

ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670

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www.rockyflatssc.org

Jefferson County ~ Boulder County ~ City and County of Broomfield ~ City of Arvada ~ City of Boulder
City of Golden ~ City of Northglenn ~ City of Thornton ~ City of Westminster ~ Town of Superior
League of Women Voters ~ Rocky Flats Cold War Museum ~ Rocky Flats Homesteaders
Kim Griffiths

Board of Directors Meeting – Agenda

Monday, September 18, 2023

8:30 – 10:30 AM

VIA ZOOM (details on next page)

- 8:30 AM Convene/Introductions/Agenda Review/Meeting Protocols
- 8:40 AM Public Comment: Comments are limited to three minutes
- 8:50 AM Business Items (briefing memo attached)
1. Consent Agenda: Approve meeting minutes and checks
 2. Executive Director's Report
- 9:00 AM Host DOE Quarterly Meeting (briefing memo attached)
- DOE will brief on site activities for the first quarter of 2023
- 9:45 AM 2024 Work Plan – Initial Review (briefing memo attached)
- The Board will review and edit the draft 2024 work plan
 - Formal approval of the work plan will take place at the October 30th meeting
- 10:15 AM 2024 Budget – Initial Review (briefing memo attached)
- The Board will review, and modify as necessary, the draft 2024 budget
 - The budget hearing and adoption of the 2024 budget will take place at the October 30th meeting
- 10:30 AM Board Roundtable – Big Picture/Additional Questions/Issue Identification

Adjourn

Upcoming Meetings

October 30, 2023

February 5, 2024

Join Zoom Meeting

<https://zoom.us/j/94970665169?pwd=OWRWbjVzKzQ5TzZZcTI2Wjd5NHE5Zz09>

Webinar ID: 949 7066 5169

Passcode: 116022

Phone #: (719) 359-4580

Or One Tap Mobile:

+17193594580,,94970665169#,,,,*116022# US

Business Items

- June 4, 2023, draft board meeting minutes
- List of Stewardship Council checks

DOE Quarterly Report Briefing

- Cover memo
- Selection of the quarterly report

ROCKY FLATS STEWARDSHIP COUNCIL
Monday, June 5, 2023
Rocky Mountain Metropolitan Airport, Terminal Building, Mount Evans Room
11755 Airport Way, Broomfield, Colorado

Board members in attendance: Randy Moorman (Director, Arvada), Jake Moyer (Alternate, Arvada), Tara Winer (Director, City of Boulder), Marni Ratzel (Alternate, City of Boulder), Claire Levy (Director, Boulder County), Nick Robles (Alternate, Boulder County), Deven Shaff (Director, City and County of Broomfield), Andy Kerr (Director, Jefferson County), Pat O’Connell (Alternate, Jefferson County), Rich Kondo (Director, Northglenn), Laura Farzim (Alternate, Northglenn), Bob McCool (Director, Superior), Jan Kulmann (Director, Thornton), Caleb Owen (Alternate, Thornton), Rich Seymour (Director, Westminster), Trea Nance (Alternate, Westminster), Jeannette Hillery (Director, League of Women Voters), Murph Widdowfield, Roman Kohler (Director, Rocky Flats Homesteaders), Kim Griffiths

Stewardship Council staff members and consultants in attendance: David Abelson (Executive Director), Melissa Weakley (Technical Program Manager), Barb Vander Wall (Seter & Vander Wall, P.C)

Members of the public in attendance: Andy Keim (DOE-LM), Padraic Benson (DOE-LM), Ramona Phillips (RSI), Janette Kiernan (RSI), John Boylan (RSI), Harry Bolton (RSI), Jody Nelson (RSI), Lisa Bade (RSI), Karin McShea (RSI), Ryan Wisniewski (RSI), Brian Walker (CDPHE), David Connolly (EPA), Eric Barnes (Fiscal Focus Partners), Laura Hubbard (City & County of Broomfield), Travis Culley, Chris Allred, Paula Elofson-Gardine, Susan Hurst

Convene/Agenda Review: Jan Kulmann convened the meeting at approximately 8:31 AM.

Public Comment: Travis Culley discussed the triennial review, public review of reports, and the anniversary of the FBI raid. He asked about what is preventing the rebuilding of Rocky Flats in the future, and the connection between sludge, hypergolic fires, and the Marshall Fire. Susan Hurst discussed CDPHE testing the Marshall Fire ashes and the 3-minute public comment limit. Chris Allred handed out a letter regarding public accessibility to meetings, David Abelson’s contract with the Stewardship Council, and recording of meetings. Paula Elofson-Gardine discussed public involvement with the Stewardship Council, hybrid options, and having a court reporter to produce minutes.

Consent Agenda: The consent agenda included the draft April 2023 meeting minutes and checks written since that meeting. Randy Moorman made one correction. Roman Kohler moved to approve the checks and edited minutes. The motion was seconded by Jeannette Hillery. The motion to accept the minutes and checks passed 13-0.

Executive Director’s Report: David discussed three topics. First, the website rebuild is in process. He is hoping it will be done in the next six weeks. The update will make the website more modern-looking and more stable. He then stated that two community member Board positions (the Homesteaders and League of Women Voters) are due for reappointment, effective February 2024. The Board will start the process for those seats in September. The application will be open for 30 days, with interview and appointments at the October 30, 2023, meeting. Information will be posted on the Stewardship Council website. David then introduced Brian Walker, who took over for Lindsay Murl as the Rocky Flats lead for CDPHE. He also introduced Dave Connolly, who started as the EPA lead at the beginning of 2023. Regarding DOE’s quarterly reports, David discussed that Stewardship Council staff continues to

experiment with how to discuss the quarterly reports as a Board. David said the Executive Committee therefore made the decision to return to the previous method of DOE presenting more in-depth overviews of the quarterly reports, followed by questions/comments from the Board, then questions/comments from the public, then a chance for the Board to have further questions. David discussed the Intergovernmental Agreement (IGA). Every three years, the member governments must reauthorize the agreement (i.e., the triennial review), which gives the Board the opportunity to check in with member governments that they want to continue. David will provide the resolution in the fall, with approval no later than January 2024. He is planning to make one change, which is that lack of unanimous consent means the organization will continue without that government, rather than the organization will be disbanded. Trea asked if there would be a minimum number of governments. David said he wasn't sure, as it would depend on the number of governments that wanted to stay engaged. Trea then asked if governments would need to contribute funds. David said they have a sufficient balance so additional contributions are not envisioned at this time.

Stewardship Council 2022 Financial Audit (briefing memo attached)

Eric Barnes gave an overview of the results of the audit. He said very little changed from previous years. No material problems were found, and the Stewardship Council was found to be in compliance with all applicable laws and regulations. He mentioned that the Stewardship Council is not required to have an audit, but the Board has elected to have one.

Randy Moorman asked about the grant funding process. David said we have a 5-year grant from DOE with annual funding. In 2027, we will apply for another 5-year grant.

Rich Kondo moved to approve the audit. The motion was seconded by Jeannette Hillery. The motion to accept the audit passed 13-0.

DOE Presentation – Calendar Year 2022

Surface Water Monitoring – George Squibb

George Squibb, surface water lead at Rocky Flats, gave an overview of the surface water monitoring locations and sampling results from 2022. At the Original Landfill (Woman Creek location GS59), the third quarter 2022 mean arsenic concentration was 12.5 ug/L (above the 10 ug/L RFLMA standard), which triggered increased monthly sampling frequency. Monthly sampling continued through the fourth quarter. The fourth quarter 2022 mean arsenic concentration was 2.28 ug/L, so the sampling frequency returned to quarterly. All other quarterly concentrations below applicable RFLMA standards during full CY 2022.

At the Present Landfill (location PLFSYSEFF), the arsenic concentration for the first quarter 2022 sample was 20 ug/L (above the 10 ug/L RFLMA standard), which triggered monthly sampling frequency. The arsenic concentration for the first monthly sample (February 2022) was 4.1 mg/L, so the sampling frequency returned to quarterly. All other quarterly concentrations were below the applicable RFLMA standards during full CY 2022.

At Points of Evaluation, the 12-month rolling average uranium concentrations at location GS10 were above the RFLMA standard of 16.8 ug/L starting in August 2022, which was a reportable condition under RFLMA (see RFLMA Contact Record 2022-03). The reportable condition concentrations were 17.4–18.3 ug/L. Uranium was no longer reportable as of December 31, 2022. Concentrations at the Walnut Creek Point of Compliance (WALPOC, which is downstream of GS10) remained well below 16.8 ug/L. The 12-month rolling average plutonium concentrations at location SW027 were above the RFLMA standard of

0.15 pCi/L starting in May 2022. A reportable condition was triggered under RFLMA (see RFLMA Contact Record 2022-04). The reportable condition concentration was 0.18 pCi/L. There was no flow at SW027 in 2022, so the reportable condition only includes a sample from 2021. Plutonium was no longer reportable as of July 31, 2022. Concentrations at Woman Creek Point of Compliance (WOMPOC, downstream of SW027) remained well below 0.15 pCi/L. No RFLMA POC analyte concentrations were reportable during 2022.

