

# ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670  
Boulder, CO 80308-0670  
www.rockyflatssc.org

(303) 412-1200  
(303) 600-7773 (F)

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

## **Board of Directors Meeting – Agenda**

**Monday, April 5, 2010, 8:30 AM – 11:15 AM**

**Rocky Mountain Metropolitan Airport, Terminal Building, Mount Evans Room  
11755 Airport Way, Broomfield, Colorado**

8:30 AM Convene/Agenda Review

8:35 AM Approval of 2010-2011 Members (briefing memo attached)

### **Action Item: Appoint Members**

8:45 AM Business Items (briefing memo attached)  
1. Election of 2010 Executive Committee

### **Action Item: Elect Officers**

2. Approval of meeting minutes and checks

3. Executive Director's Report

9:05 AM Public Comment

9:10 AM DOE briefing on Dam Breach Environmental Assessment and changes to the water monitoring system (briefing memo attached)

- DOE is in the early stages of conducting NEPA analysis for breaching ponds A-3, A-4, B-5, C-2, and the Present Landfill pond.
- DOE is also evaluating other changes to its water quality protection program, including moving the two surface water Points of Compliance (POC) along Indiana Street, operating terminal ponds A-4 (North Walnut Creek) and B-5 (South Walnut Creek) in flow-through configurations, conducting additional testing for uranium and nitrate.

10:10 AM DOE budget briefing (briefing memo attached)

- The Obama Administration submitted its 2011 budget request to Congress in early February.

- Congress is in the early stages of the annual appropriations process.
- DOE will brief on its 2011 request and priorities for the 2011 federal fiscal year (October 1, 2010 – September 30, 2011).

- 10:25 AM Continue Discussing Signs for Rocky Flats (briefing memo attached)
- At this meeting the Board will continue discussing signs for Rocky Flats.
  - The conversation will focus reviewing our conversation to date, further discussing the history of the site as a weapons facility, and time permitting, starting to focus on the scope of the cleanup and ongoing management.
  - As we discussed in prior meetings, the intent is not to specify language but to identify categories of information and the types of messages that the Board believes should be conveyed.

- 11:05 AM Updates/Big Picture Review
1. Executive Director
  2. Member Updates
  3. Review Big Picture

Adjourn

Next Meetings:        June 7  
                              September 13

## **Membership Applications**

- Cover memo
- Applications:
  - Arthur “Murph” Widdowfield
  - League of Women Voters
  - Rocky Flats Cold War Museum
  - Rocky Flats Homesteaders

## **Business Items**

- Cover memo
- February 1, 2010, draft board meeting minutes
- Meeting minutes attachments
- List of Stewardship Council checks

# ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670  
Boulder, CO 80308-0670  
www.rockyflatssc.org

(303) 412-1200  
(303) 600-7773 (f)

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

## MEMORANDUM

**TO:** Board  
**FROM:** David Abelson  
**SUBJECT:** Rocky Flats Stewardship Council Membership Applications  
**DATE:** March 20, 2010

---

I have scheduled 10 minutes for the nine governments to take final votes on the candidates for the four community representative seats on the Board of Directors and of the Board to then make formal appointments. The terms start following your appointments.

Six individuals/groups initially submitted applications. Friends of the Front Range Wildlife Refuges and Lorraine Anderson subsequently withdrew their applications, leaving four candidates for the four seats.

Arthur "Murph" Widdowfield  
League of Women Voters  
Rocky Flats Cold War Museum  
Rocky Flats Homesteaders

Their applications follow this memo.

At the February meeting, the six governments present for the interviews unanimously agreed to reappoint League of Women Voters, Rocky Flats Cold War Museum, and Rocky Flats Homesteaders. They, however, split 3-3 on appointing Lorraine Anderson versus Arthur "Murph" Widdowfield. Following that meeting, Lorraine Anderson withdrew her application. Last week Murph Widdowfield reaffirmed his interest in serving on the board.

Please let me know what questions you have.

**Action Item: Make appointments**

# Arthur “Murph” Widdowfield

**Director:** Arthur “Murph” Widdowfield

**Membership category:** Individual

**Years of service on the Rocky Flats Stewardship Council:** 0

**Number of individual/groups organization represents:** Self

**Can meet time commitment:** Yes

## **Statement of Interest:**

I have lived in the Wheat Ridge or Arvada area since 1948 and have always had an interest in Rocky Flats since the weapons plant was built. I worked on some of the facilities at the plant as a construction worker and as a contractor. Some of my neighbors over years have been employees at the Rocky Flats Plant. I am very pleased that the site has become a wildlife area and I wish that it could continue as such.

I have a very good background in serving on boards, committees and with operating groups. I have been owner, president of two contracting companies and a supply company. Having spent thirty one years with the Rotary Club of Lakewood, I have been on the Board of Directors, held the office of Secretary, Vice President and President. I have served on the Rotary International Youth Exchange and was the chairman for four years. I was one of three founders of the Rotary Youth Leadership Award conference, a one week long leadership conference for high school juniors and seniors which is now in its twenty fourth year.

As a specialty industrial contractor, our corporation operated in almost all states including Alaska and Hawaii. We held licenses in all states that require such. Our specialty was high temperature systems, such as furnaces, high pressure boilers and the operating systems. Our services ranged from engineering to modifications and new construction.

As I am not sure of the total mission for the Stewardship Council and therefore not exactly sure what I would expect to accomplish in serving. I have a sincere interest and believe in the Rocky Flats area and wish to see it stay protected and operate its wildlife capabilities. I believe that I could be an asset to the council. I am retired and have the time and energy available as an individual.

**Conflicts of Interest:** None

**Directors/Alternate Director(s) Biography:**

See statement of interest

# League of Women Voters

**Director:** Jeannette Hillery

**Alternate Director:** Sue Vaughn

**Membership category:** Public Interest

**Years of service on the Rocky Flats Stewardship Council:** 4

**Number of individual/groups organization represents:** 22 local leagues statewide, over 1700 members

**Can meet time commitments:** Yes

## **Statement of Interest:**

The League of Women Voters has a long history of promoting public process and education of the public in all areas of governmental interest. We have been active participants with Rocky Flats for years and been members of the Stewardship Council since 2005. We feel that we provide a public perspective to the ongoing process of the closed Rocky Flats facility.

We wish to see that there is ongoing monitoring at the site and that the land surrounding it be preserved. We promote public dialogue on any subject that might arise. By asking questions and joining the dialogue, we feel we have added to the ongoing issues of the Council. Continued membership will add to the continuity of the Council which is always beneficial to new members.

**Conflicts of Interest:** None

## **Directors/Alternate Director(s) Biography:**

Jeannette Hillery, Director:

I have been a member of the League of Women Voters for over 30 years. In the past 16 years I have been involved with Natural Resources issues for the Colorado League and am the state contact on Natural Resources.

During the 1990s I participated in EPA training on involving citizens in public discussion of nuclear power plant closures. I have extensive experience in moderating a variety of forums and debates. I have been on the Boulder County Board of Health (10 years), City of Boulder Water Resources Advisory Board (10 years), a continuing member of the Colorado Water Quality Forum, and on the Water and Wastewater Facilities Operators Certification Board (Chair '09 - '10). I have been a member of the RFSC for 4 years.

Sue Vaughn, Alternate Director: As an active member for seven years in League of Women Voters of Jeffco, I have been involved in a variety of activities related to Rocky Flats. These include chairing a committee to update our members on Rocky Flats since its closing, observing RFSC meetings for two years, and later serving as an alternate for League of Women Voters on the RFSC board for three years. In addition, I have served on our local board of LWV for three years as government portfolio chair and have chaired numerous committees to study issues which impact Jefferson County, as well as acting as chairperson for our school board observer corps. Prior to joining League, I taught deaf and hard of hearing students for 30 years. Since

retiring from Jefferson County Schools, I have been hired back as a part-time consultant to the school district.

# Rocky Flats Cold War Museum

**Director:** Shirley Garcia

**Alternate Director:** Ann Lockhart

**Membership Category:** Historic Preservation

**Years of Service on the Rocky Flats Stewardship Council:** 4

**Number of Individual/Groups Organization Represents:** The Rocky Flats Cold War Museum Board consists of 10 board members who include former Rocky Flats workers, former Colorado Department of Public Health and Environment staff, a Rocky Flats activist, a nearby landowner, and approximately 20 volunteers.

**Can Meet Time Commitments:** Yes

## **Statement of Interest:**

1. Historic Preservation: The Rocky Flats Cold War Museum has a focused interest in preserving the history of the former Rocky Flats Nuclear Weapons Plant. The board has saved thousands of artifacts as well as oral histories of more than 90 former workers, activists, government regulators and political leaders. The artifacts will be utilized for exhibits and educational material in traveling exhibits and a eventually in a museum facility to preserve the historic impact Rocky Flats had at the local, state, regional national and world-wide level.
2. The museum board received funding by the Department of Energy to design and present an exhibit reflecting historical activities of the Rocky Flats Site. The funding allowed the Board to hire professionals in the field to design an exhibit and develop story lines that reflect the history of the site and its impacts on surrounding governments and the community.
3. The Federal government, which owned and operated the Rocky Flats Nuclear Weapons Plant for more than 50 years, has a significant reasonability in preserving the unique history of the plant. Rocky Flats plays an integral role in the Cold War and also had a significant effect on nearby suburbs and the entire Denver metropolitan area. The story still continues with activities at other DOE facilities and our experience will be used to facilitate preserving the history of other DOE facilities that have gone through closure or player a part in the Cold War era.
4. The Fish and Wildlife Service's Comprehensive Conservation Plan (CCP) has identified the Rocky Flats Cold War Museum as the entity the Service will work with to identify language to reflect the historical aspect of the site on signage to be placed at the Rocky Flats Refuge. With the scope of the Rocky Flats Cold War Museum biding to preserve the history of Rocky Flats at all levels, we are charged to reflect the historical views of the workers, communities, regulators, governments and activists.
5. The Rocky Flats Stewardship Council supports the development of the Rocky Flats Cold War Museum to commemorate the efforts of the thousand of former employees who worked at the plant and in recognition of this important history.
6. The Rocky Flats Cold War Museum board includes members with extensive and diverse knowledge of Rocky Flats operations and cleanup and its impact on the surrounding community. The museum board includes former Rocky Flat workers, a former activist, an architect who planned building 060 and 061, former Colorado Department of Public Health and Environment employees actively involved with Rocky Flats issues, a nearby landowner,



staff from nearby communities and consultants. The board is compiling a list of key contacts that are knowledgeable about various aspects of the site and plant history.

**Conflicts of Interest:** None

**Directors/Alternate Director(s) Biography:**

Shirley Garcia, Director

Shirley Garcia is the Environmental Services Coordinator for the City and County of Broomfield. Shirley is responsible for reviewing and commenting on reports generated by Legacy Management pertaining to long-term stewardship activities at the Rocky Flats site. She has almost 15 years of experience working at Rocky Flats and two years as the Compliance Contact at a clean-up site in Utah. Shirley is the current President for the Rocky Flats Cold War Museum and Chair of the Education Committee. In addition to Rocky Flats oversight, Shirley is also responsible for waste management and compliance activities for the City and County of Broomfield. Shirley is the current President of the Rocky Mountain Chapter of the North American Hazardous Materials Management Association and is a member of the Certified Hazardous Waste Management Association. Shirley serves on the Governor's Pollution Prevention Advisory Board Assistance Committee issuing technical and recycling grants for the state of Colorado. She is also the Director of the Children's Equipping Center at Church In The City-Beth Abraham working with inner city youth. Shirley has a B.S. in Environmental Science and a M.S. in Environmental Management and Regulatory Compliance.

Ann Lockhart, Alternate Director

Ann Lockhart was public relations director of the Colorado Department of Public Health and environment in the 1980s. On the department's rock Flats Historical Public exposure Studies team in the 1990s, she focused on communicating the potential off-site health impacts from the former nuclear weapons plant's toxic emission via a newsletter, technical topic papers, fact sheets, talking to concerned citizens and sponsoring a speaker's bureau. After early retirement, she started Eagle Eye Editing to do part-time writing and editing. She is a founding member of the Rocky Flats Cold War Museum Board, was a previous President and Secretary of the organization. She currently is the chair of the Oral History Committee and Communications Committee. Ann is responsible for starting and drafting an online museum newsletter and also serves on the Education committee. She has taught high school English and journalism and later taught University of Phoenix classes: *Writing for the Professions*, *Public Relations and Environmental Issue* and *Public Relations*. She worked for the Sentinel suburban newspapers in Arvada and Wheat Ridge and edited the university of Colorado Health Sciences Center newspaper. Ann has a B.A. in English from the University of Iowa and an M.S.S. in Applied Communication from the University of Denver. A long-time Toastmaster, she's also been active in the National Federation of Press Women.

# Rocky Flats Homesteaders

**Director:** Roman Kohler

**Alternate Director:** Kathleen Bacheller

**Membership category:** Former Rocky Flats workers

**Years of service on the Rocky Flats Stewardship Council:** 4

**Number of individual/groups organization represents:** 1800

**Can meet time commitment:** Yes

**Statement of Interest:** Representing former Rocky Flats workers

**Conflicts of Interest:** None

## **Directors/Alternate Director(s) Biography:**

### Roman Kohler, Director

Roman is a 27-year veteran of Rocky Flats (1968 – 1995). He worked as an hourly Steelworker and as a salaried manager. He is a board member of the Rocky Flats Homesteaders, a social organization for retirees of the Rocky Flats Plant. He is a board member of the Rocky Flats Retired and Disabled Workers Benefits Information and Protection Committee, a committee chartered to follow any changes to retiree benefits, health or retirement plans, and to campaign for security of retiree benefits. He is the editor and distributor of the Rocky Flats Homesteaders Newsletter. The newsletter is distributed to the 1800 dues-paying members of the Homesteaders. The newsletter is distributed five times a year, and is the primary communication of the retirees living throughout the United States and abroad. He has been the designated representative for retirees from the Rocky Flats Plant, both hourly and salary.

### Kathleen Bacheller, Alternate Director

Kathleen is a 10-year veteran of Rocky Flats. She has been a board member of the Rocky Flats Homesteaders since February 2006. She has served as alternate director for the Homesteaders since 2008.

# ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670  
Boulder, CO 80308-0670  
www.rockyflatssc.org

(303) 412-1200  
(303) 600-7773 (f)

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

## MEMORANDUM

**TO:** Board  
**FROM:** David Abelson  
**SUBJECT:** Business Items  
**DATE:** March 23, 2010

---

In addition to approving the consent agenda (approval of minutes and checks), the Board will need to appoint officers for 2010.

