

ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670

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Boulder, CO 80308-0670

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, June 5, 2023, 8:30 – 10:30 AM

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

- 8:30 AM Convene/Introductions/Agenda Review
- 8:40 AM Public Comment: Comments are limited to the Consent Agenda and non-agenda items. Comments are limited to three minutes.
- 8:50 AM Business Items (briefing memo attached)
1. Consent Agenda: Approve minutes and checks
 2. Executive Director's Report
- 9:00 AM Receive Stewardship Council 2022 Financial Audit (briefing memo attached)
- The Board will be briefed on the results of the audit
 - No material problems were found, and the Stewardship Council was found to be in compliance with all applicable laws and regulations
- Action item: Approve Motion Accepting Stewardship Council 2022 Financial Audit**
- 9:15 AM Host DOE Annual Meeting (briefing memo attached)
- DOE will brief on site activities for calendar year 2022
 - DOE has posted the report on its website
- 10:00 AM Board Roundtable – Big Picture/Additional Questions/Issue Identification
- 10:10 AM EXECUTIVE SESSION
- Discussion of 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, and after announcement at the public meeting of the specific topic for discussion and the statutory citation authorizing the executive session, and a 2/3 vote of the quorum present for the Board.)*

Adjourn

Upcoming Meetings:

September 18, 2023

October 30, 2023

Business Items

- April 3, 2023, draft minutes
- List of Stewardship Council checks

2022 Financial Audit

- Cover memo
- Draft financial audit

ROCKY FLATS STEWARDSHIP COUNCIL

Monday, April 3, 2023

Virtual Meeting via Zoom

Board members in attendance: Randy Moorman (Director, Arvada), Jake Moyer (Alternate, Arvada), Tara Winer (Director, City of Boulder), Taylor Reimann (Alternate, 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), Don Davis (Alternate, City and County of Broomfield), Bill Fisher (Director, Golden), Andy Kerr (Director, Jefferson County), Pat O'Connell (Alternate, Jefferson County), Rich Kondo (Director, Northglenn), Shelley Stanley (Alternate, Northglenn), Laura Farzim (Alternate, Northglenn), Bob McCool (Director, Superior), Jan Kulmann (Director, Thornton), Caleb Owen (Alternate, City of Thornton) Rich Seymour (Director, Westminster), Trea Nance (Alternate, Westminster), Jeannette Hillery (Director, League of Women Voters), Linda Porter (Alternate, League of Women Voters), Roman Kohler (Director, Rocky Flats Homesteaders)

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

Attendees: Andy Keim (DOE-LM), Padraic Benson (DOE-LM), Dana Santi (RSI Entech), John Boylan (RSI Entech), George Squibb (RSI Entech), Chris Stewart (RSI Entech), Karin McShea (RSI Entech), Ryan Wisniewski (RSI Entech), Lindsey Murl (CDPHE), Lindsay Archibald (CDPHE), David Connolly (EPA), David Lucas (USFWS), Megan Klosterman (USFWS) Laura Hubbard (Broomfield), Cathy Shugarts (Westminster), Shirley Garcia, Lynn Segal, Travis Culley, Joan Seeman, Nancy Ford, Chris Allred, Emerald Thomas, Ash Bell, Tori Manogue, Andrea Dietz

Convene/Agenda Review: Jan Kulmann convened the meeting at 8:35 AM.

Public Comment: Lynn Segal raised the issue of possible wildfires and coal seam fires in Colorado. Travis Culley discussed David Abelson's role with the Stewardship Council and acknowledged prior Board members comments about fires in the area. He also discussed his previous comments about sludge. Chris Allred asked that meetings be recorded for the public and discussed David Abelson's role with the Stewardship Council. Emerald Thomas raised three topics: she requested that in-person meetings be recorded, she asked about arsenic found in Rocky Flats water, and she wondered about how DOE is monitoring topsoil that could be distributed by wind. Joan Seeman raised concern about PFAS. She indicated she is interested in the DOE federal study about PFAS.

Consent Agenda: The consent agenda included the draft February 2023 meeting minutes and checks written since that meeting. Roman and Melissa made one correction each. 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 12-0.

