumulative impacts” on wetlands and riparian vegetation, primarily due to increased groundwater pumping. It then (in a single paragraph) describes the Action Alternatives as all having “similar” cumulative effects as the No Action Alternative, even though use of Pueblo Reservoir water would largely replace groundwater pumping. This seems the ultimate in apples-and-oranges comparisons. This is best shown by Table 104 from the Socioeconomics section of the DEIS. Because cost of wastewater for Colorado Springs under Alternative 1 (No Action) is compared to existing conditions, but Alternatives 2-7 are compared to Alternative 1, a misleading representation is made. Colorado Springs will raise rates enormously under No Action, and also under any analyzed Alternative. Impacts of the Preferred Alternative are therefore “negligible” compared with No Action, but it will cause major adverse impacts compared with current conditions.

DEIS Needs More Discussion of 404 Permits and Related Issues

The DEIS notes that with respect to activities requiring a dredge and fill permit from the Corps of Engineers, the alternative analysis required for Clean Water Act Guidelines can be conducted either as a separate analysis during the 404 permitting process, or incorporated into the NEPA process. It goes on to state that Reclamation used an approach integrating NEPA and 404(b)(1) alternative analyses for the SDS Project because it ensured that alternatives selected for evaluation in the EIS meet the purpose and need for the proposed project, are reasonable, and comply with the 404 Guidelines. However, the Draft makes little mention of 404 activities, and appears to focus on mitigation, rather than avoidance (other than by separately analyzing a “Wetlands” alternative that would minimize impacts to wetlands). The Council on Environmental Quality (CEQ) has defined mitigation in its regulations at 40 CFR 1508.20 to include: avoiding impacts, minimizing impacts, rectifying impacts, reducing impacts over time, and compensating for impacts.

Avoidance as used in Section 404(b)(1) Guidelines does not include compensatory mitigation. It therefore is necessary for the DEIS to consider avoidance in all alternatives, and to propose compensatory mitigation only when avoidance is not feasible, rather than segregating maximum avoidance into its own, non-preferred alternative.

The mitigation measures are also obscured by discussing them under the individual environmental resource rather than comprehensively. A section discussing proposed mitigation (including wetlands impacts avoidance for each of the alternatives) would have enhanced public

review and understanding of methods for moderating the environmental impacts of the SDS project and better fulfilled the legal requirement for a 404(b)(1) analysis.

Social and Economic Component

Population Growth in the Front Range and Water Conservation

Colorado's Front Range, most notably the Colorado Springs area, has grown by leaps and bounds within the last 10-20 years with no indication of a lasting slow down. The population of Colorado Springs has increased from 281,140 in 1990 to 372,437 in 2006. Water, being a limiting factor for growth, is understandably necessary for new and existing residents. With that said, in this semi-arid area, the most effective and least harmful ways to assure sufficient water supplies for new and existing residents are water reuse and conservation and effective design and management of new development. Conservation of water and growth management should be high priorities for all growing Front Range communities and for Reclamation as it considers future uses of the resources under its jurisdiction.

This DEIS fails to consider the additional population growth and the potentially high impact development that the SDS will facilitate – indeed is designed to facilitate. In fact, Reclamation asserts that *none* of the alternatives would increase regional growth which is allegedly going to occur with or without the project. That assertion is patently false. The *raison d'être* for the project is regional growth.

The increased water demand associated with population growth and related development in arid parts of the country must be addressed in the DEIS and in the project's design, at least in part, through conservation measures. Amazingly, the DEIS discusses the topic of conservation in a short, two-paragraph section (DEIS at 87). The section merely indicates that the participating municipalities all use metering and have implemented education and rate structures to "encourage" efficient water use. The DEIS should have evaluated more thoroughly conservation programs such as expanded reuse, efficient water use, low-impact design requirements for new and modified development and mass education campaigns, and any future contract between Reclamation and the project participants should require the participants to implement such measures where feasible.

Colorado Springs Utilities (CSU) and the other project beneficiaries have the opportunity to reduce and delay the need for the water that the SDS would provide through greater emphasis on water conservation and efficiency measures. Prior to investing in such an expensive, energy intensive new water supply, the utilities should exhaust all other options by:

- Lowering significantly rates of system-wide per capita water use
- Focusing heavily on the commercial, institutional, and industrial sectors
- Increasing the participation in existing conservation programs in all sectors
- Adding new staff to their conservation departments

System-wide per capita water use in Colorado Springs is higher than many other cities on the Front Range.

City	Population (2006)*	GPCD (2006)**
Denver (city)	566,974	182 (2007: 171)
Colorado Springs	372,437	173
Aurora	303,582	155
Pueblo	103,730	135

*U.S. Census Bureau

** Colorado Springs Utilities Conservation Plan, Aurora Water Conservation Plan, Denver Water Conservation Plan, Pueblo Board of Water Works

Although CSU has notable conservation programs for its residential sector, implementation of conservation measures still has a long way to go. CSU also has significant room for improvement in the commercial, institutional, and industrial sectors. The utility offers rebates on some water-efficient devices, but even the most successful program, rebates for clothes washers, had only a 9% participation rate as of 2007. Improving implementation could significantly reduce the need for the SDS and its water.

CSU can and should improve other elements of its water program. Nine percent of CSU's water is "unaccounted for": lost through leaks, water main flushing and fire hydrant flows. Other cities, including Denver, Berthoud, Broomfield, and Aurora report unaccounted-for water of less than five percent. Reducing CSU's water losses to five percent would provide an additional 3,300 acre feet per year. (1 acre foot = 325,851.429 US gallons)

Conservation represents a "no regrets" strategy; one that does not tie the utilities to expensive infrastructure or rising electricity costs, and does not have detrimental impacts on river systems or rural communities. While conservation programs do come with a price tag, the cost is much lower than the costs of the Southern Delivery System.

Cost Factor in Elimination of Alternatives

The elimination of alternatives based solely on cost to the parties participating in the SDS project is particularly concerning. Many alternatives were eliminated, directly and indirectly, because of cost to the participating parties alone, while costs that would likely be imposed on others were ignored. "Reasonable alternatives include those that are *practical or feasible* from the technical and economic standpoint and using common sense, rather than simply *desirable* from the standpoint of the applicant," (*CEQ Forty Questions*, 46 Fed. Reg. at 18027; emphasis in original). No alternative should be thrown out based purely on cost. When living in a community that has limited water resources, higher stormwater and wastewater utility rates are expected. Rate increases are proven to make residents reflect about water conservation and appropriate usage.

In addition, failure to consider costs incurred by all affected parties (including, for example, the costs imposed on downstream residents who will be affected by pollution and flooding that will be almost inevitable consequences of the SDS project) results in systematic underestimates of the true cost of the project and forces others to subsidize unwillingly water systems and growth in the SDS beneficiary communities. Reclamation and the Frying Pan-

Arkansas Project must not become the vehicles for allowing these externalized costs to be imposed on unwilling bystanders. Those costs and appropriate prevention and mitigation measures must be considered in any legitimate DEIS.

Some of the Action Alternatives should have included an indirect potable reuse component. As the DEIS indicates, the public expressed an interest in water reuse. (SDS DEIS ¶ 2.3.5, pg. 85). Furthermore, the reuse alternatives passed all screening criteria other than cost to the project's participants.

Cost alone should not be a reason for excluding the reuse alternatives or any others from consideration. Incomplete cost estimates (i.e., those including only costs incurred by selected affected parties) must not be used to exclude any potentially viable alternative. Cost estimates that are not accompanied by a detailed explanation of the methods and data used to produce them, and independently verified by Reclamation, should not be considered at all.

Including reuse alternatives among the options considered would have provided a framework for comparing the environmental effects of reuse to the water storage and transport options. Indirect potable reuse is a practical and feasible alternative that should not have been eliminated solely on the basis of cost – a desirable outcome for the applicant perhaps, but one that does not render the alternative impractical.

Effect of Population on Flooding

Although more water is always desirable for a growing and prosperous community such as Colorado Springs, too much water can have negative impacts on areas, such as Fountain Creek, that are not suited for increased flows. The Pikes Peak Area and Pueblo Area Councils of Governments emphasize that many of the flooding and water quality issues in the Fountain Creek watershed are the result of population growth (Fountain Creek Watershed Plan, ES-2). Thus alternatives considering flooding and stormwater control should have been incorporated as feasible alternatives.

Additionally, as discussed above, the impacts of population growth should be more explicitly included and discussed throughout the DEIS. The impacts of growth on Fountain Creek water flows are insufficiently analyzed. Flows will undoubtedly increase due to existing and new wastewater treatment plants in El Paso County using Fountain Creek as a “natural pipeline” to the Arkansas River. Growth of residential, business, and industrial structures also shape water quantity in the Fountain Creek. Increased amounts of impervious surface will swell stormwater runoff. Since all of Colorado Springs, as well as other project beneficiaries, are in the Fountain Creek Watershed, stormwater run-off will end up in Fountain Creek. Thus alternatives considering flooding and stormwater control should have been incorporated as feasible alternatives.

Environmental Justice in Pueblo

Increased flows and pollution in Fountain Creek that will result from the SDS project will have significant impacts on downstream communities, notably Pueblo. Pueblo is an

environmental justice community. Its population is more than 40% Hispanic and per capita income levels are well below state and national averages.

Environmental justice issues are especially acute for residents of Pueblo's Eastside neighborhood due to flooding and water quality problems on Fountain Creek. The predominantly Latino families of this neighborhood typically survive with incomes even lower than the already low Pueblo averages.

Fountain Creek has historically been a primary recreational resource for Eastside families, but they use it now only at their peril. The banks of Fountain Creek as it passes through Pueblo are posted with signs warning of the dangers of pollution and surging water flows, exacerbated by rapid growth and poor water management upstream. Absent significant prevention efforts, the additional water delivered via the Southern Delivery System will make these problems worse. Even if SDS return flows are not directed down Fountain Creek, sewage spills and stormwater from the new development that the SDS is intended to facilitate will be.

The Environmental Protection Agency acknowledges that "minority populations and/or low-income populations bear a disproportionate amount of adverse health and environmental effects" which creates environmental injustice. Fountain Creek's abundant and occasionally surging flows and high pollution levels as the Creek runs through the Eastside neighborhood endangers residents and deprives them of a natural, low cost recreational resource.

These environmental justice issues must be analyzed and compared in any legitimate DEIS.

Water Quality Issues

Fountain Creek is an "effluent driven" stream. Most of the water in the Creek results from wastewater discharges – legal and illegal – and from urban/suburban runoff, all containing pollutants that can and do cause problems for downstream residents and other biota. Water quality in Fountain Creek is poor and has been a source of significant controversy for years, up to and including litigation.

All three regulatory segments of Fountain Creek have been declared water quality "impaired" by the State of Colorado for bacteria or selenium or both. Heavy sediment loads cause channel instability and can contribute to flooding. Toxic organics from sewage discharges and agriculture are largely below the regulatory radar screen at the moment, but that is likely to change in the foreseeable future.

The state's impairment designations will trigger efforts to develop new strategies to reduce pollutant loads, leading to the promulgation of enforceable Total Maximum Daily Loads (TMDLs). Those new restrictions usually focus on permitted discharges.

The DEIS should address these conditions and developments and discuss how they will affect and be affected by the additional water delivered through the SDS project.