Following the board appointing the new members for 2010-2011, the new board will elect the officers for 2010. In accordance with the Stewardship Council bylaws, "the Chair, Vice Chair, and Secretary/Treasurer shall be elected annually by the Board of Directors." There are no limitations as to the number of terms one can serve.

To date, Lori Cox, Bob Briggs, Lisa Morzel and Jeannette Hillery have expressed interest in serving on the executive committee. If you are interested in serving as an officer and have not yet let me know of your interest, please email or call me ASAP. That way I can notify your fellow Board members of your interest.

**Action Item: Elect officers**

**ROCKY FLATS STEWARDSHIP COUNCIL**  
**Monday, February 1, 2010, 8:30 AM – 12:00 PM**  
**Rocky Mountain Metropolitan Airport, Terminal Building**  
**11755 Airport Way, Broomfield, Colorado**

**Board members in attendance:** Marc Williams (Director, Arvada), Clark Johnson (Alternate, Arvada), Lisa Morzel (Director, City of Boulder), Carl Castillo (Alternate, Boulder), Meagan Davis (Alternate, Boulder County), Lori Cox (Director, Broomfield), David Allen (Alternate, Broomfield), Greg Stokes (Alternate, Broomfield), Dan Hartman (Alternate, Golden), Shelley Stanley (Alternate, Northglenn), Andrew Muckle (Director, Superior), Bob Briggs (Director, Westminster), Ron Hellbusch (Alternate, Westminster), Jeannette Hillery (Director, League of Women Voters), Sue Vaughan (Alternate, League of Women Voters), Shirley Garcia (Director, Rocky Flats Cold War Museum), Roman Kohler (Director, Rocky Flats Homesteaders).

**Stewardship Council staff members and consultants in attendance:** David Abelson (Executive Director), Rik Getty (Technical Program Manager), Barb Vander Wall (Seter & Vander Wall, P.C.), Erin Rogers (consultant).

**Attendees:** Hildegard Hix (citizen), Judith Mohling (Rocky Mountain Peace and Justice Center), LeRoy Moore (Rocky Mountain Peace and Justice Center), Mary Harlow (citizen), Anne Fenerty (citizen), Carl Spreng (CDPHE), Scott Surovchak (DOE-LM), Rick DiSalvo (Stoller), George Squibb (Stoller), John Boylan (Stoller), Linda Kaiser (Stoller), Bob Darr (Stoller), Jeremiah McLaughlin (Stoller), Steve Berendzen (USFWS), Doug Young (Sen. Udall), Cathy Shugarts (City of Westminster), Jennifer Bohn (RFSC accountant).

**Convene/Agenda Review**

Chair Jeannette Hillery convened the meeting at 8:40 a.m. There were no changes to the agenda.

**Business Items**

The first business item was the consent agenda. Bob Briggs moved to approve the November Board meeting minutes. The motion was seconded Lisa Morzel. The motion passed 10-0.

Bob Briggs moved to approve the Board's checks. The motion was seconded Lisa Morzel. The motion passed 10-0.

The next item on the agenda was for the Board to approve a resolution regarding 2010 meeting dates and notice provisions. David Allen noted that the name of the Rocky Mountain Metropolitan Airport needed to be updated on the resolution. Lisa Morzel moved to approve the resolution and meeting notice provisions as amended. The motion was seconded Roman Kohler. The motion passed 10-0.

## **Executive Director's Report**

David Abelson provided several updates to the Board. First, he reported on the continuing discussions with DOE-LM about future funding for the Stewardship Council. He noted that the Board's next triennial review is scheduled for February 2012. The current DOE grant provides funding through February 2011. He is therefore talking with DOE's Scott Surovchak about aligning the DOE grant period with the triennial review. This would allow for a coordinated evaluation of the organization by both the Board and DOE regarding whether the Stewardship Council continues to play an important role, and if DOE believes the group is meeting its mandate as the Local Stakeholder Organization (LSO) for Rocky Flats. David will be in Washington, D.C. for an upcoming ECA meeting, and will discuss this option with the Acting Director of DOE-LM, Dave Geiser. David is hopeful things will continue to progress. While in D.C, David will also meet with staffs from the Colorado Senators' offices, Representative Polis' office and possibly other Congressional offices. He will be updating them on the Stewardship Council's activities and current issues related to Rocky Flats.

David noted that state Representative McKinley has re-introduced a bill pertaining to signage at Rocky Flats. This topic will be discussed later in the meeting. He pointed out that discussions among members have already begun, and that members of the public were present to express their views to the Board on this issue.

Staff recently completed work on the Stewardship Council's Annual Report. David said that this project served as a good opportunity to step back and reflect on the work of the Board. He said the report showed that, although the cleanup was done well, there are still many issues that require continuing public involvement. Issues such as the landfill covers, Solar Ponds treatment system, and dam breaching all reinforce the need for an organized, ongoing presence to monitor progress and bring different perspectives to the table.

Rik Getty provided a brief update about a recent pond discharge. In December, 8.1 million gallons were discharged at Pond A4. Pre-discharge samples were all well below the regulatory limits. During discharge, samples were taken below the dam and at Indiana Street. George Squibb will provide more details during DOE's quarterly report later in the meeting.

## **Public Comment**

Ann Fenerty from Boulder began by stating that she was submitting a written statement on behalf of ten people regarding Rep. McKinley's draft legislation. She said that the five minutes of time allowed for public comment during the agenda item on this topic shows her the level of concern for public comment by this Board. She said Rocky Flats was closed as a result of environmental crimes and that Rep. McKinley knows a lot about site which cannot be disclosed. Ms. Fenerty referred to Rocky Flats' listing as a Superfund site, and a letter to former Representative Beauprez from the US Fish and Wildlife Service in 2003 stating that Rocky Flats was not a pristine site. Therefore, these citizens believe strong signage is needed. She mentioned that several of the signers of this statement are scientists. Jeannette Hillery noted that the Stewardship Council was not trying to restrict public comment to five minutes, but that this

amount of time was allotted simply because there have been very few members of the public attending or wishing to comment at these meetings lately. [Full statement attached to minutes]

Leroy Moore with the Rocky Mountain Peace and Justice Center spoke next. He said he has been working on Rocky Flats issues since 1979. He mentioned that he was asked to mention that Dr. Harvey Nichols will also be speaking later in the meeting. Mr. Moore stated that, of the 1,280 parties that commented on the draft EIS for the Rocky Flats National Wildlife Refuge, 81% rejected public access to the site. He also brought up membership requirements related to the Federal Advisory Committee Act that he said the Stewardship Council deliberately bypasses and posited whether this group was a legal entity. David Abelson responded with regard to the FACA issue. He said that two of FACA's primary requirements are open meetings and having the federal agency approve membership, and that the Stewardship Council does both of these things. He said this group is organized under Colorado law, not FACA, and must comply with the Colorado Sunshine Act. [Full statement attached to minutes]

Hildegard Hix read a statement from Sam Dixon. Ms. Dixon is concerned over the prospect of bad signage. She spent 15 years seeing that Rocky Flats was cleaned up, and is concerned that the dangers that still exist be properly signed. She is not sure that determining the wording of signs was supposed to be job of this group. Ms. Dixon believes it should be done by those who know what happened in the past, such as Rep. McKinley, and overseen by CDPHE. Jeannette Hillery pointed out that this group is not determining wording for signage, but has been trying to be collaborative with the USFWS on this issue. [Full statement attached to minutes]

Dr. Harvey Nichols, biology professor emeritus at CU, began by noting he was speaking on own behalf. He said DOE asked him to study airborne particles at Rocky Flats in 1974. He noted deficiencies in their air sampling equipment and found plutonium in freshly fallen snow. In 1987, at a meeting at the State Capitol, Dr. Nichols said he asked representatives from Rockwell if they were routinely emitting small particles of plutonium from stacks, and they said they were. He also asked them if they regarded plutonium as dangerous and they also said yes. Dr. Nichols said that the entire site was dusted with large numbers of plutonium particles, and that it remains a hazard. This is why he supports the signage bill. Dr. Nichols suggested that the Board ask questions and see if there is any other information they want to explore, and added that the vote on the sign bill could be delayed. He noted that radiation research is ongoing, and that what we consider safe today may not be considered safe in the future. He believes that much of the environmental science at Rocky Flats is questionable, even to this day. He pointed to a statement by John Rampe several years ago about the need to burn vegetation to get rid of weeds. When Lisa Morzel asked for samples, Rampe said it would cost too much and turned down her offer to do it for no cost. Nichols said this is not science, and that he has many more examples. He said he supports full and frank signage. [Full statement attached to minutes]

Jeannette Hillery asked all speakers to email their statements to Board for the record.

Judith Mohling from the Rocky Mountain Peace and Justice Center spoke next. She said that the people most vulnerable to plutonium are children, because they have longer lives during which to develop cancers. Also, they would be more likely to eat plants, dirt, and catch snowflakes in

their mouths. She said there is not as much plutonium at Rocky Flats as there was in the past, but that it is still there. She said she imagines the particles stay suspended forever.

Ann Fenerty added that the site has been cleaned partially to a depth of six feet, but that prairie dogs dig down to sixteen feet. She mentioned the statement she read previously was signed by several PhD chemists and that she would like the entire statement reflected in the minutes.

### **Host DOE Quarterly Meeting**

DOE next briefed the Stewardship Council on site activities for the third quarter of 2009 (July – September). Activities included surface water monitoring, groundwater monitoring, ecological monitoring, and site operations. DOE has posted the report on its website.

#### *Surface Water Monitoring and Operations (George Squibb)*

There were no pond discharges or transfers during the quarter. However, Pond A4 was discharged just before Christmas and it took about two weeks. All pre-discharge sampling was below standards. Nitrate values were undetectable. Plutonium and Americium samples were mostly undetectable. The data has not yet been validated, but do not usually change after this point.

Pond levels averaged about 19.4 % of capacity. Precipitation was about average at 3.34 inches. There were low to no flow rates (0-21% of average). Water quality at all points of evaluation was below applicable standards. Lisa Morzel asked about the percentages of anthropogenic (man-made) vs. natural uranium. George said that in the last samples they analyzed, about 30-40% of the activity was anthropogenic. Lisa asked for that this information be provided to the Board. George said they are planning to do another of these studies pretty soon. Shelley Stanley noted that the flow at Woman Creek is 9% of average, and asked what time period is used to calculate the average. George said they use data starting with 1993.

Surface water quality results at the Original Landfill during second quarter 2009 showed acceptable water quality.

Surface water quality results at the Present Landfill (PLF) triggered monthly sampling for vinyl chloride. Vinyl chloride was not detected in the second monthly sample. Therefore, monthly sampling was discontinued. Shirley Garcia asked how many times the site has had to do monthly sampling for vinyl chloride. George said it is probably twice per year. She asked if it was seasonal. He said he was not sure, but will add that analysis to the annual report. Lisa Morzel asked about slumps and cracking at the OLF. George said this will be discussed later in the presentation.

#### *Groundwater Monitoring and Operations (John Boylan)*

John noted that the 3<sup>rd</sup> quarter is a light sampling quarter. He began with an update on the East Trenches Plume Treatment System (ETPTS) project. Media replacement and a system upgrade project were completed. System operations resumed immediately and preliminary results indicate that the system is operating properly. They are primarily treating for solvents at this location. The previous system used two cells in series in a downflow configuration, and John

explained several problems that can occur with this type of system. The updates improved treatment effectiveness, prepared for the next media replacement, and reduced long-term maintenance needs.

Lisa Morzel asked how they know when the media needs to be replaced. John said there are several indicators, such as flow monitoring, pressures, water quality, and visual inspection. She also asked how long the replaced cell had lasted. John said it had been installed in September 2005.

Shirley Garcia asked what material was used for the new treatment cell liner. John said it is HDPE. Shelley Stanley asked what the flow rates are for this project. John said it is 1½ -2 gpm. She asked if they had to remove any soil during the work. John said they did, and then used the same soil as backfill.

At the Solar Ponds (SPPTS), 3<sup>rd</sup> quarter nitrate and uranium concentrations at SPOUT remain consistent with past reports. Since the 3<sup>rd</sup> quarter, treatment results have improved. The most recent data shows that this treatment system is meeting all standards for both nitrate and uranium. Insulation was added to cells and vaults to reduce the effects of cold temperatures. Phosphate (an essential nutrient) was added to the carbon source feeding Phase III Cell A. Phase II is a uranium treatment cell. A geochemist was added as a new technical advisor to the SPPTS technical team to assist investigations of incomplete treatment. Results will be provided and discussed in the 2009 annual report. Shirley asked if these results are these captured on the website. John said that the presentation is posted and for more long term reference, photos are archived and preserved as part of project files.

#### *Site Operations (Jeremiah McLaughlin)*

At the Original Landfill (OLF), monthly inspections were performed throughout the quarter and a vegetation inspection was completed in August.

Seep 4 had some surface expression, but did not show any surface flow. This is likely due to the rock drain that was installed during the West Perimeter Channel Regrade Project. Seep 8 flowed at a rate of 1 to 2 gpm throughout the third quarter. The rock drain located at the base of the West Perimeter Channel flowed temporarily after precipitation events, but was dry throughout most of the third quarter. Seep 7 showed a surface flow of approximately 0.1 gpm during the July inspection. The area was dry during subsequent inspections following the adjustment completed on the drain extension.

As part of the OLF geotechnical investigation, an extension to the original Seep 7 subsurface drain was installed in the OLF cover soil in September 2008. Surface flow along the eastern edge of the drain (below inclinometer 82508I) was observed during second quarter 2009. The planned adjustment to hand-excavate the drain edge and open the geotextile fabric to make the edge more porous was made on July 23 and August 19 and is completed. No further surface expression was noted in this localized area throughout the rest of the third quarter.

Settlement monuments were surveyed on September 30. Data are within the expected range per the OLF Monitoring and Maintenance Plan, which is between 1.34 and 2.86 feet depending on



the location. Inclinometers were measured once each in July, August, and September. Very little deflection was noted, indicating that the movement observed during second quarter in the area between Berms 1 and 3 on the western end of the landfill did not continue.

Areas where the landfill cover is pushed up or rolling are noticeable on the western end of the OLF between Berms 2 and 3; however, the areas continue to remain free of any surface cracking. A new 140-foot-long, narrow, continuous crack that runs along the north and south sides of Berm 1 was noticed during a non-routine inspection of the OLF on July 22. This crack is in the same general location of large cracks that appeared in 2006 and 2007 and observed again during second quarter 2009. The crack was filled and compacted with Rocky Flats Alluvium on July 22; subsequent inspections throughout the third quarter showed no new movement.