Rich Kondo asked about the rolling 12-month average and reason for averaging. George said the constituents at Rocky Flats generally have chronic risk and concentrations vary seasonally with changes in precipitation patterns. Plutonium (Pu) wants to move when rain moves soil particles. Runoff increases Pu concentrations. Uranium (U) wants to be dissolved and move in groundwater. Runoff dilutes U concentrations. Americium (Am) responds like Pu, so DOE tracks them together. Rich then asked if Pu/Am sorbing to soil gives you control over managing remaining contamination. George said most of the Pu/Am source terms were removed during closure, but there are low levels of contamination still onsite, so they monitor concentrations and possible exposure risk.

Randy Moorman asked about blips in concentrations and asked for confirmation that they are weather related. George said the blips are normal. Randy then asked what triggers mitigation actions. George explained that DOE, CDPHE, and EPA look at past data and concentrations at POCs to see if the current situation is different. They are trying to determine if the risk has changed (i.e., the remedy has become less protective). Randy asked about Pu-related mitigation actions at SW 027. George said Pu and Am move with soil. Mitigating actions are targeted at limiting the movement of soil, including vegetation monitoring and wood straw application, which help reduce impact from precipitation and hold in soil moisture.

Kim Griffiths asked if arsenic was naturally occurring or a byproduct of manufacturing. John Boylan said there was naturally occurring arsenic in onsite water.

Roman Kohler asked about typical the turnaround time to get a sample back. John Boylan said the sample turnaround time is generally 14 to 28 days.

Deven Shaff asked if surface water or groundwater was more concerning regarding exposure. George said they are not concerned more about one or the other, but they are concerned about concentrations and risk. Deven asked how DOE rules out lab error. George said a validation group looks at the data, and they certify labs periodically. He said there are many layers of review and QC.

Groundwater Monitoring – John Boylan

John Boylan, groundwater lead, gave an overview of the RFLMA groundwater monitoring network. He said there no changes to the monitoring network in 2022. All wells were scheduled for sampling in 2022. Results were generally consistent with previous data. Statistical evaluation results of original landfill (OLF) and present landfill (PLF) data were also generally consistent with previous results. Groundwater treatment systems continued to remove contaminants. The East Trenches Plume Treatment System met all treatment objectives for both collection/treatment systems (Mound and East Trenches). The Solar Ponds Plume Treatment System (SPPTS) met the nitrate treatment objectives and removed approximately 30% of the uranium. Also in 2022, a new solar/battery power facility was installed at the SPPTS. RSI began uranium treatment testing, including bench-scale tests. Pilot-scale testing will be completed in 2023 and design of the full-scale uranium treatment component is scheduled to begin in late 2023.

Rich Kondo asked if they monitored constituents other than uranium. John said wells are monitored for Pu/Am; concentrations of those constituents are non-detect.

Randy Moorman asked about the uranium treatment project being underway. John said a full-scale uranium treatment would be online in 2024. Alum will be added to form a chemical precipitate; uranium precipitates out with alum. Right now, the system is removing about a third of the U in the influent. The uranium treatment component is designed to meet 16.8 ug/L site-specific standard. He mentioned there were several contact records on this issue.

Rich Kondo asked if there was a “thumb-rule” for figuring out how much U or Pu would go airborne in a fire. John said the concentrations are such that there is not enough of a highly radioactive source term onsite that could go airborne.

Claire Levy asked how deep the groundwater is onsite. George said average is 30-35 feet bgs. Claire asked if groundwater was pumped for treatment. John said they don’t pump the wells, rather the treatment systems collect groundwater where it would normally surface (uranium/nitrate in one area, VOCs in another area, which are treated by an air stripper).

Roman Kohler asked about naturally occurring uranium. John said naturally occurring uranium is present onsite.

Deven Shaff asked how precipitation increases impact movement of contaminants. John said there would be dilution of some contaminants and flushing of some contaminants. Deven asked when the data points would be official for May and June. John said 6 months or so (two meetings from now). Deven asked if they compare results to previous quarters. John said they do that regularly.

George mentioned the GEMS website. Data are available on GEMS about 45 days after samples are collected in the field.

Rich Kondo asked about the units of measurement for water samples. John said micrograms per liter (ug/L) are generally the same as parts per billion (ppb).

Site Operations – Harry Bolton

Harry Bolton reported on Site Operations. The annual Site-wide inspection showed no evidence of violations of the institutional or physical controls. No adverse biological conditions (e.g., unexpected mortalities) were observed. The PLF was inspected quarterly and after significant precipitation events. No significant issues were observed. The OLF was inspected monthly and after significant precipitation events. No significant issues were observed. The North Walnut Creek Slump (NWCS) was monitored as a best management practice. Slump movement continued through 2022. Harry said they aren’t concerned about the slump itself, other than possible impact to monitoring wells that could be damaged from slumping.

Ecology – Karin McShea

Karin McShea gave an overview of ecological monitoring. She said revegetation and wetland monitoring activities were conducted. Revegetation efforts continue to be successful; approximately 113 acres were treated with herbicides to control noxious weeds. Several areas along the 903 hillside were seeded and

treated with engineered wood straw. No active black-tailed prairie dog towns were observed within the Site boundaries. 300+ elk were monitored using game cameras to monitor animal movement.

Randy Moorman asked about elk crossing into Central Operable Unit (COU). Karin said the elk have to jump the fence, and their hoofs sometimes impact the ground. They've installed wildlife crossings, which reduces the energy elk have to use to cross the fence.

Randy Kondo asked about the noxious weed list. Karin said the A-list weeds were the highest priority for eradication.

Deven Shaff asked about revegetation for slumping. Karin said revegetation would not help because the slumping is deeper than the roots of the vegetation.

Murph Widdowfield asked if there were any updates regarding the visitor's center. Andy Keim said there was nothing new to report.

Public comment

Travis Culley said he had ongoing question about fire. Travis wanted information on oxidized versus non-oxidized plutonium. John said plutonium would be oxidized if exposed. Travis then asked clarifying questions on the standards in place for plutonium in soil.

Chris Allred expressed concern about statements made during DOE presentation. He asked about "concentration spikes". George explained the changes in concentrations are better explained as variability, but chronic exposures are what DOE looks at. Chris expressed concern about plutonium standards and said there needs to be acknowledgement of science regarding plutonium. He wants to know how many prairie dogs have been moved to the Refuge. He also wants to know about scientific evidence of 70% naturally occurring uranium in water samples. George answered that scientific reports are available that show isotopic ratios at Rocky Flats.

Deven Shaff asked how often agencies look at remedy protectiveness and protectiveness of standards. Brian Walker replied that they review the remedy every five years and if any exceedances of standards are noted. David Connolly said the five-year review evaluates any changes in regulations that would impact protectiveness.

Big Picture/Additional Questions/Issue Identification: David went through the Big Picture. Remaining meetings for 2023 are scheduled for September 18 and October 20. Discussion topics are below.

September 18

- Initial review of 2024 work plan and budget
- DOE quarterly update

October 20

- Adopt 2024 work plan and budget
- New members interviews/appointment
- DOE quarterly update

David then addressed a petition being circulated. The issues in the petition include the time of Stewardship Council meetings. He said we meet during the day to work around commissioner and council meetings. There is a window when no one is meeting, which is Monday mornings. Regarding the location of meetings, he said we want to be centrally located along the Highway 36 corridor for access of Board members, and we need an ADA-accessible building with free parking. If there is another place that meets those criteria, he said let us know. Jan Kulmann mentioned four meetings are online to maintain accessibility. David talked about meeting recordings. The executive committee discussed recording the meetings and passed on it because the Board would need a new space to enable recording. The petition also pushes for cancelation of David's and Melissa's contracts because of DOE funding. David said the Board manages contracts and expenditures.

Deven mentioned we could reengage in conversations regarding recording meetings. Deven was fine with the meeting time and day.

David said Zoom meetings are posted on the website. It is the in-person meeting that is not recorded and posted online.

Kim acknowledged that Monday morning meetings are well attended by Board meetings.

Executive Session

At 10:49 a.m. Deven Shaff made a motion to move into Executive Session for the purpose of discussing Stewardship Council personnel contracts for 2023, authorized pursuant to Section 24-6-402(4)(e) & (b), C.R.S., to determine positions relative to matters that may be subject to negotiation, and conferencing with the attorney on such matters. Bob McCool seconded the motion. The motion passed 13-0.

The Board reconvened from Executive Session at 11:33 a.m. and affirmed that no actions had been taken during Executive Session.

The Board meeting adjourned at 11:33 AM.