In addition, the increased discharges and flows from the new development that the SDS is intended to serve will add considerably to the pollutant loads in Fountain Creek, whether or not the final project configuration relies on Fountain Creek to return added flows to the Arkansas River.

These added water quality and quantity burdens will compound and complicate all of the many efforts currently underway to improve water quality in Fountain Creek and to convert the Creek from what many refer to as an open sewer into a valuable amenity for all of the communities and people it touches.

The DEIS must address these issues and discuss prevention and mitigation measures, and explain how the costs of measures intended to prevent additional water quality deterioration will be included in the cost of the project.

Lack of Analysis about Selenium

Selenium pollution, in particular, has not been well addressed in the DEIS. Large portions of El Paso and Pueblo counties are underlain with high-selenium Pierre shale. When Pierre shale is contacted by water, selenium levels in the water increase, often significantly. Selenium can be highly toxic in sufficient concentrations. Due to bioaccumulation, selenium concentrations can escalate in the food chain to the point where livestock and nearby wildlife, as well as aquatic life, are exposed to extreme levels of selenium. Escalated flows in the Fountain Creek will lead to increased leaching of selenium from the surrounding shale, which in turn poses a threat to healthy wildlife and vegetation development along Fountain Creek and the lower Arkansas River.

In addition, Williams Creek especially could pose high selenium as well as salinity issues. Salinity influences the types of plants that grow in or near water systems and types organisms living in the body of water. High levels of salinity can repress growth of native flora and fauna. One concern of siting a reservoir to receive water from Pueblo Reservoir in Upper Williams Creek rather than at Jimmy Camp Creek is that the waters would contact strata consisting of marine sediments containing relatively high levels of salt and selenium, approximately 10% higher (DEIS p. 227). The DEIS notes a concern that seepage under the Upper Williams Creek dam could contact selenium-rich strata and that the impact would need to be quantified, but that downstream impacts are not believed to be significant due to dilution of the flow once it reaches Fountain Creek (DEIS pp. 242, 243) The alternative of a reservoir at Brush Hollow was rejected due in large part to salt and selenium concerns yet the Williams Creek alternative is still being considered without apparent concern for those same issues.

Water Quantity

Increased Flow Rates in Fountain Creek

As noted above, water quantity in Fountain Creek is a major concern. Excess water has shown to amplify erosion which increases water quality issues such as selenium and salinity and sediment. Stormwater is already a major contributor to bacteria pollution in Fountain Creek. Stream flow below the Las Vegas Sewage Treatment Plant would increase by 25% (44 cfs) year-round under the No Action Alternative due to increased municipal return flows and flow increases resulting from land use changes in the Fountain and Monument Creek basin. Stream flow would be greater than this under alternatives that do not route return flow down Highway 115 (not stated in text, but the graph shows increases are estimated at 48cfs), and 49% less for those alternative that include a Highway 115 pipeline. (DEIS pp 173, 174).

All Alternatives involving release of return flow into Fountain Creek would significantly increase flow during normal, non-flood periods and, absent significant mitigation measures (not considered), so would downstream flood risks. Note in particular Table 31 on page 163 projecting the extent of flows shows that the Preferred Alternative would have the highest increase in streamflow of Fountain Creek at Pueblo. The DEIS states that it considers only impacts to stream reaches where riparian vegetation is supported primarily by streamflow, and not those supported by groundwater movement or movement of water from irrigated fields unless the reach would be subject to groundwater pumping. This omission should be corrected

Williams Creek Reservoir Not a Good Alternative

The Wetland Alternative proposes to replace Jimmy Camp Creek reservoir with Williams Creek reservoir for water storage. Disadvantages of locating a reservoir at Williams Creek are that the reservoir would not have the same recreational potential, would not be useful for flood control, being located higher up on a smaller drainage area, and would potentially cause adverse downstream water quality impacts because of increased salt and selenium and more eutrophic water.

Streamflow downstream of the return flow release site of Williams Creek would increase by 45% (68 cfs) under the No Action Alternative due to increased groundwater usage and diversion of this water down Fountain Creek. Flows under alternatives not including a Highway 115 pipeline are described as “similar” to the No Action Alternative (11 cfs; DEIS pp 175, 176). Flows at the mouth of Williams Creek are compared to flows under the No Action Alternative, which projects a 12 cfs increase, rather than to existing conditions. Maximum flows for Williams Creek are projected at 300 cfs under all alternatives with return flow storage in Williams Creek. The DEIS notes that under the Wetland Alternative, there would not be a reservoir on Jimmy Camp Creek to attenuate floodwaters, resulting in flows of 3000 cfs, approximately 1000 cfs higher for a 100-year event compared to other Action Alternatives and the No Action Alternatives, all of which would increase flows by 2000 cfs (p. 262).

The DEIS states (p. 97) that an evaluation by CH₂MHill (2005g) suggests that the proposed 300-cfs exchange releases from Williams Creek Reservoir would be comparable to the

historical channel forming flows under which most of the Williams Creek channel has remained relatively stable over the past 50 years. Consequently, channel improvements are proposed only for potentially unstable areas. This analysis seems inadequate since it is unlikely that return flows would match historic high water in either frequency, timing, or duration. Reclamation should consider whether there will be different and possibly detrimental impacts to the lower wetland and riparian areas, and in particular whether there would be erosion potential due not only to flow rates, but also due to longer periods in which flow is high enough to transport material.

Jimmy Camp Creek Reservoir's Effect on Dawson Formation

A reservoir would be built at Jimmy Camp Creek to receive and store Arkansas River water under the No Action Alternative and under all Action Alternatives except the Wetland Alternative, which locates the storage reservoir in Upper Williams Creek. The DEIS recognizes that location of the reservoir at Jimmy Camp Creek would impact key Dawson Formation areas representing the Cretaceous-Tertiary Boundary (K-T Boundary). The DEIS states that because of location of a pumping station and other facilities, the No Action Alternative would have the highest impact of any alternative, but that all Action Alternatives except the Wetland Alternative would have essentially the same high adverse impact. The significance of the K-T Boundary is not simply that it may contain fossils representing the transition from the "Age of Dinosaurs" to the "Age of Mammals", but also that it contains chemical evidence of conditions during the transition period. High levels of iridium deposited at the exact boundary suggest that the impact of an asteroid or similar large object may have caused the extinction of the dinosaurs.

Because the mitigation plan (DEIS p. 528) focuses on identification and removal of valuable specimens during the construction process, it seems poorly adapted to protect a resource which is valuable because it contains an undisturbed and scientifically important rock interface area, not merely because it contains discrete, removable fossils. In addition, the map accompanying the paleontological discussion (DEIS p. 500) shows that the K-T Boundary has been only approximately defined in the western portion of the concerned area, and not defined in the area of the proposed treatment plant.

The DEIS assumes that Jimmy Camp Creek would benefit because of increased return flow from land development associated with the project, and would become perennial farther upstream. (We note with interest that Reclamation is apparently comfortable claiming benefits from development stimulated by the project, but prefers to ignore the many other impacts.)

Because this increased flow in Jimmy Camp Creek would be urban runoff, it would likely have high nitrogen and phosphorus content, which could result in eutrophication concerns. Since the stream would be treated as a channel carrying urban runoff, it is likely that development would focus on passing water downstream as quickly, to the detriment of downstream habitat.

In Table 5-7, the DEIS treats loss of one fish species as a "minor" effect to coldwater streams. The loss of one species should be considered a substantial impact. Species become endangered one piece of habitat at a time.

DEIS Should Analyze Impacts of Other Fountain Creek Watershed Plans and Studies

Significant information on flooding and erosion is available in the Fountain Creek Watershed Plan, developed by the Pikes Peak Area and Pueblo Area Councils of Government. The plan documents erosion, sedimentation, and flooding issues, and makes specific technical and policy recommendations for the Fountain Creek watershed. Reclamation, the Army Corps of Engineers, and the Pikes Peak Area and Pueblo Area Councils of Governments recognize that flooding is a serious issue. Therefore, the impacts on regional flooding should be considered and mitigation measures should include the recommendations of the Army Corps and the Councils of Government for mitigating erosion, sedimentation, and flooding in the watershed.

The DEIS indicates that incorporating flood control would “presuppose the results and recommendations of the on-going Fountain Creek Watershed Study” by the Army Corps of Engineers. (DEIS ¶ 2.3.6, pg. 86). However, the Corps’ watershed study is completed, and draft recommendations are already available. For example, Draft Recommendation #13 provides, “Entities should use the hydrologic and hydraulic models developed as part of the Fountain Creek Watershed Study as a basis for updating FEMA floodplains on the mainstems of Fountain and Monument Creek.” Such models would be a valuable addition to the DEIS. The recommendations of the Corps, a cooperating agency on the SDS DEIS, forthcoming in the wake of the Fountain Creek Watershed Study should be taken into account on the Southern Delivery System Project.

Similarly, Colorado Springs and other SDS participant communities are engaged in discussions with others (including the Sierra Club) interested in the future of the Fountain Creek Watershed on the Fountain Creek Vision Task Force. That Task Force is expected to release its report this summer. A first draft is currently under review. The DEIS should recognize the significance of the Fountain Creek Vision Task Force effort and discuss how the SDS project may affect and be affected by the findings and recommendations of that Task Force.

In addition, Colorado Springs Utilities has partnered with Lower Arkansas Valley Water Conservancy District to produce a “master plan” for the Fountain Creek corridor. The DEIS should also discuss impacts of the subject project on this partnership effort.

Aquatic Species and Wetlands Issues

All Actions Would Effect Wetlands

Water quality and quantity directly influence the healthy growth of wildlife and vegetation in the Fountain Creek and Arkansas River Watersheds. Each alternative varies in the amount of wetlands affected. The Preferred Action Alternative would impact only slightly less acreage of riparian and wetlands (32.2 acres, 5.9 acres of Category I wetlands). The remaining acreages are

3. Wetland Alternative	8.1 acres	0 acres Category I
4. Arkansas River Alternative	12.4 acres	0 acres Category I

5. Fountain Creek Alternative	22.6 acres	0 acres Category I
6. Downstream intake	30.9 acres	5.5 acres Category I
7. Highway 115 Alternative	30.6 acres	5.5 acres Category I

Mitigation, which is not fully addressed in the DEIS, would often involve substituting poor quality artificial riparian acreage for natural riparian communities to control flooding and water quality problems. The DEIS (p. 324) notes that the No Action Alternative would impact the greatest acreage of wetland (35.4 acres, including 6.1 acres of Category I wetlands). This is based on the assumption which underlies the entire No Action Alternative that Colorado Springs will proceed to develop its Arkansas River water rights by less desirable means or similar reasons, the DEIS likewise notes that the No Action Alternative would have the greatest impact on wetland and riparian vegetation due to increased pumping of water from the alluvial aquifer (DEIS p. 325). Note that the result of this comparison is shown on the table on pp. 335, 336 where the impacts to riparian vegetation of the Preferred Alternative on all reaches examined are describe as either "Same as No Action Alternative" or "No effect".

