



June 1, 2010

*Sent via Email to [rinfo@LM.doe.gov](mailto:rinfo@LM.doe.gov)*

Mr. Ray Plieness,  
Director of Site Operations  
Department of Energy, Office of Legacy Management  
2597 B ¾ Road  
Grand Junction, Colorado 81503

**RE: City and County of Broomfield Comments on Draft Rocky Flats Surface Water Configuration Environmental Assessment, dated April 2010**

Dear Mr. Plieness:

The City and County of Broomfield (Broomfield) has reviewed and is providing comments to the *Draft Rocky Flats Surface Water Configuration Environmental Assessment (EA), dated April 2010*. It is our understanding that the proposed actions at the Rocky Flats Site are to breach all the remaining on-site dams associated with regulatory terminal ponds containing points-of-compliance and other upstream ponds.

The Department of Energy, Office of Legacy Management (DOE-LM) wants to eliminate the retention of surface water to restore stream configurations for creeks traversing the site. The stated purpose and need for the proposed action, as identified within the EA, is to:

1. Reestablish flows to approximate pre-retention conditions to enhance ecological habitats, and
2. Reduce its maintenance costs.

We would like to remind DOE-LM of their responsibility to ensure all activities performed at the site must remain protective of human health and the environment following completion of cleanup, disposal, or stabilization in perpetuity.

The on-site ponds serve as our last measure of defense. Based on current regulatory requirements, DOE-LM must measure water quality before it leaves the site and the ponds provide a mechanism to control and contain water that does not meet surface water standards. DOE-LM may also need the ponds to store and treat water onsite since ponds A-3 and A-4 were used for this purpose in the past to ensure off-site surface water quality is protected.

With residual contamination remaining on-site, Broomfield wants to make certain that DOE-LM will continue to maintain the site in a safe configuration that protects human health and the environment for the life of the remaining contaminants. Broomfield has very thoughtfully and thoroughly reviewed this crucial document and prepared both general and specific concerns associated with the EA.

Broomfield strongly believes that DOE-LM must adopt the “**No Action**” alternative and provides strong support herein for our assertion that the EA improperly minimizes or dismisses the significance of potential impacts to environmental resources. The mere fact that the proposed action has the potential to introduce contaminants into downstream ecosystems, and such impacts have not been mentioned, assessed, or quantified, should automatically preclude DOE-LM from adopting a Finding of No Significant Impact (FONSI). Our justification for the “**No Action**” alternative is primarily based on the following key concerns.

**DOE-LM Has Failed to Follow the Proper National Environmental Policy Act (NEPA) Process.**

It is clear from the actions that have already been taken that the preferred EA alternative was pre-determined. The Colorado Department of Public Health and Environment (CDPHE) granted approval of Contact Record (CR) 2010-02 titled *Approval of Excavation Greater Than 3 Feet Below Grade to Breach Dams A-3, A-4, B-5, C-2 and the Present Landfill Dam* on **April 15, 2010**. The Surface Water EA was not released for public comment until **April 30, 2010**; therefore, CR 2010-02 presumed selection of the preferred proposed action by DOE-LM prior to allowing the public to participate in the NEPA process to evaluate and determine the action that best protects public health and the environment.

Broomfield is also aware that DOE-LM has already provided CDPHE with a draft contact record addressing modifications to the regulatory Points-of-Compliance (POCs).

**Specific Comment**

- If DOE-LM is concerned about costs, please clarify why funds have been utilized for a proposed action that has yet to be determined in accordance with the NEPA process.

**Implementation of the Chosen Alternative Would Violate Otherwise Applicable Institutional Controls.**

The Rocky Flats Legacy Management Agreement (RFLMA) includes seven Institutional Controls that restrict certain uses within the Central Operable Unit (COU). Use restriction Control #2 of the RFLMA explicitly states:

*“Excavation , drilling and other intrusive activities below a depth of three feet are prohibited, except for **remedy-related purposes** and routine or emergency maintenance of exiting utility easements, in accordance with pre-approved procedures.”* (Emphasis added.)

The proposed dam breaching activity, which is supposedly justified by the EA, would be in violation of these Institutional Controls. These use restrictions are legally enforceable requirements placed upon the property owner under the Environmental Covenant granted to CDPHE by DOE and filed with Jefferson County, Colorado in 2006. The restrictions in Attachment 2, Table 4 of the RFLMA were established to ensure such site activities would not compromise the integrity or function of the remedy or result in uncontrolled releases of, or exposure to, subsurface contamination that remains at the site.

The EA and the CR 2010-02 fail to recognize that the proposed action violates the Institutional Controls identified within the RFLMA. In addition, the Corrective Action Decision/Record of Decision (CAD/ROD) and the Rocky Flats Site Operations Guide – Appendix F are clear in the objective and rationale for prohibiting non-remedy related activities in the COU as stated for Institutional Control #2:

*Objective: prevent unacceptable exposure to residual subsurface contamination. Rationale: Contaminated structures, such as building basements, exist in certain areas of the Central OU, and the CRA did not evaluate the risk posed by exposure to this residual contamination. Thus, this restriction eliminates the possibility of unacceptable exposure. Additionally, it prevents damage to subsurface engineered components of the remedy.*

The CAD/ROD for the Rocky Flats site states:

*“These controls will extend throughout the Central OU” and **‘Will run with the Property in perpetuity and be binding on DOE and all parties having any right, title or interest in the Property.’*** (Emphasis added.)

Broomfield submits that the three-year period that has elapsed since regulatory closure clearly does not equate to "perpetuity."

Specific Comment

- Please provide the rationale as to why DOE-LM would have the authority to violate the RFLMA and the intent of the CAD/ROD and the Proposed Plan.

**Breaching the Present Landfill (PL) Pond Dam is Contrary to the Requirements Established Pursuant to the Resource Conservation and Recovery Act (RCRA) Plan.**

Breaching the Present Landfill Pond dam would allow water to freely flow into waters of the state and such releases would not meet surface water quality standards at all times. The PL was closed in accordance with 6 CCR 1007-3 § 265.12(a) (3) as a Subtitle-C Resource Conservation and Recovery Act (RCRA) landfill. Section 2.5.5 of the Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan, U.S. Department of Energy Rocky Flats Site, March 2008, states:

*The East Landfill Pond will remain and receive treated water from the PLFTS [Present Landfill Treatment System] and surface water from the east face and surrounding hillsides, as well as precipitation falling directly into the Pond.*

The decision framework for this sampling is found in RFLMA Attachment 2, Figure 11.

The Present Landfill pond was remediated and the contaminated soils were placed within the Present Landfill. The pond does serve as a settling pond based on the material that was removed during remediation of the pond. In addition, the pond receives and contains water that exceeds the RFLMA standard at the Present Landfill Treatment Unit. Vinyl chloride, selenium, silver and other analytes have exceeded the surface water RFLMA standards as recently as this past year.

Specific Comment

- Please provide the exception to the regulation that would allow DOE-LM to intentionally discharge water that does not meet surface water standards to waters of the state.

The proposed action would allow water to freely flow from the pond and there would be no control in place to prevent negative impacts to such a valuable resource. Waste in the landfill was not removed and contamination remains in place. Benzene and vinyl chloride were the primary contaminants detected above the established standards during the remedial investigation.

Specific Comment

- Provide the process to ensure the RFLMA is enforced to meet surface water standards prior to release.

The treatment unit for the PL serves as a point source and the effluent must meet surface water standards prior to discharge.

Specific Comments

- Please provide the associated contingency plan to contain the leachate if it exceeds the RFLMA surface water standard.
- Include the notification process, schedule to contain water, monitoring methodology, and notification process to downstream communities.

**DOE-LM Must Prepare Proper Contingency Plans.**

Broomfield understands that the dams are not required to maintain adequate protection of human health and the environment under the final CAD/ROD; however they do serve as sediment ponds to collect contaminants. The ponds were identified as Individual Hazardous Substance Sites (IHSS) during site closure and some of the ponds had extensive remediation to remove materials above action levels and/or surface water standards.

The scope of the previous 2004 EA related to breaching the dams in North and South Walnut Creek upstream of ponds A-3, A-4, and B-5 was limited only to those ponds listed because the downstream communities were adamant in their insistence that the terminal dams were not to be breached until adequate data were available to evaluate sediment and contamination migration post-closure. The downstream communities want to have a baseline developed on post-closure conditions after the site has fully stabilized and associated trending during wet and dry precipitation years has been completed.

The current 2010 EA states it evaluated the direct, indirect, and cumulative impacts of breaching all remaining dams. We contend the EA did not properly assess environmental impacts directly, indirectly, or cumulatively related to impacts to offsite watersheds and potential risk to downstream communities.

Specific Comment

- Please provide the modeling and evaluation that was performed to determine impacts to downstream watersheds if surface water leaves the site that does not meet the regulatory standards.

The 2010 EA did not evaluate sediment migration after an uncontrolled fire. Fires can substantially increase runoff in watersheds. The US Forest Service's Rocky Mountain Research Station has studied the impact of fires on watersheds in General Technical Report RMRS-GTR-63, "Evaluating the Effectiveness of Post fire Rehabilitation Treatments", September 2000. The report states that severe fire can increase surface runoff by 70 percent and increase erosion by three orders of magnitude (Page 5). A

single grassland similar to Rocky Flats was studied, as most of the fires studied were in forests. The increase in water yield ranged from 12 percent to 1421 percent, with the one incidence of grassland fire increasing water yield by 1150 percent. If drought conditions are combined with severe fires, the vegetation may not recover for many years.

Specific Comments

- Please provide more information about the evaluation DOE-LM performed to address wildfires to ensure there are not direct, indirect, and cumulative impacts to human health and the environment related to the certainty of increased runoff from an uncontrolled fire.
- Please identify the Contingency Plan that would be implemented to prevent major erosion and release of sediment off-site.

The absence of a Contingency Plan to limit/control actinide migration from soil erosion, especially following a major storm event or fire, has not been provided for us to review so we could evaluate the proposed action. DOE-LM has not provided us with a response or identification of a process as to how DOE-LM would maintain regulatory compliance for surface water, identify the details of the sampling methodology for water flowing freely versus the current protocols; or how the agency would contain or treat water that did not meet the RFLMA standards. Broomfield wants to protect our communities and watersheds in the event of an exceedance.

Specific Comment

- We request that DOE-LM provide us with the details of their Contingency Plans for the events identified in these comments.

**Evaluation of Groundwater Impacts is Inadequate.**

Broomfield questions the evaluation performed to address impacts from groundwater. The site has not stabilized and DOE-LM acknowledges this fact in its own documents. The EA improperly dismissed the impact to groundwater at all five proposed dam breach locations. The EA improperly evaluates such a key component of the proposed action as a mere concern. More emphasis is placed on ecological systems than on hydrology at the site. This approach is improper, particularly for a site that is still undergoing treatment and has not fully stabilized. The EA states:

*Breaching the remaining interior and terminal dams and re-establishing approximate original creek configurations on the RFS would not have a meaningful impact on groundwater. The associated ponds are well downstream of contaminant source areas, and concentrations of the pertinent contaminants in groundwater within these drainages are monitored upstream of the ponds that would be affected. Therefore, breaching the dams does not affect groundwater*

*contaminant migration or distribution, and this resource is not considered further in this EA.*

The site has not been subject to a full 5-year Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) review since regulatory closure occurred. There is no sufficient baseline data available to identify trends and evaluate the effectiveness of the existing remedies.

DOE-LM has several ongoing activities that have the potential for affecting or negatively impacting surface water quality such as modifications to groundwater treatment units, evaluation of the subsidence in the Original Landfill cover, and additional sampling regimes at the Present Landfill. In addition, insufficient time has lapsed since closure to be able to observe the hydrological or topographical impacts to the surface water quality resulting from sequential wet and dry periods. Changing the surface water flow may increase the migration of groundwater plumes, some of which are direct contiguous links to surface water on the Rocky Flats site. It is well-known that seeps south of the B-series ponds have had elevated VOC concentrations.

Specific Comment

- How will monitoring of groundwater seeps downstream of the proposed dams be evaluated?

Pertinent contaminants in groundwater within the drainages are monitored upstream of the ponds that are proposed for breaching and most of the constituent concentrations at the relevant Points of Evaluation (POEs) are above the RFLMA standards that apply at the POCs.

Specific Comment

- Please provide additional information to address how groundwater and seeps downstream of the breached ponds will be monitored to ensure water quality leaving the site is maintained.