Executive Director's Report: David discussed three topics. First, he has received the 2022 draft financial audit. He is reviewing it, and it appears to be a clean report. The results of the audit will be presented at the June 5, 2023, meeting. Second, the old website needs to be updated. He has been working with the Executive committee on this process, and hired Kerry Cheeseboro to build a new website. Lastly, regarding DOE's quarterly reports, David discussed that Stewardship Council staff has been

experimenting with how to discuss the quarterly reports as a Board. The Board has been struggling to find a balance between providing concise messaging and providing enough information. DOE presentations were changed to high-level reporting followed by a community round table in an attempt to increase community engagement. Staff members have heard frustrations from Board members and DOE that this new method is not working as community members participating in the roundtable are not reading the reports. Additionally, community member comments during round table discussions are not focused on the quarterly reports. David said we will return to the previous method of DOE presenting more in-depth overviews of the quarterly reports, but the briefings will be shortened. There will also be ample time for the Board to ask questions and for the public to make comments.

Deven asked if the new Stewardship Council website will comply with ADA-required functionality that local governments are implementing. David said there is some functionality for ADA compliance, and will look into it further.

CDPHE Briefing on PFAS

Lindsay Murl gave an introduction of PFAS (per- and poly-fluoroalkyl substances), including that they are emerging contaminants of concern, human made (not naturally occurring), bio-accumulative and linked to health impacts, chemically and thermally stable, persistent and ubiquitous, and hard to detect and treat. PFOA and PFOS, two chemicals out of thousands, have been widely used and are the most studied PFAS. However, there are so many different PFAS compounds so it is challenging to get a handle on all of them. Lindsay gave an overview of PFAS uses and exposure routes, as well as the history of PFAS. She then discussed possible health impacts from exposure to PFAS.

Lindsay talked about the emerging regulatory landscape surrounding setting the standards for certain PFAS in drinking water. She discussed the 2022 EPA Health Advisory Levels for PFOA, PFOS, GenX, and PFBS, as well as EPA's proposed PFAS Maximum Contaminant Levels (MCLs) for six PFAS. The MCL would require public water systems to monitor for PFAS and notify the public/reduce levels of PFAS if the MCL is exceeded. There is a public hearing on the MCLs on May 4; Lindsay encouraged people to attend if they are interested. Lindsay then gave an overview of the challenges with addressing PFAS in drinking water: developing regulatory standards and clarity, the environmental stability of PFAS, current analytical abilities, limited environmental and health information, and communication of the above.

Lindsay presented an overview of the history of PFAS sampling at Rocky Flats (in water and in the resident elk herd). She also discussed the CERCLA "protectiveness deferred" determination for PFAS after the 2022 Five-Year Review (FYR). In 2026, a DOE CERCLA FYR PFAS supplement will be due, which will discuss the presence of and possibly risks from PFAS at Rocky Flats.

Lindsay showed where quarterly PFAS samples are being collected within the Central Operable Unit (COU). The highest levels of PFAS onsite have been found by the former fire-fighting area. PFAS monitoring results at the Rocky Flats surface water Points of Compliance (POCs) are one to two orders of magnitude lower than at the former fire-fighting area, but above proposed MCLs.

Shelley asked about what parts of the elk were being sampled for PFAS. Lindsay said they looked at liver and muscle tissue, with a range of elk ages tested. David Lucas added that PFAS constituents are most likely to be found in liver tissue, so USFWS did not look at blood samples.

Jeanette indicated that she thinks that we need more data on PFAS.

Randy requested confirmation that we are in the monitoring phase now, but we are not looking into mitigation yet. Lindsay said we are in a data-collection phase, so we can start to ask more sophisticated questions. She said we may have regulatory developments or risk-level developments to guide future actions.

Melissa asked about soil sampling for PFAS. Lindsay said no soil sampling has been conducted to date, but soil sampling may be discussed in the future.

Laura asked about human excretion of PFAS. Lindsay said she can direct these types of questions to CDPHE's toxicology people.

USFWS Briefing

David Lucas gave an update of activities in the Refuge. First, 70% of the Rocky Mountain Greenway trail project design was completed in March 2023. Construction is planned to begin in the winter of 2023. USFWS conducted confirmatory soil sampling along with proposed Greenway path. Initial sampling results are consistent with or lower than historical sampling data.

Regarding the multi-purpose building, DOE completed the final siting memo. The Army Corps of Engineers has started drafting a project schedule, project management plan, and communications plan. The final design is scheduled for December 2024, with construction complete in March 2026.