Disruption of Eutrophication Affects Aquatic Life

Eutrophication is likely to be a problem in return flow reservoirs, which would affect aquatic life. The Pueblo Reservoir may also have eutrophication issues due to water withdrawals. The DEIS expresses some concern about eutrophication, both in Pueblo Reservoir and the return flow reservoir. In Pueblo Reservoir, algae concentrations would be significantly higher under alternatives (Wetland and Arkansas River) with a return flow to the Arkansas above Pueblo Reservoir. Dissolved oxygen concentrations in the hypolimnion would be similar under all alternatives. Under the different alternatives using a return flow reservoir at Williams Creek, capacity of the reservoir would be different. Under both the No Action, Proposed Action, and Fountain Creek Alternatives, reservoir capacity would be high, between 20,000 and 28,500 acre feet, while under the Highway 115 Alternative, they would be lower, between under 5000 and 10,000 acre feet, and under the Downstream Intake Alternative, under 5,000 acre feet. Particularly in the Proposed Act and Fountain Creek Alternatives, reservoir capacity would alter substantially over the course of the year, varying from less than 5,000 to more than 28,500 acre-feet (p. 241). The DEIS notes that except under the Fountain Creek Alternative, this reservoir would be eutrophic during the summer due to high algae levels. It also notes that this effect would be highest under the No Action Alternative, and that under the Proposed Act, this effect would be less than under the No Action, Downstream Intake, and Highway 115 Alternatives (DEIS pp. 242, 243).

Invasive Species Proliferation

The recent discovery of zebra mussels in the Pueblo Reservoir raises the possibility that new withdrawals from the reservoir could result in proliferation of these pests to other water bodies affected by SDS water. The DEIS should address this possibility, describe any differences in potential for proliferation among the alternatives, and where appropriate suggest prevention measures.

Additional recommendations for rewriting the DEIS:

- Use appendices to contain back-up data, detailed explanations, etc.
- Add glossary for all words; do not add definitions per chapter. Include all abbreviations.
- Add an appendix for all correspondence; do not have correspondence in each chapter.
- Add correspondence from each cooperating agency. Each agency should provide comments, conclusion, etc. from its own specific area of expertise.
- Add list of contractors and sub-contractors for the DEIS document.
- Add clear maps; include use of topographical maps, emphasizing river systems, describe pipeline corridors accurately. Consider using conceptual maps for clarity

Comments based on 40 CFR Ch V (7-1-89 Edition) 1500:

- Sec. 1501.6. Cooperating agencies. Add correspondence from each cooperating agency. Each agency should provide comments, conclusion, etc. from its own specific area of expertise.
- Sec. 1501.7. Scoping. Were Native American tribes that may be affected included in the scoping process? Were the results re the tribes documented?
- Sec. 1502.7. Page limits. Text of FEIS should be 150-300 pages. Suggest editing document or re-writing.
- Sec. 1502.8. Writing. Writing is too technical for general public; again, suggest editing or re-writing. The DEIS is not cohesive; parts need to be melded, reorganized.

Recommended format for easier reading and analysis:

1. Cover sheet. All cover sheet information should be on one sheet.
2. Summary. Per guidance, no longer than 15 pages. Include:
 - a. DEIS summary
 - b. Major conclusions
 - c. Areas of controversy
 - d. Issues remaining to be resolved
3. Table of Contents. Pages should be p.3-15 instead of Chap. 3, p.15.
4. Purpose and Need. P. 1,2
 - a. Explain "perfect and deliver existing Arkansas River Basin water rights", p. 2, DEIS.
 - b. Is the redundancy to be per participant, i.e. redundancy of each participant for its own area of responsibility, or does this refer to the entire project, overall, with each participant being able to rely on another?
5. Alternatives.
 - a. Page 1.3.2. Use 33 CFR 325 (regulatory) instead of 40 CFR 1500 (NEPA)
 - b. Alternatives. Include the "No Action" alternative and the impacts of its use. Suggest use of a matrix format for display of all alternatives. Also add
 - i. Alternatives eliminated, and why eliminated.

- ii. Preferred alternative, and why preferred.
 - iii. Mitigation requirements per alternative.
- 6. Effected environment. Describe in general terms the entire project area. Describe the area of each alternative in more detail. Include discussion of existing water quality issues, especially in Fountain Creek. Address the selenium, bacteria and sediment issues. Include discussion of zebra mussel risks and effect.
- 7. Environmental consequences (see also 1502.16)
 - a. Direct consequences. Include costs, including O & M, remediation and other related costs of each alternative, for entire project life for all affected parties.
 - b. Indirect effects and their significance such as:
 - i. Enabling of new development
 - ii. Impacts of construction, roads, etc.
 - iii. Include impacts on wildlife especially those on Endangered Species List, if any.
 - c. Possible conflicts regarding land use plans, policies, and controls.
 - d. Compare environmental effect of alternatives with current conditions as the baseline
 - e. Energy requirements for construction and operation per alternative
Describe the areas affected by each alternative in more detail

Conclusion

The Sierra Club is concerned that the DEIS presents a skewed and misleading view of the environmental impacts from the SDS project, based on an inappropriate No Action Alternative to which other possible actions are compared, on the limited and segmented discussion of cumulative impacts, and on the failure to consider the additional impacts from population growth and expanded development that will be facilitated by the SDS project. Additionally, viable alternatives including indirect potable reuse and conservation methods were not adequately addressed in the DEIS and many other issues were obscured by the organization of the draft.

The problems and omissions that characterize this document are so many and so pervasive that they cannot be cured by simple additions and amendments, leading directly to the publication of a fully adequate Final EIS. So much is distorted and/or missing that all reviewers, including the Sierra Club, have been denied a meaningful opportunity to understand and comment upon the project, its legitimate alternatives and its impacts.

We strongly recommend that a fully adequate, revised draft be issued with ample opportunity for public participation, before Reclamation attempts to proceed to a Final EIS, a project decision and any potential contract for use of Frying Pan-Arkansas Project resources.

Thank you for your consideration of the Sierra Club's concerns. If you have any questions, or wish to provide us with any clarification or further documentation of the matters raised in these comments, please do not hesitate to contact us.

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VIA FIRST CLASS MAIL AND E-MAIL

November 24, 2008

Kara Lamb
U.S. Bureau of Reclamation
Eastern Colorado Area Office
11056 W. County Road 18E
Loveland, CO 80537-9711
klamb@gp.usbr.gov

**Re: Supplemental Information Report
Proposed Southern Delivery System**

Dear Ms. Lamb:

On behalf of the Rocky Mountain Environmental and Labor Coalition ("RMELC"),¹ and the Sierra Club,² (collectively the "Organizations"), undersigned counsel submit these comments in response to the United States Bureau of Reclamation's ("BOR's") October 3, 2008, Supplemental Information Report ("SIR") to the Draft Environmental Impact Statement ("DEIS") for the proposed Southern Delivery System ("SDS") pipeline project. The SIR provides supplemental information on the effects of the contracts requested by Colorado Springs Utilities ("CSU"), Fountain, Security and Pueblo West ("Participants") with the BOR for the SDS project. It is our understanding that because significant modifications were made to the alternatives presented in the original DEIS, the BOR decided it was required under the National

¹ RMELC is a not for profit organization that seeks to ensure a balance between rapid population growth, labor interests and the preservation of the natural environment in the Rocky Mountain region. RMELC provides a voice for workers and unions to engage their neighbors and public officials on pressing environmental issues such as the proposed SDS project. RMELC seeks to unite labor leaders, union members, environmental activists and other concerned local citizens in the Rocky Mountain region to fight for good jobs and a clean environment in furtherance of the laudable goals of the Blue/Green Alliance. Members of RMELC live, work and recreate in El Paso and Pueblo counties and will be directly affected by decisions of the BOR with regard to the SDS project.

² Sierra Club is a national not for profit organization comprised of more than 700,000 members. Sierra Club's purpose is to explore, enjoy and protect the wild places of the earth, practice and promote the responsible use of the earth's ecosystems and resources, educate and enlist humanity to protect and restore the quality of the natural and human environment, and use all lawful means to carry out these objectives. Sierra Club has a Colorado statewide chapter of more than 25,000 members and 13 local groups in the state including groups that serve El Paso and Pueblo counties. The Sierra Club has members who use the Arkansas River and Fountain Creek, as well as the lakes and reservoirs associated with these water bodies, for recreation, aesthetic, scientific and business purposes and thus stand to be directly affected by the decisions of the BOR with regard to the SDS project.

Environmental Policy Act ("NEPA") to analyze the impacts relating to the changes made through the issuance of the SIR and make the SIR available for public comment. RMELC previously submitted comments on the DEIS on June 13, 2008, in conjunction with a coalition of environmental groups including the Sierra Club. The Organizations' SIR comments are meant to supplement, but not replace, the Organizations' earlier comments which are being incorporated by reference herein. These supplemental comments are necessitated by the extensive modifications made to the proposed SDS project since the issuance of the DEIS as the additional impacts were not reasonably foreseeable from the DEIS analysis.

I. Summary Of SIR Modifications

According to the SIR, due to changes made to the Participants' SDS project proposal since the release of the DEIS, the following modifications were made to the No Action Alternative (Alternative 1) and all six original alternatives (referred to as Alternatives 2-7 in the DEIS) as contained in the DEIS:

- Modifications to the physical layout of the alternatives to avoid or minimize effects described in the DEIS
- Modifications to the physical layout of the alternatives to accommodate changes in infrastructure unrelated to the SDS project
- Updated or additional effects analyses based on public comments and changes to the alternatives
- Identification of the Bureau of Reclamation's Preferred Alternative

II. Participants Are Proposing Modifications That Are Not Documented In The SIR

However, since the issuance of SIR, the Participants have proposed other significant modifications to the SDS project that were not reasonably foreseeable from the DEIS or the SIR and have not been analyzed in either the DEIS or the SIR. Specifically, based on our review of the Participants' 1041 Permit Application for the SDS project pending before the Pueblo County Commissioners ("SDS Pueblo County 1041 Application"), as of October 10, 2008,³ the Participants seek to move the tie-in point in the Pueblo Reservoir for the SDS pipeline from the joint use manifold south of the Arkansas River to an outlet on the north side of the Pueblo Dam. The Participants' SDS Quarterly Progress Update for October 2008, for the first time indicates that the Participants are working on preliminary designs for the Pueblo Dam River Outlet Works

³ Letter to Kim B. Headley (Director of Pueblo County Planning and Development) from John A. Fredell (Southern Delivery System Project Director) (October 10, 2008)
http://www.co.pueblo.co.us/planning/Southern%20Delivery%20System%20-%201041%20Permit%20Application/2008%2010%2010_1041_Supplement.pdf

to be completed in the months of October, November and December of 2008 – after the issuance of the SIR and after the anticipated issuance of the Final EIS (“FEIS”) in mid-December. These changes apparently would impact many property owners and other stakeholders that were not previously affected by the SDS project. The public must not be left trying to guess what in fact are the key elements of a proposed major federal action; the Pueblo Dam River Outlet Works was not reasonably foreseeable from the DEIS or the SIR, yet appear to have been added as a major design change to the SDS project.

NEPA requires federal agencies to prepare a detailed statement on the environmental impacts of a proposed “major federal action” and all the reasonable alternatives thereto before authorizing any such action. 42 U.S.C. § 4332(2)(C). In addition, 40 C.F.R. § 1502.9(c) requires governmental agencies to prepare a supplement to a DEIS if the agency makes substantial changes in the proposed action that are relevant to environmental concerns or there are significant new circumstances or information to environmental concerns bearing on the proposed action or its impacts.