Rocky Flats Stewardship Council
Check Detail 2023
May 6 through September 4, 2023

Type	Num	Date	Name	Account	Paid Amount	Original Amount
Check	2199	06/02/2023	Century Link	CASH-Wells Fargo-Operating		-30.53
				Telecommunications	-30.53	30.53
TOTAL					-30.53	30.53
Bill Pmt -Check	2200	06/02/2023	Crescent Strategies, LLC	CASH-Wells Fargo-Operating		-8,742.57
Bill	5/31/23 Billing	05/31/2023		Personnel - Contract	-8,525.00	8,525.00
				TRAVEL-Local	-20.96	20.96
				Postage	-19.99	19.99
				Telecommunications	-96.62	96.62
				Supplies	-80.00	80.00
TOTAL					-8,742.57	8,742.57
Bill Pmt -Check	2201	06/02/2023	Energy Communities Alliance	CASH-Wells Fargo-Operating		-950.00
Bill		06/01/2023		Subscriptions/Memberships	-950.00	950.00
TOTAL					-950.00	950.00
Bill Pmt -Check	2202	06/02/2023	HUB International Colorado	CASH-Wells Fargo-Operating		-3,131.20
Bill	3193680	05/25/2023		Insurance	-3,131.20	3,131.20
TOTAL					-3,131.20	3,131.20
Bill Pmt -Check	2203	06/02/2023	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-357.00
Bill	23-24	05/31/2023		Accounting Fees	-357.00	357.00
TOTAL					-357.00	357.00
Bill Pmt -Check	2204	06/02/2023	Seter & Vander Wall, P.C.	CASH-Wells Fargo-Operating		-1,871.95
Bill	85618	04/30/2023		Attorney Fees	-1,871.95	1,871.95
TOTAL					-1,871.95	1,871.95
Check	2205	07/01/2023	Century Link	CASH-Wells Fargo-Operating		-30.17
				Telecommunications	-30.17	30.17
TOTAL					-30.17	30.17
Bill Pmt -Check	2206	07/01/2023	Crescent Strategies, LLC	CASH-Wells Fargo-Operating		-8,736.59
Bill	6/30/23 Billing	06/30/2023		Personnel - Contract	-8,525.00	8,525.00
				TRAVEL-Local	-94.98	94.98
				Postage	-19.99	19.99
				Telecommunications	-96.62	96.62
TOTAL					-8,736.59	8,736.59
Bill Pmt -Check	2207	07/01/2023	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-735.00
Bill	23-29	06/30/2023		Accounting Fees	-735.00	735.00
TOTAL					-735.00	735.00
Bill Pmt -Check	2208	07/01/2023	Seter & Vander Wall, P.C.	CASH-Wells Fargo-Operating		-972.15
Bill	85743	05/31/2023		Attorney Fees	-972.15	972.15
TOTAL					-972.15	972.15
Check	2209	08/08/2023	Century Link	CASH-Wells Fargo-Operating		-30.45
				Telecommunications	-30.45	30.45
TOTAL					-30.45	30.45
Bill Pmt -Check	2210	08/08/2023	Crescent Strategies, LLC	CASH-Wells Fargo-Operating		-9,632.52
Bill	7/31/23 Billing	07/31/2023		Personnel - Contract	-8,525.00	8,525.00
				TRAVEL-Local	-20.96	20.96
				Postage	-19.99	19.99
				Telecommunications	-96.62	96.62
				Subscriptions/Memberships	-775.00	775.00
				Website	-194.95	194.95

Rocky Flats Stewardship Council
Check Detail 2023
May 6 through September 4, 2023

Type	Num	Date	Name	Account	Paid Amount	Original Amount
TOTAL					-9,632.52	9,632.52
Bill Pmt -Check	2211	08/08/2023	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-441.00
Bill	23-34	07/31/2023		Accounting Fees	-441.00	441.00
TOTAL					-441.00	441.00
Bill Pmt -Check	2212	08/08/2023	Seter & Vander Wall, P.C.	CASH-Wells Fargo-Operating		-2,692.58
Bill	85871	06/30/2023		Attorney Fees	-2,070.08	2,070.08
Bill	86025	07/31/2023		Attorney Fees	-622.50	622.50
TOTAL					-2,692.58	2,692.58
Bill Pmt -Check	2213	09/03/2023	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-178.50
Bill	23-42	08/31/2023		Accounting Fees	-178.50	178.50
TOTAL					-178.50	178.50
Bill Pmt -Check	2214	09/03/2023	Crescent Strategies, LLC	CASH-Wells Fargo-Operating		-16,223.52
Bill	8/31/23 Billing	08/31/2023		Personnel - Contract	-8,525.00	8,525.00
				TRAVEL-Local	-22.27	22.27
				Postage	-19.99	19.99
				Telecommunications	-97.16	97.16
				TRAVEL-Out of State	-564.65	564.65
				Website	-814.00	814.00
				TRAVEL-Out of State	-6,180.45	6,180.45
TOTAL					-16,223.52	16,223.52
Check	2215	09/03/2023	Century Link	CASH-Wells Fargo-Operating		-30.86
				Telecommunications	-30.86	30.86
TOTAL					-30.86	30.86

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Kim Griffiths

MEMORANDUM

TO: Stewardship Council Board of Directors
FROM: Melissa Weakley
SUBJECT: DOE's Quarterly Report Briefing
DATE: August 31, 2023

DOE will present an overview of remedy-related surveillance, monitoring, and maintenance activities conducted at Rocky Flats during the first quarter (January 1 to March 31) of calendar year 2023. The full report can be accessed here: https://lmpublicsearch.lm.doe.gov/lmsites/44807_rfs_1q23.pdf.

Quarterly Report Summary

- **Present Landfill (PLF):** One quarterly inspection (February 21) was conducted. No issues were identified.
- **Original Landfill (OLF):** Three monthly inspections (January 17, February 21, and March 23) were conducted.
 - No issues were observed during these inspections.
 - Seeps were either dry or consistent with previous first quarters.
 - DOE indicated it would continue RFLMA-required monthly inspections of the OLF until a reduction in inspection frequency was established through the RFLMA consultative process with appropriate agencies.
- **Central Operable Unit (COU):** The COU was inspected on March 23. No new erosion, subsidence, or anomalies were discovered this quarter.
- **North Walnut Creek Slump**
 - The hillside east of the Solar Ponds Plume Treatment System (SPPTS) is the site of a slump, called the North Walnut Creek Slump, that is monitored as a Best Management Practice.
 - The slump block moved 0.1 feet this quarter. The hillside has moved a total of 4 to 6 feet along the scarp since the hillside was regraded in 2017.
- **Groundwater Treatment Systems (East Trenches Plume Treatment System, Mound Site Plume Collection System, Solar Ponds Plume Treatment System, and Present Landfill Treatment System)**
 - Routine maintenance of all four systems was performed. No significant issues were noted.
 - Pilot-scale uranium treatment testing that began in November 2022 continued at the Solar Ponds Plume Treatment System.

- **Groundwater Treatment System Monitoring**
 - Routine quarterly effluent samples were collected from the Present Landfill Treatment System on January 12.
 - All analyte concentrations in the effluent sample were below the RFLMA standards for the quarter.

- **Groundwater Monitoring:** A total of 11 groundwater samples were collected and analyzed (see attached Monitoring Location figure).
 - Results were generally consistent with previous data and will be evaluated as part of the annual report for 2023.

- **Surface Water Monitoring:** A total of 11 composite surface water samples, 18 surface water grab samples, and 13 treatment system grab samples were collected and analyzed (see attached Monitoring Location figure).
 - A reportable condition at Point of Evaluation (POE) GS10 for the uranium 12-month rolling average was determined upon receipt of analytical results. DOE anticipates that the 12-month rolling average for uranium at GS10 will be below the standard for the 2nd Quarter 2023, ending the reportable condition (*see Melissa's email re: "Contact Record (CR) 2023-01 for the reportable condition of uranium at Point of Evaluation (POE) GS10 ", sent to the Board on July 20, for details*).
 - All other analyte concentrations at RFLMA Point of Evaluation locations GS10, SW027, and SW093 remained below reportable condition levels throughout the quarter.
 - All analyte concentrations at RFLMA Point of Compliance locations WALPOC and WOMPOC also remained below reportable condition levels throughout the quarter.