Lisa Morzel asked where the inclinometers were located relative to the crack. Jeremiah showed her on the map. She asked if any inclinometers were located outside of landfill area because she is wondering if there is some differential movement between the land slide area and the landfill. Jeremiah said that none are located outside the landfill area. Lisa said it might not be a bad idea to place an inclinometer outside this area just to see if there is a differential. Rick DiSalvo noted that installation of inclinometers is pretty expensive, about \$30,000 apiece. It took four weeks of work to put in the seven existing inclinometers. The geotechnical engineer working on this issue did not recommend placing any of these devices outside of the landfill area. Rick added that the geotechnical report discusses the likely mechanism for these issues with the cover, and the site has reinforced the whole area. He said it is localized and small scale. He added that it is likely to continue, but there is no indication of any type of catastrophic failure. He said that the inclinometers go down to the bedrock. Lisa said that since there is active movement, it is important to know the rate of movement of the landslide vs. the landfill. Rick said there will be a report from the geotechnical engineer in the Annual Report, and we can discuss any additional issues at that point. Rick will note Lisa's request. Scott Surovchak pointed out that measurements are taken at various points along the inclinometer.

Andrew Muckle asked if there is a more permanent solution to these issues with cracking. Jeremiah said it seems to be stabilizing, but if they need another larger scale fix in the future, they will look at options. Rick DiSalvo noted that they will probably need several more years of observation before changing their strategy. David Abelson said that when the Annual Report is released in June, staff will follow-up on this issue and maybe invite the geotechnical consultant to speak to the Board. David Allen asked if there was any correlation between movement and precipitation. Jeremiah said they are keeping an eye on this and is a standard part of their evaluation. Lisa Morzel said she would like to see charts showing the stabilization of the landfill area. Scott said one of causal factors was the west perimeter channel, and the problem with hillside stability, which de-stabilized that end of the landfill as it was collecting water in the subsurface. He said this is fixed now. Shirley Garcia asked what the role of the geotechnical engineer is now. Jeremiah said they review data, prepare information for the annual report, and consult on items of significance.

At the Present Landfill, the quarterly inspection was completed on August 27. No areas of concern were observed. The vegetation inspection was completed on August 19

## **Dam Breach NEPA Alternatives Analysis**

DOE is in the early stages of conducting NEPA analysis for the breaching of ponds A-3, A-4, B-5, C-2, and the Present Landfill pond. DOE prepared an Environmental Assessment on the first series of 7 dam breaches that were done recently. As part of the NEPA process, the public is invited to participate by identifying issues, concerns and alternatives to be considered. Input is being accepted through February 12. DOE will brief the Stewardship Council and the public at the April 5 meeting. The Draft EA will be released in May, followed by a 30-day public comment period.

Shelley Stanley asked DOE to clarify the public involvement process. DOE will be seeking input both at the alternative development phase and then on draft EA. David Abelson pointed out that this first opportunity for public involvement in the development of alternatives is not mandated. DOE is voluntarily adopting this step from the EIS scoping process. David Allen noted that the final step in the EA will be either a recommendation for an EIS or a Finding of No Significant Impact (FONSI). He asked if there would be any more opportunity for public input if a FONSI is issued. He was told there would not. Andrew Muckle asked if there is a problem the site is trying to solve through dam breaching. He was told that the primary purpose of the dam breaches is to return the site to pre-Rocky Flats conditions and also to reduce maintenance costs. The two proposed alternatives are, 1) Breach all five dams in two phases, and 2) No action. DOE is open to additional alternatives. David Abelson said that the Board will get more information about how these drainages work at the April meeting. David Allen stated that he does not think Broomfield is opposed to breaching dams as long as the data supports this strategy, but they feel that it is just too early to do this. He would like to know what criteria DOE will be looking at to make decisions on timelines, and the order of dams to be released. He also asked if they also will be looking at amending RFLMA. Scott Surovchak said RFMLA would have to be amended and that there will also be public process for this decision. In terms of the timing of the EA completion and a 'big picture' surface water plan, the 'big picture' plan will come first. The next proposed dam breach is not scheduled until March 2011.

## **Review Draft Washington, D.C. Talking Points**

In the coming months Board members and staff will meet in Washington, D.C. with Congress and DOE. To ensure that the message these members and staff will carry reflect the position and policies of the Stewardship Council Board, the Board would like to approve talking points for their meetings. Lisa Morzel moved to approve the talking points. The motion was seconded Clark Johnson. The motion passed 10-0.

## **Discuss State House Bill, 1127, Rocky Flats Visitor Information**

State Rep. Wes McKinley has reintroduced his bill requiring CDOT to post signs on non-federal lands adjacent to the Rocky Flats Refuge. The bill is the same one that died in committee in 2009. Chair Jeannette Hillery noted that the Stewardship Council has been committed to working in partnership to address these issues in discussions over the years. This Board is also interested in taking a position of 'informing' rather than 'warning'. She said if the Board felt it necessary to warn visitors to the Refuge of any significant dangers, it would not be waiting for this kind of legislative process to unfold. She explained that the Stewardship Council is working

on a new website to serve as a central point of information about Rocky Flats, and is also working with the Rocky Flats Cold War Museum. She said all parties agree there need to be signs; however the proper venue for making these decisions is in question.

Clark Johnson reported on a meeting that the City of Arvada arranged recently with Rep. McKinley. David Abelson was also invited and present. Clark said that he talked about the city's philosophical reasons for opposing the state legislature mandating these signs on federal land. To the Board, he noted that there is no current or imminent funding for allowing public access to the Refuge, which allows Rep. McKinley to engage on these issues, but also does not encourage USFWS to engage on this topic. He said Rep. McKinley tried to get Arvada to engage in discussing the wording of his bill, but that is not what they were looking to do. David Abelson explained that the Arvada officials made the point that even if they agreed with the text, they would still have trouble with this bill because of the inconsistency of the message that would be sending after they supported the cleanup efforts and development of the Refuge.

Lisa Morzel also met with Rep. McKinley. She pointed to a recurring cycle of Rep. McKinley attempting to bring forward this bill, and the Stewardship Council opposing it. Lisa does not see this as a productive use of time. She pointed out that that this bill does seem to have some momentum this time around. She volunteered to take the language in the bill and USFWS' approved sign language and try to find common ground and areas of agreement. She asked the Board not to take action at this meeting and give her some time to take a look at it.

Carl Castillo asked about the status of the language that the Stewardship Council worked on with USFWS. David Abelson explained that in the spring of 2006, USFWS initiated a process to develop entrance signs for the site. Several groups, including the Stewardship Council, submitted suggested language. USFWS selected the language, and issued a ROD for the entrance signs. The language can be found on their website. It does not align 100% with suggestions from this group, but is very close. The final decision on entrance signs has been made, but Steve Berendzen said that if there is basis for change, they would be open to having additional discussions. Also, there will be additional signs at locations within the Refuge. Shirley Garcia noted that the Refuge plan calls for the Cold War Museum to work with USFWS on additional signs. Andrew Muckle said that his understanding is that Rep. McKinley's desire is to close the Refuge to public access. Lisa Morzel said he did not say this in their meeting. She said she does think that he is willing to modify some of his wording. Jeannette said that, in the past, he has declined to meet with groups in between legislative sessions to discuss this. Lori Cox asked if Rep. McKinley was involved when USFWS developed the original wording. David Abelson said Rep. McKinley was in office at the time. Steve Berendzen said he did not recall any involvement. LeRoy Moore said that Rep. McKinley knows that USFWS has developed wording but he is not satisfied with it. Lori asked what kind of public process Rep. McKinley used to develop his bill. LeRoy said he used people who write language for the legislature and asked some parties who also do not support the USFWS language to help in his efforts.

Clark Johnson said he is skeptical that Rep. McKinley would look at an alternative approach during the session. Ron Hellbusch said he believes Rep. McKinley does not want the Refuge to open and that this is his long-term objective with this bill. Ron does not want to accommodate him on this path. Doug Young, from Senator Udall's office, said that one of the arguments he

has heard as a need for this strict language is that the cleanup was not adequate. He added that, years ago, Mark Udall urged the US Attorney to make all of the Rocky Flats grand jury materials available to EPA and CDPHE. Because this request was granted, the regulators have had access to all of the same grand jury information that Rep. McKinley saw when he served on the jury.

Sue Vaughan suggested a need to look at the goals of each of the parties, because agreement on the language for signs will never come if the goals cannot be reconciled. Megan Davis pointed out that the entrance signs have to capture a lot of information, and that codifying specific language can be dangerous. She said that they need to take some time to work on this. Clark Johnson moved that the Board take a position in opposition to HB 1127 as drafted. The motion was seconded Lori Cox. The vote was 8-2 in favor of the motion. Boulder and Boulder County voted in opposition to the motion. According to the Board's bylaws, nine votes are needed to pass a motion. Two parties were not in attendance. Jeannette noted that the vote does provide a sense of the Board on this issue. Lisa Morzel asked Board members to pass along any input to her and she will keep the Board informed about her efforts to identify areas of agreement on this topic.

### **Public Comment**

Hildegard Hix thanked Lisa Morzel for taking on the task of trying to find common ground on the sign issue. She said she disagrees that the State should not have a part in developing signs for the site. She thinks that state legislators should represent everyone, and that the USFWS does not have the full picture of information on this issue. She thinks they are coming from the viewpoint that the site is clean and safe, but she believes there are questions about this. She thinks that the signs should have information about both the history and a warning about dangers, and then let people decide for themselves if they wish to enter. She finished by asking Doug Young if the regulators ever looked at the Grand Jury data. He said he did not know.

LeRoy Moore said that the regulators did not look at material because US Attorney Suthers said there was nothing in the information that concerned the Rocky Flats cleanup.

### **NEW MEMBER INTERVIEWS AND APPOINTMENTS**

Lori Cox took over chairing the meeting since Jeannette Hillery was re-applying to serve on the Board. Lori explained that the process to be used was that the nine governments would interview candidates for the four community representative seats on the Board of Directors and then make appointments. The terms will start following the appointments. She said six individuals/groups submitted applications.

Lorraine Anderson was the first to be interviewed, via speakerphone. She gave an opening statement that explained her extensive background working on Rocky Flats issues. There were no questions for Lorraine.

Arthur "Murph" Widdowfield was the next applicant to be interviewed. He explained that he was retired, and looking for things to do. He said Rocky Flats is interesting, and that he has been around this area since the plant was built. His neighbor was a nuclear physicist, who was also

involved in fighting one of the fires at the site. Mr. Widdowfield did a lot of work at the site as a construction worker and contractor. He lives in unincorporated Jefferson County, close to Arvada. He saw ad in the newspaper for this position and decided to apply. Lisa Morzel asked if he has been to any Rocky Flats meetings before. He said he had not. She asked if he had an opportunity to read anything about this group. He said he had read the information on the website and gained a feel for what this group is doing. He said he has a lot of background with these kinds of issues. He owns some water rights, and knows a lot about water issues. His background is also in high-temperature systems, boilers, duct work, and plutonium incineration. He said he has confidence in the cleanup work done to restore Rocky Flats, and that he likes the fact that it is now a Wildlife Refuge.

Lori Cox announced that the 'Friends of Front Range Wildlife Refuges' withdrew their application from consideration. She asked if the Board had any questions for the incumbent applicants – The League of Women Voters, The Rocky Flats Cold War Museum and the Rocky Flats Homesteaders. They did not. Lisa Morzel reflected that they have four applicants with great experience, but that there is also something to be said for having a fresh look from someone who is new to the issue. She asked if it would be possible to add all of the applicants. Barb Vander Wall, the Board's attorney, said that the Board's membership is limited by the IGA, and therefore cannot add additional members beyond four.

Each government had four votes for the open positions. In the bylaws, it states that all nine governments may vote on the appointments of the non-governmental members. Superior, Jefferson County and Golden were not present for this vote, so six governments voted.

Westminster votes: Lorraine Anderson, plus all 3 incumbents  
Northglenn votes: Arthur Widdowfield, plus all 3 incumbents  
Boulder County votes: Arthur Widdowfield, plus all 3 incumbents  
Arvada votes: Lorraine Anderson, plus all 3 incumbents  
Broomfield votes: Lorraine Anderson, plus all 3 incumbents  
City of Boulder votes: Arthur Widdowfield, plus all 3 incumbents

After the first round of voting, all of the incumbent groups were voted in. Since there was a tie for the other open seat, the Board decided to wait until more voting members were present, and will therefore add this to the beginning of the agenda for the April meeting.

### **Election of Stewardship Council 2010 Officers**

Lori Cox, Bob Briggs, Lisa Morzel and Jeannette Hillery expressed their interest in serving as officers for 2010. Since the membership appointments were not completed, the Board decided to table this discussion until the April meeting as well. Clark Johnson moved to carry over the terms of the existing Board officers until the April meeting. The motion was seconded by Jeannette Hillery. The motion passed 9-0.

## **Updates/Big Picture Review**

**April 5, 2010**

### *Potential Briefing Items*

- DOE briefing on changes to water monitoring system
- DOE briefing on dam breach EA
- DOE budget briefing
- Continue discussing interpretive signs
- Update from Lisa Morzel on progress relating to Rep. McKinley's bill

**June 7, 2010**

### *Potential Business Items*

- Receive RFSC 2009 audit

### *Potential Briefing Items*

- Host LM quarterly public meeting (Annual Report)
- Continue discussing interpretive signs
- Begin discussing new website

The meeting was adjourned at 12:10 p.m.

*Respectfully submitted by Erin Rogers.*

The following article was published in Physics Today, September 2007

**The article** "Science-Based Cleanup of Rocky Flats" demonstrates a clear conflict of interest. For the record, the authors worked for Kaiser-Hill Co, the US Department of Energy contractor responsible for cleaning up Rocky Flats; their neutrality is suspect. Independent, scientific reviews of the cleanup have been written by contractors that neighboring municipalities hired, by a consortium of water users, and by DOE-hired experts.<sup>1-3</sup> All the reviewers expressed concern about the effectiveness of the remediation.

Plutonium dioxide is known to exist on the site as a finely dispersed solid. In that form it can be carried as part of a colloidal suspension in the groundwater. It will also be suspended in the air if burrowing animals bring it up from the contaminated rubble left on the site. Additionally, no independent evaluation has been conducted of the bedrock under the 10-square-mile site, which is in an earthquake zone. It is questionable that an area of this size will have no fractures in the event of an earthquake. Two unlined 20-acre, 40-foot-deep landfills were left on the site, covered by only a few feet of soil. Not only do they contain radioactive materials but also other carcinogens such as compounds of beryllium and volatile organic compounds that will eventually contaminate the groundwater.