In light of the fact that water quality is such a key component of the remediation at Rocky Flats, it is disappointing to see that groundwater was evaluated in one short paragraph of the EA. Other resources such as socioeconomic considerations, cultural resources, and transportation were given more thorough reviews than groundwater.

Specific Comments

- Please provide the analysis that the agency performed to validate the EA's rationale pertaining to its determination that there would be minimal impact to groundwater.

- Please identify the direct impacts, indirect impacts, and cumulative impacts and the modeling associated with the EA's statement.
- Was this analysis validated and if so, by whom?
- Did the evaluation consider drought years, wet years, floods, and fires?

Section 5.1 of Attachment 2 to RFLMA states:

*If the terminal ponds are removed, new monitoring and compliance points will be designated and will consider groundwater in alluvium."*

In order to make an informed decision on the proposed action and provide suitable comments on the EA, we need additional information to evaluate impacts to groundwater and other environmental media.

Specific Comment

- Please provide the details concerning how the groundwater alluvium was evaluated and how those results will be considered as part of the Points-of-Compliance.
- What will the sampling methodology be for the groundwater alluvium?

**Questions Remain as to Whether or Not Surface Water will be Protected.**

All government agencies and members of the interested public agree that protection of surface water is one of the primary objectives for remedial actions at the site. Due to the life expectancy of the remaining contaminants at the site, Section 2.1 of Attachment 2 to RFLMA states:

*Protection of surface water was a basis for making soil and groundwater response action decisions during the cleanup period so that surface water on-site and leaving the site would be of sufficient quality to support all uses.*  
(Emphasis added.)

The proposed dam breaches will likely increase the risk that water on-site will leave the federal site boundary and not meet the RFLMA regulatory standards. Breaching the dams would clearly increase the potential for uncontrolled releases of contaminated surface water off-site that would negatively impact downstream watersheds and expose downstream communities to additional risks.

Broomfield submits once again that the proposed action is not authorized per the RFLMA. Without the holding ponds, DOE-LM will intentionally be removing the only

control in place to ensure surface water on-site and leaving the site would be of sufficient quality to support all uses.

Specific Comment

- To ensure that the RFLMA is adhered to, please provide DOE-LM's rationale for the assumption that the Draft EA sufficiently evaluates all water quality impacts for the proposed action in order to make a Finding of No Significant Impact (FONSI) and does not warrant an Environmental Impact Statement (EIS).

The existing ponds serve as an early warning that the remedy is functioning as designed. The final Environmental Assessment Comment Response and Finding of "No Significant Impact," dated October 2004, states the following:

*Ponds A-4 and B-5 would be maintained for two reasons. First, these ponds improve water quality by holding the water long enough for suspended solids to settle out. Since these terminal ponds are the largest ponds in their respective drainages, and thereby provide the longest residence times, they provide the most improvement in water quality of any ponds in the existing pond network. The second reason for maintaining the terminal ponds is for flood control. Removing all of the dams and the stormwater protection these ponds provide would change the hydrology of the basin and potentially expose downstream development to increased risk from flood hazards. However, the importance of this second reason for maintaining the terminal ponds may be partially diminished as future runoff volumes from the Site decrease, as discussed below. (Emphasis added.)*

The 2004 EA for the Pond Reconfiguration clearly identifies the need to maintain the terminal ponds to improve water quality. Broomfield also submits that the ponds serve an essential purpose to ensure that the water in the ponds meets RFLMA water quality standards prior to release off-site.

Specific Comments

- What changes have occurred since 2004 to conclude that the remaining dams no longer provide a water quality benefit?
- Please provide the documentation that supports this conclusion.

Table 4-16 of the draft EA provides a summary of analytical results at POEs and Performance Monitoring locations. The average of the data is for October 2005 through 2009. Data when averaged especially over four years can provide us with the average concentration, but we would like to see the highest concentration for each location to determine if compliance would have been met at any single point in time.

Specific Comment

- Please provide in table format, the supporting data for each location and include the highest concentration and the lowest.

The draft EA provided some insight to the peak flow rates in the events of major storm events but leaves several critical questions unanswered.

Specific Comments

- Has sediment transport been modeled with the associated storm events?
- Did Wright Water Engineers, Inc. determine the peak flow in the event of a wildfire with no vegetation as part of the report attached to the EA as Appendix D?
- What would the erosion rates be and would channeling contribute to sediment transport?

The draft EA identifies dam safety as an issue which supports DOE-LM's decision to remove the dams. In Table ES-1 Surface Water Quality, the draft EA states for Surface Water Quality under No Action:

*However, failure of a dam during a flood event would result in higher flood flows downstream and transport and deposition of large quantities of soil from the embankment structure. The remaining dams at the RFS are more than 30 years old.*

We understand that the dams are more than 30 years old. Nevertheless, there are several dams in Colorado that are much older than three decades. Continued operations and maintenance would ensure the safety of the dams. From previous inspections, it appears there were no issues with the dams

Specific Comment

- Please provide information that supports what appears to be DOE-LM's determination that the dams are failing or are suffering from other conditions that would help us make a determination concerning the safety of the dams..

The following statement is included in Table ES-1 for Surface Water Quality under Proposed Action:

*Individual sample results downstream are expected to show increased variability. Data indicate that remedy-related soil and infrastructure removal, revegetation, land configuration, and reduction in runoff would continue to result in water quality summary statistics that meet applicable standards.*

The downstream communities are very concerned about this statement. The Proposed Action is expected to have increased variability yet such changes can result in water quality that exceeds Colorado Water Quality Control Commission (WCCC) Regulation No. 38 that are applicable the downstream watersheds below federally controlled lands.

#### Specific Comments

- Please clarify which sampling results are expected to have increased variability and provide information as to the magnitude, frequency, and basis for calculation that was used to make this conclusion.
- How will the variability be monitored?
- How many data points will be collected and under what site conditions?
- Please provide the information on the application of surface water standards via summary statistics.

#### **DOE-LM Attempts to Justify the Proposed Alternative based on Unsupported Assumptions that Breaching the Dams will Enhance Habitat and Various Ecological Systems.**

The agency has not adequately evaluated the hypothesis that the chosen alternative will enhance or improve habitat and various ecological systems as compared to the current system. DOE-LM has failed to properly support its conclusion that negative impacts are occurring with the present pond system.

The draft EA does not properly assess alleged long-term habitat enhancements. The alleged benefits are theoretically based on the concept of what “*available water allows.*” Numerous references by DOE-LM to water quantity limitations throughout the draft EA and DOE-LM annual reports theoretically support this conclusion.

DOE-LM’s decision to breach all the remaining dams is based on an unsupported theory that the breaches will improve riparian habitat within the COU. The proposed action will not ensure sustainable habitat improvement in the drainages downstream of the existing ponds.

It is optimistic at best to suggest that breaching the dams will establish new and better habitat in downstream drainages. Water quantity limitations, alone, bring this conclusion into question.

Moreover, the draft EA clearly states that the dam breaching **will eliminate 95 percent (14 acres) of open water habitat for 45 species of waterfowl.** Broomfield submits that the theoretical gains in riparian habitat and the species they support would be minimal relative to the proven and admitted loss of open water habitat that will result from the dams being breached.

Specific Comment

- Please provide an analysis of, and the justification for, elimination of 95% of one type of habitat (i.e., open-water habitat) as the proper trade-off for the theoretical potential gain for riparian habitat, particularly in light of the fact that the project site is located in a part of Colorado that is mainly a prairie grassland ecosystem.

The objective of the Proposed Action is to “*preserve and enhance wetlands and habitat to the extent practicable.*” However, the draft EA does not offer any objective criteria for measuring success of the proposed action, nor does the draft EA identify the expected timelines for reaping the theoretical environmental rewards of the proposed action.

Specific Comments

- Please provide the evaluations that DOE-LM prepared to determine the enhancements to, and the viability of, the wetlands.
- Please provide the data to document the negative impacts the current system has on habitat.

Since the ponds are more than 30 years old, Broomfield submits that substantial alterations to the associated ecological systems have already occurred.

Specific Comment

- Please identify how human activities impact the ecosystems and the alterations that such activities have created at the site for the past 30 years.

Establishing the suggested riparian habitat will certainly take many years, during which time the potential for uncontrolled contaminant migration flow off site remains.

Specific Comments

- If contaminants flow offsite, what is the impact to the offsite habitat?
- Have offsite impacts to habitats been evaluated?

**DOE-LM has Not Adequately Evaluated the Impacts to Threatened and Endangered Plant and Wildlife Species.**

The draft EA states that the multi-strata habitat could change the multi-strata riparian woodland/shrubland habitats in Walnut Creek to a single story herbaceous habitat, which would limit the amount of quality habitat for the Preble’s Meadow Jumping Mouse (PMJM). In fact, continued long-term reduction in creek flows below the dams

in Walnut Creek will likely reduce the amount of existing wetland along this reach of creek, which would in turn, reduce available habitat.

Specific Comment

- Please provide us with the agency's assessment of the change in downstream habitat from the original habitat in 1979 as compared to today's habitat.

In addition, because Broomfield augments water for downstream asset holders, Broomfield does not agree with the agency's suggestion that the lower South Platte River species would continue to be impacted by the retention of water upstream of the dams in the No Action Alternative.

Specific Comment

- Please provide a proper assessment of the reduction in wetlands based on the current configuration of wetlands at the site.

**DOE-LM has Failed to Explain the Inconsistencies which have Surfaced in the Draft EA, the Contact Record (CR), and the May 18, 2010 Public Meeting.**

Broomfield is also concerned about the inconsistencies that have surfaced in terms of the details provided in and related to two of the critical documents related to the agency's proposed choice of alternatives (i.e., the draft EA and the CR), as well as the DOE-LM's attempt to explain the proposed dam breaching activities and related operations presented at the public meeting on May 18, 2010. It is impossible to adequately comment on the proposed action when DOE-LM has changed the concept, rationale, and protocols for the breaching of the dams throughout the process.

Specific Comments

- Why is it necessary to collect several years of additional information and data related to habitat development and ecological changes related to the proposed flow-through condition that will be created at the terminal dams in the A and B series, but not at the terminal dam in the C series?
- How can the draft EA properly state that there will be enhanced habitat and ecological conditions that will result from the dam breaches, while simultaneously stating at the May 18, 2010 public meeting that several additional years of information and data compilation will need to be gathered at two of the three terminal dams to determine the exact habitat and ecological conditions which will result from the flow-through conditions?

As justification for breaching the dams for the Present Landfill and Pond C-2 dam in 2011, the draft EA conclusively states, with virtually no explanation or assessment, that there will be minimal change to the habitat for No Name Gulch and Woman Creek.

Without an adequate assessment of this conclusion, it is impossible for Broomfield or any other interested party to understand the need to proceed with the proposed action or the urgency to breach the C-2 dam. DOE-LM, without explanation, is treating two of the terminal dams in the A and B series differently than the C-2 dam.

At the May 18, 2010 public meeting DOE-LM either could not, or simply would not, explain or justify its decision to place the C-2 dam breaching on a different schedule than the breaching for the A-4 and B-5 dams. All three of the terminal ponds are used as the downstream users' last opportunity to determine the quality of water to be released offsite. C-2 receives the run-off water from the 903 Pad, Inner Lip area, Americium area, 881 hillside and the 400 area. All these areas have residual contamination and C-2 captures the surface runoff for this large area. In addition, several trenches remain in the area north of C-2. Elevated readings for uranium have been recorded in this pond, and DOE-LM acknowledges that it is not 100% natural uranium.

Although it is not discussed in the draft EA, the agency has determined that it is necessary to collect several years of additional information related to habitat and ecological system changes by creating a flow-through condition at two of the terminal dams. Broomfield submits that, before DOE-LM breaches any of the terminal dams, the same data and information should be collected over the same period of years for the C-2 terminal dam. There is no justification to treat the C-2 dam any differently than the A-4 and B-5 dams. Once that information is collected for the habitat above and below all three dams, and several years from now, the agency should then assess the need, if any, to suggest breaching of the terminal dams and make that assessment available to the public for review and comment.

Specific Comment

- Why is DOE-LM treating the terminal dams associated with the A- and B- series ponds differently than dam for Pond C-2?
- Please provide the methods of evaluation and basis for success of the proposed flow-through operations.

**The EA Fails to Disclose or Quantify the Fiscal Benefit of the Proposed Action**

It appears the key motive for DOE-LM's proposal is alleged cost savings. As a downstream community, Broomfield reminds DOE-LM that they are responsible for the long-term stewardship of the site for the life of the contaminants left on-site and which, if improperly managed, may move off-site.