Attachments

Q1 2023 Report Cover Page, Table of Contents, Abbreviations, and Executive Summary
 Rocky Flats Site Water Monitoring Locations

**Rocky Flats Site, Colorado,
Quarterly Report of
Site Surveillance and Maintenance
Activities, First Quarter,
Calendar Year 2023**

July 2023



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

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Abbreviations

Am	americium
AOC	Area of Concern
BMP	best management practice
CAD/ROD	Corrective Action Decision/Record of Decision
CDPHE	Colorado Department of Public Health and Environment
COU	Central Operable Unit
CR	Contact Record
CY	calendar year
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ETPTS	East Trenches Plume Treatment System
IC	institutional control
ITSS	Interceptor Trench System Sump
LM	Office of Legacy Management
µg/L	micrograms per liter
MSPCS	Mound Site Plume Collection System
NWCS	North Walnut Creek Slump
OLF	Original Landfill
pCi/L	picocuries per liter
PLF	Present Landfill
PLFTS	Present Landfill Treatment System
POC	Point of Compliance
POE	Point of Evaluation
Pu	plutonium
RCRA	Resource Conservation and Recovery Act
RFLMA	<i>Rocky Flats Legacy Management Agreement</i>
RFSOG	Rocky Flats Site Operations Guide
SPPTS	Solar Ponds Plume Treatment System

Executive Summary

This report for the first quarter (January 1–March 31) of calendar year (CY) 2023 includes information on the remedy-related surveillance, monitoring, and maintenance activities conducted at the Rocky Flats Site, Colorado, managed by the U.S. Department of Energy (DOE) Office of Legacy Management. This report summarizes the maintenance and inspection of the two closed Site landfills and four groundwater collection or treatment systems, the inspection of the perimeter signs of the Central Operable Unit, erosion control and revegetation activities, and water and ecological monitoring.

The Present Landfill quarterly inspection for the first quarter of CY 2023 was conducted on February 21, 2023. No issues were identified during this inspection. The Present Landfill Treatment System (PLFTS) North and South Manhole Outlet pipes were cleaned with a mechanical pipe cleaner as a best management practice.

The Original Landfill monthly inspections for the first quarter of CY 2023 were conducted on January 17, February 21, and March 23, 2023. No issues were observed during these inspections.

Routine maintenance was performed at the Mound Site Plume Collection System, the East Trenches Plume Treatment System, the Solar Ponds Plume Treatment System (SPPTS), and the PLFTS during the first quarter. Pilot-scale uranium treatment testing that began in November 2022 continued at the SPPTS. Freezing conditions interfered with flows at the SPPTS but did not cause any damage or lasting effects, and treatment continued without problem.

Water monitoring met the targeted monitoring objectives required by the *Rocky Flats Legacy Management Agreement* (RFLMA). During the quarter, 11 flow-paced, composite surface water samples; 18 surface water grab samples; 13 treatment system grab samples; and 11 groundwater samples were collected in accordance with RFLMA-required protocols and were submitted for laboratory analysis.

A reportable condition at Point of Evaluation (POE) GS10 for the uranium 12-month rolling average was determined upon receipt of recently validated analytical results. Validated results were received on May 9, 2023, with formal notification to regulators and stakeholders being made on May 17, 2023. The RFLMA Parties (DOE, Colorado Department of Public Health and Environment, and U.S. Environmental Protection Agency) held a consultation regarding this reportable condition on June 8, 2023. Once finalized, the plan and path forward will be described in a contact record that will be posted on the Rocky Flats website. See Section 3.1.3.1 for a detailed discussion.

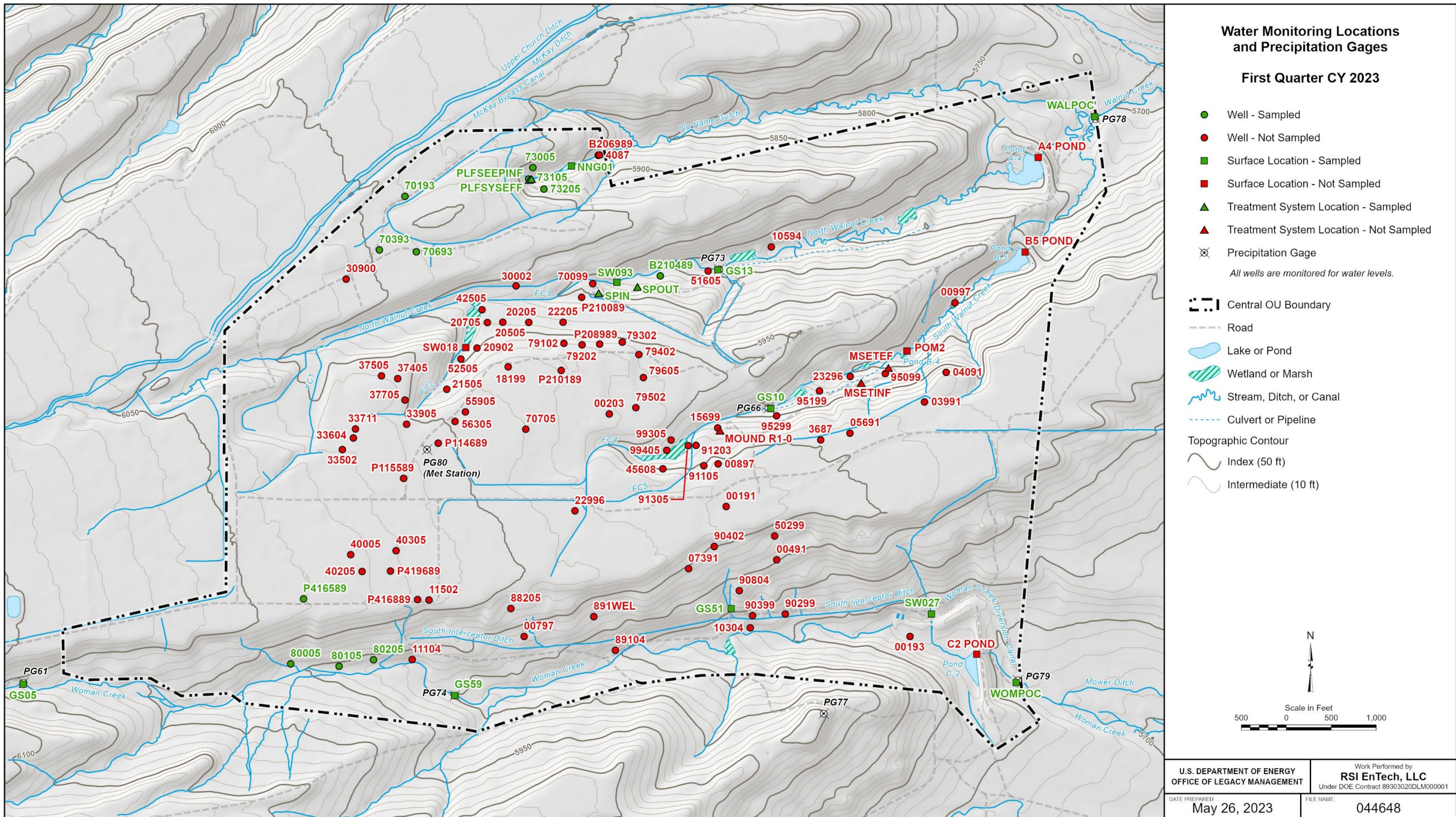
All other analyte concentrations at POE locations GS10, SW027, and SW093 remained below reportable condition levels during the first quarter of CY 2023.

All analyte concentrations at Points of Compliance WALPOC and WOMPOC also remained below reportable condition levels during the first quarter of CY 2023.

RFLMA-required groundwater monitoring during the first quarter of CY 2023 was conducted at the 10 Resource Conservation and Recovery Act wells monitoring the two closed landfills.

Results were generally consistent with previous data. Groundwater monitoring data presented in this quarterly report will be evaluated as part of the annual report for CY 2023.

Ecological activities conducted during the first quarter included revegetation of disturbed areas, vegetation enhancement activities (interseeding with native grasses and shrubs), prairie dog surveys, and installation of wildlife crossings.



Abbreviations: ft = feet, OU = Operable Unit

Figure 1. Rocky Flats Site Water Monitoring Locations and Precipitation Gauges

Draft 2024 Work Plan

- Cover memo
- Draft work plan

Draft 2024 Budget

- Cover memo
- Draft budget

ROCKY FLATS STEWARDSHIP COUNCIL

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Jefferson County ~ Boulder County ~ City and County of Broomfield ~ City of Arvada ~ City of Boulder
City of Golden ~ City of Northglenn ~ City of Thornton ~ City of Westminster ~ Town of Superior
League of Women Voters ~ Rocky Flats Cold War Museum ~ Rocky Flats Homesteaders
Kim Griffiths

MEMORANDUM

TO: Board
FROM: David Abelson & Melissa Weakley
SUBJECT: Draft 2024 Work Plan
DATE: September 1, 2023

At the September 18th meeting the Board will begin reviewing its 2024 work plan (draft plan attached). The changes we are proposing are noted using track changes.

The central changes are to clarify how the Stewardship Council works, not aspires to work. These changes aim to reset expectations. The other proposed changes are to update work scope to better align with external factors – e.g., DOE’s plans, Congressional action, achievements, etc.