Apparently, per the SDS Pueblo County 1041 Application and the Participants’ SDS Quarterly Progress Update for October 2008, use of the Pueblo Dam River Outlet Works is contemplated due to concerns that the Joint Use Manifold Tie-In connection will be limited in the future when the purported increased demands are placed on the Joint Use Manifold pipeline by other users. However, there appears to be no mention of this approach in either the DEIS or the SIR. The DEIS and the SIR are deficient due to the absence of such analysis. Accordingly, prior to the issuance of the FEIS, the BOR must perform, and make available for public review and comment, an analysis that evaluates whether increased demands require a connection to the Pueblo Dam River Outlet Works to augment flows and achieve the total required flows from the Pueblo Reservoir as discussed in the Participants’ SDS Pueblo County 1041 Application. In addition, the BOR needs to consider whether the Pueblo Dam River Outlet Works is technologically feasible and identify the impacts of the Pueblo Dam River Outlet Works on the environment and community under NEPA.

Issuance of the FEIS without adequate consideration of the feasibility and impacts of the Pueblo Dam River Outlet Works and additional public participation and comment on the modifications would be premature and inconsistent with the NEPA mandate that a “hard look” be taken at project alternatives and the potential environmental impacts.

III. The SIR’s Purpose And Need Statement Is Inadequate

Despite objections raised by cooperating Federal Agencies and the public in response to the DEIS, the BOR has not required the Participants to change the Participants’ purpose and need statement for the proposed SDS project under the SIR. The Participants continue to articulate

their needs as set forth in the SIR at page 3:

- The need to use developed and undeveloped water supplies to meet most or all projected future demands through 2046
- The need to develop additional water storage, delivery, and treatment capacity to provide system redundancy
- The need to perfect and deliver their existing Arkansas River Basin water rights

The BOR noted that public comments on the DEIS questioned the propriety of the Participants' need to perfect and deliver their existing Arkansas Basin water rights. The Organizations and the Army Corps of Engineers (the "Corps") specifically raised this issue in their respective comments submitted on the DEIS. In the SIR analysis, the BOR summarily dismisses this criticism and states that the BOR has determined that this need – to perfect and deliver existing Arkansas River Basin water rights – is reasonable.

The BOR's circular explanation as to its approval of the Purpose and Need Statement despite public comments to the contrary is inadequate as contained at page 4 of the SIR:

The role of the water rights need in the alternatives development and evaluation process was reviewed for this Supplemental Information Report. This need was not an important factor in selecting alternatives for detailed evaluation. All alternatives eliminated from consideration based on water rights use were or would have been eliminated based on other criteria. No alternative has been eliminated based solely on the need of the Participants to perfect and deliver their existing Arkansas River Basin water rights, and the seven alternatives analyzed in detail in the DEIS provide a full range of reasonable and practicable alternatives.

Thus, the BOR has approved an overly narrow Purpose and Need Statement for the SDS project in the SIR. Based on this decision, the BOR continues to exclude from consideration other means to meet water demands in an economic and sustainable manner: water conservation, water reuse, land use planning strategies, and other mechanisms for delivering water that do not involve perfecting the Participants' existing Arkansas River Basin water rights.

The narrowly scoped alternatives analysis, which expressly excludes consideration of alternatives that do not use the Participants' existing Arkansas River Basin water rights, inappropriately fails to identify and assess reasonable alternatives to the proposed action that will avoid or minimize adverse effects on the human environment including but not limited to water conservation methods and land use planning strategies in violation of section 102 of NEPA and 40

C.F.R. §§ 1500.2, 1502.1 and 1502.14.

As such, the SIR fails to include any analysis of alternatives such as water reuse, water conservation, land use planning strategies and other mechanisms for delivering water that might be achieved in an economic and sustainable manner.⁴ In that regard, the SIR is as flawed as was the DEIS. Therefore, the Organizations' objections to the narrow Purpose and Need Statement in the DEIS are still pertinent and remain unaddressed. Prior to the issuance of the FEIS, the BOR must fully analyze alternatives and take a hard look as to whether the water needs of the Participants may be met via water conservation programs, water reuse, land use planning strategies, and means for delivering water that do not involve perfecting the Participants' existing Arkansas River Basin water rights to satisfy NEPA's action forcing requirements.

IV. The SIR's Range Of Alternatives Analysis Is Flawed

Due to the BOR's approval of the narrow Purpose and Need Statement in the SIR, the BOR continues to use the same flawed analysis as in the DEIS that compares the various alternatives to each other, and not to existing conditions. So, while there is additional information and analysis relating to the modifications made to the seven alternatives, the framework of the analysis remains the same: Alternatives 2-7 are compared to Alternative 1, not to existing conditions or future conditions where water demands are moderated via conservation programs, water reuse, and land use planning strategies. Thus, the impacts continue to be described as having the same impact as the No Action Alternative without reference to the existing conditions or moderated future conditions. Comments previously raised by RMELC and the environmental groups including the Sierra Club criticizing the Participant's Malthusian analysis, therefore, remain pertinent and are incorporated by reference herein.

⁴ The U.S. EPA has stated as follows in its public comments to the BOR on the DEIS:

Communities across the country are using creative strategies to develop in ways that preserve natural lands and critical environmental areas, protect water and air quality, and reuse already-developed land, EPA supports these "Small Growth" approaches in development planning that incorporate government and community partnering, environmental stewardship and transportation network enhancements in safety and functionality. We recommend that Reclamation encourage the project proponent to consider these approaches. ...For innovative solutions which address low-impact development, please visit EPA's Smart Growth Website at <http://www.epa.gov/smartgrowth/index.htm>.

Letter from Larry Svoboda (Director, NEPA Programs, U.S. EPA Region 8) to Michael Collins (Area Manager, Bureau of Reclamation, Eastern Colorado Area Office) (September 16, 2008); See also U.S. EPA, "Growing Toward More Efficient Water Use: Linking Development, Infrastructure, and Drinking Water Policies" http://www.epa.gov/smartgrowth/pdf/growing_water_use_efficiency.pdf.

V. The SIR's Identification Of Preferred Alternative Is Flawed

As part of the SIR, the BOR for the first time has identified the modified Participants' Proposed Preferred Action – Alternative 2 (See Table 1, Major Components and Options for Each Alternative) -- as the Agency Preferred Alternative which, not surprisingly, has the lowest estimated capital cost and lowest estimated operation and maintenance cost of all alternatives. The SIR is deficient because no specific rationale or explanation is articulated to support preference of Alternative 2 over the other alternatives after making that identification on page 11 of the SIR.

VI. The SIR's Modification Of Alternatives Is Presented With Inadequate Analysis

The Participants have modified the proposed SDS project with regard to the terminal storage and associated facilities and the return flow conveyance purportedly to lessen the adverse impacts of the project under the various alternatives. With regard to the environmental consequences of the modifications, the SIR merely updates the information that has changed from the original analysis in Chapter 3 of the DEIS without providing meaningful analysis. Modifications are as follows:

- Replacing the proposed Jimmy Camp Creek Reservoir with the proposed Upper Williams Creek Reservoir
- Adding an untreated water pump station at the Upper Williams Creek Reservoir site
- Realigning Bradley Road to the south of Upper Williams Creek Reservoir rather than to the north and designed it to comply with Defense Access Road requirements
- Realigning an existing electrical transmission line east of the Upper Williams Creek Reservoir site
- Moving the Upper Williams Creek Water Treatment Plant northwest to near the intersection of U.S. 24 and Colorado 94 away from the Upper Williams Creek Reservoir site
- Adjusting untreated and treated water pipelines to connect to the Upper Williams Creek Water Treatment Plant
- Eliminating the Upper Williams Creek Booster Pump Station, Drennan Pump Station, and the Reduced Northfield Booster Pump Station
- Replacing the Williams Creek Return Flow Conveyance with a pipeline to fountain Creek in a pipeline
- Eliminating the pipeline and pump station that connected the Clear Spring Regional Water Reclamation Facility to Williams Creek
- Increasing the capacity of the Chilcotte Ditch Return Flow Conveyance

According to the BOR, the project was modified in response to comments raised by stakeholders or through additional agency evaluation of the SDS project for the following primary reasons:

- Replacing Jimmy Camp Creek Reservoir with Upper Williams Creek Reservoir to avoid effects on wetlands, minimize potential effects on cultural resources, avoid effects on important paleontological resources and minimize potential increased Bird Aircraft Strike Hazard
- Changing the Bradley Road Realignment at Upper Williams Creek Reservoir site to avoid potential effects on a golden eagle nest
- Relocating the Water Treatment Plant to eliminate the potential need for rechlorination facilities between the Upper William Creek Reservoir site and customers
- Changing the Williams Creek Return Flow Conveyance to avoid effects on wetlands in Williams Creek downstream of the proposed reservoir, avoid effects on aquatic resources in Williams Creek downstream of the proposed reservoir and avoid potential effects on the geomorphology of Williams Creek downstream of the proposed reservoir

The analysis presented in the SIR, however, is deficient in many key respects: (1) the SIR fails to provide requested information about how project alternatives would avoid and mitigate impacts to wetlands and streams; (2) the SIR fails to assess cumulative impacts of other regional water supply and storage projects; (3) the SIR fails to assess water quality impacts of proposed reservoirs including using improper models for predicting water quality impacts of proposed reservoirs and the releases of mercury from newly flooded reservoirs; (4) the SIR fails to assess the significance of expected increases in selenium levels in river segments; and (5) the SIR includes changes to the proposed action that necessitate re-evaluation of reuse alternatives.

A. The SIR Fails To Provide Requested Information As To How Project Alternatives Would Avoid And Mitigate Impacts To Wetlands And Streams

As a result of SDS, a significant portion of native wetlands remaining in the Fountain Creek watershed would be filled or otherwise impacted by the proposed action and other project alternatives that are under consideration by the BOR. In its public comments on the DEIS, the U.S. EPA states:

Although the DEIS states that the Clean Water Act (CWA) 404(b)(1) guidelines, 40 CFR Part 230, (Guidelines) were considered throughout the alternatives analysis, EPA believes that additional information on water quality and wetlands impacts is necessary to fully assess the impacts of the Proposed Action and to identify the least environmentally damaging practicable alternative (LEDPA). This

information generally is developed as part of the analysis required by the Guidelines. To demonstrate that the Proposed Action is the LEDPA, the applicant must show that, to the extent practicable, steps have been taken to avoid and minimize impacts to aquatic resources, as well as compensate for any remaining unavoidable impacts. Compensatory mitigation proposed by the applicant must be in accordance with the revised regulations set forth in the Final Rule entitled Compensatory Mitigation for Losses of Aquatic Resources (73 FR 19594, April 10, 2008). Given that the decision whether to issue a CWA Section 404 permit will be determinative of whether the Proposed Action can be implemented, *EPA recommends that a complete Guidelines analysis be included in the supplemental information Reclamation is currently preparing.* (Emphasis supplied.).⁵

Similarly, the Corps noted in its DEIS comments, that the DEIS does not substantiate that the preferred action alternative, Alternative 2, represents LEDPA.⁶ According to the Corps, the DEIS is deficient due to the lack of detailed section 404(b)(1) analysis and the LEDPA had not been identified. Instead, the Corps expressly identified Alternative 3, the Wetlands Alternative, as the LEDPA. The Corps concluded the BOR was required to identify all impacts and activities integrally related to the project along with a detailed section 404(b)(1) analysis.

Despite the concerns articulated by the U.S. EPA and the Corps, the SIR does not include a complete section 404(b)(1) guidelines analysis as requested by these cooperating agencies. Instead, less than two pages of text in the SIR provides updated information about the quantity of different types of wetlands that would be impacted by the newly modified project alternatives, including the preferred action alternative.