### Specific Comments

- Please clarify how DOE-LM determined cost savings associated with the proposed action.
- Provide a comparison of costs against the potential cost for corrective actions to address a release of offsite contamination.
- Has a cost benefit analysis been prepared to make a comparison between the actual cost and increased risk?
- Please provide the following financial information:
  - Annual cost to inspect the dams;
  - Annual cost to draft reports associated with the ponds;
  - Annual cost to perform O&M activities for the ponds;
  - Annual cost for sampling to ensure compliance;
  - The estimated construction costs to breach the dams;
  - The cost saving that would be made if the proposed action is implemented; and
  - A comparison of these dam-related costs to the overall costs of the remedy to date, and as compared to expected future costs for the entire remedy.

### **DOE-LM has Not Identified the Assessments that Need to be Made Related to Sediment/Soil Removal**

Broomfield does not agree sediment from a settling pond should be removed and placed on the site surface without prior characterization. The ponds were clearly identified as IHSSs due to their nature to capture sediment potentially containing radionuclides, heavy metals or other analytes.

### Specific Comments

- When dredging the sediments and soil from the ponds and dams, will any sampling be performed to determine if there are any contaminants in the sediments?

### **Closing Remarks**

In conclusion, Broomfield reiterates that it is too soon to breach the dams. More time is needed for the site to stabilize to develop a proper baseline and then compile data for trending and analysis. DOE-LM has not been able to provide the public with a Contingency Plan to protect downstream communities, and we do not have the details of the proposed relocation of the points-of-compliance. In addition, all three terminal dams should continue to serve as the last line of defense to prevent the movement of contaminated water and/or sediments off-site.

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We would also like to remind DOE-LM that monitoring at A-4, B-5 and C-2 is not a 'feel good' thing as stated at the public meeting on May 18, 2010. These sampling locations are regulatory obligations explicitly identified within the RFLMA. The terminal ponds are currently points-of-compliance and, at one time, the sampling methodology for these terminal ponds was for a 30-day running average.

Broomfield and other downstream communities worked in good faith with DOE-LM to develop and identify the sampling locations and protocols for the site post-closure. Broomfield expects DOE-LM to uphold its obligation to ensure protection of human health and the environment by ensuring it has an effective long-term monitoring and maintenance program.

We look forward to your response to our comments and a future meeting to address your disposition to the comments. We ask that DOE-LM disseminate our comments individually to address each specific concern to reflect due diligence on their part to address our concerns and comments to protect one of our greatest assets, surface water. Finally, we are hopeful that Broomfield and the general public will have an opportunity to review and comment on the additional information requested in this letter before DOE-LM takes any formal action on the Draft EA.

Thank you for the opportunity to provide comments on this important document. If you have any questions regarding our comments on the Draft EA, please contact Ms. Shirley Garcia of my staff at (303) 438-6329.

Sincerely,



Alan King  
Director of Public Works  
City and County of Broomfield

cc: Senator Udall's Office  
Senator Bennett's Office  
Representative Polis' Office  
Dave Geiser, DOE-LM  
Scott Surovchak, DOE-LM  
James Martin, EPA  
Carol Rushin, EPA  
Larry Svoboda, EPA  
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City and County of Broomfield Comments on the Draft Rocky Flats Surface Water  
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May 18, 2010

**RE: Rocky Flats Surface Water Configuration Environmental Assessment**

While the City of Northglenn, a downstream community of 35,000, appreciates the opportunity to comment on this important issue we are deeply disappointed that major changes to the site are being proposed so soon after regulatory closure. Paraphrasing from a DOE Fact Sheet, *Legacy Management refers to all activities necessary to ensure protection of human health and the environment following completion of cleanup, disposal, or stabilization.* Northglenn feels that the proposed changes would not be protective of human health or the environment for the following reasons:

- The proposed breaching of the dams increases the risk of contamination leaving off site. Sediment from the former ponds can be moved downstream during a precipitation event. DOE proposes to establish wetlands to stabilize the soil in the pond footprint. Wetlands can take years to establish, should a large enough precipitation event occur before the wetlands are established, it is almost certain that contaminated sediment would be moved downstream. Northglenn suggests that water levels in the ponds be slowly reduced, allowing time for wetlands to become established prior to breaching the dams.
- Once the dams are breached, water flowing off site can no longer be contained. In the event a water quality standard is violated, there is not way to capture the water. While Northglenn does not border Big Dry Creek, we support protecting citizens from potential health risks.
- The Draft EA states that the dams are no longer needed and breaching would reduce costs and by association taxpayer costs, but no estimates of cost savings were given.
- One final concern, Northglenn can not support the establishment of new surface water monitoring and compliance points due to the absence of a Contingency Plan to ensure downstream surface water quality are protected at all times.

Thank you for your time.

Sincerely,

Susan Clyne, Mayor Pro-tem

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Jefferson County -- Boulder County -- City and County of Broomfield -- City of Arvada -- City of Boulder  
City of Golden -- City of Northglenn -- City of Westminster -- Town of Superior  
League of Women Voters -- Rocky Flats Cold War Museum -- Rocky Flats Homesteaders  
Arthur Widdowfield

April 8, 2010

Mr. Dave Geiser  
Director, Office of Legacy Management  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

Ms. Carol Rushin  
Acting Regional Administrator  
Environmental Protection Agency  
1595 Wynkoop Street  
Denver, CO 80202

Mr. Gary Baughman  
Division Director, Hazardous Materials and Waste Management  
Colorado Department of Public Health and the Environment  
4300 Cherry Creek Drive South  
Denver, CO 80246

## **RE: Rocky Flats Surface Water Configuration Environmental Assessment**

Dear Messrs. Geiser, Baughman, and Ms. Rushin,

As the Department of Energy (DOE)-designated Local Stakeholder Organization for Rocky Flats, the Rocky Flats Stewardship Council is expressing its support of the downstream communities to advocate for the “*No Action*” alternative for the Rocky Flats Surface Water Configuration Environmental Assessment. These downstream communities, collectively representing more than 300,000 residents, have expressed their support for the “*No Action*” alternative by sending letters to DOE this past February 2010.

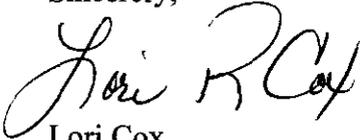
The communities favor the “*No Action*” alternative primarily based on two concerns: 1) uncertainties resulting from an insufficient post-closure period of record for assessing hydrologic conditions at the site, and 2) the inability to fully evaluate the effectiveness of the remedy due to

the ongoing construction activities, recent operational changes, and future plans for phased modifications at landfills and groundwater treatment systems.

In addition, we request that DOE host a formal public meeting on the Rocky Flats Surface Water Configuration Environmental Assessment within the first two weeks after the document is published for the mandatory thirty-day public comment period.

We appreciate the opportunity to comment on this important issue and provide support for the downstream users who could be impacted by the proposed federal actions.

Sincerely,

A handwritten signature in black ink, appearing to read "Lori Cox". The signature is written in a cursive, flowing style.

Lori Cox  
Chair

- cc: Ray Plienness, DOE  
Scott Surovchak, DOE  
Vera Moritz, EPA  
Joe Schieffelin, CDPHE  
Carl Spreng, CDPHE  
Steve Berendzen, USFWS



*Woman Creek Reservoir Authority*

*4800 W. 92<sup>nd</sup> Avenue  
Westminster, Colorado 80031  
Phone (303) 658-2180  
FAX (303) 706-3927*

---

May 28, 2010

*Via Email and U.S. Mail*

Attn: Comments  
Rocky Flats Surface Water Configuration EA  
11025 Dover Street  
Suite 1000  
Westminster 80021

Re: Comments on the Draft Rocky Flats Surface Water Configuration Environmental Assessment

To Whom It May Concern:

I am writing on behalf of the Woman Creek Reservoir Authority (the "Authority"), a political subdivision and public corporation of the State of Colorado created under C.R.S. § 29-1-204.2. The Authority is the owner and operator of Woman Creek Reservoir generally located at the intersection of Woman Creek and Indiana Street, immediately adjacent to the historical boundaries of what has been formerly known as the Rocky Flats Plant Buffer Zone. I am writing to provide comments on the April 2010 Draft "Rocky Flats Surface Water Configuration Environmental Assessment" on behalf of the Authority.

The Authority incorporates by reference the comments contained in its February 11, 2010, letter. A copy of that letter is attached. In addition, the Authority states as follows:

1. The Authority strongly prefers a "No Action" decision. The "alternative" of breaching the five dams and the resulting flow of water and sediments from the existing ponds is simply unacceptable to the Authority. Under this alternative, there would be a permanent loss of any DOE control of water in the watersheds. Simply walking away from any long term stewardship obligations associated with the 5 ponds is inappropriate at this time and cannot constitute a viable "alternative", nor can it be justified in the name of alleged water quality, riparian or wetland improvements.

2. The A, B and C series ponds were constructed, in part, to allow contaminated sediments to settle out of the water column before the surface water was discharged offsite. These ponds currently serve as a last measure of on-site protection for the downstream communities to prevent offsite migration of contaminants. These terminal ponds are also points of compliance under the Rocky Flats Legacy Management Agreement ("RFLMA"). Breaching the relevant dams would eliminate the inherent protections to the downstream communities. DOE has not provided any documentation in the EA to address sediment mobility concerns. The potential costs associated with cleanup of mobile sediment should be factored into any cost saving determination advanced by DOE.

3. The current DOE effort to breach the dams appears to be motivated more by a desire to reduce DOE dam liabilities and operational costs, rather than any supportable environmental benefit. In public meetings, DOE has stated that breaching the dams will save “24 million dollars over a 75 year period.” Nothing in the EA provides any support for these figures. DOE must provide a detailed breakdown of support for these figures, including, but not limited to, an appropriate estimate of costs and liability if contaminated water and/or sediments leaves federally controlled property. It is inappropriate for DOE to rely on cost savings as a rationale for dam breaching under the EA without including the cost saving data in the EA itself. At a minimum, the EA needs to be supplemented with detailed cost saving information as to each of the terminal ponds and circulated for additional public comment.

4. At a public meeting, DOE rationalized, in part, the alternative of dam breaching by pointing to ongoing evaporation concerns. Those concerns, however, will be addressed by the currently pending plan for augmentation filed by DOE in Colorado Water Court – Water Division No. 1. In Case No. 08CW002, DOE has already taken steps to address the current level of evaporation from the terminal ponds. Upon issuance of a decree in Water Court, those concerns will be addressed on a permanent basis. During the pendency of that case, on information and belief, DOE has obtained a valid Substitute Supply Plan to address evaporative losses until such time as a final decree issues in Water Court. In short, DOE is already addressing evaporative loss issues.

5. The Authority wants specific assurances from DOE and the relevant regulators that a “breach” or any other “alternative” considered in this process does not include or constitute a relaxation, movement, change or re-visitation of DOE’s ongoing obligations for operation and monitoring of the Indiana Street Point of Compliance in the future. DOE must continue to monitor water quality at the Indiana Street Point of Compliance indefinitely. Any attempt to relax or move the point of compliance would constitute a major change to the RFLMA and would be inconsistent with DOE’s existing agreements with the Authority. The Authority wants written assurances that any such activity is not contemplated under the current proposal.

6. Pond C-2 is the only remaining on-site detention facility in the Woman Creek basin. It contains sediments from the days when DOE actively conducted nuclear activities at the Site and, to this day, still collects runoff from a portion of the industrial zone via the South Interceptor Ditch. At a minimum, continued maintenance of Pond C-2 is critical to the protection of Woman Creek flows. As such, an alternative should be analyzed that at least maintains a viable dam and appropriate water quality testing at Pond C-2. The water quality testing that currently occurs at Pond C-2 prior to any release would presumably be eliminated if the dam is breached. This water quality testing is critical to the interests of the Authority and serves as an additional assurance that the water released to Woman Creek is of an acceptable quality.

7. DOE failed to consider the Authority’s suggested alternative in the EA. The Authority suggested that DOE should consider a breach of Pond C-2 in 10 years, 25 years or 50 years as separate alternatives. This would allow a meaningful analysis of flow regime in Woman Creek during both extended wet and dry year cycles. Moreover, before any breach under these types of approaches is authorized, it would be essential for a full suite of independent testing of the sediments in Pond C-2 to occur that demonstrates that the sediments released by a breach of the dam do not negatively impact Woman Creek and the related environment and ecology. An

extended delay of any breach event coupled with sediment testing should be considered as an alternative to simply breaching the dams in the next year as proposed by DOE. These alternatives need to be fully analyzed in the EA, not simply ignored and justified as a no action alternative. These were not a “no action” alternatives, but rather specific alternatives for dam breaching at different times to allow for additional data collection.