We are also proposing to delete the section on “Former Rocky Flats Workforce.” The reason is two-fold – (1) we have not had any issues brought to the Stewardship Council in years, and (2) all discussions with the Stewardship Council regarding former workers flow through the Rocky Flats Homesteaders. The deletion is not to suggest a disregard for the needs and challenges of former workers.

We will be prepared to answer your questions at the meeting. Any changes to the draft plan as presented will be incorporated into a revised draft that will be reviewed, modified as necessary, and approved at the October 30, 2023, meeting.

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Kim Griffiths

2024 Work Plan

Draft #1, September 2023

Mission:

The mission of the Rocky Flats Stewardship Council (Stewardship Council) is to provide continuing local engagement on activities occurring at the Rocky Flats site (“Rocky Flats” or “site”) regarding long-term stewardship of residual contamination and refuge management; to provide a forum to track issues related to former site employees, including but not limited to long-term health benefits and pension programs; to provide an ongoing mechanism to help maintain public knowledge of Rocky Flats and the ongoing needs and responsibilities regarding contaminant management and refuge management; and to provide an ongoing forum to engage on all other issues pertinent to Rocky Flats, as determined by the Stewardship Council Board of Directors (Board).

Background:

The Stewardship Council occupies two roles: (1) serving as the Local Stakeholder Organization (LSO) for Rocky Flats, and (2) engaging the U.S. Fish & Wildlife Service (USFWS) on the management of the Rocky Flats National Wildlife Refuge (Refuge). To help ensure the Board and public understand when the Stewardship Council acts in its capacity as the Rocky Flats LSO and when it engages on issues beyond its scope as the LSO, the plan includes headers indicating “LSO” and “Non-LSO” activities.

Local Stakeholder Organization (LSO)

The Department of Energy (DOE) Office of Legacy Management (LM) approved the LSO Plan for Rocky Flats on December 21, 2005. That Plan identifies how the main responsibilities Congress identified in the legislation authorizing the creation of LSO (Section 3120 of the Fiscal Year 2005 Defense Authorization bill) are to be carried out at Rocky Flats. These responsibilities are summarized as follows:

- Solicit and encourage public participation in appropriate activities relating to the closure and post-closure operations of the site.
- Disseminate information on the closure and post-closure operations of the site to the State, local and Tribal governments in the vicinity of the site, as well as persons and entities having a stake in the closure or post-closure operations of the site.
- Transmit to appropriate officers and employees of DOE questions and concerns of governments, persons, and entities referred to in the preceding bullet.

In fulfilling these responsibilities, the Stewardship Council has been tasked with helping LM meet its public involvement obligations identified in the Legacy Management Public Involvement Plan (LMPPI) for Rocky Flats.

Rocky Flats National Wildlife Refuge (non-LSO activity)

“The Rocky Flats National Wildlife Refuge Act of 2001” established that Rocky Flats shall become a national wildlife refuge following U.S. Environmental Protection Agency (EPA) certification that the site has been cleaned to the agreed-upon regulatory standards. In July 2007, DOE conveyed jurisdictional responsibility of nearly 4,000 acres to the Department of the Interior for the ~~Rocky Flats National Wildlife~~ Refuge. Additional lands were conveyed in 2014.

USFWS opened the Refuge for guided tours in 2015 and for public recreation in 2018. Additional trails will open in the Refuge in the coming years.

Work Plan Elements:

The Work Plan is divided into the following five sections:

1. DOE Management Responsibilities (LSO activity)
2. Former Rocky Flats Workforce (LSO activity)
3. Outreach (LSO activity with two exceptions noted)
4. Rocky Flats National Wildlife Refuge (non-LSO activity)
5. Business Operations (LSO activity)

DOE Management Responsibilities

LSO Activity

Overview:

One of the key roles of the Stewardship Council is to understand and engage on the various issues regarding the cleanup and post-closure management of Rocky Flats, as well as to provide a forum to foster discussions ~~with among~~ DOE ~~and~~ the regulatory agencies, and community members.

2024 Activities:

1. Review information regarding the long-term stewardship and management of the Rocky Flats site, including but not limited to the results of ~~the site~~ operational and performance monitoring data ~~of site operations~~ and DOE status reports.
2. Continue to identify key questions about the cleanup and ongoing management, track the ~~effe~~protectiveness of site remedies, and understand the impacts to human and ecological receptors.
3. Track the progress made in treating contaminated groundwater at the groundwater treatment systems, including the ~~ongoing~~ uranium treatment ~~evaluation-upgrades~~ at the Solar Ponds Plume Treatment System (SPPTS).
4. Track the ongoing investigation into the source(s) of elevated actinide levels found in surface water. Of particular note are the ~~cyclic uranium levels in North Walnut Creek at point of compliance~~ ~~WALPOC~~ elevated levels of actinides at point of evaluation GS10 on South Walnut Creek, and elevated plutonium levels at point of evaluation SW027 in the Woman Creek drainage.
5. Track the ongoing investigation into the presence of per- and polyfluoroalkyl substances (PFAS) in site groundwater and surface water.
6. Track the effectiveness of the remedy implemented to address slumping at the Original Landfill.
7. Track issues related to slumping along North Walnut Creek.

Commented [MW1]: This system has been designed and is being installed soon.

Commented [MW2]: There are no exceedances at the POCs - not sure this part is needed.

8. Continue to participate in Adaptive Management Plan (AMP) meetings, including technical evaluations of data; ~~track implementation of AMP results, which could include breaching the terminal ponds on Woman and Walnut Creeks.~~
9. ~~Continue engaging in DOE, CDPHE, and/or EPA assessment(s) of remedy operations and effectiveness.~~
- 10-9. Track development of and, as applicable, participate in conversations regarding resumption of air quality monitoring to ~~establish-understand~~ baseline ~~prior conditions in the event of a~~ wildfire.
- 11-10. Work with DOE on implementing its LMPIP, including the meetings DOE identified in the LMPIP.
- 12-11. Review ~~Congressional funding DOE budgets~~ for implementation of DOE responsibilities.
- 13-12. Understand potential legal and regulatory issues regarding implementation of the Rocky Flats Legacy Management Agreement and related site documents; provide this information to the Stewardship Council and to the community.
- 14-13. Work with DOE and the regulators to understand technical data regarding implementation and effectiveness of cleanup remedies and long-term controls; communicate this information ~~via Board memos and/or Board meeting discussions to the Stewardship Council and to the community.~~
- 15-14. Transmit to appropriate DOE officers and employees any questions and/or concerns of governments, persons, and entities regarding Rocky Flats.
15. As opportunities allow, continue to work with DOE on the development of interpretative signage for the Rocky Flats National Wildlife Refuge.
16. Support the ongoing efforts of the Rocky Flats Cold War Museum to educate successive generations about the history of Rocky Flats, particularly about residual contamination and continued need for long-term stewardship.
17. ~~Track the development of the Jefferson County Parkway as it relates to Rocky Flats.~~
18. ~~Track Congressional actions/decisions affecting potential mineral development at Rocky Flats and engage as needed.~~
19. ~~Examine the potential impacts of climate change on site remedies, focusing on climate adaptation and resilience, including shock events and changes over the long term.~~

Commented [DA3]: Deleting as DOE does not anticipate any action in 2024 (and likely in the handful of years that follow)

Commented [DA4]: Deleting as it is covered by item #1

Commented [DA5]: Changed to bring greater clarity to how the Stewardship Council meets its responsibilities. The change does not reflect a change in our we currently operate.

Commented [DA6]: Removing as there is no action or anticipated action

Commented [DA7]: Removing as there is no action and no anticipated action

Commented [DA8]: Removing as this item was addressed

Former Rocky Flats Workforce LSO Activity

Commented [DA9]: Removing as we have no had any issues brought to the Stewardship Council in years. All discussions with the Stewardship Council regarding former workers flow through the Rocky Flats Homesteaders

Overview:

~~Many of the former site workers are the constituents of the Stewardship Council governments. Further, the Rocky Flats Homesteaders, which represents more than 1,800 former site workers, sits on the Board of the Stewardship Council. For these and other reasons, as noted in the Stewardship Council's Intergovernmental Agreement, worker issues will, as needed, continue to be an important component of the Stewardship Council's work. At this time, worker issues largely revolve around claims under the Energy Employee Occupational Illness Compensation Program Act (EEOICPA). Workers address claims on an individual basis.~~

2024 Activities:

1. ~~Forward worker concerns, as necessary.~~

Outreach
LSO Activity (two exceptions noted)

Overview:

As the LSO for Rocky Flats, a core responsibility for the Stewardship Council is providing a forum (the Board of Directors meetings) to help engage electd officials, their staffs, and other community leaders ~~people~~ on Rocky Flats and the ongoing management needs. As part of this mission, it remains essential that the Stewardship Council maintain close communications with DOE, EPA, Colorado Department of Public Health and Environment (CDPHE), and Congress.