A complete section 404(b)(1) guidelines analysis is necessary to avoid and minimize impacts to aquatic resources, as well as compensate for any remaining unavoidable impacts of the project alternatives under consideration because the guidelines require a watershed approach that takes into account the context of the entire landscape. In the preamble to proposed rule that the U.S. EPA finalized on April 10, 2008, the agency stated:

Site selection is a critical planning step for compensatory mitigation projects, and the watershed approach in the proposed rule is intended to focus on choosing appropriate locations for compensatory mitigation activities. Restoring or establishing a specific aquatic habitat type, such as a wetland, requires careful site selection for two primary reasons. First, development activities may alter the

⁵ Letter from Larry Svoboda (Director, NEPA Programs, U.S. EPA Region 8) to Michael Collins (Area Manager, Bureau of Reclamation, Eastern Colorado Area Office) (September 16, 2008).

⁶ Letter from Donald Borda (Chief, Regulatory Division, U.S. Army Corps of Engineers) to Kara Lamb (Bureau of Reclamation, Eastern Colorado Area Office) (June 13, 2008).

interaction between hydrology, soils, and organisms within a landscape, affecting the type of habitat that can be supported by the project site. For example, forested wetlands require narrow hydrologic regimes because many tree species cannot tolerate long periods of inundation. Development activities may change local hydrology, resulting in new patterns of inundation and saturation that cannot support forested wetlands. Therefore, it is important to find a compensatory mitigation project site that will support the appropriate hydrology for the desired type of wetland habitat. Second, even if the desired habitat type can be restored or established at that site, surrounding development may result in an isolated or fragmented habitat that is less capable of supporting viable populations of species of import. Motile species require corridors to move between different habitats in the landscape, and if the surrounding area is occupied by roads and buildings, the ability of many species to move between habitats and interact with each other is restricted. *Therefore, compensatory mitigation projects, especially those that are intended to replace wetland habitat, need to be planned within larger landscape contexts, such as watersheds.* (Emphasis supplied.).⁷

The larger landscape context that the BOR must consider to fully assess the impacts of the Proposed Action and to identify the LEDPA includes the following: since 1977, the population in El Paso County, Colorado, has increased by more than 75 percent;⁸ this increase in population and development has led to profound changes in the quantity and quality of wetlands within the Fountain Creek watershed.⁹ As stated by the Corps, all impacts and activities integrally related to the overall project must be identified along with a detailed section 404(b)(1) analysis. The DEIS as supplemented and modified by the SIR does not address the concerns of the U.S. EPA and the Corps by failing to conduct the detailed section 404(b)(1) analysis including identification of the LEDPA. The Organizations request that a detailed section 404(b)(1) analysis be completed and made available to the public for review and comment along with the identification of the LEDPA prior to the issuance of the FEIS.

B. The SIR Fails To Assess Cumulative Impacts Of Other Regional Water Supply And Storage Projects

The BOR has failed to assess the cumulative impacts of the preferred action alternative and other project alternatives under consideration in conjunction with other water projects in the Fountain Creek watershed as required by NEPA per 40 C.F.R. §§ 1502.16 and 1508.7. The

⁷ U.S. Army Corps of Engineers, U.S. EPA "Proposed Rule: Compensatory Mitigation for Losses of Aquatic Resources," 71 FR 15520 at 15522 (March 28, 2006).

⁸ U.S. Geological Survey, "Trends in Precipitation and Streamflow in the Fountain Creek Watershed, Southeastern Colorado, 1977-99" (October 2000).

⁹ U.S. Army Corps of Engineers, "Fountain Creek Watershed Study: Section 3: Wetlands" (October 2005).

DEIS at 130 states:

A number of actions that have been proposed were not considered reasonably foreseeable because they did not meet one or more of the criteria necessary to be deemed reasonably foreseeable. Many of these activities lacked funding, government action, or NEPA compliance by 2008 (the time at which NEPA compliance should be largely complete for the proposed SDS Project). One notable project is the Preferred Storage Options Plan (PSOP), sponsored by the Southeastern Colorado Water Conservancy District and Reclamation. The PSOP calls for reoperation of space in Pueblo Reservoir and other Fry-Ark facilities and enlargement of Pueblo Reservoir. For the project to move forward, however, changes to federal legislation, NEPA compliance, and funding are required.

Another notable project is the Arkansas Valley Conduit (AVC), which is a proposal sponsored by the Lower Arkansas Valley Water Conservancy District and Reclamation. The AVC would include a pipeline with up to 16 mgd of capacity and probably including water treatment facilities to deliver Fry-Ark water and other water supplies to municipalities and other water agencies east of Pueblo. It would deliver high quality water to an area where existing quality is poor and was approved initially as part of the Fry-Ark Project in 1962. However, this project remains speculative for due to funding constraints (Black & Veatch and Applegate Group 2006), the need for an independent NEPA analysis (probably an EIS), the possible need to water rights changes or acquisitions (GEI 2003a; Black & Veatch and Applegate Group 2006), and, despite current local support for the proposed project, the number of participants is undetermined and thus the size, location, and timing of project facilities are uncertain.

Conversely, in its public comment on the DEIS, the U.S. EPA states:

The DEIS does not consider two planned water projects that will be located in the same watershed as the SDS project in the cumulative impacts analysis for SDS. EPA understands that Reclamation did not evaluate the Preferred Storage Options Plan (PSOP) or the Arkansas Valley Conduit (AVC) projects in the cumulative impacts analysis because the projects have not been funded. Lack of funding, in and of itself is not a sufficient basis to disregard these projects. Area policy-makers and community leaders consider PSOP, AVC and SDS to be part of regional cooperative efforts to address flood control and water quality problems on Fountain Creek. In addition, PSOP and AVC may impact water quality in the Arkansas River Basin which, as noted in the DEIS, is currently impaired in the project area for selenium and total recoverable iron, proposed to be listed as impaired for sulfate, and listed as of concern for salinity. *By not considering the*

impacts of PSOP and the AVC on water quality in the Arkansas River, along with impacts from SDS, the total cumulative impacts to that resource, including impacts to the ecosystem and downstream users, cannot be fully assessed. (Emphasis supplied.).¹⁰

The SIR does not include an assessment of the cumulative impacts of the preferred action alternative and its alternatives taking into consideration other planned water projects in the region. This deficiency is increasingly problematic as Congress moves towards authorization of funding water projects that the BOR has not considered. On May 21, 2008, the Senate Environment and Public Works Committee passed a resolution authorizing the Army Corps of Engineers to proceed with a feasibility study of water projects in the Fountain Creek watershed, including the Preferred Storage Options Plan (PSOP) and the Arkansas Valley Conduit (AVC).¹¹ On September 11, 2008, a U.S. Senate committee moved a bill authorizing the Arkansas Valley Conduit to the Senate floor. Then on September 16, 2008, the Senate placed the bill on the Senate's Calendar of Business for consideration by the Senate as a whole.¹² On November 5, 2008, in anticipation of Senate Action, the U.S. Congressional Budget Office prepared a cost estimate for the bill as reported by the Senate Committee on Energy and Natural Resources on September 16, 2008.¹³ Based on this recent record of Congressional activity, the PSOP and AVC appear to be progressing and, therefore, must be taken into consideration by the BOR as to the cumulative impacts analysis.

C. The SIR Fails To Assess Water Quality Impacts Of Proposed Reservoirs

A major environmental consideration of the preferred action alternative and the other alternatives under consideration is the creation of new artificial reservoirs within the Fountain Creek Watershed. All of the project alternatives involve the creation of one or more new reservoirs: all alternatives involve the creation of new terminal storage reservoir; many of the alternatives, including the preferred action alternative, also involve the creation of new return flow conveyance reservoirs. These reservoirs have the potential to greatly impact water quality and aquatic resources in the watershed. In two important aspects, the BOR's assessment of these potential impacts is fundamentally flawed.

1. The SIR uses improper models for predicting water quality impacts of the proposed reservoirs

In its public comment on the DEIS, the U.S. EPA states:

¹⁰ Letter from Larry Svoboda (Director, NEPA Programs, U.S. EPA Region 8) to Michael Collins (Area Manager, Bureau of Reclamation, Eastern Colorado Area Office) (September 16, 2008).

¹¹ Press Release of U.S. Senator Ken Salazar. <http://salazar.senate.gov/news/releases/080521fncreek.htm>

¹² S. 2974: Arkansas Valley Conduit Act of 2008. <http://www.govtrack.us/congress/bill.xpd?bill=s110-2974>.

¹³ <http://www.cbo.gov/ftpdocs/99xx/doc9914/s2974.pdf>

The DEIS does not analyze the cumulative impacts from growth, particularly around the proposed reservoirs and the Banning-Lewis Ranch development. The DEIS states that full build-out could include 75,000 homes, and construction may include 2,500 homes per year. In addition to this identified development, any alternative which includes construction of a reservoir in close proximity to Colorado Springs will have the tendency to induce growth near the reservoir. While EPA agrees that the growth will eventually occur in that watershed, *EPA believes that the cumulative impacts due to the increased flows from the reservoir and the additional developed flows from both an increase in impervious areas and landscape watering will cause greater water quality impacts than are currently identified in the DEIS.* We recommend that the FEIS estimate those impacts and propose mitigation to address the cumulative impacts of induced growth. (Emphasis supplied).¹⁴

Stated more simply, reservoirs are attractive areas for land development. When land surrounding a reservoir is developed, contaminated runoff from impervious surfaces and chemically-maintained lawns invariably enter the reservoir, elevating pollutant and nutrient levels that impact surface water quality.

To predict water quality impacts of the proposed reservoirs, the BOR used a mathematical model (Aquatox) that relied on assumptions about the quantity and quality of water that would enter the proposed reservoirs. By design, this mathematical model specifically excluded impacts of contaminated runoff resulting from impervious surfaces and chemically-maintained lawns that are likely to exist in close proximity to the proposed reservoirs. For example, the technical report about the approach that the BOR used to model impacts of the proposed Williams Creek Reservoir states:

On an average annual basis, Williams Creek native inflows represent a negligible portion of the total inflows. In addition, there is very little information on the historical quality of Williams Creek watershed runoff. Therefore, the quality of Williams Creek flows is not explicitly defined in the Aquatox model, and is effectively equal to the water quality estimated for the Chilcotte Ditch and CSRWRF combined.¹⁵

As noted by the U.S. EPA, the BOR's analysis of water quality impacts of the proposed reservoirs is deficient and flawed for failing to consider the additional developed flows into the proposed reservoirs from both an increase in impervious areas and landscape watering.

¹⁴ Letter from Larry Svoboda (Director, NEPA Programs, U.S. EPA Region 8) to Michael Collins (Area Manager, Bureau of Reclamation, Eastern Colorado Area Office) (September 16, 2008).

¹⁵ MWH, "Water Quality Effects Analysis Approach, Southern Delivery System Environmental Impact Statement," at page D-11 (January 2008).

2. The SIR fails to assess releases of mercury from newly flooded reservoirs

As documented in numerous scientific and technical papers, newly flooded reservoirs have characteristics that make them likely sources of mercury contamination of aquatic life.¹⁶ The BOR must assess these potential impacts prior to issuance of the FEIS.