David then discussed the resident elk herd. USFWS determined a herd size of 200 to 250 elk is the carrying capacity for a healthy population at Rocky Flats. USFWS recently counted 360 elk residing on Rocky Flats, which is too many. USFWS is discussing options for reducing the herd size. Additionally, in March 2023, USFWS took samples of 15 animals plus one control (from Jackson County, Colo) for PFAS sampling. All 16 animals were sampled for chronic wasting disease (CWD), radionuclides, and PFAS. USFWS knows there is CWD in this area, but there is not a lot of data. Sampling results will be forthcoming.

Lastly, in March 2023, USFWS completed their spring mowing on the Refuge as a fire mitigation step (planned for twice per year).

Randy asked about USFWS's confidence level on the elk herd sample size. David Lucas said they were 95 to 98 percent confident on the representative nature of the herd. Randy asked when results from the study will come in. David said results came in late March. USFWS is reviewing the data and then they will share it with the public.

Shelley asked about the sampling depth for Rocky Mountain Greenway soil samples. David said samples were from surface soil. Shelley asked about the sampling methodology. David said all samples were individual, not composited. She then asked who is supplying water for and addressing wastewater from the multi-purpose building. David said the wastewater system will probably be septic, and fresh water will probably come from a purveyor to the east. Shelley asked about elk that will be culled (how many and when?). David said USFWS has not developed a management plan yet. They will assess elk samples first, then work with Colorado Parks & Wildlife to come up with plan (hunting, hazing, culling, etc.). He thinks culling will happen in the fall of 2023, so the over-population problem does not continue to grow.

Claire asked about what we know about mowing and the health of the tall-grass prairie. David said USFWS is finishing a review of the xeric tall-grass prairie. Mowing is not the preferred management method, but the roads being mowed are not the best habitats. Repetitive mowing will impact grasses over the long-term. David said burning is the best method for managing the grasslands. David Abelson mentioned that prescribed burns have been opposed due to political concerns. If there is a change in the politics, it is something the Board should discuss. Claire also asked about interpretive material being developed and consultation with tribes. David said USFWS is consulting with tribes for the exhibits.

Trea asked about having a fire truck out in the Refuge in the winter. David Lucas said the fire truck will be out there in April, but USFWS cannot have it at the Refuge in the winter because of lack of heating. USFWS is waiting on Xcel to install a transmission line.

Deven asked if we are taking soil samples outside the Refuge for comparison. David Lucas said no soil samples were being taken on non-Refuge lands for comparison, but there is sizeable historical data set for comparison. Deven asked if USFWS is auditing labs to ensure the samples are accurate. David said duplicate samples and spikes are used to calibrate lab equipment. He has high confidence in the lab being used for this round of sampling. Deven asked about mitigation measures being planned during construction. David said mitigation for construction of the multi-purpose building will be traditional dust abatement. Deven then asked what fencing will be placed in the Refuge so people do not migrate into areas they should not be. David said the COU has a fence and signage around it already, and there are no plans to change that at this time.

Jeanette asked about the possibility of using solar energy rather than an Xcel transmission line at the Refuge. David replied that NREL offered USFWS a free powerline for the Refuge, which USFWS accepted.

Rich Kondo asked what radionuclides are monitored and what radionuclides aggregate in elk tissue. David replied that samples are being assessed for americium, two plutonium isotopes, and three uranium isotopes. Samples were taken from elk liver, muscle, and kidney tissue.

Board Roundtable Discussion on Air Quality Monitoring to Evaluate Wildfire Impacts

David Abelson summarized recent discussions surrounding air quality monitoring at Rocky Flats, focusing on a November 2022 meeting DOE hosted with local jurisdictions and other community representatives. He explained accepted facts are (a) Rocky Flats has burned and will burn in the future; (b) there is residual contamination; (c) following a fire people will ask questions; and (d) there will be a smoke plume that will drift over a community/communities. Board members reflected in the past that people feel better with information and knowledge, and we will battle misinformation. DOE reflected that there was no data or regulatory driver for reopening the decision to discontinue air monitoring. Board members mentioned climate change, being in a post-fact world, and public assurance. DOE offered that it could provide assistance for communities to establish an air monitoring system. DOE, EPA, and CDPHE were unwilling to implement agency-led monitoring program because there is no technical or regulatory basis for that action.

Board members then discussed options for resuming air quality monitoring. Agency representatives discussed the need for a robust and clear sampling design to define the objectives of the sampling (how things have changed, possible exposure to downwind receptors, etc.), access to the Refuge and the COU, and past results/reasons for discontinuing monitoring. Some of the governments will meet to

figure out next steps, and will report back to the Stewardship Council, as needed. Those meetings are not Stewardship Council meetings.