8. DOE has suggested that different timing of dam breaching occur to allow for additional collection of data. DOE has failed to explain why Pond C-2 is treated differently than the other terminal ponds. The Authority prefers a no action alternative. To the extent that DOE goes forward with dam breaching, however, it would be appropriate to operate all the terminal in a flow through approach to collect more data. Under this approach, the outlet works for Pond C-2 would be opened so as to operate as a flow through system. Testing would be maintained at both the outlet and at the Indiana Street Point of Compliance. To the extent a relevant standard is exceeded at either point of compliance, the outlet could be shut to retain any remaining contaminated water on site until such time as DOE can adequately address the exceedance. This allows DOE to maintain some level of ability to retain contaminated water on-site.

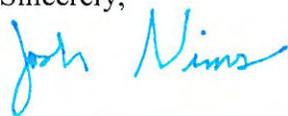
DOE argues that any such contamination is unlikely, but this approach allows for some level of protection to downstream entities if DOE’s assurances of no exceedances proves inaccurate. It also allows DOE to obtain additional data on the flow regime on Woman Creek in both extended wet and dry year cycles to justify additional action in the future. To the extent DOE’s assurances are accurate and no future exceedances occur, the DOE will have minimized evaporation issues associated with a flow through pond and furthered its stated goal of wetlands and riparian improvements, yet maintained the ability to retain water on-site, if necessary in the future. To the extent DOE claims a lack of cost reduction related to dam monitoring and repairs associated with this approach, it must provide a detailed cost analysis specific to costs associated with operating and maintaining Pond C-2.

9. DOE has claimed that it will operate some of the terminal ponds in a flow through manner to obtain additional necessary data prior to final breach. The Authority believes this need for additional data, in and of itself, precludes DOE’s ability to issue a Finding of No Significant Impact in this instance. It is inappropriate to make a determination of no significant impact when all of the data required to support the decision are not, as yet, collected.

10. If Pond C-2 is breached, DOE must be required to maintain long term monitoring of Woman Creek flows at the Indiana Street Point of Compliance in perpetuity and sediment testing prior to any such breach. As indicated above, the Authority strongly prefers a “No Action” determination. In the worst case scenario, however, a breach upon demonstration that the released sediments pose no undue risks coupled with a perpetual monitoring requirement at the Indiana Street Point of Compliance would be better than a simple breach alternative.

11. The Authority joins in the comments submitted by the City and County of Broomfield, and the Cities of Northglenn and Westminster to the EA.

Sincerely,



Josh Nims  
President  
Woman Creek Reservoir Authority

cc: Shelley Stanley, Woman Creek Reservoir Authority Board  
Ed Lanyon, Woman Creek Reservoir Authority Board  
Mike Smith, City of Westminster  
David Willett, City of Northglenn  
Bud Elliot, City of Thornton  
David Allen, City and County of Broomfield  
Shirley Garcia, City and County of Broomfield  
Ray Plienus, DOE-Legacy Management  
Scott Surovchak, DOE-Legacy Management  
Dave Geiser, DOE-Legacy Management  
Vera Moritz, Environmental Protection Agency  
Carol Rushin, Environmental Protection Agency  
Carl Spreng, Colorado Department of Public Health and Environment  
Joe Schieffelin, Colorado Department of Public Health and Environment  
Steve Berendzen, US Fish & Wildlife Service  
Rocky Flats Stewardship Council

Feds want to breach Rocky Flats dams\_buchanan  
From: Portia D Buchanan  
Sent: Monday, May 31, 2010 11:44 PM  
To: RFIInfo  
Subject: Feds want to breach Rocky Flats dams

I am responding to the above (subject) article from BROOMFIELD ENTERPRISE, Sunday, May, 23, 2010.  
Under no circumstances should the DOE, breach the dams, at Rocky Flats. They must find a safer water supply to restore the wetlands and riparian habitat. URANIUM238 has a half life of 4.5 billion years, i.e, URANIUM235 i.e, URANIUM.  
Around 5 years ago, an unidentifiable person, who worked on the clean up of Rocky Flats, said that Rocky Flats will NEVER BE SAFE!!!!!!!  
The elements of RADIOACTIVE CONTAMINATION would be detrimental, given the fact, URANIUM238 HAS A HALF LIFE OF 4.5 billion years!!  
Portia Buchanan

RF EA Comments from James Campbell MD

From: James Campbell  
Sent: Tuesday, June 01, 2010 11:33 PM  
To: RFInfo  
Cc: info@rockyflatssc.org  
Subject: RF EA Comments from James Campbell, MD

To whom It May Concern:

I am writing to register my concerns about proposed changes in the management of surface water flows at the Rocky Flats Site. I submit these comment in response to the request for public commentary as outlined in the Department of Energy Office of Legacy Management's (OLM) publication entitled "Notification of Availability and Request for Public Review and Comments on the Draft Rocky Flats Surface Water Configuration Environmental Assessment (EA)" dated April 30th, 2010.

I write both as a resident of and a community pediatrician. Living about 3 miles from the Rocky Flats Site, I have had a keen and long-standing interest in the remediation process there, attending many public meetings on this subject since 2004. My wife and I are raising our two healthy children in a neighborhood which is often directly downwind of the site and I have numerous patients living on all sides of the site. I have taken the time to read the entire DOE EA draft statement which proposes to breach the dams retaining surface water in the A3, A4, B5, and C2 ponds and I did attend the recent OLM May 18th meeting which provided a public overview of the same plan. Additionally, I am thankful to multiple staff members of S.M. Stoller who were kind and patient enough in the days after the meeting to field my questions about the proposed changes as well as review for me the current practices of monitoring surface and ground water at the site.

After learning more about the proposed changes, I do remain concerned that breaching the dams constitutes a relatively irreversible loss of potential containment for contaminated surface water leaving the site. In short, I submit that the dams should be maintained and not breached.

While the present system of periodic release of batched pond water is no guarantee that surface water will be confirmed as meeting specification before leaving the site (e.g. the recent emergency release at the B5 Pond in Spring of 2010), it is true that the current ability to retain water in the ponds does represent an important line of defense against the vast majority of unforeseen releases of contaminated surface water in the future. The current site, even post-remediation, still represents an enormously complex and dynamic system of ongoing cleanup tasks (e.g. volatile organic compound (VOC) degradation) and monitoring of contaminants (e.g. surveillance of radionuclide levels in surface water effluent). Given the great deal of work done to clean up the site and continually monitor it, we may hope with some degree of confidence that there will not be unexpected contaminant releases from the site in the future, but it would be untenable to project that the dynamic migrations of ground and surface water through this intricately and highly contaminated site will never change in unpredicted ways. It is important for any public review to recall that the Rocky Flats cleanup agreement achieved higher standards for surface soil remediation by allowing for retention of many original Rocky Flats structures underground. Additionally, while there is diligent attention currently focused on the current system for remediation and monitoring of underground VOC plumes, this too can be a tricky business, prone to unanticipated events over the coming years and decades.

RF EA Comments from James Campbell MD

One of the most important elements of public input in achieving the cleanup of the site was the collective work done by the Rocky Flats Citizen's Advisory Board (CAB). At the conclusion of the cleanup, the board published a summary of their long term recommendations for ensuring the best stewardship of the site over the many years to come. This work was entitled "Our Legacy Report to the Community" and its final recommendations focused specifically on the critical need to maintain the highest standards of water quality surveillance. (The report is archived and easily accessed through the Rocky Flats Stewardship Council website [www.rockyflatssc.org](http://www.rockyflatssc.org).)

Notably, the report states: "water Quality will be a significant measure of the site's cleanup. Historically, water quality problems have occurred at Rocky Flats during periods of increased precipitation and run-off. Although surface water quality as it leaves the site has always remained below regulatory limits, there have been some instances, as late as 2005, where onsite water quality has exceeded state standards for plutonium, uranium, and americium. This water is collected in onsite ponds and tested before it is released to streams that travel offsite... The board advises that site neighbors and other interested community members pay particular attention to the surface water monitoring program for the foreseeable future."

This expert recommendation represents the culmination of 13 years of dedicated service by the men and women of the Citizen's advisory board and constitutes a warning for all parties interested in the future of Rocky Flats to maintain the highest reasonable standards for monitoring the site's surface water quality as a means of monitoring the fitness of the entire site in the coming post-cleanup decades. Breaching the dams diminishes our ability to characterize and control effluent releases of surface water from the site and consequently should be viewed with great caution and avoided. While maintaining the current system of retention ponds at the site is not without difficulty and expense, it does constitute a better and safer alternative than free unregulated flow of surface water off the site via breached dams.

I appreciate the opportunity to offer comments on the draft EA statement and I can be reached at my Denver West Pediatrics office at (303) 216-0333.

James Campbell, MD, MS

Fellow of the American Academy of Pediatrics

Denver West Pediatrics, P.C.

Cc: Rocky Flats Stewardship Council

Public Comment on Rocky Flats Surface Water Configuration EA\_davies  
From: Morgan Davies [  
Sent: Friday, May 28, 2010 11:28 AM  
To: RFIInfo  
Subject: Public Comment on Rocky Flats Surface Water Configuration EA

To Whom It May Concern:

I am a masters student in the Environmental Science department at Colorado School of Mines and a resident of Rocky Flats. I recently reviewed the Rocky Flats Surface Water Configuration Environmental Assessment Draft from April 2010. I am concerned that the EA does not discuss the potential mobilization of radionuclides from the sediment as a result of the breaching of the dams. The draft EA mentions but does not review the pertinent elements of the "Erosion Control Plan for Rocky Flats Property Central Operable Unit July 2007". The erosion control plan states that "no grading, excavation, digging, tilling, or other disturbance of any kind of surface soils is permitted, except in accordance with an erosion control plan approved by CDPHE or EPA". One of my principal concerns is the mobilization of radionuclides as a result of increased erosion from the banks of the creeks. The erosion control plan notes that plutonium 239/240 could reach surface water as the result of disturbance of the surface soils.

It is my understanding that breaching the dams will result in increased flow in the creeks and erosion during major storm events. I am also concerned that by breaching the dams the ability to measure and mitigate pollution from storm water runoff will be inhibited. After reading the erosion control plan, it seemed that performing batch and release management of the waters was inherent to ensuring that there were no significant releases of radionuclides as a result of storm water runoff.

I would also like to call your attention to section 7.1 of the erosion control plan which states that it is important to "minimize the project activities in wet areas and wet conditions to avoid damage to the Preble's mouse habitat." I understand that one objective of the breaching of the dams is to improve the Preble's mouse habitat, but I am concerned that the construction activities could have detrimental affects to critical habitat for the Preble's mouse.

Thank you for your attention in this matter.

Sincerely,

Morgan Davies

Rocky Flats EA Comments  
 11025 Dover St., Suite 1000  
 Westminster, Co 80021  
 Scott Surovchak, DOE Rocky Flats Site Manager

May 25, 2010

This letter is to serve as public comment prepared by Mickey Harlow, on the **Draft Rocky Flats Surface Water Configuration Environmental Assessment (EA)**.

This EA evaluates impacts related to breaching dams and restoring approximate stream configuration for creeks traversing the Rocky Flats Site. The EA asserts that the dams hold surface water in retention ponds that are no longer necessary to site operations.

**QUESTION:** The Rocky Flats Site Regulatory Contact Record indicates that DOE requested Approval of Excavation Greater than 3 Feet below Grade to Breach Dams, A-3, A-4, B-5, C-2 and the Present Landfill Dam and the **Contact Record was approved on April 15, 2010** by CDPHE. Carl Spreng, CDPHE, maintains that the contact record approval does not allow DOE to remove the ponds. However, would it not have been more appropriate to include this request as part of the EA and obtain public approval of this action? Breaching the dams, restoring stream configuration, and removing ponds are linked.

**I support the no action alternative.** Operation and maintenance of the dams and necessary structures must be continued until DOE can prove that the selected closure remedies are operating efficiently and that the cracking and sloughing in the Original Landfill Site in the Woman Creek drainage is no longer occurring. Additional peizometers need to be added to this hillside and movement monitored for at least ten additional years. The additional movement monitors were requested by Councilor Lisa Morzel, City of Boulder, Secretary and City elected representative of the Rocky Flats Stewardship Council.