A report of the U.S. EPA discusses the capacity of newly created reservoirs to generate and release mercury into the environment.¹⁷ The report states:

Several environmental variables can affect the net microbial production of methylmercury in the landscape. These include physicochemical characteristics of surface waters, flooding and inundation of vegetated areas, and density of wetlands in the watershed. Moreover, *some human activities, such as the construction of new reservoirs, can greatly increase mercury levels in fish by creating environmental conditions that increase the microbial methylation of inorganic Hg(II).* (Emphasis supplied).¹⁸

This report includes a discussion of the magnitude of the extent to which riverine wetlands can generate methylmercury – the most toxic form of mercury – and release this mercury into the environment:

When the riverine wetland was flooded to simulate reservoir creation, it went from annually yielding ~3 mg MeHg ha⁻¹ to yielding 70 mg MeHg ha⁻¹ due to Hg methylation associated with the decomposition of flooded organic matter. Annual yields of MeHg slowly decreased during the six years postflood to approximately 15 mg MeHg ha⁻¹. This increase in methylation in the reservoir immediately resulted in elevated MeHg concentrations in food web organisms.¹⁹

¹⁶ See, e.g., “Great Lakes Indian Fish and Wildlife Commission, Investigations into Walleye Mercury Concentrations related to Long-Standing Reservoirs’ Water Quality, Wetlands and Federal Energy Regulatory Licensed Dam Operation,” (March 2003) at 2-3, http://www.glifwc.org/biology/reports/FERC_2003.pdf; U.S. EPA “Proceedings and Summary Report Workshop on the Fate, Transport, and Transformation of Mercury in Aquatic and Terrestrial Environments,” EPA/625/R-02/005 (June 2002), <http://www.epa.gov/nrmrl/pubs/625r02005/625R02005.pdf>; and U.S. Geology Survey, “Mercury in the Environment” Fact Sheet 146-00 (October 2000) at 7, <http://www.usgs.gov/themes/factsheet/146-00/> (“Lake acidification, addition of substances like sulfur that stimulate methylation, and *mobilization of mercury in soils in newly flooded reservoirs or constructed wetlands have been shown to increase the likelihood that mercury will become a problem in fish.*” (Emphasis supplied.).

¹⁷ U.S. EPA, “Proceedings and Summary Report Workshop on the Fate, Transport, and Transformation of Mercury in Aquatic and Terrestrial Environments,” EPA/625/R-02/005 (June 2002).
<http://www.epa.gov/nrmrl/pubs/625r02005/625R02005.pdf>

¹⁸ *Id.* at 21.

¹⁹ *Id.* at B-6.

The report also discusses the implication of methylmercury formation in newly flooded reservoirs on aquatic life and human health:

*High concentrations of mercury have since been found in fish from surface waters not affected by direct discharges of mercury; these include humic and lowalkalinity lakes, dark-water coastal streams, newly flooded reservoirs, and surface waters influenced by wetlands, which are sites of active methylmercury production. Methylmercury contamination now accounts for 78% of the fish-consumption advisories in the United States. (Emphasis supplied.).*²⁰

The report emphasizes the biological mechanism for the formation of methylmercury²¹ in newly flooded reservoirs: the action of sulfate-reducing bacteria under anaerobic conditions that inhabit the sediment layer of newly flooded reservoirs. As the report notes, increased levels of sulfate stimulate the activity of these sulfate-reducing bacteria:

The impact of sulfate loading on methylmercury production in wetland systems may equal or exceed that of mercury loading.²²

The report concludes:

Moreover, some human activities, such as the construction of new reservoirs, can greatly increase mercury levels in fish by creating environmental conditions that increase the microbial methylation of inorganic Hg(II).²³

All of the proposed reservoirs of the various project alternatives – the proposed Jimmy Camp Creek Reservoir, the proposed Upper Williams Creek Reservoir, and the proposed Williams Creek Reservoir – possess the above-mentioned characteristics that may pose a high risk of generating and releasing methylmercury. Water quality modeling of the proposed reservoirs indicates that all three would suffer anaerobic conditions during part of the year.²⁴ As noted in the DEIS, high levels of sulfate, which can stimulate the activity of bacteria responsible for methylmercury production, are present in surface waters throughout the project area.²⁵

Of particular concern is the proposed Williams Creek Reservoir that would store return

²⁰ *Id.* at B-12.

²¹ See also Gilmour, Henry, and Mitchell, "Sulfate Stimulation of Mercury Methylation in Freshwater Sediments," ²⁶ *Environ. Sci. Technol.* 2281-2287 (1992)

²² *Id.* at 47.

²³ *Id.* at B-12.

²⁴ MWH, "Water Quality Effects Analysis: Southern Delivery System Environmental Impact Statement" (January 2008).

²⁵ See, e.g., DEIS, at 219.

flows under the 'no action' alternative, the preferred action alternative, the downstream intake alternative, and the Highway 115 alternative. The predominant source of water entering the proposed Williams Creek Reservoir via the Chilcotte Ditch would be effluent from the wastewater treatment plant operated by CSU. According to the Alternatives Analysis Addendum:

Figure 4 presents a summary of the simulated average monthly streamflow for Fountain Creek at the Owen and Hall Ditch, which is the most downstream proposed reuse diversion point on Fountain Creek and assumed to be representative of the other proposed diversion points on Fountain Creek. To estimate the percentage of wastewater effluent at the gage, both the total flow at the diversion structure and the amount of effluent accruing to the stream from all wastewater treatment facilities upstream of the diversion were obtained from the daily hydrologic model being developed for the SDS EIS (MWH, 2007). On an overall annual basis, approximately 60 percent of the streamflow at the Owen and Hall Ditch is composed of wastewater effluent. During low flow months, especially during the winter and during low flow years, more than 75 percent of the total streamflow at the Owen and Hall Ditch is composed of wastewater effluent, with December average streamflow greater than 92 percent effluent.²⁶

The largest source of effluent to Fountain Creek is the Las Vegas Street Wastewater Treatment facility ("LVS WTF") operated by CSU. CSU acknowledges that a variety of commercial and industrial discharges are sources of mercury to the LVS WTF and that twice in 2005, measured levels of mercury in effluent from this facility exceeded permitted levels by nearly three-fold.²⁷ Effluent that originates from the LVS WTF facility would therefore be an additional and potentially significant source of mercury within the proposed Williams Creek Reservoir in addition to naturally occurring levels of mercury that reside in soils and sediments of the area that would be flooded to form this reservoir.

Finally, the likelihood that the proposed reservoirs would generate and release mercury into the environment is exacerbated by the nearby location of coal-fired power plants that emit mercury and would be sources of mercury deposition to these reservoirs. For example, CSU operates two coal-fired power plants – the Ray D. Nixon power plant in Fountain, Colorado, and the Martin Drake power plants in Colorado Springs, Colorado, that are within close proximity – less than 10 kilometers of the proposed reservoirs. Coal-fired power plants are documented sources of elevated levels of mercury in nearby lakes and reservoirs. According to a recent study published by scientists from the University of Alberta:

²⁶ U.S. Bureau of Reclamation, "Alternatives Analysis Addendum: Southern Delivery System Environmental Impact Statement," at 18 (December 2007).

²⁷ Bill Giannetto, Environmental Section Supervisor, Colorado Springs Utilities, "Mercury in the Wastewater System" (January 18, 2006) <http://www.csu.org/about/projects/mercury/10044.pdf>.

Coal-fired power plants are a major source of contaminants to terrestrial and aquatic ecosystems (Nriagu and Pacyna 1988). Among the contaminants released by coal combustion are trace metals such as mercury (Hg), arsenic (As), selenium (Se), lead (Pb), and copper (Cu), and organic compounds such as polycyclic aromatic hydrocarbons (PAHs). Trace metals and PAHs are pollutants of concern in aquatic ecosystems for their persistence, toxicity, and bioavailability (van Brummelen et al. 1998; MacDonald et al. 2000). *Of particular concern are bioaccumulative contaminants such as Hg that concentrate in fish tissue and can pose a health risk to human consumers....*

Surface enrichments of sedimentary trace metals and PAHs in Wabamun Lake are indicative of fossil fuel combustion, and implicate adjacent coal-fired power plants as dominant sources. *The close coincidence of increases in Hg deposition within Wabamun Lake-with construction and operation of four coal-burning power plants and two coal surface-mines in the area, and diminishing deposition with distance, suggests a causal relationship between coal-related industry in the area and increased Hg deposition.* (Emphasis supplied).²⁸

The BOR has yet to consider the extent to which the various project alternatives would release mercury into the environment. Neither the SIR, the DEIS, nor the Technical Report on Water Quality Effects²⁹ mention the issue of mercury. Therefore, prior to the issuance of the FEIS, the BOR must analyze the impacts of the newly created reservoirs and the effects of mercury contamination on aquatic life in the Fountain Creek and the Arkansas River and make this analysis publicly available for review and comment.

3. The SIR fails to assess the significance of expected increases in selenium levels in river segments

The SIR uses a different methodology (a mass balance model) than the methodology of the DEIS (historical relationships between salinity and selenium) to predict dissolved selenium levels in various stream segments within the SDS project area. The predicted levels of dissolved selenium put forward in the SIR are very different than the predicted levels of dissolved selenium put forward in the DEIS (compare Table 12 of the SIR to Table 49 of the DEIS) and warrant closer scrutiny by BOR and the public prior to issuance of the FEIS.

²⁸ Donahue, "Impacts of coal-fired power plants on trace metals and polycyclic aromatic hydrocarbons (PAHs) in lake sediments in central Alberta, Canada," *Journal of Paleolimnology*, 35:111-128. DOI 10.1007/s10933-005-7878-8 (2006).

²⁹ MWH, "Water Quality Effects Analysis: Southern Delivery System Environmental Impact Statement" (January 2008).

(i) **Selenium levels and CDPHE Water Quality Standards**

Table 12 of the SIR compares predicted dissolved selenium levels of the various project alternatives to the 'no action' alternative. A more useful comparison would be predicted dissolved selenium levels to water quality standards of the Colorado Department of Health and Environment ("CDPHE"), an issue that is discussed only briefly on pages 63-64 of the SIR.