Big Picture/Additional Questions/Issue Identification: David went through the Big Picture.

June 5

- 2022 audit results
- DOE quarterly update

September 18

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

October 30

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

Deven asked about the process for discussing staff contracts. Deven would like to discuss the contracts in person (in June), if possible.

Board meeting adjourned at 10:53 AM.

Rocky Flats Stewardship Council
Check Detail 2023

March 12 through May 5, 2023

Type	Num	Date	Name	Account	Paid Amount	Original Amount
Check		03/23/2023		CASH-Wells Fargo-Operating		-3.50
				Admin Services-Misc Services	-3.50	3.50
TOTAL					-3.50	3.50
Bill Pmt -Check	2189	04/03/2023	Crescent Strategies, LLC	CASH-Wells Fargo-Operating		-10,659.26
Bill	3/31/23 Billing	03/31/2023		Personnel - Contract	-8,525.00	8,525.00
				TRAVEL-Local	-19.65	19.65
				Postage	-17.99	17.99
				Telecommunications	-96.62	96.62
				Website	-2,000.00	2,000.00
TOTAL					-10,659.26	10,659.26
Bill Pmt -Check	2190	04/03/2023	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-325.50
Bill	23-17	03/31/2023		Accounting Fees	-325.50	325.50
TOTAL					-325.50	325.50
Bill Pmt -Check	2191	04/03/2023	Seter & Vander Wall, P.C.	CASH-Wells Fargo-Operating		-2,480.50
Bill	85401	03/31/2023		Attorney Fees	-2,480.50	2,480.50
TOTAL					-2,480.50	2,480.50
Check	2192	04/03/2023	Century Link	CASH-Wells Fargo-Operating		-30.18
				Telecommunications	-30.18	30.18
TOTAL					-30.18	30.18
Bill Pmt -Check	2193	05/05/2023	The Hartford	CASH-Wells Fargo-Operating		-510.00
Bill	11599945 23-24	05/11/2023		Insurance	-510.00	510.00
TOTAL					-510.00	510.00
Bill Pmt -Check	2194	05/05/2023	Seter & Vander Wall, P.C.	CASH-Wells Fargo-Operating		-877.53
Bill	85546	04/01/2023		Attorney Fees	-877.53	877.53
TOTAL					-877.53	877.53
Bill Pmt -Check	2195	05/05/2023	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-294.00
Bill	23-23	04/30/2023		Accounting Fees	-294.00	294.00
TOTAL					-294.00	294.00
Bill Pmt -Check	2196	05/05/2023	Fiscal Focus Partners, LLC	CASH-Wells Fargo-Operating		-5,000.00
Bill	23009	04/18/2023		Annual Audit	-5,000.00	5,000.00
TOTAL					-5,000.00	5,000.00
Bill Pmt -Check	2197	05/05/2023	Crescent Strategies, LLC	CASH-Wells Fargo-Operating		-8,872.71
Bill	4/30/23 Billing	04/30/2023		Personnel - Contract	-8,525.00	8,525.00
				TRAVEL-Local	-13.10	13.10
				Postage	-17.99	17.99
				Telecommunications	-96.62	96.62
				Meeting Expense	-220.00	220.00
TOTAL					-8,872.71	8,872.71
Check	2198	05/05/2023	Century Link	CASH-Wells Fargo-Operating		-30.62
				Telecommunications	-30.62	30.62
TOTAL					-30.62	30.62

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Kim Griffiths

MEMORANDUM

TO: Board
FROM: David Abelson
SUBJECT: 2021 Stewardship Council Financial Audit
DATE: May 19, 2023

Attached for your review is Fiscal Focus Partners' draft 2022 financial audit of the Rocky Flats Stewardship Council. The auditors issued a clean audit. The Stewardship Council will formally accept the audit at the meeting.

The Stewardship Council is not required by state law or the DOE grant to secure an audit. However, an independent audit is an important check that confirms the Board and staff manage the finances in accordance with applicable laws and regulations.