Rocky Flats will be opened to the public for general recreation, and I shudder to think of children playing at this site. As a former member of the Rocky Flats Citizens Advisory Board and a chemist, I find this unacceptable. This isn't a cleanup, it's a cover-up.

#### References

- 1. GEI Consultants Inc, *Interim Measure/ Interim Remedial Action: For Groundwater at the Rocky Flats* (rep. prepared for the city of Westminster and the city and county of Broomfield, CO), Glastonbury, CT (10 February 2005).
- 2. S. F. Dwyer, *Review of the Original Landfill Closure Design, Specifications, and CQAP for the Rocky Flats Environmental Technology Site, Golden, Colorado* (rep. prepared for the Woman Creek Reservoir Authority), Sandia National Laboratories, Albuquerque, NM (23 May 2005).
- 3. Muller Engineering Co Inc, *Walnut Creek Drainages Pond Reconfiguration Review* (rep. prepared for the city and county of Broomfield, CO), Muller Engineering Co Inc, Lakewood, CO (28 March 2005).

**Anne Fenerty**

[\(anne@fenerty.com\)](mailto:anne@fenerty.com)

*Boulder, CO*

Regarding: **Rocky Flats Signage**

**To Rocky Flats Stewardship Council and Others To Whom It May Concern:**

I ask that this note be read at your meeting if at all possible.

I wish that I could be at this meeting to let you know how concerned I am over the prospect of bad signage at Rocky Flats. Having spent 15 years of my life trying to have Rocky Flats cleaned up to a safety standard that would protect the citizens living near this site, and for families that may visit the site, and failing, I now realize that I have failed in this endeavor. I am concerned that the dangers that still exist at this site be properly signed, so that those who want to visit the site do so with the knowledge of what still remains there.

I am not sure that determining the wording of the signs was ever supposed to be the job of this Council. However, I know how important it is to individuals to keep their jobs going and others to pad their résumés.

In the best interest of the public health and safety of the citizens, the wording/warning on the signs should come from those who know what really happened here, such as Rep.McKinley with the cooperation of the State Health Department.

Enough people have paid the price, with their bad health and deaths, for this sites existence and for the sake of the Almighty Dollar. Do not let any more people be negatively affected.

Thank you,

Samantha "Sam" Dixon

Former 16 year Council Person for the Westminster & Member of RFLII &RFCLOG

Please add this to the Minutes of this meeting held February 2, 2010 . Thank you



Statement in support of Rep. Wes McKinley's House Bill on Rocky Flats signage:

**RESEARCH:** Dr. H. Nichols was asked by ERDA/DOE official to research Rocky Flats (RF) airborne particles in 1974, contract awarded 1975-1976. **I noted deficiencies in air sampling equipment and found large numbers of radionuclide particles in fresh snow** **\*\*\***(see below). Reported to DOE, Gov. D. Lamm, Cong. Tim Wirth.

**1987 ON RECORD I QUESTIONED ROCKWELL (DOE CONTRACTOR): "DID YOU ROUTINELY EMIT SMALL QUANTITIES OF TINY PLUTONIUM PARTICLES FROM YOUR STACKS?" ANSWER: "YES"** ( CO HR sub-committee on Rocky Flats, chair Rep. Dorothy Rupert and Sen. Ruth Wright, 9/30/1987). Confirmation: History of RF plutonium emissions by **Dr. John Till** for CDPHE, **showed from official DOE data that over 600 million nanocuries of plutonium were emitted from the RF stacks during routine operations from 1952/3 to 1989. These were minimal estimates according to Dr. Till. N.B. EPA official at RF, Tim Rehder "A nanocurie is a massive dose" (p.c. 2000).**

*\*\*\* I conclude that the radionuclide particles I detected were plutonium, and the numbers greatly exceeded the J. Till total of over 600 million nanocuries; my estimates range up to tens of billions of plutonium particles per acre deposited across RF during routine operations.* Response to me from **Dr J. Till** at public meeting in Boulder, May 1, 2001: "Harvey, I believe your data." Witnessed by Dr. LeRoy Moore.

With help from offices of US Sen. Allard and Cong. Beauprez I got information about RF from EPA and US Fish and Wildlife Service (e.g. USFW letter 10/21/2003 to Cong. Beauprez) and learned that **I appear to be the only person ever to have sampled snowfall for radionuclides at RF, from which this current concern of mine arises.**

**SOIL SAMPLING:** DOE and Kaiser-Hill have analysed many soil samples at RF and maintain that plutonium levels in the Wildlife Refuge area are barely above "background" levels (i.e. from the atmospheric bomb tests of the 1950s/60s). NB the level of maximum radiological clean-up at the Refuge is 50 picocuries/gram, approx. 1000 times "background." **Professor Litaor** at Tel-Hai Academic College, Israel, former soil scientist at RF, stated that when he worked in the (future) Wildlife Refuge area in 1990 - 95 **"I commonly found that my personal protection equipment (PPE) was 'hot' by the day's end and was discarded into the 'hot' contaminated bin."** (p.c. letter March 23, 2004). **Dr. Litaor stated forcefully at a public meeting in Boulder in 2004 that from his direct experience at RF the scheme to allow recreation at Rocky Flats was "crazy."**

**PLUTONIUM EXPOSURE & HEALTH; & CHANGING "SAFE" LIMITS:** DOE, Kaiser-Hill, and USFW say that the small amounts of plutonium still remaining in the Refuge area are no threat to public health. Throughout the 20<sup>th</sup> century the US radiation standards, originally regarded as safe, were repeatedly revised downwards, and we can expect this process to continue, as knowledge advances. "Safe" today may not

be judged safe tomorrow. Dr. Edward Martell of NCAR said that if he and Dr. Karl Morgan (founder of US health physics) were correct in suggesting that the US official radiological protection standards were too lax by factors of 100 or 1000, then there would be profound health consequences for exposure of the public to current “safe” levels of radiation (PBS Frontline TV program, 1993: “Secrets of a Bomb Factory”).

**A PRISTINE REFUGE?** The Colorado public has been told that the Wildlife Refuge is “pristine” (e.g. by DOE ecologist John Rampe, and RF spokesman Pat Etchart) but from the USFW there is acknowledgement that they do not regard the RFNWF as pristine: **“We have not referred to the Buffer Zone as “pristine” because we do not believe it to be so. Some areas of the Buffer Zone are publicly known to have very low levels of plutonium contamination; much of the Buffer Zone is also infested with exotic weeds. Since plutonium is not a naturally occurring element and these weeds are not native species, the Service does not consider the Buffer Zone to be pristine.”**( Oct. 21, 2003 USFW Regional Director letter to US Cong. Beauprez, forwarded to H. Nichols). I am concerned that at least one of our senior political representatives may have been influenced by this supposedly pristine status, and that may have colored his thinking about the matter at hand.

**PUBLIC PERCEPTION AND THE NEED FOR “INFORMED CONSENT:”**  
**Without full and frank language in the signage** Wildlife Refuge visitors would assume that a site certified for recreation by EPA and CDPHE and managed by USFW would be safe, unaware of the toxic and radiological history of the site and the contamination remaining there. It is the firm belief of myself and former Boulder County Commissioner Paul Danish that such DOE sites need a “special status” for the indefinite future to protect the public, until further research shows whether they are safe, or not.

I therefore ask that the Committee support Rep. McKinley’s bill for informational signage at the Rocky Flats National Wildlife Refuge.

Harvey Nichols, Ph.D.

Emeritus Professor of Biology.  
4255 Chippewa Drive, Boulder CO 80303  
tel. 303 494 2700  
Harvey.nichols@colorado.edu

# Rocky Mountain Peace and Justice Center

P. O. Box 1156, Boulder, CO 80306 USA 303-444-6981 Fax 720-565-9755 www.rmpjc.org

To: Rocky Flats Stewardship Council  
From: LeRoy Moore, Ph.D.  
Date: February 1, 2010  
Re: Statement for the public record

Please include the following two comments as part of the official record of today's meeting.

First, of 1,280 parties that commented on the Draft Environmental Impact Statement for the Rocky Flats National Wildlife Refuge,\* 81% rejected public access to the refuge while only 11% explicitly favored such access. This information is based on the official published record of comments on the Draft EIS.\*

Second, the Federal Advisory Committee Act requires that the membership of a body created to advise an agency of the federal government must "be fairly balanced in terms of the points of view represented" within the advisory committee. The Rocky Flats Stewardship Council, which advises the federal agency that funds it, was created in a way that deliberately bypasses this legal requirement. Is the Stewardship Council therefore an illegal entity?

\* U. S. Fish & Wildlife Service, *Rocky Flats National Wildlife Refuge, Appendix H: Comments and Responses on the Draft Environmental Impact Statement* (September 2004). I arrived at the total of 1,280 commenting parties by eliminating duplications, so that multiple individuals from a given organization, such as the Rocky Mountain Peace and Justice Center or the City of Broomfield, are in each case counted as a single party.

8:14 AM  
03/20/10

## Rocky Flats Stewardship Council Check Detail January 15 through March 20, 2010

Type	Num	Date	Name	Account	Paid Amount	Original Amount
<b>Check</b>		<b>1/29/2010</b>		<b>CASH-Wells Fargo-Operating</b>		<b>-2.00</b>
				Admin Services-Misc Services	-2.00	2.00
TOTAL					-2.00	2.00
<b>Bill Pmt...</b>	<b>1410</b>	<b>1/31/2010</b>	<b>Crescent Strategies, LLC</b>	<b>CASH-Wells Fargo-Operating</b>		<b>-8,756.87</b>
Bill	1/31/...	1/31/2010		Personnel - Contract	-6,850.00	6,850.00
				Telecommunications	-125.90	125.90
				TRAVEL-Local	-137.50	137.50
				Postage	-15.99	15.99
				Supplies	-36.40	36.40
				TRAVEL-Out of State	-498.90	498.90
				Printing	-234.42	234.42
				Admin Services-Misc Services	-857.76	857.76
TOTAL					-8,756.87	8,756.87
<b>Bill Pmt...</b>	<b>1411</b>	<b>1/31/2010</b>	<b>Jennifer A. Bohn</b>	<b>CASH-Wells Fargo-Operating</b>		<b>-578.00</b>
Bill	10-9	1/31/2010		Accounting Fees	-578.00	578.00
TOTAL					-578.00	578.00
<b>Check</b>	<b>1412</b>	<b>2/1/2010</b>	<b>Qwest</b>	<b>CASH-Wells Fargo-Operating</b>		<b>-27.95</b>
				Telecommunications	-27.95	27.95
TOTAL					-27.95	27.95
<b>Bill Pmt...</b>	<b>1413</b>	<b>3/4/2010</b>	<b>Blue Sky Bistro</b>	<b>CASH-Wells Fargo-Operating</b>		<b>-255.00</b>
Bill	179	2/1/2010		Misc Expense-Local Government	-255.00	255.00
TOTAL					-255.00	255.00
<b>Bill Pmt...</b>	<b>1414</b>	<b>3/4/2010</b>	<b>Crescent Strategies, LLC</b>	<b>CASH-Wells Fargo-Operating</b>		<b>-7,094.59</b>
Bill	2/28/...	2/28/2010		Personnel - Contract	-6,850.00	6,850.00
				Telecommunications	-130.62	130.62
				TRAVEL-Local	-43.50	43.50
				Postage	-15.99	15.99
				Supplies	-45.48	45.48
				TRAVEL-Out of State	-9.00	9.00
TOTAL					-7,094.59	7,094.59
<b>Bill Pmt...</b>	<b>1415</b>	<b>3/4/2010</b>	<b>Jennifer A. Bohn</b>	<b>CASH-Wells Fargo-Operating</b>		<b>-391.00</b>
Bill	10-17	2/28/2010		Accounting Fees	-391.00	391.00
TOTAL					-391.00	391.00
<b>Bill Pmt...</b>	<b>1416</b>	<b>3/4/2010</b>	<b>Seter &amp; Vander Wall, P.C.</b>	<b>CASH-Wells Fargo-Operating</b>		<b>-2,984.76</b>
Bill	57528	1/31/2010		Attorney Fees	-1,922.26	1,922.26
Bill	57747	2/28/2010		Attorney Fees	-1,062.50	1,062.50
TOTAL					-2,984.76	2,984.76
<b>Check</b>	<b>1417</b>	<b>3/4/2010</b>	<b>Qwest</b>	<b>CASH-Wells Fargo-Operating</b>		<b>-27.54</b>
				Telecommunications	-27.54	27.54
TOTAL					-27.54	27.54

## **Dam Breaching/Water Configuration**

- Cover memo
- Broomfield comment letter
- Northglenn comment letter
- Westminster comment letter
- Woman Creek Reservoir Authority comment letter

# ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670  
Boulder, CO 80308-0670  
www.rockyflatssc.org

(303) 412-1200  
(303) 600-7773 (f)

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

## MEMORANDUM

**TO:** Stewardship Council Board  
**FROM:** Rik Getty  
**SUBJECT:** Proposed changes to Rocky Flats surface water configuration briefing  
**DATE:** March 24, 2010

---

We have scheduled one hour for DOE to present a combined briefing on proposed dam breaching actions and additional proposed surface water configuration changes.

### **Status of Proposed Dam Breaching Activities**

As you recall, DOE briefed the Stewardship Council on proposed dam breaching activities at the February 1<sup>st</sup> meeting. As DOE explained, in order to breach the dams they will conduct a National Environmental Policy Act (NEPA) Environmental Assessment (EA).

As DOE explained at the February meeting, the purpose of the dam breach project is:

1. Reduce or eliminate the retention of surface water to return Rocky Flats surface water flow configuration to the approximate conditions existing prior to the construction of the dams;
2. Provide ecological benefits by improving riparian habitat and promoting wetlands;
3. Reduce management efforts related to evaporative depletion reporting while reducing costs to water rights holders responsible for downstream augmentation replacements; and,
4. Reduce and/or eliminate the inspection and reporting costs associated with meeting dam safety requirements and the management and maintenance costs for upkeep of the dams.

DOE also stated that their focus in evaluating the impacts of the proposed actions will include:

5. hydrology;
6. endangered species (e.g., Preble's Mouse);
7. wetlands habitat; and,
8. fugitive dust emission during construction.

Following that meeting, several Stewardship Council member governments and the Woman Creek Reservoir Authority issued letters requesting DOE select the "no-action" alternative outlined in DOE's initial plans. Those letters are attached to this memo.