Commented [DA10]: Changed to bring greater clarity to how the Stewardship Council meets its responsibilities. The change does not reflect a change in our we currently operate.

The local communities have developed over the period of many years a very good working relationship with the two primary regulatory agencies that oversee the site, EPA and CDPHE. It is imperative that the Stewardship Council continue this tradition of partnership with these agencies.

The Colorado congressional delegation likewise plays a critical role in addressing Rocky Flats issues. The Stewardship Council shall remain an important mechanism for addressing questions and concerns of the delegation, as well as providing ongoing interface with the delegation on site-specific issues and concerns.

2024 Activities:

1. Hold quarterly Board meetings and provide opportunity for comment and dialogue.
2. Communicate with other local officials, DOE, state and federal regulators, the Colorado congressional delegation, and other stakeholders about the Stewardship Council’s mission and activities, as appropriate.
3. Take public comment on issues related to DOE and USFWS responsibilities at Rocky Flats.¹
4. Evaluate Congressional action affecting DOE and USFWS and administrative action that could affect Rocky Flats.²
5. Maintain communication with federal and state legislators, as appropriate, ~~and track potentially impactful federal and state legislation as needed.~~
6. Provide opportunities at meetings and in between meetings for education on site-related issues and relevant feedback.
7. Work with DOE to disseminate information on the cleanup and post-closure operations of Rocky Flats.
8. Participate in local, regional, and national forums.
- 9.8. ~~Implement mechanisms for the Stewardship Council and the general public to be informed of the results of monitoring data and other relevant site specific information, recognizing that not all communication between DOE and Rocky Flats constituencies will flow through the Stewardship Council.~~

Commented [DA11]: Partial deletion as there is no legislation outside of funding that affects Rocky Flats, and that item is covered elsewhere.

Commented [DA12]: Deleted as these the board meetings, our meeting packets and the website are the mechanisms. No need to any longer specify this item in a work plan.

Rocky Flats National Wildlife Refuge
Non-LSO Activity (one exception noted)

Overview:

¹ Issues related to USFWS are a non-LSO activity.
² Issues related to USFWS are a non-LSO activity.

One of the Stewardship Council’s roles is to engage on issues related to the development and management of the Refuge. In September 2018, USFWS began allowing public recreation at the Refuge.

In addition, USFWS and DOE are discussing a partnership to develop a ~~multi-purpose building~~~~visitor’s center~~. That ~~building center~~ would be sited on refuge lands, with USFWS taking lead on the public engagement process. As the LSO for Rocky Flats, the Stewardship Council would work with DOE on that agency’s role in developing the ~~facility~~~~visitor center~~. (That work with DOE is an LSO activity.) USFWS would take lead on public engagement; Stewardship Council members may be involved in that process.

The items identified in this part of the work plan only concern USFWS.

2024 Activities:

- ~~1. Reengage USFWS with the goal of obtaining ongoing briefings on management issues, visitor data, and other pertinent information related to the Rocky Flats Wildlife Refuge and Rocky Flats.~~
- ~~2.1. Track agency and Congressional action affecting funding for USFWS and the Refuge. Engage as needed.~~
- ~~3.2. Track issues related to the development of the multi-purpose building and interpretative signage for the Rocky Flats National Wildlife Refuge.³ Engage as needed.~~
- ~~4.3. Continue to track issues related to the development of trails on the Rocky Flats National Wildlife Refuge.~~
- ~~5. Track issues related to the development of a trail network connecting the Rocky Flats National Wildlife Refuge, Rocky Mountain Arsenal National Wildlife Refuge, Two Ponds National Wildlife Refuge, and Rocky Mountain National Park.~~
- ~~6.4. Forward information regarding the Refuge to the Board and the public, as appropriate.~~

Commented [DA13]: Achieved this goal.

Commented [DA14]: Deleted as we are not doing anything towards this end. This issue had been the focus of the City of Boulder.

Business Operations
LSO Activity

Overview:

Business Operations refers to organizational management responsibilities—conducting the annual audit, submitting financial reports to DOE, adopting the annual Work Plan and annual budget, etc.

2024 Activities:

1. Work with DOE to ensure the Stewardship Council continues to meet its responsibilities as the LSO for Rocky Flats.
2. Operate the Stewardship Council in compliance with state and federal regulations.
3. Conduct a financial audit.
4. Prepare and adopt the annual work plan and the annual budget.
5. Submit financial reports to DOE.
6. Review, and renew as necessary, consulting agreements.
7. **Provide an annual report on activities.**
8. Appoint community members to the Board (two seats).

Commented [DA15]: Let's discuss. We have yet to receive a single question from prior reports we developed, raising the question of the need for the report. As a result we have not developed reports each year.

³ As noted above, as the LSO for Rocky Flats, the Stewardship Council will work with DOE on that agency’s partnership with USFWS in developing interpretative signage. The item identified in this part of the work plan only concerns USFWS’s role.

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League of Women Voters -- Rocky Flats Cold War Museum -- Rocky Flats Homesteaders
Kim Griffiths

MEMORANDUM

TO: Board
FROM: David Abelson
SUBJECT: Initial review of 2024 budget
DATE: September 4, 2023

Attached for your review is the first draft of the Stewardship Council's fiscal year 2024 budget. As a unit of local government under the Colorado Constitution, the Stewardship Council must review the budget at this meeting and hold a budget hearing at a second meeting prior to adopting a final budget. The budget hearing will be held at the October 30th meeting, at which time the Board will adopt the budget.

Budget Overview

As is the case each year, the budget is for more than the anticipated costs. Over-budgeting provides the Board latitude in how it manages expenditures without requiring supplemental budgeting should expenditures increase.

The 2024 budget is essentially the same budget that the Board approved for 2023 with one notable change – an increase in travel to account for Legacy Management's focus on International Atomic Energy Association (IAEA) meetings, a new development over the past 12-18 months for DOE.

Please let me know what questions you have.

ROCKY FLATS STEWARDSHIP COUNCIL

2024 Budget -- draft #1

	2024 Budget Amounts	2024 Anticipated Expenditures	2023 Budget	2023 Actual/ Projected Expenses	2022 Expenses
A. Personnel	\$ 102,300.00	\$ 102,300.00	\$ 102,300.00	\$ 102,300.00	\$ 102,300.00
B. Fringe Benefits	\$ -	\$ -	\$ -	\$ -	\$ -
Staff are contractors					
C. Travel	\$ 12,200.00				
Out of State	\$ 11,000.00	\$ 11,000.00	\$ 6,100.00	\$ 10,072.28	\$ 2,938.46
National DOE-related trips					
Local Travel	\$ 1,200.00	\$ 1,000.00	\$ 1,200.00	\$ 582.23	\$ 450.08
\$100/month for 12 months					
D. Computer Equipment	\$ 500.00	\$ -	\$ 500.00	\$ -	\$ -
Purchase misc. hardware, software					
E. Supplies	\$ 1,200.00	\$ 250.00	\$ 1,200.00	\$ 236.79	\$ 30.00
Supplies (\$100/month)					
F. Contractual	\$ 39,500.00				
Attorney & Accounting Services					
Legal Services (\$1400/month)	\$ 16,800.00	\$ 16,000.00	\$ 16,800.00	\$ 17,565.21	\$ 12,328.40
Accounting (\$850/month)	\$ 10,200.00	\$ 5,800.00	\$ 10,200.00	\$ 4,620.00	\$ 4,433.75
Audit Report	\$ 6,500.00	\$ 4,250.00	\$ 6,500.00	\$ 5,000.00	\$ 4,250.00

Admin. Services

Misc. Services: bank fees, etc.	\$ 1,000.00	\$ 100.00	\$ 1,000.00	\$ 10.50	\$ 359.40
Minutes Preparation (5 meetings)	\$ 3,000.00	\$ 2,500.00	\$ 3,000.00		\$ 450.00

Local Government Expenses

Miscellaneous expenses not covered by DOE funds (includes meeting expenses and non-LSO activities)	\$ 2,000.00	\$ 1,500.00	\$ 2,000.00	\$ 200.00	\$ -
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G. Construction	\$ -	\$ -	\$ -	\$ -	\$ -
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None