Action Item: Approve motion accepting Stewardship Council's 2022 audit

Rocky Flats Stewardship Council
FINANCIAL STATEMENTS
With Independent Auditor's Report
December 31, 2022

Draft - Subject to Revision - 3/14/23

Rocky Flats Stewardship Council

BASIC FINANCIAL STATEMENTS

December 31, 2022

Independent auditor’s report..... I

Basic financial statements:

Government-wide financial statements:

 Statement of net position..... 1

 Statement of activities 2

Fund financial statements:

 Balance sheet – governmental fund 3

 Statement of revenues, expenditures, and changes in fund balance –
 governmental fund..... 4

 Statement of revenues, expenditures, and changes in fund balance –
 budget and actual – general fund 5

Notes to financial statements 6

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors
Rocky Flats Stewardship Council
Boulder, Colorado

Opinions

We have audited the financial statements of the governmental activities and each major fund of Rocky Flats Stewardship Council (the Council), as of and for the year ended December 31, 2022, and the related notes to the financial statements, which collectively comprise the Council's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities and each major fund of the Council as of December 31, 2022, and the respective changes in financial position thereof, and the respective budgetary comparison information for the general fund for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Council, and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Council's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we

- exercise professional judgment and maintain professional skepticism throughout the audit.
- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Council's internal control. Accordingly, no such opinion is expressed.
- evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Council's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Management has omitted management's discussion and analysis that accounting principles generally accepted in the United States of America require to be presented to supplement the basic financial statements. Such missing information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriated operational, economic, or historical context. Our opinions on the basic financial statements are not affected by this missing information.

Greenwood Village, Colorado
March xx, 2023

ROCKY FLATS STEWARDSHIP COUNCIL
STATEMENT OF NET POSITION
December 31, 2022

	Governmental Activities
ASSETS	
Cash and cash equivalents	\$ 201,070
Grant funds receivable	13,613
Total assets	214,683
LIABILITIES	
Accounts payable	11,986
Total liabilities	11,986
NET POSITION	
Unrestricted	202,697
Total net position	\$ 202,697

The accompanying Notes to the Financial Statements are an integral part of these statements.

ROCKY FLATS STEWARDSHIP COUNCIL
STATEMENT OF ACTIVITIES
For the Year Ended December 31, 2022

<u>Functions/Programs</u>	Program Revenue			<u>Net (Expense) Revenue and Changes in Net Position</u>	
<u>Expenses</u>	<u>Charges for Services</u>	<u>Operating Grants and Contributions</u>	<u>Capital Grants and Contributions</u>	<u>Governmental Activities</u>	
Primary government	\$ 135,660	\$ -	\$ 135,234	\$ -	\$ (426)
Total primary government	\$ 135,660	\$ -	\$ 135,234	\$ -	(426)
General revenues:					
Interest income					36
Total general revenues					36
Change in net position					(390)
Net position - beginning					203,087
Net position - ending					\$ 202,697

The accompanying Notes to the Financial Statements are an integral part of these statements.

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Draft - Subject to Revision - 3/14/23

ROCKY FLATS STEWARDSHIP COUNCIL

**BALANCE SHEET
GOVERNMENTAL FUND**

December 31, 2022

	General Fund	Total Governmental Funds
ASSETS		
Cash and cash equivalents	\$ 201,070	\$ 201,070
Grant funds receivable	13,613	13,613
Total assets	214,683	214,683
 LIABILITIES AND FUND BALANCES		
LIABILITIES		
Accounts payable	11,986	11,986
Total liabilities	11,986	11,986
 FUND BALANCES		
Unassigned:		
General government	202,697	202,697
Total fund balances	202,697	202,697
Total liabilities and fund balances	\$ 214,683	
Net position of governmental activities		\$ 202,697

The accompanying Notes to the Financial Statements are an integral part of these statements.

ROCKY FLATS STEWARDSHIP COUNCIL
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
GOVERNMENTAL FUND

For the Year Ended December 31, 2022

	Total General Fund and Governmental Funds
REVENUES	
Grants	\$ 135,234
Interest income	36
Total revenues	135,270
 EXPENDITURES	
General government	
Annual audit	4,250
Accounting fees	4,434
Attorney fees	12,328
Administrative service	359
Insurance	3,268
Meeting expense	600
Personnel - contract	102,750
Postage	614
Subscriptions/membership dues	2,014
Supplies	30
Telecommunications	1,525
Travel - local	450
Travel - out of state	2,938
Website	100
Total expenditures	135,660
Net change in fund balances	(390)
Fund balances - beginning	203,087
Fund balances - ending	\$ 202,697
 Change in net position- Statement of Activities	 \$ (390)

The accompanying Notes to the Financial Statements are an integral part of these statements.