The table below provides direct comparisons of predicted dissolved selenium levels of the various project alternatives to water quality standards of the CDPHE:

Location	Existing	A1 (NA)	A2 (PP)	A3 (WE)	A4 (AR)	A5 (FC)	A6 (DI)	A7 (115)
Monument Creek at Bijou St	4	4	4	4	4	4	4	4
Fountain Creek near Fountain	5	4	4	5	5	5	4	4
Fountain Creek at Pueblo	28	23	24	34	34	34	21	22
Arkansas River at Moffat St	33	49	59	43	26	54	65	70
Arkansas River near Avondale	16	18	20	19	17	18	17	19
Arkansas River at Catlin Dam	12	14	14	14	12	14	13	14

CDPHE water quality standards for the Arkansas River Basin

	Chronic	Acute	Stream Segment
Monument Creek at Bijou St	4.6	18.4	Fountain Creek: Stream Segment 6
Fountain Creek near Fountain	8.0	18.4	Fountain Creek: Stream Segment 2a
Fountain Creek at Pueblo	28.1	42.3	Fountain Creek: Stream Segment 2b
Arkansas River at Moffat St	17.4	50.9	Middle Arkansas: Segment 3
Arkansas River near Avondale	14.1	19.1	Lower Arkansas: Segment 1a
Arkansas River at Catlin Dam	existing	18.4	Lower Arkansas: Segment 1b

Predicted changes versus CDPHE chronic WQS for selenium

Monument Creek at Bijou St	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
Fountain Creek near Fountain	-3	-4	-4	-3	-3	-3	-4	-4
Fountain Creek at Pueblo	-0.1	-5.1	-4.1	5.9	5.9	5.9	-7.1	-6.1
Arkansas River at Moffat St	15.6	31.6	41.6	25.6	8.6	36.6	47.6	52.6
Arkansas River near Avondale	1.9	3.9	5.9	4.9	2.9	3.9	2.9	4.9
Arkansas River at Catlin Dam	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Predicted changes versus CDPHE acute WQS for selenium

Monument Creek at Bijou St	-14.4	-14.4	-14.4	-14.4	-14.4	-14.4	-14.4	-14.4
Fountain Creek near Fountain	-13.4	-14.4	-14.4	-13.4	-13.4	-13.4	-14.4	-14.4
Fountain Creek at Pueblo	-14.3	-19.3	-18.3	-8.3	-8.3	-8.3	-21.3	-20.3
Arkansas River at Moffat St	-17.9	-1.9	8.1	-7.9	-24.9	3.1	14.1	19.1
Arkansas River near Avondale	-3.1	-1.1	0.9	-0.1	-2.1	-1.1	-2.1	-0.1
Arkansas River at Catlin Dam	-6.4	-4.4	-4.4	-4.4	-6.4	-4.4	-5.4	-4.4

The comparisons set forth in the above tables raise questions about the permissibility of the 'proposed action/preferred action' and 'no action' alternatives that are under consideration due to selenium water quality impacts.

First, not only does the preferred action alternative further exacerbate non-compliance with the *chronic* water quality standard ("WQS") for selenium in portions of the Middle Arkansas River and Lower Arkansas River, but the preferred action alternative is the only alternative of those under consideration that would result in a portion of the Lower Arkansas River (Segment 1a) violating *acute* WQS for selenium; the preferred action alternative also is one of four alternatives under consideration that would result in a portion of the Middle Arkansas River (Segment 3) violating the *acute* WQS for selenium. Thus, approval of the preferred action alternative would violate the mandate regarding compliance with WQS within, *inter alia*, section 301(e) of the Clean Water Act ("CWA") because the BOR issuance of an FEIS designating as the preferred alternative a proposed action would not only worsen compliance with the *chronic* WQS for selenium, but brings river segments that are currently in compliance with the *acute* WQS for selenium out of compliance.

Second, as the DEIS admits and as several commentators have noted, the 'no action' alternative is a far different scenario from the existing conditions, and encompasses a complex water delivery scheme that would not require a BOR permit though the specter of such a paradigm appears to be as speculative and uncertain as the PSOP and AVC projects that BOR refuses to consider. Moreover, similar to the preferred action alternative, the 'no action' alternative (which actually contemplates and requires significant actions) would worsen non-compliance with the *chronic* WQS for selenium in portions of the Middle Arkansas River and Lower Arkansas River and therefore appear to be impermissible alternatives due to selenium WQS considerations.

Finally, Table 12 of the SIR shows only the 85th percentile simulated dissolved selenium levels of the project alternatives under consideration.³⁰ The 85th percentile simulated dissolved selenium level for the 'no action' alternative closely approaches the *acute* WQS for selenium in portions of the Middle Arkansas River and Lower Arkansas River. It is highly probable, then, that several days each year the 'no action' alternative would bring portions of the Middle Arkansas River and Lower Arkansas River out of compliance with *acute* WQS for selenium. Therefore, it would be impermissible for the BOR to designate as the 'no action' alternative one that would predictably result in river segments worsening compliance, or falling out of compliance, with applicable state water quality standards; as such, the adoption of the 'no action' alternative would be inconsistent with NEPA and the CWA, rendering it beyond the range of

³⁰ Appendix B also shows the median (50th Percentile) simulated dissolved selenium levels of the project alternatives under consideration.

feasible alternatives.

(ii) Selenium levels and impacts to aquatic life

Comparing the predicted levels of selenium of the project alternatives to applicable water quality standards is only the first step in evaluating their impacts on receiving waters. For purposes of NEPA, the BOR must further analyze and evaluate whether the predicted water quality changes would affect aquatic life. The SIR lacks this analysis. Section 5.7 of the SIR (Aquatic Life) does not mention the impacts the newly predicted increased selenium levels might have on aquatic life.

Similarly, the DEIS lacked an analysis of how predicted increases in dissolved selenium would impact aquatic life. Page 229 of the DEIS contains the following discussion of whether predicted water quality changes would affect water quality life:

The segment of Fountain Creek from the State Highway 47 Bridge to the Arkansas River is currently on the 2006 and proposed 2008 303(d) lists for selenium impairment. It has a site-specific, underlying WQS of 28.1 µg/L due to natural sources of selenium (CDPHE 2007a). Because the increase in selenium concentrations for the Wetland, Arkansas River, and Fountain Creek alternatives' increase in selenium concentrations would be caused primarily by a diversion of water and putting that water to beneficial use, and the natural source of selenium would not be altered, CDPHE would likely revise the underlying WQS to reflect the new ambient conditions under those alternatives in accordance with the Colorado Water Quality Control Act (CDPHE 2007e; Hegeman 2007). Therefore, these alternatives would not cause exceedance of the WQS and would not have an adverse effect on water quality. Potential effects on aquatic life are discussed in the Aquatic Life section (Section 3.10).

In the lower Arkansas River, as represented by the Avondale and Catlin Dam gages, selenium concentrations would be similar among alternatives, with differences of 6 percent and 1 µg/L or less (within the range of analysis uncertainty). Therefore, there would be no selenium water quality effects in the lower Arkansas River.

The DEIS analysis is problematic for several reasons. First, predicted levels of dissolved selenium are substantially higher in the SIR compared to the DEIS as the result of using a mass balance model to predict selenium levels. Second, it is improper to assume that the CDPHE would necessarily revise Colorado water quality standards to permit higher levels of dissolved selenium – once again, the BOR appears arbitrarily to embrace certain future paradigms that serve

the end result of supporting the Alternative 2 as the preferred action alternative (e.g., applicable selenium WQS will become less stringent) while rejecting others that complicate selection of Alternative 2 (e.g., applicable selenium WQS will remain the same or become more stringent). In July 2008, the CDPHE considered and rejected several proposals put forward to relax selenium water quality standards that apply in the Arkansas River Basin.³¹

Finally, the SIR fails to consider a recent study by U.S. EPA regarding the effects of selenium on aquatic life³² which the BOR must consider to properly analyze the impact of predicted dissolved selenium levels of the various project alternatives on impact aquatic life. This new study concludes that when juveniles of the test species *Lepomis macrochirus* (Bluegill Sunfish) are exposed to levels of selenium that are predicted to occur in the Arkansas River basin as a result of the various project alternatives the biota suffer greater than expected adverse affects at lower ambient temperatures. The EPA report concludes:

Juvenile bluegill sunfish appear to be more sensitive to selenium in waters reaching 4-5°C than 9°C. The EC20 and EC10 estimates for the exposure in which temperature decreased from 20 to near 4°C were 10.16 and 9.56 µg/g dw, respectively, while the EC20 and EC10 estimates for the exposure that began at 20°C and systematically lowered to 9°C were 14.02 and 13.29 µg/g dw, respectively....

The accumulation of selenium in the juvenile bluegill was affected by temperature. Fish exposed to dietary selenium via *L. variegatus* accumulated up to 39% more selenium in the 20 to 9°C regime than in the 20 to 4°C regime.”³³

This new information is particularly relevant to the BOR’s assessment of the various project alternatives. According to the February 2006 Aquatic Resources Technical Report, *Lepomis macrochirus* is an introduced species in the Arkansas River basin; other species of *Lepomis* (including the Green sunfish *Lepomis cyanellus*) are native to the basin. Several river segments that would be impacted by the various project alternatives are cold water segments that the new information published by the U.S. EPA indicate will result in greater adverse impacts to test species of fish than indicated in the DEIS and SIR. According to Section 3.10 of the DEIS:

The upper Arkansas River downstream of Cañon City to the inlet of Pueblo Reservoir is classified as a coldwater segment but is a transitional segment of

³¹ CDPHE Water Quality Control Commission, Regulation No. 32, Classifications and Numeric Standards for Arkansas River Basin, § 32.42: Statement of Basis, Specific Statutory Authority and Purpose: July 2008 Rulemaking; Adopted August 2008; Effective January 1, 2009.

³² U.S. EPA, “Effect of Selenium on Juvenile Bluegill Sunfish at Reduced Temperature,” EPA-822-R-08-020 (September 2008).

³³ *Id.* at 52.

stream between coldwater and warmwater aquatic communities. A brown trout fishery is located in the section of the river near Cañon City with more of a warmwater fishery toward Pueblo Reservoir. Fish include coldwater species such as brown trout; species with wide temperature tolerances such as longnose dace and white sucker; and warmwater species such as black bullhead, green sunfish, and numerous minnows.

This is the segment of the Arkansas River that the SIR now predicts to have a much higher level of dissolved selenium, including an 85th percentile simulated dissolved selenium level of 59 ug/L for the proposed action alternative. As such, prior to the issuance of the FEIS, the BOR must consider the information presented in the new EPA study to determine the range of potential adverse impacts caused by the project alternatives on aquatic life and make this analysis available to the public for review and comment.

D. The SIR Modifications To The Preferred Action Alternative And Other Alternatives Necessitate Re-evaluation Of Reuse Alternatives

In December 2007, the BOR considered but rejected six alternatives to the preferred action alternative that might minimize environmental impacts by reusing treated wastewater for human consumption. The BOR rejected all six reuse alternatives solely on the basis of cost. In its Alternatives Analysis Addendum, the BOR states:

Each of the six reuse alternatives and their associated components was passed through the same screening process used in the Alternatives Analysis report (Reclamation 2006a). Deficiencies were identified for all of the reuse alternatives, primarily due to issues with purpose and need and cost screening results. The reuse alternatives passed the purpose and need screening criteria (i.e., would provide water supplies to meet future demands through 2046, would provide system redundancy for Colorado Springs' Arkansas River water rights, and would deliver the Participants' existing Arkansas River water rights). The reuse alternatives did not pass the cost screening criteria for firm yield or SMAPD under 2046 Planning Forecast demands (i.e., reuse alternatives cost estimates were at least twice the cost criteria for firm yield and for SMAPD under 2046 Planning Forecast demands).³⁴

Two of the six rejected alternatives (B and B2) would further minimize impacts to the environment by employing subsurface retention storage of Fountain Creek reusable return flows and post-treatment blending with treated Pueblo Reservoir water. In its Alternatives Analysis

³⁴ U.S. Bureau of Reclamation, "Alternatives Analysis Addendum: Southern Delivery System Environmental Impact Statement Great Plains Region," at 52 (December 2007).

Addendum, the BOR further discounted alternatives B and B2 on the basis that it would involve a greater area of wetland disturbance if water were returned to the proposed Jimmy Camp Creek Reservoir, but a greater cost if water were returned to the proposed Upper Williams Creek Reservoir.