Based on this initial feedback, DOE hosted an additional technical briefing on the proposed EA on March 3<sup>rd</sup>. Those in attendance included DOE and contractor staff, CDPHE and EPA staff, Broomfield Board member and staff, Westminster Board member and staff, Thornton staff (representing the Woman Creek Reservoir Authority) and Stewardship Council staff. During this meeting DOE reiterated the proposed activities could occur in two phases. The first phase could occur in 2011 for A-3 (North Walnut Creek), C-2 (Woman Creek) and the Present Landfill pond. The second phase could occur in the 2015-2018 period for the two remaining terminal ponds on Walnut Creek (A-4 and B-5).

One of the questions that arose during the March 3<sup>rd</sup> meeting was whether C-2 on Woman Creek is a terminal pond. As DOE explained, the answer is no as Woman Creek does not flow into C-2 but is (and has always been) diverted around C-2. The South Interceptor Ditch (SID) goes into C-2. When water from C-2 is released it joins Woman Creek a short distance to the east of the C-2 dam. (In contrast, Ponds A-4 and B-5 on Walnut Creek are at the terminus of North and South Walnut creeks respectively and thus are considered “terminal ponds”.)

DOE plans to release the draft EA for public comment in mid-April with a 30-day public comment period.

### **Proposed Surface Water Configuration Changes**

As discussed in more detail below, DOE is evaluating other changes to the surface water program, including:

1. Moving the two surface water Points of Compliance (POC) along Indiana Street where Walnut and Woman Creek leave the Refuge upstream to the eastern edge of DOE’s property adjacent to the Refuge boundary;
2. Operating terminal ponds A-4 (North Walnut Creek) and B-5 (South Walnut Creek) in flow-through configurations for several years to observe changes in water quality and riparian habitat. As DOE will explain, the data they gather in operating the ponds in a flow-through configuration will help them determine whether to breach those ponds.
3. Conducting additional testing to determine whether uranium found in surface water is naturally occurring; and
4. Conducting additional testing for nitrate levels in surface water at targeted locations.

#### *Change in POC locations*

DOE wants to move the Indiana Street POCs for Walnut and Woman Creeks to upstream locations. Both new POC locations would be on DOE-retained lands near the refuge boundary. The Walnut Creek POC would be moved to the confluence of North Walnut Creek, South Walnut Creek, and No-name Gulch, which is the drainage from the PLF pond that rarely flows. The Woman Creek POC would be moved to the confluence of Woman Creek and the C-2 dam discharge.

DOE is proposing these new locations to align with CERCLA regulations which require the agency to monitor water quality at the site boundary. DOE’s jurisdiction previously extended to Indiana Street, but with the creation of the Refuge it is now at the edge of the Central Operating Unit.



*Operating terminal ponds A-4 and B-5 in a flow-through configuration for several years*

DOE is evaluating operating A-4 and B-5 in a flow-through configuration prior to dam breaching. One of their rationales for this configuration is to see what, if any, changes may occur to water quality and habitat prior to breaching the dams. DOE has stated they can always shut off the flow-through and revert back to batch-and-release if unknown problems arise during the flow-through period.

DOE also believes that if the ponds are operated as flow-through the only time Walnut Creek surface water will reach Indiana is during a major precipitation event, such as a major snowmelt or large rainfall. This assumption is based on years of flow monitoring and sampling on Walnut Creek.

*Additional LANL testing for uranium at targeted locations*

DOE will perform additional testing for uranium at targeted locations in the hopes of better understanding the nature and extent of uranium contamination in surface water. As you recall the highly specialized testing LANL labs undertake can distinguish between naturally-occurring and man-made uranium based on isotopic abundance. Most of the uranium that has been detected by previous LANL testing of surface water and groundwater samples has been naturally-occurring. DOE is hoping to determine an ambient level (regulatory term for “normal” or steady-state condition) of uranium in surface water. The data that is collected will help the Colorado Water Quality Control Commission evaluate any future uranium standards for Rocky Flats.

This additional testing is beyond the monitoring requirements of the RFLMA and CDPHE will provide regulatory oversight.

*Additional testing for nitrates at targeted locations*

DOE will also perform additional testing for nitrate levels in surface water at targeted locations in North Walnut Creek (effluent from SPPTS empties into North Walnut Creek). Like the uranium testing, the additional nitrate testing is beyond the monitoring requirements of the RFLMA and CDPHE will provide regulatory oversight.

DOE is hopeful that the new monitoring data will provide information on whether nitrate levels decrease as the surface water flows through wetland habitat in the breached A-1 and A-2 dams. Decrease in nitrate levels could be due to dilution with cleaner surface water or possible natural attenuation processes such as phytoremediation. In the case of nitrates (think major component of plant fertilizer, the “N” in the N-P-K ...Nitrogen-Phosphorus-Potassium formula for fertilizers), plants are known to provide uptake of nitrates into their systems thus reducing nitrate levels in water. At the end of 2009, the nitrate standard for surface water was lowered from the temporary modification of 100 mg/l to the state standard of 10 mg/l. DOE is hopeful that the lower standard for nitrate will be met by the new upgrades to the SPPTS and possible reduction contributions from natural attenuation processes.

Please contact me if you have any questions.



February 11, 2010

Mr. Scott Surovchak  
U.S. Department of Energy  
Rocky Flats Environmental Technology Site  
11025 Dover St., Suite 1000  
Westminster, Colorado 80221-5573

RE: Proposed Rocky Flats Surface Water Configuration Environmental Assessment

Dear Mr. Surovchak:

The City and County of Broomfield (Broomfield) appreciates the opportunity to provide you with our initial feedback on the proposed alternatives that are being considered by the Department of Energy, Office of Legacy Management (LM) for the Rocky Flats Surface Water Configuration Environmental Assessment (EA). Our position and subsequent comments are based on your February 1, 2010 presentation to the Rocky Flats Stewardship Council.

It is our understating that the proposed EA will evaluate the following two project alternatives: 1) breaching the remaining surface water dams over the next three to five years and 2) no action which would maintain the status quo. Since our knowledge on the breaching alternative is limited to a general statement of scope, Broomfield is not able to provide any significant or meaningful comments on LM's proposal. Due to the lack of details available at this time, Broomfield will advocate and encourage others to support the "No Action" alternative. Our position on the "No Action" alternative is based on the following:

Insufficient Monitoring History – The site has not been subject to a full 5-year review period of remedial activities since closure. Official regulatory closure occurred less than three and one-half years ago and there is not enough data available to trend and evaluate the effectiveness of the existing remedies. In addition, insufficient time has lapsed since closure to be able to observe the hydrological or topographical impacts to surface water quality resulting from sequential wet and dry periods.

Recent Changes and Current Investigations – LM has several ongoing activities that have the potential for affecting or negatively impacting surface water quality. For example, structural and operational modifications were recently completed on some of the groundwater treatment units; a geotechnical expert is currently evaluating the cracks and subsidence in the Original Landfill cover; and additional sampling regimes are being implemented to address sporadic elevated levels of vinyl chloride at the Present Landfill.

Inadequate Information and Details – Other than a range spanning several years, no criteria, parameters, or threshold have been presented to support the basis and rationale for breaching the dams. In addition, the proposed changes to site operations and monitoring have not been shared. Specific areas of potential concern include (1) the absence of a contingency plan to limit/control actinide migration from soil erosion following a major storm event and (2) the lack of a documented monitoring and sampling protocol for the free-flowing water. These types of operational changes will need to be included as a revision to the Rocky Flats Legacy Management Agreement.

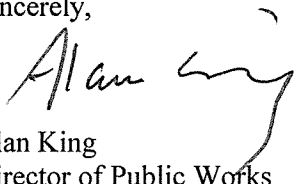
Although LM and the Colorado Department of Health (CDPHE) do not consider the ponds to be part of the remedy, they serve as a vital mechanism to prevent actinides and other contaminants from leaving the Rocky Flats site. We want to reiterate that the ponds serve as our last measure of protection to prevent contamination from migrating off-site through surface water flows. Notching the dams to allow unrestricted flows could result in significant environmental impacts to Broomfield if contamination is released off-site. Because of the potential risks, Broomfield prefers to be overly cautious rather than attempting to react to a detrimental situation.

Despite our current position to support the "No Action" alternative, we acknowledge LM's recent efforts and improvements to ensure residual contamination does not impact surface water quality leaving the site boundary. To help us gain a better understanding of the dam breaching project, we would like to host a public meeting with LM to review the proposed alternatives in more detail and discuss other alternatives provided by the public. Our preference is to have this meeting within the next 4 to 6 weeks before the EA is officially released for a 30-day comment period in May 2010.

Communication has been, and will continue to be, fundamental in understanding Broomfield's and LM's goals for ensuring the protection of human health and the environment. LM worked intimately with the downstream communities to discuss the EA for Pond and Land Configuration of Rocky Flats, dated May 2004. We felt that this approach was successful and would like to follow a similar process for this new pond configuration proposal.

Thank you for the opportunity to provide comments on the alternatives being considered for the Rocky Flats Surface Water Configuration EA. As a downstream community, we will continue to be involved with activities associated with the Walnut Creek drainages and hope that you will continue providing information and allowing us to participate. If you have any questions, please call Ms. Shirley Garcia of my staff at 303.438.6329.

Sincerely,



Alan King  
Director of Public Works

- c: Ms. Lori Cox, Broomfield City Council  
Mr. Greg Stokes, Broomfield City Council  
Mr. David Allen, City & County of Broomfield  
Ms. Shirley Garcia, City & County of Broomfield  
Mr. Carl Spreng, CDPHE  
Ms. Vera Moritz, EPA



*Water and Wastewater Utility*  
2350 West 112th Avenue  
Northglenn, Colorado 80234-3253  
Phone (303) 451-1289  
FAX (303) 451-0994  
TDD (303) 451-8403

---

February 12, 2010

**Sent via email**

Mr. Scott Surovchak  
U.S. Department of Energy  
Rocky Flats Environmental Technology Site  
11025 Dover St., Suite 1000  
Westminster, Colorado 80221-5573

Re: Draft Rocky Flats Surface Water Configuration Environmental Assessment, dated February 2010

Dear Mr. Surovchak:

The City of Northglenn appreciates the opportunity to review the draft proposed alternatives of the Rocky Flats Surface Water Configuration Environmental Assessment (EA), dated February 2010. The City is not offering an alternative different from the two currently proposed by the DOE but would like to take this opportunity to outline why we are supporting the "No Action" alternative.

Regulatory closure occurred in 2006. In the three and one half years since closure, modifications to multiple remedies have occurred. DOE LM is currently reviewing modifications to the treatment unit operations and designs, reviewing engineering geotechnical recommendations and evaluations of cracks and subsidence in the Original Landfill cover, and implementing additional sampling regimes to address sporadic elevated levels of vinyl chloride at the Present Landfill. While the City of Northglenn commends the DOE for responding to changing site conditions that have the potential to impact water quality, it seems in the best interest of public health to allow more time to "test" modifications already made before embarking on additional modifications from which there is no turning back (i.e. breaching the dams). Data collected during this modification period can then be added to the existing, 3.5 year database resulting in a more robust and defensible data set from which to make scientifically sound decisions. It also seems prudent to observe and evaluate topographic and hydrologic responses to surface water quality during sequential wet or dry years.

The provided purpose in the EA to breach the remaining dams does not substantiate the need to protect water quality, but rather to reduce operational cost and improve ecological systems. Northglenn feels that protection of public health should be considered above operational costs.

Notching the dams to allow free flow conditions could have significant, negative impacts to Northglenn if contamination is released off-site. The ponds serve as our last measure of protection to prevent the movement of soil and water borne contamination off-site. Because of the potential risk, Northglenn prefers the "no action" alternative.

Thank you for the opportunity to comment on this draft document. The City of Northglenn will continue to be involved in the revisions to the EA and any activity associated with the Walnut and Woman Creek drainages. If you have any questions, please feel free to me at 303-450-4067.

Sincerely,

A handwritten signature in black ink that reads "Shelley Stanley". The signature is written in a cursive, flowing style.

Shelley Stanley, Water Quality Coordinator

cc: David Willett, City of Northglenn  
Sheri Paiz, Northglenn City Council  
Raymond Reling, City of Northglenn  
Carl Spreng, CDPHE  
Vera Moritz, EPA  
David Abelson, Rocky Flats Stewardship Council  
Josh Nims, Woman Creek Reservoir Authority  
Shirley Garcia, City and County of Broomfield  
David Allen, City and County of Broomfield  
Mike Smith, City of Westminster  
Bud Elliot, City of Thornton



# WESTMINSTER

February 12, 2010

Mr. Scott Surovchak  
U.S. Department of Energy  
Rocky Flats Environmental Technology Site  
11025 Dover St., Suite 1000  
Westminster, Colorado 80221-5573

City of Westminster  
Office of the  
Council

4800 West 92nd Avenue  
Westminster, Colorado  
80031

303-658-2400  
FAX 303-706-3921

Nancy McNally  
Mayor

Chris Dittman  
Mayor Pro Tem

Bob Briggs  
Councillor

Mark Kaiser  
Councillor

Mary Lindsey  
Councillor

Scott Major  
Councillor

Faith Winter  
Councillor

Re: Draft Rocky Flats Surface Water Configuration Environmental Assessment,  
dated February 2010

Dear Mr. Surovchak:

The City of Westminster appreciates the opportunity to provide comment on the proposed alternatives to be addressed in the Rocky Flats Surface Water Configuration Environmental Assessment (EA) as presented to the Rocky Flats Stewardship Council on February 1, 2010. The City is not proposing an alternative in addition to the two currently proposed by the Department of Energy Legacy Management (DOE LM), but we will take this opportunity to outline our concerns as to why we are supporting the "No Action" alternative.

1. The site has not had its first five-year review of remedial activities at the site since closure. Regulatory closures occurred less than three and one-half years ago and there is not sufficient data to trend and evaluate the remedy.
2. There is not sufficient data to evaluate hydrological or topographical impacts to surface water quality during sequential wet or dry years.
3. Current modifications to the remedy are ongoing; therefore, a baseline has not been established to evaluate the effectiveness of the remedy to determine the implications of removing the ponds. DOE LM is currently reviewing modifications to the treatment unit operations and designs, reviewing engineering geotechnical recommendations and evaluations of cracks and subsidence in the Original Landfill cover, and implementing additional sampling regimes to address sporadic elevated levels of vinyl chloride at the Present Landfill.
4. The EA does not address residual contamination; a sampling protocol for the free-flowing water has not been developed, nor is a Contingency Plan in place in the event of a major storm event to address actinide migration based on severe soil erosion. This information will need to be developed, and the Rocky Flats Legacy Management Agreement will need to be revised.