ROCKY FLATS STEWARDSHIP COUNCIL

**STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE - BUDGET AND ACTUAL -
GENERAL FUND**

For the Year Ended December 31, 2022

	Original and Final Budget	Actual	Variance with Final Budget Favorable (Unfavorable)
Revenues			
U.S. Department of Energy - Office of Legacy Management	\$ 150,800	\$ 135,234	\$ (15,566)
Contributions from local governments	10,000	-	(10,000)
Carry over - Rocky Flats Coalition of Local Governments	7,100	-	(7,100)
Interest income	-	36	36
Total revenues	167,900	135,270	(32,630)
Expenditures			
General government			
Personnel	102,300	102,750	(450)
Travel	7,300	3,388	3,912
Equipment	500	-	500
Supplies	1,200	30	1,170
Contractual	39,500	21,371	18,129
Meeting expense	2,500	600	1,900
Insurance	4,000	3,268	732
Postage	1,500	614	886
Printing	2,000	-	2,000
Subscriptions/membership dues	2,400	2,014	386
Telecommunications	2,700	1,525	1,175
Website	2,000	100	1,900
Total expenditures	167,900	135,660	32,240
Net change in fund balance	-	(390)	(390)
Fund balance - beginning of year	203,087	203,087	-
Fund balance - end of year	\$ 203,087	\$ 202,697	\$ (390)

The accompanying Notes to the Financial Statements are an integral part of these statements.

Rocky Flats Stewardship Council
NOTES TO FINANCIAL STATEMENTS

December 31, 2022

Note 1 – Summary of significant accounting policies

Reporting entity

The Rocky Flats Stewardship Council (Council) was organized on February 13, 2006 through an Intergovernmental Agreement (IGA) by and among the following governments: the City and County of Broomfield, the Counties of Jefferson and Boulder, the Cities of Arvada, Boulder, Golden, Northglenn, Thornton, and Westminster, and the Town of Superior. All jurisdictions are located adjacent to or near the former U.S. Department of Energy's Rocky Flats weapons plant. All jurisdictions are permanent parties, with continuous representation on the Board of Directors. The Council was organized as the successor organization to the Rocky Flats Coalition of Local Governments (Coalition), also formed through an IGA, which concluded its existence shortly following the organization of the Council, having fulfilled its purpose in connection with the closure of the Rocky Flats Site.

The Council was formed for the purpose of overseeing all post-closure Rocky Flats activities. The legislative and administrative power of the Council is vested with a Board of Directors not to exceed 14 voting members. Members are community stakeholder representatives, selected by the remaining Board of Directors upon application, and have a right to appoint a Director to the Board.

Under the terms of the IGA, the status of the Council is to be reviewed periodically by the local governments which are parties to the agreement to determine whether the Council will continue in existence. Also under the terms of the IGA, the Council is established as an "enterprise", as defined by Article X, Section 20 of the Colorado constitution, commonly referred to as the Taxpayer's Bill of Rights, or Tabor (Note 7).

The Council has no employees and all operations and administrative functions are contracted.

The Council follows the Governmental Accounting Standards Board (GASB) accounting pronouncements which provide guidance for determining which governmental activities, organizations and functions should be included within the financial reporting entity. GASB pronouncements set forth the financial accountability of a governmental organization's elected governing body as the basic criterion for including a possible component governmental organization in a primary government's legal entity. Financial accountability includes, but is not limited to, appointment of a voting majority of the organization's governing body, ability to impose its will on the organization, a potential for the organization to provide specific financial benefits or burdens and fiscal dependency.

As of December 31, 2022, no component unit has been identified as reportable to the Council, nor is the Council a component unit of any other primary governmental entity.

Rocky Flats Stewardship Council

NOTES TO FINANCIAL STATEMENTS

(continued)

December 31, 2022

Government-wide and fund financial statements

The statement of net position reports all financial and capital resources of the Council. The difference between the assets and liabilities of the Council is reported as net position.

The statement of activities demonstrates the degree to which the direct and indirect expenses of a given function or segment are offset by program revenues. Direct expenses are those that are clearly identifiable with a specific function or segment. Program revenues include 1) charges to customers or applicants who purchase, use, or directly benefit from goods, services or privileges provided by a given function or segment, and 2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular function or segment. Taxes and other items not properly included among program revenues are reported instead as general revenues.

Separate financial statements are provided for governmental funds. Major individual governmental funds are reported as separate columns in the fund financial statements.