H. Other	\$ 17,100.00				
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Printing & Copy	\$ 2,000.00	\$ -	\$ 2,000.00	\$ -	\$ -
Postage \$125/month for 12 months	\$ 1,500.00	\$ 300.00	\$ 1,500.00	\$ 621.88	\$ 613.88
Meeting Room Rental \$500/meeting, 5 meetings/year	\$ 2,500.00	\$ 1,000.00	\$ 2,500.00	\$ 1,311.40	\$ 600.00
Liability Insurance Property Contents/General Liability	\$ 500.00	\$ 500.00	\$ 500.00	\$ 502.00	\$ 500.00
Board Members	\$ 3,500.00	\$ 3,500.00	\$ 3,500.00	\$ 3,131.20	\$ 2,767.61
Telephone, email, etc.	\$ 2,700.00	\$ 1,700.00	\$ 2,700.00	\$ 1,610.39	\$ 1,524.57
Website Hosting	\$ 500.00	\$ 425.00	\$ 500.00	\$ 824.00	\$ 100.00
Web master	\$ 1,500.00	\$ 750.00	\$ 1,500.00	\$ 1,990.00	
Subscriptions/Memberships ECA membership	\$ 950.00	\$ 950.00	\$ 950.00	\$ 950.00	\$ 950.00
Conference registration fees	\$ 800.00	\$ 800.00	\$ 800.00	\$ 800.00	\$ 789.48
Newspapers	\$ 650.00	\$ -	\$ 650.00	\$ 275.00	\$ 275.00

J. Indirect Costs	\$ -	\$ -	\$ -	\$ -	\$ -
N/A					
TOTAL PROPOSED BUDGET	\$ 172,800.00	\$ 154,625.00	\$ 167,900.00	\$ 152,602.88	\$ 135,660.63

REVENUE FOR 2024

Department of Energy grant \$ 155,700.00

CARRY OVER FOR 2024

Local government contributions \$ 10,000.00

RFCLOG carry-over \$ 7,100.00

TOTAL \$ 172,800.00

*2023 Actual/Projected Expenses = actual January through August; projected September through December

ACRONYMS

Rocky Flats Acronym List
 Prepared for the Rocky Flats Stewardship Council
 Rev. 02/20

Acronym or Term	Means	Definition
Alpha radiation		A type of radiation that is not very penetrating and can be blocked by materials such as human skin or paper or one inch of air. Alpha radiation presents its greatest risk when it is inhaled or ingested. Plutonium, the radioactive material of greatest concern at Rocky Flats, produces this type of radiation.
Am	americium	A man-made radioactive element that is a byproduct of plutonium (Pu) production. Am emits gamma radiation, which can penetrate many types of protective shielding. During the production era at Rocky Flats, Am was chemically separated from Pu to reduce personnel exposures.
AME	Actinide Migration Evaluation	An exhaustive, years-long study by independent researchers who studied how actinides such as plutonium, americium, and uranium move through the soil and water at Rocky Flats.
AMP	Adaptive Management Plan	Additional water quality sampling and analysis that DOE is conducting, beyond the normal environmental assessments, to inform decisions regarding future breaches of remaining dams.
AOC well	Area of Concern well	A particular type of groundwater well.
B	boron	An inorganic compound that has been found in some surface water and groundwater samples at Rocky Flats.
Be	beryllium	A very strong and lightweight metal that was used at Rocky Flats in the manufacture of nuclear weapons. Exposure to beryllium is now known to cause respiratory disease in those persons sensitive to it.
Beta radiation		A type of radiation that is more penetrating than alpha (but less penetrating than gamma). Beta particles can be stopped after traveling through 10 feet of air or a thin layer of glass or metal. Some forms of uranium emit beta radiation.
BMP	Best Management Practices	A term used to describe actions taken by DOE that are not required by regulation but warrant action.
BZ	Buffer Zone	The portion of the Rocky Flats site that was added during production to provide a "buffer" between the neighboring communities and the industrial portion of Rocky Flats. The buffer zone covered approximately 6,100 acres. Most of the buffer zone lands now make up the Rocky Flats National Wildlife Refuge.
CAD/ROD	Corrective Action Decision/Record of Decision	The complete final plan for cleanup and closure for Rocky Flats. The Federal/State laws that governed the cleanup at Rocky Flats required a document of this sort.
CCP	Comprehensive Conservation Plan	The refuge plan adopted by the U.S. Fish and Wildlife Service in 2007.
CDPHE	Colorado Department of Public Health and Environment	The state agency that regulates Rocky Flats.

Rocky Flats Acronym List
 Prepared for the Rocky Flats Stewardship Council
 Rev. 02/20

Acronym or Term	Means	Definition
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	Federal legislation that governs the Rocky Flats cleanup. Also known as the Superfund Act.
cfs	cubic feet per second	A volumetric measure of water flow.
COC	Contaminant of Concern	A hazardous or radioactive substance that is present at Rocky Flats.
COU	Central Operable Unit	A CERCLA term used to describe the DOE-retained lands (about 1,300 acres) at Rocky Flats. The COU overlays the former Industrial Area (where manufacturing activities took place) and contains all engineered elements of the remedy (two landfills and four groundwater treatment systems) and areas of residual subsurface contamination.
CR	Contact Record	A regulatory procedure where CDPHE reviews a proposed action by DOE and either approves the proposal as is or requires changes to the proposal before approval. CRs apply to a wide range of activities performed by DOE. After approval, the CR is posted on the DOE-Legacy Management (LM) website and the public is notified via email.
Cr	chromium	Potentially toxic metal used at Rocky Flats.
CRA	Comprehensive Risk Assessment	A series of analyses that assess human health risks and risks to the environment (flora and fauna).
D&D	decontamination and decommissioning	The process of cleaning up and tearing down buildings and other structures.
DG	Discharge Gallery	The location where the treated effluent of the Solar Ponds Plume Treatment System (defined below) empties into North Walnut Creek.
DOE	U.S. Department of Energy	The federal agency that manages portions of Rocky Flats. The site office is the Office of Legacy Management (LM).
EA	Environmental Assessment	A study required by NEPA (defined below) when a federal agency proposes an action that could impact the environment. The agency is responsible for conducting the analysis to determine what, if any, impacts to the environment might occur due to a proposed action.
EIS	Environmental Impact Statement	An evaluation that is undertaken by a government agency when it is determined, via the EA, that a proposed action by the agency may have significant impacts to the environment.
EPA	U.S. Environmental Protection Agency	The federal agency that regulates Rocky Flats activities.
EEOICPA	Energy Employees Occupational Illness Compensation Program Act	An act passed by Congress in 2000 to compensate sick nuclear weapons workers and certain survivors.

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Acronym or Term	Means	Definition
ETPTS	East Trenches Plume Treatment System	The treatment system near the location of the East Waste Disposal Trenches. This system treats groundwater emanating from the trenches that is contaminated with organic solvents, as well as groundwater routed from the Mound Plume Site Collection System. Treated effluent flows into South Walnut Creek.
FC	functional channel	Man-made stream channels constructed during cleanup to help direct water flow.
FACA	Federal Advisory Committee Act	The federal law that regulates federal advisory boards. The law requires balanced membership and open meetings with published Federal Register meeting dates.
Gamma Radiation		The most penetrating type of radiation at Rocky Flats. Thick, dense shielding is necessary to protect against gamma rays. Americium (Am) is a strong gamma emitter.
GAO	Government Accountability Office	Congressional investigative office that reports to Congress.
g	gram	A metric unit of mass.
gpm	gallons per minute	A volumetric measure of water flow.
GWIS	Groundwater Intercept System	A below-ground system that directs contaminated groundwater toward the Solar Ponds Plume and East Trenches Plume Treatment Systems.
IA	Industrial Area	The central core of Rocky Flats where all manufacturing activities took place. The IA covered 385 of Rocky Flats's 6,500 acres.
IC	Institutional Control	Administrative and legal controls employed to protect the integrity of the remedies in place and minimize the potential for human exposure to residual contamination.
IGA	intergovernmental agreement	A cooperative agreement between local governments that establishes the framework of the Stewardship Council.
IHSS	Individual Hazardous Substance Site	A name given during cleanup to a discrete area of known or suspected contamination. There were formerly over two hundred IHSSs at Rocky Flats.
ITPH	interceptor trench pump house	The location where contaminated groundwater collected by the interceptor trench is pumped to either the Solar Ponds Plume Treatment System or the East Trenches Plume Treatment System.
L	liter	Metric measure of volume (slightly larger than a quart).
LANL	Los Alamos National Laboratory	One of the US government's premier research institutions located near Santa Fe, NM. LANL is continuing to conduct highly specialized water analysis for Rocky Flats. Using sophisticated techniques, LANL is able to determine the percentages of both naturally occurring and man-made uranium, which helps to inform water quality decisions.
LHSU	lower hydrostratigraphic unit	Hydrogeological term for deep unweathered bedrock that is hydraulically isolated from the upper hydrostratigraphic unit (see UHSU). Data show that site COCs have not contaminated the LHSU.