Mr. Scott Surovchak  
U.S. Department of Energy  
February 12, 2010  
Page 2

5. The provided purpose in the EA to breach the remaining dams does not substantiate the need to protect water quality, but rather to reduce operational cost and improve ecological systems. Notching the dams to allow free-flowing water could have significant negative impacts on Westminster if contamination is released off-site. We understand that DOE LM and the Colorado Department of Public Health and Environment do not consider the ponds to be part of the remedy, but they serve as a vital mechanism to prevent actinides and other contaminants from leaving the Rocky Flats site. The ponds serve as our last measure of protection to prevent the movement of soil and water borne contamination off-site.

We request that a public meeting be held to address the two proposed alternatives and any additional alternatives provided by the public. Thank you for the opportunity to comment on the proposed EA alternatives. The City of Westminster will participate in review of the Surface Water Configuration EA and any activities associated with the Woman and Walnut Creek drainages. If you have any questions, please contact Cathy Shugarts at 303-658-2462.

Sincerely,

Nancy McNally  
Mayor

cc: City Council  
Brent McFall, City Manager  
Mike Smith, Director of Public Works & Utilities  
Ron Hellbusch, Special Projects Coordinator  
Mike Happe, Utility Planning and Engineering Manager  
Cathy Shugarts, Water Quality Specialist  
Carl Spreng, CDPHE  
Vera Moritz, EPA  
David Abelson, RFSC  
Alan King, City of Broomfield  
David Willett, City of Northglenn  
Mark Koleber, City of Thornton  
Manuel Montoya, FRICO



**Woman Creek Reservoir Authority**

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

---

February 11, 2010

***Via Email and U.S. Mail***

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

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

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 "Rocky Flats Surface Water Configuration Environmental Assessment Alternatives" on behalf of the Authority.

By way of background, Woman Creek Reservoir was completed in 1996 as part of the Standley Lake Protection Project, a federally funded project designed to provide an extra layer of protection to the downstream municipal drinking water supplies in Standley Lake from activities at the Rocky Flats Plant site. Woman Creek Reservoir operations allow for the diversion of all Woman Creek flows into the reservoir, and the subsequent pumping and release of any stored water to the Walnut Creek basin, near Great Western Reservoir. As required by the Rocky Flats Legacy Management Agreement ("RFLMA"), the Department of Energy (DOE) is responsible for testing the quality of the water in Woman Creek at the Indiana Street Point of Compliance. This point of compliance is critical to Woman Creek Reservoir operations. To the extent an exceedance of certain water quality standards occurs at the Indiana Street Point of Compliance, DOE has agreed to take certain actions to address the issue. If no exceedance occurs, water is released from Woman Creek Reservoir to the Walnut Creek basin.

The Authority has the following initial comments on the "Rocky Flats Surface Water Configuration Environmental Assessment Alternatives" request:

1. The Authority strongly prefers a "No Action" decision and believes it is the only viable "alternative" at this time. 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 five ponds is inappropriate at this time and cannot constitute a viable “alternative”, nor can it be justified in the name of water quality, riparian or wetland improvements.

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. Breaching the relevant dams would eliminate the inherent protections to the downstream communities.

As you know, although regulatory closure of the Site occurred in 2006, there are still a number of ongoing DOE remedial efforts at the Site that still do not conform to the requirements of the RFLMA as of this date, including, but not limited to, ongoing groundwater treatment and landfill cover activities. In light of these activities and in light of the fact that regulatory closure occurred less than four years ago, there is not nearly enough of a record of wet and dry year cycles to reach any meaningful conclusions on the long term flow regime of both the Woman and Walnut Creek watersheds that could possibly justify breaching existing dams. Frankly, the current 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.

2. At the outset, 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.

3. 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.

4. The Authority opposes any breach of Pond C-2. Notwithstanding this position, the Authority would urge that a longer period of time pass before any breach is accomplished. For example, DOE should consider an alternative that contemplates a breach of Pond C-2 in 10 years, 25 years or 50 years as 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 which 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.

5. An alternative should be analyzed to a simple breach of the ponds that specifically requires DOE's 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.

6. The Authority joins in the comments submitted by the City and County of Broomfield, and the Cities of Northglenn and Westminster to the requested alternatives analysis.

In accordance with the February 2, 2010 Notice, the Authority is interested in being notified of the availability for review of the Draft EA for review and comment. To this end, we request that you add [jnims@cityofwestminster.us](mailto:jnims@cityofwestminster.us) and [ljohnson@chp-law.com](mailto:ljohnson@chp-law.com) to your contact list for review of any draft EA and/or other future relevant communication. Thank you for the opportunity to comment on the Rocky Flats Surface Water Configuration Environmental Assessment Alternatives.

Sincerely,



Josh Nims  
President  
Woman Creek Reservoir Authority

cc:

David Willett, City of Northglenn  
Bud Elliot, City of Thornton  
Mike Smith, City of Westminster  
David Allen, City and County of Broomfield  
Shirley Garcia, City and County of Broomfield  
Shelley Stanley, Woman Creek Reservoir Authority Board  
Ed Lanyon, Woman Creek Reservoir Authority Board  
Carl Spreng, Colorado Department of Public Health and Environment

Vera Moritz, Environmental Protection Agency  
Ray Plieness, Legacy Management  
Scott Surovchak, Legacy Management  
Rocky Flats Stewardship Council

## **DOE Budget Briefing**

- Cover memo
- Selections for FY11 DOE budget submission to Congress

## **Refuge Signs**

- Cover memo
- Selection from February 2, 2009, minutes
- Selection from June 1, 2009, minutes
- Fact sheet: Rocky Flats History, Cleanup and Ongoing Management
- Fact sheet: How Clean Is Clean
- Rocky Flats Timeline

# ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670  
Boulder, CO 80308-0670  
www.rockyflatssc.org

(303) 412-1200  
(303) 600-7773 (f)

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

## MEMORANDUM

**TO:** Board  
**FROM:** David Abelson  
**SUBJECT:** DOE Fiscal Year 2011 Funding Request  
**DATE:** March 22, 2010

I have scheduled 15 minutes for DOE to brief on their fiscal year 2011 Office of Legacy Management (LM) request to Congress. For Rocky Flats, LM requested approximately \$5.2 million.<sup>1</sup> (Federal fiscal year 2011 runs October 1, 2010 – September 30, 2011.)

### Overview of Legacy Management request to Congress

As the attached information reflects, for the total LM program, DOE requested a 1.1% decrease over current year funding.

2009 Appropriation (millions)	2010 Appropriation (millions)	2011 Request (millions)	2011 versus 2010 in \$ (millions)	2011 versus 2010 in %
\$185,981	\$190,802	\$188,626	(2,176)	(1.1%)

In the attached budget, documents DOE provides the following regarding LM's mission:

The Office of Legacy Management (LM) ensures the sustainable protection of human health and the environment after DOE cleanup is completed, and continues management of certain retirement benefits for former contractor personnel after site closure. This program supports long-term stewardship activities (e.g., groundwater monitoring, disposal cell maintenance, records management, and management of natural resources) at sites where active remediation has been completed. In addition, at some sites the program includes management and administration of pension and benefit continuity for contractor retirees. The FY 2011 budget request of \$189 million supports these activities.

<sup>1</sup> According to DOE, the budget numbers for Rocky Flats are as follows: 2009 = \$5.1 million, including breaching interior dams; 2010 = \$3.4 million; 2011 = \$5.2 million. depending on results of dam breach environmental assessment.

Additionally, in FY 2011, LM will have “post closure responsibility for long-term stewardship activities at 85 sites and pension and benefit claims for former contractor employees at 7 sites. Funding for the Mound, Ohio, and the Inhalation Toxicology Laboratory, NM, closure sites, are included within the LM budget.”

DOE identified the following “significant funding changes” for LM’s budget:

1. **Decrease \$1.496M** – “reflects an adjustment based on actual spending rates for post-retirement benefits associated with the Paducah and Portsmouth Gaseous Diffusion Plants and reduced cost estimates associated with funding pensions and post-retirement benefits to former contractor employees at the Rocky Flats site.”
1. **Increase \$320K** – “reflects new costs added to the Working Capital Fund for the telephone communications. Legacy Management continues to administer its programs consistent with its delegation as a High Performing Organization.”

Please let me know what questions you have.

Department of Energy  
**Budget by Organization**  
(discretionary dollars in thousands)

Discretionary Summary By Organization	FY 2009 Current Approp.	FY 2009 Current Recovery	FY 2010 Current Approp.	FY 2011 Congressional Request	FY 2011 vs. FY 2010	
					\$	%
<b>National Security</b>						
Weapons Activities	6,410,000	0	6,384,431	7,008,835	+624,404	+9.8%
Defense Nuclear Nonproliferation	1,545,071	0	2,136,709	2,687,167	+550,458	+25.8%
Naval Reactors	828,054	0	945,133	1,070,486	+125,353	+13.3%
Office of the Administrator	439,190	0	410,754	448,267	+37,513	+9.1%
<i>Total, National Nuclear Security Administration</i>	<i>9,222,315</i>	<i>0</i>	<i>9,877,027</i>	<i>11,214,755</i>	<i>+1,337,728</i>	<i>+13.5%</i>
<b>Energy and Environment</b>						
Energy Efficiency and Renewable Energy	2,156,865	16,771,907	2,242,500	2,355,473	+112,973	+5.0%
Electricity Delivery and Energy Reliability	134,629	4,495,712	171,982	185,930	+13,948	+8.1%
Fossil Energy	1,097,003	3,398,607	951,133	760,358	-190,775	-20.1%
Nuclear Energy	1,357,263	0	869,995	912,252	+42,257	+4.9%
<i>Total, Energy</i>	<i>4,745,760</i>	<i>24,666,226</i>	<i>4,235,610</i>	<i>4,214,013</i>	<i>-21,597</i>	<i>-0.5%</i>
<b>Environment</b>						
Environmental Management	5,990,667	6,000,000	6,007,854	6,047,000	+39,146	+0.7%
Civilian Radioactive Waste Management	288,390	0	196,800	0	-196,800	-100.0%
<b>Office of Legacy Management</b>	<b>185,981</b>	<b>0</b>	<b>190,802</b>	<b>188,626</b>	<b>-2,176</b>	<b>-1.1%</b>
<i>Total, Environment</i>	<i>6,465,038</i>	<i>6,000,000</i>	<i>6,395,456</i>	<i>6,235,626</i>	<i>-159,830</i>	<i>-2.5%</i>
<i>Total, Energy and Environment</i>	<i>11,210,798</i>	<i>30,666,226</i>	<i>10,631,066</i>	<i>10,449,639</i>	<i>-181,427</i>	<i>-1.7%</i>
<b>Science</b>	<b>4,807,170</b>	<b>1,632,918</b>	<b>4,903,710</b>	<b>5,121,437</b>	<b>+217,727</b>	<b>+4.4%</b>
Advanced Research Projects Agency - Energy	15,000	388,856	0	299,966	+299,966	N/A
<b>Corporate Management</b>						
Office of the Secretary	5,700	4,800	5,864	7,864	+2,000	+34.1%
Cost of Work and Revenues	-68,780	0	-72,203	-71,203	+1,000	+1.4%
Chief Information Officer	115,500	5,700	103,063	102,163	-900	-0.9%
Chief Financial Officer	43,257	15,000	62,981	62,731	-250	-0.4%
Management	67,790	10,000	78,456	86,675	+8,219	+10.5%
Human Resources	31,436	2,800	29,537	27,560	-1,977	-6.7%
Hearings and Appeals	6,603	0	6,444	6,444	—	—
Congressional and Intergovernmental Affairs	6,200	0	10,326	6,326	-4,000	-38.7%
Public Affairs	3,780	0	4,500	4,500	—	—
Office of Indian Energy Policy and Programs	0	0	0	0	—	—
General Counsel	31,233	3,200	32,478	36,654	+4,176	+12.9%
Policy and International Affairs	23,000	0	30,253	30,253	—	—
Economic Impact and Diversity	4,400	500	6,671	6,337	-334	-5.0%
Inspector General	51,927	15,000	51,927	42,850	-9,077	-17.5%
<i>Total, Corporate Management</i>	<i>322,046</i>	<i>57,000</i>	<i>350,297</i>	<i>349,154</i>	<i>-1,143</i>	<i>-0.3%</i>
<b>Credit Programs</b>						
Innovative Technology Loan Guarantee Program	0	0	0	500,000	+500,000	N/A
Advanced Technology Vehicles Manufacturing Loan	7,510,000	10,000	20,000	9,998	-10,002	-50.0%
Section 1705 Temporary Loan Guarantee Program	0	3,960,000	0	0	—	—
<i>Total, Credit Programs</i>	<i>7,510,000</i>	<i>3,970,000</i>	<i>20,000</i>	<i>509,998</i>	<i>+489,998</i>	<i>+2,450.0%</i>
<b>Health, Safety and Security</b>	<b>447,470</b>	<b>0</b>	<b>443,882</b>	<b>464,211</b>	<b>+20,329</b>	<b>+4.6%</b>
Energy Information Administration	110,595	0	110,595	128,833	+18,238	+16.5%
Power Marketing Administrations	234,139	10,000	99,477	95,477	-4,000	-4.0%
Federal Energy Regulatory Commission	-23,080	0	-28,886	-29,111	-225	-0.8%
Domestic Utility Fees	0	0	0	-200,000	-200,000	N/A
Cost of Implementing Reclassification of Receipts, PMAs	0	0	189,384	0	-189,384	-100.0%
<b>Total, Discretionary Funding</b>	<b>33,856,453</b>	<b>36,725,000</b>	<b>26,596,552</b>	<b>28,404,359</b>	<b>+1,807,807</b>	<b>+6.8%</b>

\*The Defense Environmental Cleanup/Uranium Enrichment Decontamination and Decommissioning Fund accounts reflect correctly the Administration's policy for the Department's FY 2011 request. These accounts include \$47 million that was inadvertently omitted from the official Budget request. A budget amendment is expected to be forthcoming to formally correct for this error.

# Legacy Management

(dollars in thousands)

	FY 2009 Current Approp.	FY 2009 Current Recovery	FY 2010 Current Approp.	FY 2011 Congressional Request	FY 2011 vs. FY 2010	
					\$	%
Other Defense Activities						
Legacy Management	174,397	0	177,618	176,122	-1,496	-0.8%
Program Direction	11,584	0	12,184	12,504	+320	+2.6%
Congressionally Directed Projects	0	0	1,000	0	-1,000	-100.0%
<b>Total, Office Of Legacy Management</b>	<b>185,981</b>	<b>0</b>	<b>190,802</b>	<b>188,626</b>	<b>-2,176</b>	<b>-1.1%</b>

## PROGRAM DESCRIPTION

The **Office of Legacy Management (LM)** ensures the sustainable protection of human health and the environment after DOE cleanup is completed, and continues management of certain retirement benefits for former contractor personnel after site closure.