Measurement focus, basis of accounting and financial statement presentation

The government-wide financial statements are reported using the *economic resources measurement focus* and the *accrual basis of accounting*. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Expenditures for property and equipment are shown as increases in assets.

Governmental fund financial statements are reported using the *current financial resources measurement focus* and the *modified accrual basis of accounting*. Revenues are recognized as soon as they are both measurable and available. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, the government considers revenues to be available if they are collected within 60 days of the end of the current fiscal period. Expenditures generally are recorded when a liability is incurred, as under accrual accounting.

Eligible grant receipts and interest associated with the current fiscal period are all considered to be susceptible to accrual and so have been recognized as revenues of the current fiscal period. Other revenue items are considered to be measurable and available only when the Council receives cash.

The government reports the following major governmental fund:

The general fund is the Council's primary operating fund. It accounts for all financial resources of the general government.

When both restricted and unrestricted resources are available for use, it is the Council's policy to use restricted resources first, then unrestricted resources as they are needed.

Rocky Flats Stewardship Council

**NOTES TO FINANCIAL STATEMENTS
(continued)
December 31, 2022**

Use of estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires Council management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenditures during the reporting period. Actual results could differ from those estimates.

Cash and cash equivalents

The Council's cash and cash equivalents are considered to be cash on hand, demand deposits and short-term investments with maturities of three months or less.

Capital assets

Capital assets, which include furniture and equipment, are reported in the government-wide financial statements. Capital assets are defined by the Council as assets with an initial, individual cost of more than \$250. Such assets are recorded at historical cost if purchased or constructed. Donated capital assets are recorded at acquisition value at the date of donation.

The cost of normal maintenance and repairs that do not add to the value of the asset or materially extend the life of the asset are not capitalized. Improvements are capitalized and depreciated over the remaining useful lives of the related fixed assets, as applicable. Depreciation expense is computed using the straight-line method for all assets, based on the estimated useful lives of the assets, estimated at 3 years.

Fund equity

Fund balance for governmental funds should be reported in classifications that comprise a hierarchy based on the extent to which the government is bound to honor constraints on the specific purposes for which spending can occur. Governmental funds report up to five classifications of fund balance: non-spendable, restricted, committed, assigned, and unassigned. Because circumstances differ among governments, not every government or every governmental fund will present all of these components. The following classifications describe the relative strength of spending constraints:

Non-spendable fund balance – The portion of fund balance that cannot be spent because it is either not in spendable form (such as inventory) or is legally or contractually required to be maintained intact.

Restricted fund balance – The portion of fund balance constrained to being used for a specific purpose by external parties (such as grantors or bondholders), constitutional provisions or enabling legislation.

Rocky Flats Stewardship Council

**NOTES TO FINANCIAL STATEMENTS
(continued)
December 31, 2022**

Committed fund balance – The portion of fund balance constrained for specific purposes according to limitations imposed by the Council’s highest level of decision making authority, the Board of Directors, prior to the end of the current fiscal year. The constraint may be removed or changed only through formal action of the Board of Directors.

Assigned fund balance – The portion of fund balance that is constrained by the government’s intent to be used for specific purposes, but is neither restricted nor committed. Intent is expressed by the Board of Directors to be used for a specific purpose. Constraints imposed on the use of assigned amounts are more easily removed or modified than those imposed on amounts that are classified as committed.

Unassigned fund balance – The residual portion of fund balance that does not meet any of the above criteria.

If more than one classification of fund balance is available for use when an expenditure is incurred, it is the Council’s policy to use the most restrictive classification first.

As of December 31, 2022, the entire fund balance of \$202,674 is considered by the Council to be unassigned.

Budgetary information

Annual budgets are adopted on a basis consistent with generally accepted accounting principles for all governmental funds. In accordance with the Colorado State Budget Law, the Council’s Board of Directors follows these procedures in establishing the budgetary data reflected in the financial statements:

1. On or before October 15, the Board prepares a proposed operating budget for each fund, based on their respective basis of accounting, for the fiscal year commencing the following January 1. The operating budget includes proposed expenditures and the means of financing them.
2. After considering comments received, the Board approves the budget. The budget is formally adopted by resolution, published, and filed with the state.
3. Before December 31, the expenditures are appropriated for the ensuing year. The appropriation is at the total fund level and lapses at year-end.