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LM	Legacy Management	DOE office responsible for overseeing activities at closed sites.
LMPIP	Legacy Management Public Involvement Plan	A plan that follows DOE and EPA guidance on public participation and outlines the methods of public involvement and communication used to inform the public of site conditions and activities. It was previously known as the Post-Closure Public Involvement Plan (PCPIP).
O&M/OM&M	Operations, monitoring, and maintenance	Term that describes ongoing activities at Rocky Flats.
MOU	Memorandum of Understanding	The formal agreement between EPA and CDPHE specifying that CDPHE is the lead post-closure regulatory agency with EPA providing assistance when needed.
MSPCS	Mound Site Plume Collection System	The system that collects groundwater and routes it to the ETPTS for treatment.
MSPTS	Mound Site Plume Treatment System	The remediation system formerly in place (reconfigured in 2016) to treat groundwater contaminated with organic solvents emanating from the Mound Site (a portion of Rocky Flats where waste barrels were buried).
NEPA	National Environmental Policy Act	Federal legislation that requires the federal government to perform analyses of environmental consequences of major projects or activities.
nitrates		Contaminant of concern originating from Solar Ponds wastes. Nitrates have been detected in the North Walnut Creek drainage. Nitrates are very soluble in water and move readily through the aquatic environment.
Np	neptunium	A man-made radioactive isotope that is a by-product of nuclear reactors and plutonium production.
NPL	National Priorities List	A list of Superfund sites. The refuge lands were de-listed from the NPL, while the DOE-retained lands are still on the NPL because of residual groundwater contamination and associated remediation activities.
NWCS	North Walnut Creek Slump	Slumping observed on the hillside east of the Solar Ponds Plume Treatment System.
OLF	Original Landfill	Hillside dumping area of about 20 acres that was used from 1951 to 1968. The OLF underwent remediation with the addition of a soil cap and groundwater monitoring locations.
OU	Operable Unit	A distinct area within a cleanup site. These areas may address geographic areas, specific problems, or medium (e.g., groundwater, soil) where a specific action is required.
PCE	perchloroethylene (a.k.a. tetrachloroethylene)	A volatile organic solvent used in past operations at Rocky Flats.
pCi/g	picocuries per gram	A unit of radioactivity in soil.
pCi/L	picocuries per liter	A unit of radioactivity in water. CDPHE's regulatory limit for Pu and Am in surface water at Rocky Flats is 0.15 pCi/L. This standard is 100 times stricter than the EPA's drinking water standard.

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PLF	Present Landfill	Landfill constructed in 1968 to replace the OLF. During site remediation, the PLF was closed under RCRA regulations with an extensive cap and monitoring system.
PMJM	Preble's Meadow Jumping Mouse	A species of mouse found along the Front Range that is on the endangered species list. There are several areas in the Refuge and COU that provide adequate habitat for the mouse, usually found in drainages. Any operations that are planned in potential mouse habitat are strictly controlled.
POC	Point of Compliance (surface water)	A surface water monitoring location at Rocky Flats where contaminant concentrations must be in compliance with federal and state standards for hazardous constituents. Violations of water quality standards at the points of compliance could result in DOE receiving financial penalties.
POE	Point of Evaluation (surface water)	A surface water monitoring location at Rocky Flats where water quality is monitored. There are no financial penalties associated with water quality exceedances at these locations, but DOE may be required to develop a plan of action to improve the water quality.
POU	Peripheral Operable Unit	A CERCLA term used to describe the 4,800-acre area surrounding the Central Operable Unit.
Pu	plutonium	A metallic substance that was fabricated to form the core, or "trigger", of a nuclear weapon. Formation of these triggers was the primary production mission of the Rocky Flats site. There are different forms of plutonium, called isotopes. Each isotope is known by a different number, such as plutonium 239 (Pu-239) and plutonium 241 (Pu-241). Pu-239 is the primary radioactive COC at Rocky Flats.
RCRA	Resource Conservation and Recovery Act	Federal law regulating hazardous waste. In Colorado, EPA delegates to CDPHE the authority to regulate hazardous wastes.
RFCA	Rocky Flats Cleanup Agreement	The regulatory agreement that governed cleanup activities. DOE, EPA, and CDPHE were signatories.
RFCAB	Rocky Flats Citizen Advisory Board	The group formed as part of DOE's site-specific advisory board network. The RFCAB provided community feedback to DOE on a wide variety of Rocky Flats issues from 1993 through regulatory closure in 2006.
RFCLOG	Rocky Flats Coalition of Local Governments	The predecessor organization of the Rocky Flats Stewardship Council.
RFETS	Rocky Flats Environmental Technology Site	The moniker for Rocky Flats during cleanup years.
RFLMA	Rocky Flats Legacy Management Agreement	The post-cleanup regulatory agreement between DOE, CDPHE, and EPA that governs site activities. The CDPHE has the lead regulatory role, with support from EPA as required.
RFNWR	Rocky Flats National Wildlife Refuge	The 4,000 acres of Rocky Flats where unrestricted use is allowed. This land is now a wildlife refuge.

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RFSOG	Rocky Flats Site Operations Guide	The nuts-and-bolt guide for post-closure site activities performed by DOE and its contractors.
RSAL	Radionuclide Soil Action Level	Concentration of radionuclide in soil above which remedial action should be considered so that people are not exposure to radiation doses above permitted levels.
SEP	Solar Evaporation Ponds	An area of Rocky Flats used in the 1950s to hold excess wastewater generated during manufacturing operations. Wastewater that could not be treated in the onsite treatment plant was sent to open-air holding ponds where solar energy was utilized to evaporate and concentrate the waste. The original SEPs were unlined, and substantial quantities of uranium and nitrates made their way into groundwater. As a result, the Solar Ponds Plume Treatment System was constructed to treat contaminated groundwater before it emerged as surface water in North Walnut Creek.
SID	South Interceptor Ditch	A water feature designed to intercept runoff from the southern portion of the COU. The SID flows from west to east into Pond C-2. Woman Creek water does not enter Pond C-2, but is diverted around Pond C-2 through the Woman Creek Diversion Canal.
SPPTS	Solar Ponds Plume Treatment System	Engineered system designed to treat groundwater contaminated with uranium and nitrates. The nitrates originate from the former solar evaporation ponds, which had high levels of nitric acid. The uranium is primarily naturally occurring. Effluent from the SPPTS flows into North Walnut Creek.
SVOCs	semi-volatile organic compounds	Organic compounds that are not as volatile as solvent-related VOCs. SVOCs are found in many environmental media at Rocky Flats. They are found in materials like oil, coal, asphalt, and tar.
TCE	trichloroethylene	A volatile organic compound used as a solvent in past site operations. TCE is also a degradation product of PCE.
U	uranium	Naturally occurring radioactive element. There were two primary isotopes of U used during production activities. The first was enriched U, which contained a very high percentage (>90%) of U-235 and was used in nuclear weapons. The second isotope was U-238, also known as depleted uranium. U-238 has low levels of radioactivity.
ug/L or µg/L	micrograms per liter	A unit of contaminant concentration in water.
UHSU	upper hydrostratigraphic unit	A hydrogeological term describing the surficial materials and weathered bedrock found at Rocky Flats. The UHSU is hydraulically isolated from the lower hydrostratigraphic unit (see LHSU). Groundwater in some UHSU areas of Rocky Flats is contaminated with site-related COCs, while groundwater in other UHSU areas is not impacted. All groundwater in the UHSU emerges to surface water before it leaves Rocky Flats.

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USFWS	United States Fish & Wildlife Service	The agency within the US Department of the Interior that is responsible for maintaining the nation-wide system of wildlife refuges, among other duties. The regional office is responsible for the RFNWR.
UUUE	unlimited use and unrestricted exposure	A regulatory term used to describe residual risk remaining after a site has been remediated. In 2007, the Peripheral Operable Unit (POU) was found to be suitable for unlimited use and unrestricted exposure (based on risk calculations). EPA removed the POU (now largely the Rocky Flats National Wildlife Refuge) from the EPA's National Priorities List of CERCLA or "Superfund" sites.
VOC	volatile organic compound	These compounds include cleaning solvents that were used in the manufacturing operations at Rocky Flats. The VOCs used at Rocky Flats include carbon tetrachloride (often called carbon tet), trichloroethene (TCE), perchloroethylene (PCE), and methylene chloride.
WALPOC	Walnut Creek Point of Compliance	The surface water Point of Compliance on Walnut Creek, at the COU boundary.
WCRA (or "the Authority")	Woman Creek Reservoir Authority	The group composed the cities of Westminster, Northglenn, and Thornton. These cities use Standley Lake as part of their drinking water supply network. Surface water from Rocky Flats formerly flowed through Woman Creek to Standley Lake, but the Woman Creek Reservoir was constructed to sever that connection. The Authority has an operations agreement with DOE to manage the Woman Creek Reservoir.
WOMPOC	Woman Creek Point of Compliance	The surface water Point of Compliance on Woman Creek, at the COU boundary.
WQCC	Water Quality Control Commission	State board within CDPHE tasked with overseeing water quality issues throughout the state. DOE has petitioned the WQCC several times in the last few years regarding water quality issues.
WRW	Wildlife Refuge Worker	User scenario on which exposure risks are calculated.
ZVI	zero valent iron	A type of fine iron particles formerly used to treat VOCs in the ETPTS and MSPTS.