This program supports long-term stewardship activities (e.g., groundwater monitoring, disposal cell maintenance, records management, and management of natural resources) at sites where active remediation has been completed. In addition, at some sites the program includes management and administration of pension and benefit continuity for contractor retirees. The FY 2011 budget request of \$189 million supports these activities.

## PROGRAM HIGHLIGHTS

The FY 2011 request provides \$189 million to carry out all legacy management functions. In FY 2011, post closure responsibility for long-term stewardship activities at 85 sites and pension and benefit claims for former contractor employees at 7 sites. Funding for the Mound, Ohio, and the Inhalation Toxicology Laboratory, NM, closure sites, are included within the LM budget.

## SIGNIFICANT FUNDING CHANGES – FY 2010 to FY 2011 Request (\$ in millions)

### Other Defense Activities

**Legacy Management (FY 2010 \$178.6; FY 2011 \$176.1) ..... -\$1.5**  
 The decreased funding reflects an adjustment based on actual spending rates for post-retirement benefits associated with the Paducah and Portsmouth Gaseous Diffusion Plants and reduced cost estimates associated with funding pensions and post-retirement benefits to former contractor employees at the Rocky Flats site.

**Program Direction (FY 2010 \$12.2; FY 2011 \$12.5) ..... +\$0.3**  
 The increased funding reflects new costs added to the Working Capital Fund for the telephone communications. Legacy Management continues to administer its programs consistent with its delegation as a High Performing Organization.



# ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670  
Boulder, CO 80308-0670  
www.rockyflatssc.org

(303) 412-1200  
(303) 600-7773 (f)

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

## MEMORANDUM

**TO:** Board  
**FROM:** David Abelson  
**SUBJECT:** Rocky Flats Signs – Restarting the conversation  
**DATE:** March 24, 2010

---

I have scheduled 40 minutes for the Board to continue discussing interpretative signs for Rocky Flats. As we discussed at the February meeting in the context of Rep. McKinley's legislation, the USFWS' 2005 Rocky Flats National Wildlife Refuge conservation plan (CCP) provides interpretative signs will be placed at the entrance to the Rocky Flats National Wildlife Refuge and throughout the site. The CCP further provides the signs will include information about "DOE's development and management of a nuclear weapons production site and the cold war history.... to tell the story of the site as a nuclear production site."

At this meeting, we will continue discussing signs interpreting Rocky Flats as a weapons facility. We will not discuss either the signs interpreting the natural history of the Refuge or the entrance signs for the Refuge that USFWS approved in 2007.

### **Our Work Product – What we will present to USFWS**

Our goal is to identify the type of information USFWS should include on interpretative signs and to forward to USFWS ideas/information about the message they should convey, along with a detailed explanation of why this information and message are important. USFWS can then use this information when developing their network of signs, including deciding what information to provide to visitors.

As background, the Board began discussing interpretative signs at the February and June 2009 meetings. At those meetings the Board identified the following topics for signs:

1. History of Rocky Flats
2. Scope of the cleanup
3. Ongoing management
4. Monitoring activities
5. Groundwater treatment

As the minutes from those meetings reflect, our conversations have focused on:

1. The need for signs
2. Why the Stewardship Council is undertaking this effort
3. Topic areas for signs
4. The type and depth of information we might present to USFWS

Those minutes are attached to the end of this memo.

The fact sheets that we developed in 2008 and posted on our website ([www.rockyflatssc.org/fact\\_sheets.html](http://www.rockyflatssc.org/fact_sheets.html)) provide valuable background information for USFWS to use when developing specific language for the signs. (A few of those fact sheets are attached to this memo.) Additionally, the Rocky Flats Cold War Museum is developing information interpreting the history of the site. They too will work with USFWS on developing signs for the Refuge.

### **Ideas Re: What We Should Provide to USFWS**

The following ideas are for discussion purposes. At this meeting, we will focus on history of Rocky Flats, scope of the cleanup, and ongoing management.

#### *History of Rocky Flats*

##### Message to be conveyed:

1. Rocky Flats was one of the main nuclear production facilities in the United States. It operated from 1951 until 1992.
2. Activities included producing pits, which serve as the triggers for nuclear weapons. At one point all of the nuclear weapons in the US arsenal passed through Rocky Flats.
3. Rocky Flats site included both a production area – approximately 385 acres – and a buffer zone. The initial site spanned 2560 acres.
4. Additional lands were purchased in mid-1970s to expand the site to 6400 acres. This land, which was a buffer zone, now comprises much of the Rocky Flats Refuge.
5. Cleanup began in earnest in 1995 and was completed in 2005.
6. In 2007, 4000 acres were transferred from the Department of Energy to the United States Fish and Wildlife Service. These lands now comprise the Rocky Flats National Wildlife Refuge.
7. The Department of Energy retains the core production area where manufacturing took place and where materials were deposited. The Department also controls the lands currently being mined in the western part of the site.

##### Additional ideas:

1. Use overlooks into the DOE lands to discuss the history of the site, and show through photographs where buildings and other structures once stood.

#### *Scope of the cleanup*

##### Message to be conveyed:

1. Cleaning up Rocky Flats was one of the most complex environmental remediations in history.
2. The cleanup focused on four principal activities:
  - a. Stabilizing materials

- b. Decontaminating and demolishing buildings
  - c. Shipping all waste to off-site receiver sites (note: the two landfills that were used during production were capped in place)
  - d. Remediating contaminated soils and contaminated groundwater, and protecting surface water quality
3. Waters leaving the site are available for any and all uses – at Rocky Flats the surface water standard for plutonium is 100 times cleaner than the federal drinking water standard.
  4. All buildings were demolished and foundations were removed to 6’ below grade.
  5. The Refuge is clean enough to support residential and/or industrial use.
  6. Contamination is found along old, underground building foundations, in pond sediments, in old underground process waste lines, in two landfills, and in other areas. This contamination, which is at or, in nearly all cases, below all federal and state regulatory standards, includes radioactive materials, chemical solvent wastes and heavy metal wastes.

Additional ideas:

1. Do not suggest there is no risk or that visiting the refuge is risky – and stay away using the term “safe” as it is hard to define.
2. Explain what was cleaned up and what remains and identify places people can go for more information.
3. Use overlooks into the DOE lands to discuss the cleanup, and show through photographs where buildings and other structures once stood.
4. At or near the plaque honoring the workers, add a sign discussing their work.

*Ongoing Management*

Message to be conveyed:

1. DOE retains management responsibility over the former production, ponds, and two landfills.
2. DOE’s responsibility is to ensure the cleanup remedies are working as designed and to protect the remedies from human intrusion. DOE’s responsibilities include:
  - a. Monitoring and maintaining the two landfills and four groundwater treatment systems.
  - b. Conducting environmental monitoring, including surface water and groundwater monitoring, and repairing systems as necessary.
  - c. Ensuring surface water and groundwater on-site is not used for drinking water or for agricultural purposes.
  - d. Prohibiting activities that may damage or impair the proper functioning of any engineered control, including treatment systems, monitor wells, landfill caps and/or surveyed benchmarks.

Additional ideas:

1. Use overlooks into the DOE lands to discuss ongoing management. Do not point out specific management activities, such as monitoring wells.

## February 2, 2009, Minutes

### Discuss Interpretative Signage for Rocky Flats

The USFWS' site conservation plan for Rocky Flats includes commitments to place interpretative signage at various locations in the Refuge. Those signs will include information about the history of the site as a nuclear weapons facility, the remediation project and ongoing management requirements. The Stewardship Council's conversation will focus on identifying the types of information regarding history of the site and the remediation project that it believes USFWS should include in their signs.

David began by providing some context for this discussion. During cleanup, one of the important community issues was the long-term retention of information about Rocky Flats. This included the use of institutional controls and the education of successive generations. When the Conservation plan was developed, everyone agreed there was a need to inform Refuge visitors about the history and special circumstances of this site, notably the DOE-retained lands in the center. USFWS developed signage for the entrance and DOE has posted basic signs around the areas that it controls. The Stewardship Council has also discussed how information onsite can be used to lead to additional information offsite. Starting today, the idea is for the Board to focus only on information related to the DOE mission at Rocky Flats (i.e. not to focus on wildlife or recreation issues), to discuss and debate signage ideas, and then to codify and send recommendations to USFWS.

David noted that there will be six access points across all four sides of the Refuge. He suggested that the Board begin with brainstorming about what type of information should be conveyed to visitors. These ideas can then be refined to determine how best to communicate them. He added that the Board would like to inform, not warn and should not overwhelm Refuge visitors with information.

Lori Cox said she was confused about what the role of the Stewardship Council is or should be in this process. David noted that although the Stewardship Council did not exist when the Refuge CCP was developed, USFWS has said they wanted to work with community in developing these plans. As the Rocky Flats LSO, a core part of the Stewardship Council's role and mission is to inform and educate the public about the site. The issue of Refuge signage has been in the group's Work Plan. The only concern of USFWS at this point is that they do not have funding to commit to working on this issue.

Lori also asked about how much liberty USFWS has in terms of signage. Steve Berendzen said that the agency tries to follow the CCP as closely as they can. He strongly encouraged the Stewardship Council to work in coordination with them, and said he does appreciate the help. He said USFWS quite often cooperates with partners to do things such as this. David Allen said he thought it will be helpful to focus on specific kinds of signs. He also posed the question of how important the topic of cleanup will be years from now.

Andrew Muckle suggested a Colorado historical organization as a potential funding source if necessary. He also said web links are probably a better choice for signs rather than providing telephone numbers for more information. He added that it would be great to have a multimedia presentation available to the public. Lorraine said she thought Kaiser Hill had produced a video addressing the cleanup. She also responded to David Allen that the cleanup of Rocky Flats site is one of most important things that ever occurred in the U.S. She said that there is a whole community of workers that needs to be recognized, and their story must be told; without that, Rocky Flats does not mean much. Lisa Morzel said she agreed. She added that it would be a good idea to use graphics as part of the message. She also would like to see an emphasis on the ongoing monitoring. Megan Davis said she also agreed with these points, and that the message should also emphasize that there was continuous involvement of local communities and governments in the cleanup decisions.

David Allen said fully agreed that cleanup should be recognized, but that there was a danger of sending mixed messages by raising questions in the public's mind. Lorraine pointed out the need to explain that the DOE fenced areas are not in place to protect the public, but rather to protect the remedies. Sue Vaughan added that it is also important to consider the audience and what they need from a sign versus what the Cold War Museum can handle in more depth. Jeannette said that the museum will help identify these issues. Shirley Garcia confirmed that Museum planners are working on developing Rocky Flats storylines for an upcoming exhibit and hope to be done by the end of summer. She said they will continue to work on collaboration with this group. Lisa Morzel commented that Rocky Flats environmental monitoring activities could be great educational tools for children.

David Abelson asked the group to focus on what to convey and why, and to what extent and depth. David Allen suggested putting up panels of before and after photos with historical descriptions at various locations. Bob Briggs said he is currently working on materials for the 100<sup>th</sup> anniversary of the City of Westminster. They have decided on developing a historical timeline, and that this may be a good way to approach presenting the history of Rocky Flats also. Andrew Muckle asked if there is an existing map showing where signs may be placed. Steve Berendzen said he did not think the CCP was that specific, but that USFWS can provide feedback during the process. He said the agency could assign one of their specialists from the Regional Office to work on this project and attend future meetings. Steve added that there are some general sign plans, but no specifics. David Allen said it is too early to suggest specific content. David Abelson agreed, but said that the group needs to start somewhere. Matt Jones said that there is a science behind this kind of signing. For example, one study showed that people spend an average of eight seconds at entrance signs. He added that in most cases, specialists who are trained in creating signs will produce a draft, and then people will comment on that. Jeannette Hillery said she would like to see what kind of language is used on the signs at the Rocky Mountain Arsenal. Sue Vaughan suggested that the group also think about programs and background packets for educational visitors.

## June 1, 2009, Minutes

### Continue Discussing Interpretative Signs for Rocky Flats National Wildlife Refuge

The Board moved into a continued discussion of signs for Rocky Flats. This conversation was set up for the Board to identify categories of information and the types of messages it believes should be conveyed regarding the history of the site as a weapons facility, without suggesting specific language.

David noted that representatives from USFWS were not able to attend this meeting, but have passed along to him that they are concerned that the Stewardship Council will recommend too much information for the signs. He said they are also concerned about the roles of the Cold War Museum and the Stewardship Council. David said he explained to the agency that the missions of the two organizations are in line.

David suggested that the Stewardship Council put forth ideas for the types of information that should be provided to visitors, along with detailed explanations for why these messages should be included. He also recommends aiming for objective facts, rather than any value judgments. The Board will also likely recommend information be conveyed about ongoing management activities. David said he has communicated this type of goal on behalf of the Board to the USFWS, and that there still may be some level of discomfort within the agency.

Lorraine Anderson said she thinks David is on the right track with these parameters. She asked if the signs in question include those on the DOE lands. She said her preference would be to focus only on refuge lands. David Allen said he likes the idea of the Board providing this type of information, and added that the Board's 'talking point' papers cover a lot of this information. David Abelson said he agreed. Carl Castillo asked if the USFWS process would involve draft wording coming back to this group for comment. David Abelson said that the short answer is yes, since this is part of one of the agency's 'step-down' plans. He said the last similar action was put through a process of informal public involvement, and that he would expect them to reach out in a similar way on the sign issue. Carl then asked how Rep. McKinley's bill would play into this process. David said that the McKinley bill only addresses entrance signs, and language for these signs has already been adopted by USFWS. The signs being discussed now are additional interpretive signs to be posted at various points within the refuge. Ron Hellbusch said he thought if Steve Berendzen of USFWS were here, that he would support David's approach. He said USFWS is trying to get as much consistency as possible across the country on signage at similar new sites. Shirley Garcia said that the Cold War Museum has an education committee, which is working on an exhibit for next summer and are trying to combine various Rocky Flats timelines into historical facts and key points. She said they would love to have anyone join them. Jeannette Hillery asked Shirley to keep the Board in the loop so it can support the Museum when needed.

Jeannette directed the Board to page two of a memo in the Board packet that listed framing topics for this discussion. She asked the Board if these topics were enough or if they needed to be expanded.