Each of the reuse alternatives with surface retention storage (Alternatives A, A2, C, and C2) would use the proposed Williams Creek Reservoir site for retention storage and Jimmy Camp Creek Reservoir for terminal storage, and the area of wetlands disturbed would be greater than that for Alternative 3. The two reuse alternatives without surface retention storage (Alternatives B and B2) would use the proposed Jimmy Camp Creek Reservoir for terminal storage and would have a greater area of wetland disturbance than the Wetland Alternative as a result (i.e., about 8 acres). The option of substituting the proposed Upper Williams Creek Reservoir for the proposed Jimmy Camp Creek Reservoir for terminal storage in the reuse alternatives was considered but would not be economically efficient. The approximate costs of constructing the proposed Jimmy Camp Creek Reservoir would be \$234 million and the approximate costs of constructing the proposed Upper Williams Creek Reservoir would be \$338 million (CH2M HILL 2005c). Maintaining the cost efficiency of the reuse alternative was one of the development criteria for the reuse alternatives, as discussed in Section 5.3.1. Due to the substantially higher costs of using the proposed Upper Williams Creek Reservoir for terminal storage, the proposed Jimmy Camp Creek Reservoir was used for terminal storage in all of the reuse alternatives.³⁵

This comparative analysis, however, is now outdated. In the SIR, the BOR modified the preferred action alternative and the other alternatives by substituting the proposed Upper Williams Creek Reservoir for the proposed Jimmy Camp Creek Reservoir for terminal storage. The cost differential cited as a reason in the Alternatives Analysis Addendum for rejecting reuse alternatives B and B2 no longer exists. Because the BOR has modified the preferred action alternative and the other alternatives, it is invalid to use the proposed Jimmy Camp Creek Reservoir for terminal storage in assessing the cost of the reuse alternatives. Therefore, prior to the issuance of the FEIS, the BOR must conduct a new comparative analysis that accurately assesses the cost of the reuse alternatives before dismissing these alternatives out of hand. The mere fact that reuse alternatives may not be politically viable for Colorado Springs does not establish that the reuse alternatives are impracticable and can be rejected. If cost is no longer a legitimate basis for rejecting these reuse alternatives, then these reuse alternatives may be viable and constitute the least environmentally damaging practicable alternative as compared with the preferred action alternative and the other alternatives set forth in the SIR.

³⁵ Id. at 49.

**E. Reclamation Failed To Consult With The Colorado Division Of
Wildlife In The Design Of Project Alternatives As Required By The El
Paso County Land Development Code**

In its discussion of the regulatory framework under which it must assess impacts to vegetation, the BOR states:

Federally threatened and endangered species are protected under the ESA of 1973, as amended. The ESA defines an endangered species as ‘a species in danger of becoming extinct throughout all or a large portion of its range’ and a threatened species as “a species likely to become endangered in the foreseeable future.’ If a project with a federal action would have adverse effects on a federally listed plant species or its habitat, consultation with the Service under Section 7 of the ESA would be required. Candidate species are species for which there is sufficient information on their biological vulnerability to support federal listing as endangered or threatened (Service 2006), but listing is precluded by other higher priority listing activities. No regulations require consultation for effects on candidate species; however, if a candidate species occurring in the analysis area becomes listed during project planning or construction, consultation with the Service may be required.³⁶

Similarly, in the discussion of the regulatory framework under which it must assess impacts to wildlife, the BOR states:

Reclamation projects must comply with federal and state laws and regulations protecting wildlife species including:

Endangered Species Act of 1973 (16 USC 1531 et seq.)
Bald and Golden Eagle Protection Act of 1940, as amended (16 USC 668-668d)
Fish and Wildlife Coordination Act of 1934, as amended (16 USC §§ 661-667e)
Migratory Bird Treaty Act of 1918, as amended (16 USC §§ 703-712)
Executive Order 13186 Responsibilities of Federal Agencies To Protect Migratory Birds
Colorado wildlife statutes concerning non-game and endangered species conservation (Title 33, Article 2, C.R.S. (2007))³⁷

This regulatory framework omits applicable local standards, including those of the El Paso County Land Development Code. A large majority of structural components of the SDS project

³⁶ DEIS, Chapter 3.12 Vegetation, at 345.

³⁷ DEIS, Chapter 3.13 Wildlife at 367.

would be located in El Paso County. Under the El Paso County Land Development Code:

(B) Wildlife Standards

(1) Reductions of Impacts and Avoidance

Wildlife and wildlife habitat are important to the quality of life in El Paso County. When developing a lot, tract or parcel, wildlife considerations should be incorporated into the design of the project and important wildlife habitat avoided when practical.

(2) Other Local, State and Federal Standards

(a) Compliance with Recommendations of DOW Standards

Proposed development should make every reasonable attempt to comply with the requirements of the DOW. The applicant should consult with DOW prior to submission of a development application when significant wildlife habitat is present on the subject property. DOW input should be reflected in design of the project.³⁸

There is no evidence in the SIR or the DEIS or other Technical Reports demonstrating that the applicant consulted with the Colorado Division of Wildlife (DOW) prior to submission of the application and that input from the DOW was reflected in the design of the project. To the contrary, in its public comment on the DEIS, which is highly critical of Reclamation's methodology for analyzing aquatic impacts, the DOW complains of its input being ignored. For example, in its public comment, DOW stated:

The Division is concerned about the lack of quantitative analysis with regard to the potential adverse impacts of noxious weeds, in particular tamarisk. We understand that the direct impacts as it relates to the infrastructure footprint of SDS are located in Table 92. However, the Division has concerns about the indirect impacts as they relate to reservoir water levels in Pueblo, Henry, Meredith and Holbrook. All of the above listed reservoirs have varying degrees of tamarisk infestations. *Despite our request during the scooping phase, this requested analysis has been ignored. We believe that a proper environmental impact statement should analyze varying reservoir water levels and the associated adverse impact on tamarisk invasions on shoreline habitat.* We realize that this may fall outside of the affected environment but recommend some type of quantitative analysis occur for each alternative. (Emphasis supplied).³⁹

In the SIR, the BOR continues to ignore input from DOW, providing no quantitative

³⁸ El Paso County Land Development Code, § 6.3.9. Wildlife.

³⁹ Letter from Doug Prenzlows (Southeast Regional Manager, Colorado Division of Wildlife) to Kara Lamb (Bureau of Reclamation, Eastern Colorado Area Office) (May 6, 2008).

analysis with regard to the potential adverse impacts of noxious weeds, in particular tamarisk.

VII. The SIR Fails To Address Environmental Justice Concerns

U.S. EPA's DEIS comments raised significant concerns as to environmental justice issues that were not identified and analyzed in the DEIS. Those concerns included the failure to not fully identify and disclose impacts to the 'high risk areas' depicted in Figure 94, page 445 of the DEIS including increased exposure to contaminants, increased erosion and flooding due to the return flows coming down Fountain Creek. U.S. EPA's comments noted that approximately 4,000 migrant workers live in the East Side, who were not identified by the DEIS. Finally, the U.S. EPA criticized the DEIS for failing to include mitigation plans to address the increased risk of exposure to contaminants and the risk of flooding in these neighborhoods that have experienced flooding as recently as 2006 and 2007.⁴⁰

The SIR does not contain any additional information addressing EPA's environmental justice concerns, once again, ignoring the recommendations of a cooperating agency. Instead, at section 5.13.2, the SIR simply notes that the modifications made added three new study areas relating to the Upper Williams Creek Water Treatment Plant, realignment of Bradley Road east and west of the proposed Upper Williams Creek Reservoir. The SIR then concludes that since the three new study areas are within the Census Block Group areas that were defined as being of "No Risk or Concern from an Environmental Justice" standpoint, no additional assessment was needed.

However, the SIR fails to take into consideration the potential for increased exposure to contamination from mercury and selenium that these communities may experience in light of the SIR modifications. As discussed above in Section VI.C., 2, the BOR must further analyze the water quality impacts – in particular, impacts relating to the methylation of mercury – of the proposed new reservoirs contained in the SIR. The SIR offers no mitigation measures to reduce mercury methylation or address the potential for disproportionate impacts on low-income water users in Pueblo County due to increased exposure to contaminants in Fountain Creek arising from use of the Williams Creek Reservoir and other potentially impacted surface waters in the Arkansas River Basin.

The preferred action alternative has the potential to significantly elevate levels of methylmercury and inorganic mercury concentrations in aquatic and terrestrial biota within the newly formed reservoirs and the downstream waterbodies including Fountain Creek and the Arkansas River resulting in mercury exposure risks for low income water users who may eat fish taken from these waterbodies. As discussed above, bacteria converts inorganic mercury to

⁴⁰ Letter from Larry Svoboda (Director, NEPA Programs, U.S. EPA Region 8) to Michael Collins (Area Manager, Bureau of Reclamation, Eastern Colorado Area Office) (September 16, 2008) at 1.

methylmercury, which then builds up or bioaccumulates in the tissue of fish and may be eaten by wildlife or people. Scientists now recognize that mercury is a pervasive contamination problem for reservoirs and in particular new reservoirs – where the decomposition of submerged vegetation and soils create an ideal environment for transforming inorganic mercury to methylmercury. The failure of the SDS DEIS as supplemented by SIR to consider and discuss this significant environmental justice concern is a glaring omission that violates NEPA and Executive Order 12898 on Environmental Justice (February 11, 1994).

VIII. Conclusion

In sum, the Participants have modified the SDS project to address certain concerns raised by DEIS commenters including negative impacts on wetlands, cultural resources, paleontological resources and geomorphology. However, the DEIS as supplemented and modified by the SIR for the proposed SDS project is fundamentally flawed for myriad significant reasons as discussed above including, *inter alia*, the overly narrow Purpose and Need Statement, the limited range of alternatives considered, the failure to analyze cumulative and connected impacts, the failure to consider water conservation, efficiency, reuse alternatives and increased energy use caused by the SDS project. In addition, there are significant water quality issues and potential effects on aquatic life and human health due to the new reservoirs relating to mercury and selenium that must be considered fully prior to the issuance of the FEIS. Potential increased exposure to significant contamination from mercury and selenium are environmental justice issues affecting the known 'high risk areas' in Pueblo County.

Moreover, the BOR and the Participants appear to have embraced a "race to the finish line" approach by adopting a hard December 2008 deadline for issuance of the FEIS. The setting of this arbitrary deadline ignores the fact that significant components of the proposed SDS project are in flux in light of the changes proposed in the Participants' SDS Pueblo County 1041 Application. Most troubling, the Participants' SDS October 2008 Quarterly Progress Update indicates that the preliminary design for the Pueblo Dam River Outlet Works is scheduled to be completed shortly thereafter. Proceeding with issuance of the FEIS in December 2008 prior to completion and release of this analysis to the public compromises NEPA solely for the sake of the parochial interests of the Participants.

The Organizations, therefore, respectfully request that the BOR withdraw the DEIS as supplemented and modified by the SIR and redefine the scope of the environmental analysis to include other alternatives that do not ignore water reuse, water conservation and land use planning strategies, or view rapid population growth and the tapping of the Arkansas River Basin waters by the Participants as the only alternative as well as address the additional outstanding issues raised above in the Organizations' comments. In the alternative, the Organizations request that the BOR supplement the DEIS and the SIR to address the deficiencies set forth above.

Letter to K. Lamb
RMELC/Sierra Club Comments on SDS SIR
11/24/2008
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Very truly yours,

/s/

Joseph M. Santarella Jr.
Susan J. Eckert
Counsel for the Organizations

Cc: The Honorable John Salazar (U.S. Representative)
The Honorable Kenneth Salazar (U.S. Senator)
The Honorable Mark Udall (U.S. Senator-Elect)