The remedy for the solar ponds has failed miserably to this point. DOE has not been able to meet the stream standard, which is also a drinking water standard, for nitrates in Walnut Creek. This remedy needs to be proven for at least five years.

1. Without the dams, sedimentation will not occur. Although DOE has not mentioned the initial purpose of the dams citing that they were needed during operations, one must assume that they were used to settle out site surface contamination during runoff and storm events.
2. The ponds are the only protection and early warning that the downwind communities have that the remedy's constructed during cleanup are working. Over time it is expected that contamination will surface either through, wind, erosion, burrowing animals or an earthquake. DOE cannot just consider \$\$\$\$. Human health must also be considered.
3. LM has instructed DOE to ensure protection of human health and the environment through effective long-term stewardship of land, structures and facilities. DOE has further been instructed to be responsible for the cost-effective management of this directive. DOE knew that the dams were 30 years old when they supported Kaiser-Hill closure of the site and accepted the liability for cleanup. DOE has not effectively demonstrated that they can currently meet the requirements set forth by LM for long-term stewardship.
4. A complete 5 year CERCLA review cycle has not occurred since regulatory closure.
5. A sufficient number of dry, normal and wet hydrological cycles have not occurred.
6. Monitoring results since closure have not been consistent and cannot be used to determine baseline conditions.

7. Additional soil samples of the sediments behind the ponds needs to be completed to determine if further changes to the remedy are required.
8. In the event of large storm event at the site, the stream beds and sides will be eroded how does DOE plan to ensure the stream beds erosion of banks is repaired? Isn't another Institutional control required?

**I Understand that:**

1. Surface water retention is not required at RFS and the dams are not a functional part of the final CAD/ROD remedy.
2. The dams are not required to maintain adequate protection of human health and the environment under the final CAD/ROD.
3. However, Activities proposed in this EA do not fall within the scope of CAD/ROD or FONSI under the Environmental Assessment Comment Response and Finding of No Significant Impact, pond and Land Configuration (DOE 2004). The 2004 EA only considered alternatives related to breaching dams in North and South Walnut Creek upstream of ponds A-4 and B-5. The breaching of all remaining dams, including cumulative impacts was not addressed. This EA evaluates the direct, indirect and cumulative impacts of breaching the remaining dams

**I have come to the conclusion that the DOE purpose for breaching the dams, moving the POC's, and supporting flow through for all site streams are:**

1. To reduce and eliminate the inspection and reporting costs associated with meeting dam safety requirements.
2. The management and maintenance costs for upkeep of the dams.
3. Breaching the dams will reduce the Rocky Flats management efforts related to the continuous determination of evaporative depletion's while also reducing the costs to water rights holders responsible for downstream augmentation replacements.
4. Costs to downwind residents and local governments from windblown contamination have not been taken into consideration.

**The Draft Environmental Assessment lacks Important Details**

1. What are the costs required for the inspection, maintenance, sampling, water purchases from Broomfield that are referred to in this document? Page 1-2 states that the ponds in both Walnut and Woman Creek are only discharged 0 to 2 times a year.
2. DOE has undertaken sampling of the Original Landfill in order to shorten the 30 year post-closure care period. There is no mention of this in the draft EA. What is the outcome of this sampling? The Rocky Flats Site Regulatory Contact Record dated 2010-01 discusses the Targeted soil sampling at the Original Landfill to evaluate residual contamination levels in relation to the CDPHE August 2008 Policy, End of Post Closure Care. Contact Record approval was given as January 20, 2010. The OLF was closed in accordance with the March 10, 2005 Final Interim Measure/Interim Remedial Action for the Original Landfill. Under the Colorado Hazardous Waste Act, regulatory requirements, the generally applicable post-closure care period is 30 years, but this period may be shortened or extended. Has DOE been successful in shortening this time period?
3. Section 3.1.1 The average construction duration for dam breaching at each structure is approximately 11 weeks why are 14 vehicles required on the site. Why does C-2 require more

- area of disturbance lay down and road area than the other dam sites? Where is the lay down area in location to the drainage?
4. Where will the earth removed be stockpiled? Will protection from storm events be provided to the stockpile? Will the removed soil be sampled? What are the locations that will receive the infill? DOE states that the excavated soil from the breach channel will fill predefined fill areas. These areas need to be detailed in this EA. Where will be the piping etc. removed from the dam sites be stored and disposed? Does DOE assume that this removed equipment will be free from contamination?
  5. The channel bottom and side slopes are to be armored as need to resist future erosion. Armored with what? What is the life expectancy of the armor? Doesn't this require another institutional control?
  6. The channel bottom and side slopes are to be armored as need to resist future erosion. Armored with what? What is the life expectancy of the armor? Doesn't this require another institutional control?

#### **My Issues with the closure of the original Landfill in the Woman Creek drainage**

1. I am amazed that the decision was made by EPA, CDPHE to support of closure of the landfill as a CERCLA Municipal Landfill Presumptive Remedy to Military Landfills. The Original Landfill was not a municipal or military landfill. There were no environmental regulations at the site during its early operations. Everything was dumped into that landfill. I am also aware that classified shapes turned up in the original landfill during the late 1990's.

*Records detailing the waste that was put into this landfill are not available. Many important DOE documents related to site operations have been misplaced or destroyed. I base this observation on my work as Rocky Flats Coordinator for the City of Westminster during cleanup and closure of the Site. As co-chair of the Soil Action Level Oversight Panel I was made painfully aware of how difficult it would become to select a soil action level that was protective of human health and the environment due to the lack of background documents and sampling records that would have been very helpful in determining the extent of radionuclide contamination.*

The Rocky Flats Site Regulatory Contact Record dated 2010-01 states that the OLF's historical use is typical of solid waste dumps of the time and the wastes disposed of were plant trash and construction debris that based on sampling likely contained some chemical that subsequently were regulated as CERCLA hazardous substances.

The document further states that the OLF was not a radioactive contaminated waste disposal area. However, there is a documented instance of placing a smoldering depleted uranium slab in the OLF to allow it to "burn out". When the burned slab was recovered not all of the DU mass was recovered. Surface soil monitoring at the site also located several hot spots. Before the soil cover was place on the OLF, the hot spots were removed.

The OLF IM/IMRA contains environmental media, analytical results, including results from 57 surface soil locations and 22 subsurface soils (to bedrock) borehole locations. The OLF has never been tested for Thorium which was used at the site during its early history. It was used in three buildings on site. Thorium compounds were used in analytical procedures and development programs.

## LANDFILL REVIEW

A review of the Original Landfill Closure at RFETS by Stephen Dwyer, PhD, PE dated January 28, 2005 indicates that the remedy selected was a quick, cheap solution to a very complex landfill that poses significant environmental problems and consequences. VOC's, SVOC's metals, rads such as uranium and plutonium have been identified at or near the site.

Groundwater passes through the subsurface waste while surface water passes over the OLF. The cover is not designed to minimize percolation through it into the underlying waste. There is no means to prevent biointrusion. Without the presence of a biointrusion layer burrowing animals will continue to surface. Plants can bring many of these contaminants to the surface and contamination can be blown away and spread, washed away by surface runoff or ingested by fauna. No peziometers installed the length of the hillside where the OLF is located to determine the extent of erosion and sloughing. Plutonium uptake by tumbleweeds at the Hanford Site, Washington State (EPA 1991) is a perfect example of this.

### Pond C-2

Access to pond C-2 is on the east side of the Refuge (Indiana Street) and via existing dirt roads east and south of C-2. Does the expansion of the Northwest Parkway in the 300ft right of way given for Indiana roadway expansion in the Wildlife Refuge Bill have a bearing on DOE decision to remove the dam at C-2?

DOE states that since 1989 and 1991 inventories, the areas adjacent to the retention ponds have been minimally disturbed, with the exception of removing sediment from the bottom of the PLF Pond during construction of the nearby landfill; outlet works upgrades to the ponds, spillway repair and occasional sampling of sediment from the other ponds. With these exceptions no surface-disturbing activities have occurred during the past 20 years. For this reason DOE believes that the 1989 and 1991 inventories remain applicable and have no effect. The pond soils should be sampled prior to removal of any soil to ensure that radionuclide contamination has not settled out in the sediments during cleanup and post closure.

### Table 1, Resource-Specific Consequence and Mitigation

#### Impacts to Wildlife

Restore a more natural, seasonally variable flow system to provide more consistent water for downstream habitat. Next bullet states that the action will eliminate surface water habitat for species and restore a more seasonally variable flow system to provide more consistent water for downstream habitat. Conflicting statements.

**Page 4-6 second paragraph.** The ponds located in the project areas are used by waterfowl and shorebirds as breeding habitat or feeding areas. Isn't this habitat part of a Wildlife Refuge?

US Fish and Wildlife has not designated critical habitat for the Prebles Mouse. According to Fish and Wildlife an amendment to the Programmatic Biological Assessment will be written to address impacts from this project. An amendment to the PBA would be written to address impacts from this project. USFWS would then respond with either a BO or letter for the amendment. Fish and Wildlife should designate the critical habit for the Prebles Mouse before this project begins not afterward.

Breaching the dams would result in an estimated 95 percent reduction of available open surface water area at the RFS that is utilized by a variety of ducks and other avian species. There would be a reduction

in the abundance of fish, aquatic species such as fish, frogs, or turtles which live in and around the ponds may not be able to relocate prior to dewatering actions. It would seem appropriate to maintain habitat for these species. Does Fish and Wildlife concur?

### **Surface Water flow**

Section 4.3.4.2 Wetlands...The table in this section lists the existing pond wetlands/open water summary. However DOE states small difference from the 1994 USACOE wetland delineation may currently exist at the remaining ponds due to the changes in environmental conditions. Therefore the extent of wetland mapping as delineated by USACOE site closure activities result in disturbances to wetlands. The values listed may no longer be accurate due to changes in the environmental conditions between 1994 and present. The 2009 wetland mitigation monitoring report submitted to EPA shows no changes in wetland acreage for C-2 or the other ponds only the Primary landfill pond is noted. An increase in wetlands from removing the ponds and allowing flow through will not occur.

Page vii of the document states that "the contribution of water to Woman Creek resulting from the infrequent releases from Pond C-2 is minimal due to the relatively small drainage basin area (South Interceptor Ditch basin) tributary to Pond C-2."

Based on the above information why is it necessary to eliminate C-2 Pond?

### **Work to be completed**

Section 3.1.1 The average construction duration for dam breaching at each structure is approximately 11 weeks why are 14 vehicles required on the site. Why does C-2 require more area of disturbance lay down and road area than the other dam sites? Where is the lay down area in location to the drainage? This information should be included in the EA.

1. Where will the earth removed be stockpiled?
2. Will protection from storm events be provided to the stockpile?
3. Will the removed soil be sampled?
4. What are the locations that will receive the infill? DOE states that the excavated soil from the breach channel will fill predefined fill areas. These areas need to be detailed in this EA.
5. Where will be the piping etc. removed from the dam sites be stored and disposed? Does DOE assume that this removed equipment will be free from contamination?

The channel bottom and side slopes are to be armored as need to resist future erosion. Armored with what? What is the life expectancy of the armor? Dosen't this require another institutional control?

Thank you for the opportunity to provide my comments on this draft EA.

Mary (Mickey) Harlow, Citizen, City of

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**From:** MacCabe Family  
**Sent:** Thursday, May 27, 2010 1:35 PM  
**To:** RFInfo  
**Subject:** Don't breach dams at Rocky Flats

Please don't breach the dams at Rocky Flats! They were put their for our protection and need to stay in place. Please, please don't breach them!

Sincerely,  
Gail MacCabe

**Darr, Bob**

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**From:** LeRoy Moore [leroymoore@earthlink.net]  
**Sent:** Wednesday, May 19, 2010 6:53 PM  
**To:** Surovchak, Scott; Darr, Bob  
**Cc:** Carl Spreng; EPA RF

Rocky Mountain Peace and Justice Center  
P. O. Box 1156, Boulder, CO 80306 USA 303-444-6981 Fax 720-565-9755 www.rmpjc.org

May 19, 2010

To: Mr. Scott Surovchak,  
DOE Office of Legacy Management Rocky Flats Site  
11025 Dover St., Suite 1000  
Westminster, CO 80021-5573  
From: LeRoy Moore, Ph.D.  
Re: Draft Rocky Flats Surface Water Configuration Environmental Assessment

Thank you for the opportunity to comment on this Draft EA. What purpose is served by seeking public comment on a matter to which the regulators, EPA and CDPHE, have already given approval?