Lorraine said that the list covered the major topics that the Board should be considering for signs, and that the Museum may be able to fill in some of the gaps. Karen Imbierowicz asked if bullet #1 addressing the 'History of Cleanup' should also mention the history of Rocky Flats in general. David noted that the Board must determine how broad the scope should be, and added that staff could present options of different approaches to the Board for its consideration. Carl Castillo asked about whether to explain the reasons the remediation that was completed. David Abelson acknowledged that this was not exactly spelled out, but he would play around with wording and ideas. He also pointed to three eras at the site; production, cleanup, and from this point forward. Scott Surovchak said that the history is not quite as clear-cut as that. He pointed to quite a bit of overlap in activities (i.e. various ongoing cleanup activities since the 1950's). Lorraine said this is reason the Board needs to distinguish between the industrial area and the rest of site. She said the Stewardship Council is funded to talk about issues related to the existence of Rocky Flats, such as why there was a buffer zone, and if there was contamination. David Abelson clarified that he was not trying to get into anything about the history of the site beyond the DOE mission. The Board will break the site history into categories, and then deal any overlapping issues.

# ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670  
Boulder, CO 80308-0670  
www.rockyflatssc.org

(303) 412-1200  
(303) 412-1211 (f)

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  
Karen Imbierowicz

## **Rocky Flats History, Cleanup and Ongoing Management**

### **The History of Rocky Flats and the Cleanup (1995 – 2005)**

Rocky Flats operated from 1951 until 1989 and served as the nation's primary nuclear weapons trigger production facility. Production of triggers (known as pits) and other classified work resulted in widespread contamination within the buildings and throughout portions of the 6,200-acre site, with the greatest contamination and thus hazards within the 384-acre core industrial area. Site operations and fires in the production buildings also spread contamination to off-site lands and into off-site water supplies.

Production ceased in 1989 after the FBI and Environmental Protection Agency (EPA) raid on the site, yet DOE did not announce an end to the nuclear weapons production mission until 1993. Cleanup, which began in earnest in 1995 and was closely regulated by both the EPA and the Colorado Department of Public Health and Environment (CDPHE), took 10 years and cost \$7 billion. Local governments and community organizations closely tracked site issues and engaged on numerous issues, including cleanup levels and future use determinations.

The cleanup focused on four principal activities:

1. Stabilizing materials
2. Decontaminating and demolishing buildings
3. Shipping all waste to off-site receiver sites (note: the two landfills that were used during production were capped in place)
4. Remediating contaminated soils and contaminated groundwater, and protecting surface water quality

The overarching goals for the cleanup project included:

1. Ensuring waters leaving the site are available for any and all uses – at Rocky Flats the surface water standard for plutonium is 100 times cleaner than the federal drinking water standard
2. Demolishing all buildings and removing foundations to 6' below grade
3. Remediating soils to levels that support a wildlife refuge – in fact, most of the site is clean enough to support residential and/or industrial use
4. Developing and implementing a comprehensive post-closure stewardship plan



DOE, EPA and CDPHE determined off-site lands were not contaminated to levels that warranted remediation. Cleanup activities ended in October 2005, and in late 2006 and early 2007, DOE, EPA and the CDPHE declared the cleanup complete. The former buffer zone and off-site lands were removed from the Superfund list and 4000 acres of the former buffer zone were transferred to the Department of the Interior to be protected as the Rocky Flats National Wildlife Refuge.

### **Ongoing Management**

Cleanup, however, did not eliminate all risk. The core production areas, settling ponds and two landfills hold the greatest hazards and thus remain under DOE's jurisdiction. Contamination is found along old building foundations, in pond sediments, in old underground process waste lines, in two landfills, and in other areas. This contamination, which is at or, in nearly all cases, below all federal and state regulatory standards, includes radioactive materials, chemical solvent wastes and heavy metal wastes. DOE's responsibility is to ensure the cleanup remedies are working as designed and to protect the remedies from human intrusion.

This remaining contamination poses no immediate threat to human health and the environment, but it does require ongoing management by DOE and regulatory oversight by CDPHE and EPA. Accordingly, DOE, CDPHE and EPA entered into a post-closure regulatory agreement, the Rocky Flats Legacy Management Agreement (RFLMA). The RFLMA identifies each party's management/oversight responsibilities. DOE's responsibilities include:

1. Monitoring and maintaining the two landfills and four groundwater treatment systems.
2. Conducting environmental monitoring, including surface water and groundwater monitoring, and repairing systems as necessary.
3. Maintaining legal and physical controls, including but not limited to:
  - a. Prohibiting excavation, drilling, tilling and other such intrusive activities except for remedy-related purposes and in conjunction with plans approved by CDPHE and EPA.
  - b. Ensuring surface water and groundwater on-site is not used for drinking water or for agricultural purposes.
  - c. Maintaining groundwater wells and surface water monitoring stations.
  - d. Prohibiting activities that may damage or impair the proper functioning of any engineered control, including treatment systems, monitor wells, landfill caps and/or surveyed benchmarks.
  - e. Maintaining signs and fencing demarcating the Rocky Flats National Wildlife Refuge lands from the DOE-retained lands.

Perhaps the best barometer to gauge whether the remedies are performing as designed is water quality, both surface water and groundwater. Per the RFLMA, water leaving the site must meet stringent standards, which in the case of plutonium is 100 times below the federal standard for drinking water. The current standard for uranium is two times more stringent than the state standard, although the site specific standard will likely be changed in 2009 to conform with state standards.

To determine whether water standards are being met, DOE uses an extensive water quality monitoring network. This network, which is found throughout both the DOE lands and the Rocky Flats National Wildlife Refuge, includes approximately 20 surface water monitoring

stations and nearly 100 groundwater monitoring wells. Changes to the network require approval by the state of Colorado. Water in the terminal pond system (two terminal ponds on Walnut Creek; one on Woman Creek) is tested by both DOE and CDPHE prior to releasing the water. That data is also shared with downstream communities prior to the releases.

**The RFLMA can be found at:**

[http://www.lm.doe.gov/documents/sites/co/rocky\\_flats/rflma/RFLMA\\_200702.pdf](http://www.lm.doe.gov/documents/sites/co/rocky_flats/rflma/RFLMA_200702.pdf)

*May 2008*

# ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670  
Boulder, CO 80308-0670  
www.rockyflatssc.org

(303) 412-1200  
(303) 412-1211 (f)

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  
Karen Imbierowicz

## **How Clean is Clean**

Often one of the most pressing questions people have about Rocky Flats is “Is it safe?” The best way to answer this question is to present objective facts and let each decide whether the risks are reasonable and thus worth taking.

The cleanup of Rocky Flats was extensive. Cleanup actions included:

1. Demolishing 800+ buildings and facilities
2. Consolidating 21 metric tons of weapons-grade nuclear materials and 100 metric tons of plutonium residues
3. Excavating and/or consolidating 275,000 cubic meters of radioactive wastes
4. Analyzing and remediating as necessary 360 individual hazardous substance sites
5. Shipping these wastes and other materials to off-site locations

Following are a few benchmarks in determining “how clean is clean”:

1. Cleanup meets or exceeds federal and state standards.
2. Water leaving the site meets all applicable standards. In the case of plutonium, the standard is 100 times cleaner (more protective) than the federal drinking water standard.
3. The vast majority of the site can support residential and/or industrial use. The reason the DOE lands are not part of the Refuge and thus not open to the public is to protect the remedies from humans; access is not restricted to protect humans from residual risk.
4. One of the key drivers for designating Rocky Flats as a national wildlife refuge was to protect this important resource from future development.
5. DOE calculates the greatest risk from residual contamination is to a refuge worker with an increased cancer risk estimated to be  $2 \times 10^{-6}$ , or 2 in one million. These levels are also protective of wildlife.
6. A refuge worker’s annual dose would be less than 1 mrem/year. The dose visitors to the Refuge would receive would be significantly less. 1 mrem compares to other doses as follows:

Average dose to US public from all sources: 360 mrem/year  
Average dose to US public from natural sources: 300 mrem/year  
Average dose to US public from medical sources: 53 mrem/year  
Average dose to US public from nuclear power: < 0.1 mrem/year  
Average US terrestrial radiation: 28 mrem/year  
Terrestrial background (Atlantic coast): 16 mrem/year

Terrestrial background (Rocky Mountains): 40 mrem/year  
Cosmic radiation (Sea level): 26 mrem/year  
Cosmic radiation (Denver): 50 mrem/year  
Radionuclides in the body (e.g., potassium): 39 mrem/year  
Building materials (concrete): 3 mrem/year  
Drinking water: 5 mrem/year  
Pocket watch (radium dial): 6 mrem/year  
Eyeglasses (containing thorium): 6 - 11 mrem/year  
Coast-to-coast airplane (roundtrip): 5 mrem  
Chest x-ray: 8 mrem  
Dental x-ray: 10 mrem

*(source: Idaho State University, Radiation Information Network)*

For more information about the cleanup and residual contamination, please go to:

[http://www.lm.doe.gov/land/sites/co/rocky\\_flats/rocky.htm](http://www.lm.doe.gov/land/sites/co/rocky_flats/rocky.htm)

May 2008

# ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670  
Boulder, CO 80308-0670  
www.rockyflatssc.org

(303) 412-1200  
(303) 412-1211 (f)

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  
Karen Imbierowicz

## Rocky Flats History – Timeline of Key events

(adapted from The Politics of Cleanup, Energy Communities Alliance, 2007)

- 1951 On March 23<sup>rd</sup>, *The Denver Post* reports “There Is Good News Today: U.S. To Build \$45 Million A-Plant Near Denver.” Dow Chemical becomes the initial operating contractor.
- 1957 A major fire occurs in Building 771, later deemed the most dangerous building in the complex. Community is not told about fire until 1970 despite the spread of contamination to off-site lands.
- 1969 A major fire in a glove box in Building 776 – later declared the second-most dangerous building in the complex – results in the costliest industrial accident in the nation at the time; cleanup took two years.
- 1970 After independent scientists find plutonium on off-site lands, the Atomic Energy Commission (AEC) announces the contamination is the result of the 1957 fire, the first the community had heard about the fire, and leaking waste drums containing radioactive and hazardous materials.
- 1972 AEC determines it needs to expand the buffer zone around the production buildings; Congress agrees to spend \$6 million to buy an additional 4,600 acres, bringing the total site acreage to approximately 6400 acres.
- 1973 In April, the Colorado Health Department finds tritium in downstream drinking water supplies but does not alert local officials for five months; the AEC initially denies the presence of tritium at Rocky Flats but later admits to its presence.
- 1974 Gov. Richard Lamm and Rep. Timothy Wirth establish the Lamm-Wirth Task Force on Rocky Flats. The group, which includes site workers and anti-nuclear activists, is charged with making recommendations regarding the future of the site.
- 1975 Rockwell International replaces Dow Chemical as managing contractor.
- 1978 In April, large-scale protests begin at Rocky Flats when 5,000 people turn out for a rally at the west gate; protestors begin camping on railroad tracks leading into the Plant site and occupy the tracks until January 1979 when plans are made for a large-scale protest.

- 1979 In April, 9,000 protestors rally outside of Rocky Flats; 300 are arrested, including Pentagon Papers whistle-blower Daniel Ellsberg; in August the United Steelworkers of America, the main site union, holds a counter demonstration that draws 16,000.
- 1983 On October 15, 15,000 protestors nearly encircle the 17-mile perimeter of the Rocky Flats site.
- 1986 DOE, the Colorado Department of Health, and the Environmental Protection Agency sign an agreement to allow regulation of radioactive/hazardous waste at Rocky Flats.
- 1987 Rocky Flats Environmental Monitoring Council forms, a community oversight organization. It is replaced in 1993 by the Rocky Flats Citizens Advisory Board.
- 1989 On June 6, as part of Operation Desert Glow, 80 armed federal agents raid the site to investigate allegations of environmental violations; contractor Rockwell International later agrees to pay an \$18.5 million fine, the largest in the nation as of that date.
- 1990 EG&G takes over operation of Rocky Flats from Rockwell International.
- 1991 An interagency agreement among DOE, the Colorado Department of Health and EPA is signed, outlining multiyear schedules for environmental restoration studies and remediation activities fully integrated with anticipated National Environmental Policy Act documentation requirements. The approach stymies progress leading the parties five years later to sign the Rocky Flats Cleanup Agreement, which provides the regulatory basis to accelerate cleanup.
- 1992 In the State of the Union address, President George H.W. Bush announces the end of the W-88 warhead program, effectively ending the mission at Rocky Flats.
- 1993 Gov. Roy Romer and Rep. David Skaggs form a 29-member Citizens Advisory Board to provide advice on technical and policy decisions related to cleanup and waste management activities at Rocky Flats.
- 1995 In July, Kaiser-Hill LLC signs contract to clean up site with a target completion date of 2010 for an estimated cost of \$7.3 billion.
- 1995 In July, the Future Site Use Working Group issues a comprehensive report of the future use of the site, which includes protecting the 6,000-acre buffer zone as open space, but leaving open the questions regarding the future use of the 384-acre core production area (the Industrial Area).
- 1997 DOE and the regulatory agencies agree to no on-site burial of Rocky Flats waste.
- 1998 The Industrial Area Transition Task Force issues a report listing six alternatives for use of the Industrial Area. Final determinations about use of the Industrial Area are made in 2001 with the passage of “The Rocky Flats National Wildlife Refuge Act of 2001.”
- 1999 In February, seven surrounding local government form the Rocky Flats Coalition of Local Governments (RFCLOG) to give affected governments greater leverage over cleanup and future use decisions.
- 2001 Rocky Flats National Wildlife Refuge Act signed into law, as part of the 2002 National Defense Authorization Act (P.L. 107-107); it directs protection of the entire site as

national wildlife refuge following completion of cleanup activities and expressly prohibits reindustrialization of the site or local government annexation of the property.

- 2003 DOE, EPA and CDPHE agree to site-wide cleanup levels for soils contaminated with radioactive materials.
- 2005 On October 13, Kaiser-Hill announces physical completion of Rocky Flats cleanup, more than 14 months ahead of schedule.
- 2006 In September, EPA and CDPHE grant regulatory approval of the cleanup.
- 2007 Rocky Flats buffer zone and off-site lands are deleted from superfund list.
- 2007 On July 12<sup>th</sup> jurisdiction over 4000 acres of the former buffer zone is transferred to the Department of the Interior to be managed as the Rocky Flats National Wildlife Refuge. DOE retains jurisdiction of the vast majority of the former core production area and settling ponds (1309 acres), as well as jurisdiction over active mining claims (929 acres).

*May 2008*