I nevertheless wish to raise one issue that evidently has not been raised by others. The Rocky Flats site was remediated to a graduated set of Radionuclide Soil Action Levels for plutonium/americiium for which the strictest level was 50 picocuries per gram of soil (50 pCi/g) for the top 3 feet of soil. A study done as part of the multi-year Actinide Migration Evaluation concluded that cleaning the Rocky Flats site to an RSAL of 10 pCi/g would not guarantee meeting the 0.15 pCi/L surface water standard for areas downstream of the 903 Pad (Kaiser-Hill, Report on Soil Erosion and Surface Water Sediment Transport Modeling for the Actinide Migration Evaluations at the Rocky Flats Environmental Technology Site [RF-00015], February 2001). This report underscored uncertainties regarding conditions at the site vis-à-vis the surface water standard. I am not aware that any further work of the AME or any other body refuted the conclusion of this report. I believe that it referred only to the Woman Creek watershed.

In 2004 there were reports that the surface water standard was twice exceeded not in Woman Creek but in Walnut Creek. CDPHE, I'm sure, could readily provide the records. The source of these exceedances, as I recall, was never identified. Is it not likely that such exceedances will occur again, especially in Woman Creek? If the holding-pond dams are breached, will exceedances be detected? If so, will there be any way to prevent the contaminated water from moving off the site? The Draft EA nowhere considers the issues posed by the referenced K-H report or the esceedances documented in 2004.

Cc: Carl Spreng, CDPHE  
Vera Moritz, EPA  
Rocky Flats Stewardship Council

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LeRoy Moore, Ph.D.  
Rocky Mountain Peace and Justice Center  
P. O. Box 1156, Boulder, Colorado 80306-1156 USA E-mail address: leroymoore@earthlink.net



## WESTMINSTER

June 1, 2010

*Sent via Email to [rinfo@lm.doe.gov](mailto:rinfo@lm.doe.gov)*

City of Westminster  
Office of the  
City Manager

4800 West 92nd Avenue  
Westminster, Colorado  
80031

303-658-2400  
FAX 303-706-3921

Mr. Ray Plienness  
Director of Site Operations  
Department of Energy, Office of Legacy Management  
2597 B ¾ Road  
Grand Junction, Colorado 81503

RE: Draft Rocky Flats Surface Water Configuration Environmental Assessment, dated April 2010

Dear Mr. Plienness:

The City of Westminster appreciates the opportunity to provide comment on the National Environmental Policy Act (NEPA) Environmental Assessment (EA) prepared by the Department of Energy (DOE) Office of Legacy Management, titled *Rocky Flats Surface Water Configuration Environmental Assessment, Draft*, April 2010. The EA states in the Executive Summary:

*The purpose of the Proposed Action is to reduce or eliminate the retention of surface water to return the RFS surface water flow configuration to the approximate conditions existing prior to construction of the dams.*

The City of Westminster advocates the “**No Action**” EA alternative and provides supporting evidence herein to refute assertions in the EA that minimize or dismiss the significance of potential impacts to identified resources. In addition, the City identifies in its comments additional resource impacts that were omitted from evaluation in the EA.

### Institutional Controls

Westminster contends the EA Proposed Action violates the Institutional Controls for the Central Operating Unit (COU) as detailed in Rocky Flats Legacy Management Agreement (RFLMA) Attachment 2, Table 4, February 2007. Use Restriction Control # 2 states: “*Excavation, drilling and other intrusive activities below a depth of three feet are prohibited, except for remedy-related purposes and routine or emergency maintenance of existing utility easements, in accordance with pre-approved procedures.*” Based on the purpose of the EA stated above, excavation for breaching the dams under this EA would be in violation of Institutional Control # 2. The Use Restrictions are legally enforceable requirements placed upon the property owner under the Environmental Covenant granted to Colorado Department of Public Health and Environment by DOE and filed with Jefferson County in 2006.



The Colorado Department of Public Health and Environment (CDPHE) granted approval of Contact Record (CR) 2010-02 titled *Approval of Excavation Greater Than 3 Feet Below Grade to Breach Dams A-3, A-4, B-5, C-2 and the Present Landfill Dam* on April 15, 2010. The CR details plans for the Surface Water EA that was not released for public comment until April 30, 2010. The Rocky Flats Operations Guide, Appendix F, *Rocky Flats Site Soil Disturbance Evaluation Procedure* assumes excavation below the three foot depth only requires compliance with a soil erosion control protocol. The requirement for an erosion control plan, while applicable to this project, is not the regulatory compliance document required to perform excavation at depths below three feet for non-remedy related purposes.

The EA and CR 2010-02 fail to recognize that the Proposed Action violates Institutional Control # 2 because the Proposed Action is not remedy-related. The Corrective Action Decision/Record of Decision (CAD/ROD) states and The Rocky Flats Site Operations Guide - Appendix F reiterates the objective and rationale for prohibiting non-remedy related activities in the COU as stated for Institutional Control # 2:

*Objective: prevent unacceptable exposure to residual subsurface contamination. Rationale: Contaminated structures, such as building basements, exist in certain areas of the Central OU, and the CRA did not evaluate the risks posed by exposure to this residual contamination. Thus, this restriction eliminates the possibility of unacceptable exposures. Additionally, it prevents damage to subsurface engineered components of the remedy.*

The CAD/ROD states “*These controls will extend throughout the Central OU*” and “*will run with the Property in perpetuity and be binding on DOE and all parties having any right, title or interest in the Property*”. Westminster contends that the excavation activities proposed in CR 2010-02, for consideration based on results of the EA, violate Institutional Control # 2.

#### Habitat

The City of Westminster is located directly east of the Rocky Flats Site (RFS) adjacent to Indiana Street along the eastern boundary of the federal property. Surface water flows in Woman Creek leaving the RFS bypass the City’s drinking water supply in Standley Lake by means of the facilities constructed and operated under the Standley Lake Protection Project; however, Walnut Creek flows that bypass Great Western Reservoir flow through portions of the City to Big Dry Creek and provide an existing primary contact recreation use to City residents that could result in incidental ingestion of water.

Walnut and Woman Creeks, including those segments on the COU and the Peripheral Operating Unit (POU), are classified by the Colorado Water Quality Control Commission as Aquatic Life Warm Water 2, which means these waters are not capable of sustaining a wide variety of warm water biota, including sensitive species, due to physical habitat, water flows or levels, or uncorrectable water quality conditions that result in substantial impairment of the abundance and diversity of species. Breaching all remaining dams in a selective attempt at riparian habitat improvement on the COU, will not ensure sustainable habitat improvement in the drainages downstream of the existing

ponds. The numerous references to water quantity limitations provided by DOE throughout the EA and RFS annual reports support this conclusion. The success in establishing new habitat in downstream drainages if the dams are breached is optimistic, especially due to the water quantity limitations. It is certain that dam breaching will eliminate 95 percent (14 acres) of open water habitat for 45 species of waterfowl. The gains in riparian habitat and the species they support would be minimal relative to the loss of open water habitat.

The objective of the Proposed Action, to “*preserve and enhance wetlands and habitat to the extent practicable*” does not offer any objective goals for measuring success of the Proposed Action or expected timelines for reaping any ecological rewards from the Proposed Action. Establishing riparian habitat could take years, during which time the potential remains for uncontrolled contaminant migration flow off site.

#### Dam Breach Configurations

The details provided for breaching the dams in the EA are inconsistent with the details included in contact record CR 2010-02. In addition, DOE’s explanation of the proposed dam configuration and operations presented at the public meeting on May 18, 2010 presented other conflicting details, such as the free board levels that would remain above the Pond C-2 sediments following the dam breach. Consistency of the message would simplify the efforts to understand and respond to the impacts; DOE must address any inconsistencies between the two documents.

The EA describes the channel inlets at the dam breach sites “... *will be located to provide positive drainage from the area upstream of each channel inlet. This would ensure a consistent flow of water and prevent ponding. The area upstream of each channel would be designed to preserve and enhance wetlands and habitat to the extent possible, while still providing positive flow.*” The EA does not specify any criteria for assessing the habitat enhancements, yet quantifies the acres of existing habitat to be eliminated in the areas upstream of each channel. The priority for the dam breach focuses on positive flow of surface water off the COU - at the expense of any open pond habitat.

The soil in the breach channel below a depth of three feet (as detailed in CR 2010-02) will be used to fill “*former spillways and roads to be reclaimed.*” There is no reference to characterization of the excavated soils or specific identification of the designated areas to be filled with the excavated soils. Westminster contends this activity is in violation of Institutional Control # 2.

#### Dam Safety and Costs

The EA states that the dams are no longer needed for the original purpose. According to historical documents, the original purpose for the majority of the ponds was the containment of wastewater flows including some flows which were contaminated with radionuclides and other analytes of concern. In effect, the ponds serve as the last line of defense for the downstream communities by preventing contaminated sediment migration off the COU.

DOE revealed at the public meeting held on May 18, 2010, the cost savings resulting from implementing the Proposed Action for operation, maintenance and dam safety

compliance would be 24 million dollars over a 75 year period. The detailed assessment of how DOE derived the cost saving estimate is not available for review.

The attendees at the public meeting on May 18, 2010 were also led to believe the dams are in jeopardy of failing – especially B-5. Summaries of the recent dam inspections reported by DOE listed satisfactory condition ratings and recommended a safe storage level of “full.” Clearly, dam safety has not been jeopardized. Emergency releases as detailed in the Rocky Flats Site Operations Guide are utilized, as necessary, to ensure dam safety.

The EA states that breaching Pond C-2 and Present Land Fill (PLF) dams will have little to no effect on improvement to downstream habitat. Cost savings, rather than habitat improvement, appears to be the driver for breaching the Pond C-2 and the PLF dams.

#### Water Quality Impacts – Surface Water

The EA states that “*Water discharged from the terminal pond dams meets applicable RFLMA surface water quality standards, which are based on the Colorado Water Quality Control Commission (CWQCC) Code of Colorado Regulations (CCR) Regulation No. 31: Basic Standards and Methodologies for Surface Water (5 CCR 1002-31) and on the site specific standards in the CWQCC Regulations No. 38: Classifications and Numeric Standards South Platte River Basin Laramie River Basin Republican River Basin Smoky Hill River Basin (5 CCR 1002-38).*” It should be noted, however, that while the RFLMA surface water standards are based on the referenced regulations, they are not applied in the same manner. The mechanism for calculating compliance with RFLMA standards is relatively unique in the state for assessing compliance with surface water standards applicable for individual stream segments. The manner in which CWQCC Regulation No. 38 is applied for segment 4a within the RFS and how it is applied outside the boundary of federal lands are not the same. Protection of surface water was a basis for making soil and groundwater response action decisions during the cleanup period so that surface water on site and leaving the site would be of sufficient quality to support all uses. Table ES-1 in the EA, Resource-Specific Consequences, states “*Individual sample results downstream are expected to show increased variability.*” The EA does not indicate how the variability will be monitored. Increase variability in sample results based on the Proposed Action could result in exceedance of the applicable stream standards in the downstream watersheds when the WQCC Regulation No. 38 standards are applied to streams off federal lands.

In some instances, the statistical assessment software DOE uses for data interpretation requires more individual data points than are collected under the current sampling frequencies and site conditions. Oftentimes, contaminant plume migration trending cannot be assessed as evidenced in CR 2010-05. The uranium data in the groundwater wells downstream of the Old Landfill (OLF), while significantly higher than the wells upgradient of the OLF, cannot be trended due to the limited data collected. These limitations on interpretation and applicability of the data collected to predict impacts on the downstream site locations, both on federal lands, and off, concern the downstream communities regarding the protectiveness of the remedy to ensure surface water is of sufficient quality to protect all uses.

It should also be noted that surface water standards have been exceeded on the COU at the POEs upstream of the ponds and in the PLF pond.

Westminster is concerned by the following section included in the EA: *“Parallel to the completion of this EA, DOE has proposed that the RFLMA be modified to change some of the current RFLMA monitoring points, including Point of Compliance (POCs) downstream of the dams. The proposed RFLMA modification is subject to CDPHE and EPA approval. The RFLMA modification is not considered a part of this EA but is a part of the remedy for the RFS. The modification has not been approved as of the date of this Draft EA, but if the approval has been received by the Final EA, this document will be updated to reflect the change. If the RFLMA is modified to change the location of the POCs downstream of the dams, ground disturbance would occur with the closure of the current POCs and development of new monitoring points.”* The public does not have access to the proposed RFLMA modification document referenced. The EA should not be amended following the public comment period to incorporate significant changes, such as monitoring point locations, if the public is not permitted to provide comments. DOE must disclose the specifics of all actions relevant to this EA for evaluation of the resource impacts to downstream communities.

#### Water Quality Impacts – Groundwater

The EA categorizes groundwater under the “Resources Considered but not Present or Impacted by the Proposed Action” section. The EA dismisses the impact to groundwater at all five proposed dam breach locations. Westminster insists that groundwater could be impacted if the dams are breached. Changing the hydrologic configuration at the RFS for surface water flow may increase the migration of groundwater plumes, some of which are direct contiguous links to surface water. It has been noted that groundwater seeps to the surface more in dry years. Seeps have been identified in the drainages where the Proposed Action is identified. The EA states that if the POCs are relocated downstream of the ponds, groundwater will be considered in deciding where the POCs should be located. Westminster contends that there is a potential for groundwater to be impacted by the Proposed Action.

#### Water Quality Impacts – Stormwater

The EA discusses the need for an EPA-issued stormwater permit to be applied during the construction activities. The potential impact to surface water due to construction activities could be significant. In the event the Proposed Action proceeds, Westminster requests EPA consider adding a water quality monitoring requirement to the stormwater permit in addition to the best management practices to ensure protection of human health and the environment during construction activities.

#### Resource Impacts Not Addressed in the EA

Westminster has identified additional resources that could be impacted by the Proposed Action, which were not addressed in the EA:

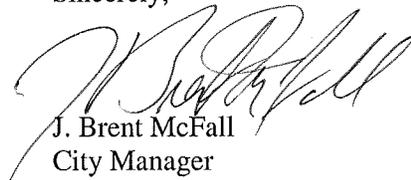
- The EA fails to address the impact of the Proposed Action on the downstream communities in the event any part of the remedy releases contaminated water or sediments that would have been captured in the ponds, but as a result of the Proposed Action, will be released downstream and off federal land. A contingency plan for containment of contamination on the COU is critical.

- The EA fails to consider the impacts of fires on the COU, how the impacts would be monitored and the physical barriers required to contain any contamination on site.
- The proposed relocation of the boundary POCs should be fully evaluated as part of this EA.
- DOE is currently performing non-RFLMA sampling (CR 2010- 03) to assess sediment transport in the A and B series ponds. If more data is required to ensure the Proposed Action is protective of surface water before those dams are breached, then DOE is acknowledging there is the potential for downstream impacts. The present action should be assessed as a cumulative impact in the EA.
- DOE has received approval from CDPHE to perform targeted soil sampling at the OLF (CR 2010-01) in order to meet CDPHE requirements for ending post-closure landfill care - which usually is required for 30 years, but may be extended or shortened. The impacts of ending OLF monitoring in the foreseeable future should be addressed as a cumulative impact in this EA.

Westminster respectfully requests a written response to each of our concerns individually.

In closing, Westminster does not support a Finding of No Significant Impact (FONSI) for this EA and advocates the “*No Action*” alternative. At less than five years post-closure, remediation activities continue at the Rocky Flats Site and the uncertainties of all impacts associated with those activities do not justify the risk to the downstream communities. DOE – Legacy Management is obligated to comply with the CAD/ROD and RFLMA requirements for Institutional Controls on the COU to ensure protection of public health and the environment.

Sincerely,



J. Brent McFall  
City Manager

CC - via email:

Dave Geiser, DOE-LM

Carol Rushin, EPA

Steve Berendzen, USFWS

Vera Moritz, EPA

Josh Nims, WCRA

Joe Schieffelin, CDPHE

Carl Spreng, CDPHE

Larry Svoboda, EPA

Scott Surovchak, DOE-LM

David Abelson, FSC

Senator Udall's Office

Senator Bennett's Office

Senator Polis' Office

June 1, 2010

Rocky Flats EA Comments  
11025 Dover Street  
Suite 1000  
Westminster, CO 80021

**Original mailed with copy sent via email to [rfinfo@LM.doe.gov](mailto:rfinfo@LM.doe.gov)**

**Re: Comments Submitted on Behalf of the City & County of Broomfield, State of Colorado, Related to the Draft Rocky Flats Surface Water Configuration Environmental Assessment dated April 2010.**

To Whom it May Concern:

I serve as special counsel to the City & County of Broomfield, Colorado (“Broomfield”) and have been asked to prepare comments on their behalf related to the Draft Rocky Flats Surface Water Configuration Environmental Assessment dated April 2010 (“Draft EA”). These comments are a supplement to the comments submitted by Mr. Alan King, the Broomfield Director of Public Works.

Broomfield strongly supports the “No Action” alternative identified in the Draft EA. We question the rationale for breaching terminal dams A-4, B-5, and C-2. The Draft EA does not provide sufficient analysis, data, or information for eliminating these features which serve as the last line of defense to ensure that contaminants which remain on the Rocky Flats site in soil, sediments, ground water and surface water are not released off-site into surrounding communities.

Moreover, the agency acknowledges that it needs to gather several years of data and information related to ecological systems and habitat formation and restoration in the context of the “flow-through” configuration which the agency has proposed for terminal dams A-4 and B-5. Broomfield submits that the agency has not adequately justified its intent to breach terminal dam C-2 without gathering this same type of data and information for the habitat and ecological systems which exist in that portion of the site.

This letter identifies certain issues of concern followed by specific comments and questions.

**Issue: Timing of the dam breach activities.**

COMMENTS and QUESTIONS:

- (1) At the May 18, 2010 public meeting, the DOE staff explained that, although it would breach terminal dam C-2 relatively quickly, i.e., in 2011, the agency intended to breach terminal dams A-4 and B-5 several years later, i.e., sometime in the years 2015-2018. The timing differential was referenced in the draft EA, but the reasoning for this time differential was not addressed in the draft EA.
- (2) Although it was not mentioned in the draft EA, the agency staff also stated at the May 18, 2010 public meeting that they intend to create a “flow-through” condition in the intervening years at terminal dams A-4 and B-5.
- (3) At the May 18, 2010 meeting, in response to the question of “why,” the agency staff stated that they wanted to collect several years of additional data and information in the interim related to changes to habitat and the ecological systems that would occur after the agency created a flow-through condition for both terminal dams A-4 and B-5.
- (4) Having learned for the first time at the May 18, 2010 public meeting about this “flow-through” condition concept and the need for the agency to collect additional habitat formation and other ecological system data and information for two of the terminal dams, Broomfield asked why the agency was treating terminal dam C-2 differently than terminal dams A-4 and B-5.
- (5) Please explain in detail:
  - a. The methods and protocols for establishing the “flow-through” condition at terminal dams A-4 and B-5;
  - b. Why this same “flow-through” condition could not be established at terminal dam C-2;
  - c. What data and information the agency intends to collect related to habitat formation and ecological systems for terminal dams A-4 and B-5 in the intervening years between now and 2015-2018; and
  - d. Why the agency has determined that it is not necessary to collect the same types of data and information related to habitat formation and ecological systems before it fully breaches terminal dam C-2.

**Issue: Downstream Habitat. The Draft EA provides a partial justification for the breaching proposal and states: “Long-term continuation of batch releases from the ponds, predominantly during the non-growing season, could alter the structure and composition of the downstream habitat.” See page xii, Walnut Creek “No Action Summary;” see also page 5-4, section 5.2.2.2; and page 5-15, Table 5-2.**

COMMENTS and QUESTIONS:

- (1) In light of the fact that the terminal dams have been in operation for several decades, i.e., in excess of 30 years, it is clear that the structure and composition of the downstream habitat has already been altered over those several decades.
- (2) The public learned for the first time at the May 18, 2010 public meeting that the DOE intends to create a “flow-through” condition at terminal dams A-4 and B-5, but not at terminal dam C-2. The purpose of this flow-through condition is to collect additional data and information related to ecological systems and habitat restoration and formation before breaching terminal dams A-4 and B-5.
- (3) The agency also mentioned in the Draft EA that the batch and release events occur during the “non-growing” season for vegetation. See page 5-3, section 5.2.1.2.
- (4) Broomfield MAY be amenable to operating all three terminal dams with a flow-through configuration, provided that the agency develops and implements an acceptable contingency plan in the event of high flow (or any other) conditions which could otherwise result in releases offsite which are not in conformance with applicable standards. If such an acceptable contingency plan is prepared and submitted to Broomfield and other members of the public for comment, it MAY be acceptable to allow “flow-through” at all three terminal dams so that releases occur throughout the year, including the “growing seasons.
- (5) This will ensure that (a) data and information related to ecological systems and habitat restoration and formation can be collected for all three dams rather than just two, and that (b) the dams can continue to serve their exceptionally valuable function as a final line of defense against problematic off-site releases.
- (6) In the meantime, Broomfield submits that it makes more sense to maintain the status quo via the “No Action” alternative.

**Issue: Riparian habitat and wetlands. See discussion in the Draft EA related to “Purpose and Need,” at page 1-5, which states in part, “Returning flows to approximate pre-**

**retention conditions would provide ecological benefits by improving riparian habitat and reestablishing wetland formation.”**

COMMENTS and QUESTIONS:

- (1) Extensive wetland and riparian habitat has developed as a result of dam placement over the last several decades (*see* Figures 4-1 through 4-5; *see also* page 4-9, Table 4-4 showing total wetland acreage of 18.155 acres).
- (2) Has the agency assessed and estimated (and if so what is your best estimate of) the total acreage of wetlands which will develop over time as a result of the dam breach as compared to the total wetland and riparian habitat acreage which will be lost as a result of the dam breach?
- (3) What is the net acreage increase or decrease for wetlands?
- (4) Is it a wash? In other words, is there essentially no net increase or decrease?
- (5) What is the basis for your response to questions (3) and (4), immediately above?
- (6) Is the agency’s need to properly answer these questions at least in part the reason the agency wishes to collect additional data and information related to ecological systems and habitat restoration and formation related to terminal dams A-4 and B-5?

**Issue: Water quality standards. See discussion in the Draft EA related to “Purpose and Need,” at page 1-5, which states in part, “Water discharged from the terminal pond dams meets applicable RFLMA surface water quality standards.”**

COMMENTS and QUESTIONS:

- (1) The water quality monitoring program results which support the above statement are premised on 12-month averages.
- (2) The DOE staff stated at the May 18, 2010 public meeting that the individual data points for each monitoring event, each location, and each constituent are provided in the quarterly reports provided on the agency’s website.
- (3) We have not had the time to review the data related to these individual monitoring events, but one expects that there will be substantial variation over time showing that in relation to several data points (location, date, media, constituents analyzed), there

will be several exceedances of the applicable water quality standards at individual monitoring stations and at different dates over the 12-month averaging period.

- (4) Is this true?
- (5) What are the trends, if any, with regard to these exceedances?
- (6) How does the water quality vary over time?

**Issue: Sediments.** *See discussion in the Draft EA related to “Issues and Concerns,” at page 2-1, section 2.1.1, Internal Scoping which states in part, “The team identified the following issues to be addressed in the EA: . . . Surface water quality monitoring, including downstream sediment (the team noted that surface water quality is a key known concern for neighboring communities).” (Emphasis added.)*

*See also the agency’s statement at page 5-1 of the Draft EA, “[T]he dams are not a part of the final CAD/ROD remedy for RFS and are not designed or operated as sedimentation basins.” (Emphasis added.)*

COMMENTS and QUESTIONS:

- (1) Although the dams (both terminal dams and non-terminal dams) are not “designed or operated as sedimentation basins,” they function as such, i.e., they have collected sediment behind the dams for decades.
- (2) The agency mentions at page “x” of the Draft EA in the “No Action” discussion that, “Data would continue to be collected on water quality and sediment.” (Emphasis added.)
- (3) What is the current protocol for testing sediments – both upstream and downstream of the dams?
- (4) What are the levels of contaminants which have been found in both upstream and downstream sediments?
- (5) We assume that contaminated sediments (wherever they are found, above or below the dams) which are above a certain threshold will be removed to an appropriate area and isolated from the environment or disposed off-site.
- (6) What criteria have been developed to determine whether and when to remove sediments upstream or downstream of the dams in the context of the breaching activities?

- (7) Why did the agency limit its assessment of sediments to “downstream sediments?” *See* “Issues and Concerns,” at page 2-1, section 2.1.1, Internal Scoping of the Draft EA.
- (8) Did the agency consider the fact that the breaching activities will cause what are now “contained and captured sediments” which lie above the dams to be released downstream of the dams and perhaps off-site, particularly during peak surface water flows?

**Issue: Floodplains and Peak Flood Flows. The agency’s floodplain analysis in the Draft EA which begins at page 4-10 confirms that substantial peak flows will occur at the site in the event of 50-year or 100-year flood events.**

**The water quality analysis beginning at page 4-24 of the Draft EA confirms Total Uranium exceedances at POE GS-10 (16.9 ug/L averaged over 68 sampling events versus a standard of 16.8 ug/L) and, more particularly Performance location GS-13 (26.4 ug/L averaged over 76 sampling events versus a standard of 16.8 ug/L).**

COMMENTS and QUESTIONS:

- (1) Broomfield submits that it makes more sense to maintain the terminal dams at ponds A-4, B-5 and C-2 indefinitely to avoid substantial sediment movement downstream of the dams if and when such flood events occur?
- (2) The agency states at pages 5-18 and 5-19 of the Draft EA that the “breach of the C-2 dam would be engineered to accommodate” the possibility that the Woman Creek Diversion Dam would fail, and thus the C-2 dam breach would be “designed to accommodate the entire Woman Creek flood flow.”
- (3) What are the characteristics of the sediments which would flow downstream in the event of the failure of the Woman Creek Diversion Dam?
- (4) Given the fact that there is a possibility that the new C-2 dam configuration resulting from the “C-2 dam breach” might not “accommodate the entire Woman Creek flood flow,” Broomfield submits that it makes more sense to maintain the status quo via the “No Action” alternative for all three terminal dams, including C-2.
- (5) As stated above in the section related to Downstream Habitat, Broomfield MAY be amenable to operating all three terminal dams with a flow-through configuration, provided that the agency develops and implements an acceptable contingency plan in the event of high flow (or any other) conditions which could otherwise result in releases offsite which are not in conformance with applicable standards. If such an

acceptable contingency plan is prepared and submitted to Broomfield and other members of the public for comment, it MAY be acceptable to allow “flow-through” at all three terminal dams so that releases occur throughout the year, including the “growing seasons.

- (6) This will ensure that (a) data and information related to ecological systems and habitat restoration and formation can be collected for all three dams rather than just two, and that (b) the dams can continue to serve their exceptionally valuable function as a final line of defense against problematic off-site releases.
- (7) The agency’s flood flow modeling predicts that flood flows will occur over time. Broomfield submits that the agency should maintain all three terminal dams to capture the modeled and predicted flood flows.
- (8) Again, Broomfield submits that it makes more sense to maintain the status quo via the “No Action” alternative for all three terminal dams, including C-2.

**Conclusion.**

**In sum, subject to further communications among the interested parties and agencies particularly with regard to contingency plans, and to allow the continued use of the terminal dams as the last line of defense against unacceptable off-site releases, Broomfield submits that it is better to maintain the status quo via the “No Action” alternative. It is important to continue to capture water flows and test the water before releases occur.**

Respectfully submitted this 1<sup>st</sup> day of June, 2010.

**BERENBAUM WEINSHIENK PC**

/s/ John Watson

John L. Watson

JLW/sss

Copy: Tami Yellico, Esq., City and County Attorney’s Office, City and County of Broomfield

Thank you for allowing comment on the DRAFT Rocky Flats Surface Water Configuration Environmental Assessment.

My name is Lori Cox and I am a City Council member for the City and County of Broomfield in addition to being the current Chair for the Rocky Flats Stewardship Council. I directly represent the 55,000 citizens of the City and County of Broomfield and indirectly, the approximately 800,000 citizens in total represented by members of the Stewardship Council.

As stated in the DOE's Facts Sheet on Rocky Flats ~ the DOE office of Legacy Management is responsible for and has committed to "long term surveillance and maintenance for the Rocky Flats site..... and any activities necessary to ensure protection of human health and the environment following completion of cleanup, disposal, or stabilization at a site or portion of the site and in perpetuity." That same fact sheet informs the reader that "Because remaining contamination in the Central OU does not allow for unlimited use and unrestricted exposure, periodic reviews are required by CERCLA to be conducted at least every 5 years to determine whether the Central OU remedial actions remain protective of human health and the environment." I know....we are commenting on an environmental assessment however, every reference DOE makes to being protective of the environment include the words "human health" ~ DOE's own documents never separate the two thoughts therefore, it is consistent to consider protection of "human health" when considering whether or not an action is protective of the environment.

I also know that the DOE has been consistent with their message that the terminal ponds, whose dams you are seeking to breach, aren't and were never part of the remedy. It is worth noting; however, that testing the water captured in these terminal ponds provides assurance that the remedial actions remain protective "of human health and the environment." While they may not be part of the remedy, they provide an indication as to whether or not the remedies have been effective, which is one of the reasons a testing protocol was developed. If breached, the dams no longer capture the water, allowing any residual contamination contained in that water to move downstream and out of the "long term surveillance and maintenance area" for which Legacy Management has assumed responsibility.

It should also be noted that each series of ponds has specific upstream sources of water thereby currently making it simple to determine the source of contamination, should any occur, in a sample taken at a single terminal pond. If water simply flows through each terminal pond to a single Point of Compliance and contamination is detected not only could that contamination have been significantly diluted by having been mixed with several water sources giving a false level of contamination, it would also mean having to analyze every upstream water source to determine the source of contamination because a single POC can't eliminate any source.

I submit to you my opinion that it is premature to move forward with these changes while the site is still in the "stabilization" process..... and to move forward without documentation expressly showing that the remedial actions through several cycles of CERCLA reviews remains protective of human health and the environment is, simply, irresponsible. If future CERCLA reviews provide the necessary documentation supporting your proposed action, then by all means, we would support moving ahead but, until then, I respectfully request that, in an effort to be protective of human health and the environment, no changes are made to current conditions of the terminal ponds or the present landfill pond.

Thank you ~



# City of Thornton

Infrastructure Maintenance Center  
12450 Washington Street  
Thornton, CO 80241-2405

Infrastructure Department  
720-977-6500  
FAX 720-977-6202  
[www.cityofthornton.net](http://www.cityofthornton.net)

June 1, 2010

Via Email and U.S. Mail

Attn: Comments  
Rocky Flats EA Comments  
11025 Dover Street, Suite 1000  
Westminster, CO 80021

RE: Rocky Flats Surface Water Configuration Environmental Assessment

To Whom It May Concern:

The City of Thornton (Thornton) appreciates the opportunity to provide the attached comments on the Draft Rocky Flats Surface Water Configuration Environmental Assessment (EA) released by the Department of Energy (DOE) on April 30, 2010. Thornton supplies drinking water to over 137,000 people who reside inside and outside of the Thornton's municipal boundaries. A substantial portion of Thornton's water supplies are derived from Standley Lake which is located directly downstream of Rocky Flats. Thornton also owns water rights on Big Dry Creek which contribute to the City's water supply. Due to Thornton's significant interests on Woman Creek and Walnut Creek, a tributary to Big Dry Creek which flows through Thornton, the City wishes to express its concern for potential impacts to the City's water supplies as a result of the dam breaching project proposed by the DOE.

Thornton strongly supports the "No Action" alternative discussed in the Draft EA for the reasons identified below:

- 1.) Impact to and protection of human health and the environment were not fully considered in the EA. At the public meeting held on May 18, 2010, DOE staff stated that a contingency plan has not been developed or even considered should residual contamination move off the Rocky Flats site and into the downstream communities;
- 2) It is unknown if sufficient time has passed since regulatory closure in 2006 to adequately evaluate the effectiveness of the mitigation that has been put in place. At a minimum, Thornton requests that the DOE provide information on how it has evaluated the effectiveness of the mitigation;
- 3) Breaching of the dams will remove facilities that help to prevent residual contamination from moving off the site.

In addition to the items outlined above that are of direct concern to Thornton, many of the justifications utilized in the EA for breaching of the dams are overstated and/or are unclear as to whether the assumptions used in the technical analyses are prudent and appropriate. Specific comments that address this general concern are outlined in the attachment to this letter.

Thornton requests that the DOE allow more time to pass to evaluate the remedy before taking action so soon after regulatory closure. Unnecessary and hasty actions at this point could have serious consequences for the downstream communities should the assumptions made by the DOE prove to be incorrect. Should you have any questions, please do not hesitate to contact me. I can be reached at 720-977-6512.

Sincerely,



Ed Lanyon

Water Resources Administrator

EAL/als

cc: Bud Elliot, Deputy City Manager – Infrastructure  
Mark Koleber, Water Supply Director  
Emily Hunt, Water Resources Manager  
Josh Nims, City of Westminster/Woman Creek Reservoir Authority  
Shelley Stanley, City of Northglenn/Woman Creek Reservoir Authority  
Ron Hellbusch, City of Westminster  
David Allen, City and County of Broomfield  
Shirley Garcia, City and County of Broomfield  
MLCR

**City of Thornton**

**Questions and Comments about the Draft Rocky Flats Surface Water Configuration Environmental Assessment - April 2010**

1. The Draft EA states that a reduction/elimination of depletions would reduce or eliminate the following: 1) costs incurred by Broomfield; 2) depletion reporting costs; and 3) costs to water rights holders responsible for downstream augmentation.
  - *Unless all depletions are going to be eliminated and water won't be impounded on the site, and reporting will not be required by the State Engineer, then reporting costs aren't going to be reduced. It doesn't matter if an entity is reporting 100 AF or 1 AF, there will still be reporting requirements to perform.*
  - *Water impounded on the site to maintain wetlands will cause depletions.*
  - *How are costs to water rights holders responsible for downstream augmentation going to be reduced or eliminated? This statement is not clear and is not consistent with Colorado water law or water rights administration.*
2. The Draft EA states that the dams are no longer needed and breaching would reduce costs (and by association taxpayer costs).
  - *What are the estimated cost savings? There isn't an amount discussed in the EA. If cost savings is one of the major reasons for breaching the dams then the estimated savings should be stated.*
3. The Draft EA states that the 2004 EA did not anticipate the breaching of the remaining dams.
  - *Why wasn't breaching all of the dams anticipated at that time? It is unclear how this is relevant to the current proposal.*
4. The Draft EA states that breaching of the dams will preclude any injury to calling senior water rights holders.
  - *This is not a true statement since there is an augmentation plan in place that augments depletions associated with these reservoirs. That is the function of an augmentation plan, to ensure other water rights are not injured.*
5. The Draft EA states that breaching the dams would not change DOE obligations to monitor surface water and meet standards as required by RFLMA.
  - *What are the DOE's plans if there is an exceedence of the standards?*

6. The Draft EA discusses floodplains across the eastern portion of the Rocky Flats site.

- *Why weren't the floodplains related to the entire site addressed and studied? If they would have been studied, could that reveal an increased risk of residual contamination being exposed and conveyed through the breached dams and onto the downstream communities?*
- *Were out-of-basin inflows from canals considered in the assessment? If out-of-basin inflows were not considered, could they increase the risk of residual contamination being exposed and conveyed through the breached dams and onto the downstream communities? DOE stated at a public meeting that they get flows onto the site from the irrigation canals.*

7. The Draft EA states that even with maintenance, the dams still might need to be breached in the future.

- *Appropriate and continued maintenance of the dams could make them last for decades.*



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Rocky Mountain Arsenal National Wildlife Refuge  
Building 121  
Commerce City, Colorado 80022-1748  
Telephone (303) 289-0232 Fax (303) 289-0579



FILE CODE

May 24, 2010

Rocky Flats EA Comments  
11025 Dover St., Suite 1000  
Westminster, CO 80021

This letter is in response to the Environmental Assessment regarding pond breaching at Rocky Flats National Wildlife Refuge.

The area of damage from breaching, 26 acres, seems a little excessive, but the EA does state that this is a worst case estimate. I assume this area includes disturbance caused by construction and removal of coffer dams as well as the pond breaching.

The EA states that breaching will take about 11 weeks per dam. This seems a bit excessive, but I am not an engineer and the time may be necessary. As a biologist, though, I feel that a shorter period would be better for wildlife.

The EA promotes the use of native vegetation, and I am very comfortable with this as long as Jodi Nelson is directing this aspect of the project. I have full confidence in his ability to know what should be planted where.

The EA suggests that the work will benefit the Preble's meadow jumping mouse. I suspect that the long-term restoration of riparian habitat will provide benefit, but defer to the Ecological Services branch of the Fish and Wildlife Service on this issue.

The Rocky Flats National Wildlife Refuge supports this project.

Sincerely,

Steve Berendzen  
Project Leader  
Rocky Mountain Arsenal NWR Complex