Note 2 – Cash and Investments

Cash and investments as of December 31, 2022 are classified in the accompanying statements as follows:

Statement of net position:	
Cash and cash equivalents	<u>\$ 201,070</u>

Rocky Flats Stewardship Council

**NOTES TO FINANCIAL STATEMENTS
(continued)
December 31, 2022**

Deposits with Financial Institutions

Colorado statutes require that the Council use eligible public depositories as defined by the Colorado Public Deposit Protection Act (the Act). Under the Act, amounts on deposit in excess of federal insurance levels must be collateralized. The eligible collateral is determined by the Act and allows the institution to create a single collateral pool for all public funds. The pool is to be maintained by another institution or held in trust for all the uninsured public deposits as a group. The market value of the collateral must be at least equal to 102% of the aggregate uninsured deposits.

The State Regulatory Commissions for banks and financial services are required by Statute to monitor the naming of eligible depositories and reporting of the uninsured deposits and assets maintained in the collateral pools.

At December 31, 2022, all of the Council's deposits were covered by insurance provided by the federal government. The Council was not subject to custodial credit risk at December 31, 2022.

The Council's cash deposits at December 31, 2022 are as follows:

	<u>Carrying Balance</u>	<u>Bank Balance</u>
Deposits with financial institutions	\$ 201,070	\$ 201,101
Total cash and cash equivalents	<u>\$ 201,070</u>	<u>\$ 201,101</u>

Investments

The Council has not adopted a formal investment policy, however, the Council follows state statutes regarding investments. Colorado Revised Statutes limit investment maturities to five years or less unless formally approved by the Board of Directors. Such actions are generally associated with a debt service reserve or sinking fund requirements.

Colorado statutes specify investment instruments meeting defined rating and risk criteria in which local governments may invest which include:

- Obligations of the United States, certain U.S. government agencies securities and securities of the World Bank
- General obligation and revenue bonds of U.S. local government entities
- Bankers' acceptance of certain banks
- Commercial paper
- Local government investment pools
- Guaranteed investment contracts
- Written repurchase agreements and certain reverse repurchase agreements collateralized by certain authorized securities
- Certain money market funds

As of December 31, 2022, the Council had no investments.

Rocky Flats Stewardship Council

**NOTES TO FINANCIAL STATEMENTS
(continued)
December 31, 2022**

Note 3 – Capital Assets

An analysis of the changes in capital assets for the year ended December 31, 2022 follows:

	<u>Balance 12/31/21</u>	<u>Additions</u>	<u>Deletions</u>	<u>Balance 12/31/2022</u>
Capital assets being depreciated:				
Furniture and equipment	\$ 442	\$ –	\$ –	\$ 442
Total capital assets	442	–	–	442
Accumulated depreciation	(442)	–	–	(442)
Capital assets, net	<u>\$ –</u>	<u>\$ –</u>	<u>\$ –</u>	<u>\$ –</u>

Note 4 – Net position

The Council has net position consisting of three components – net investment in capital assets, restricted, and unrestricted.

Net investment in capital assets consists of capital assets, net of accumulated depreciation. As of December 31, 2022, the Council had no net investment in capital assets.

Restricted assets include net position that are restricted for use either externally imposed by creditors, grantors, contributors, or laws and regulations of other governments or imposed by law through constitutional provisions or enabling legislation. As of December 31, 2022, the Council had no restricted net position.

As of December 31, 2022, the Council had unrestricted net position of \$202,697.

Note 5 - Risk management

The Council is exposed to various risks of loss related to torts, thefts of, damage to, or destruction of assets, errors or omissions, injuries to personnel, or natural disasters. The Council maintains commercial insurance for all risks of loss. Settled claims have not exceeded the commercial insurance coverage limits in any of the past three years.

Note 6 - Concentration

The Council receives the majority of its funding through a grant from the U.S. Department of Energy (DOE). The DOE grant has a current expiration date of February 28, 2027.

Rocky Flats Stewardship Council

NOTES TO FINANCIAL STATEMENTS

(continued)

December 31, 2022

Note 7 - Tax, spending and debt limitation

Article X, Section 20 of the Colorado Constitution, referred to as the Taxpayer's Bill of Rights (TABOR), contains tax, spending, revenue, and debt limitations which apply to the State of Colorado and all local governments.

Spending and revenue limits are determined based on the prior year's Fiscal Year Spending adjusted for allowable increases based upon inflation and local growth. Fiscal Year Spending is generally defined as expenditures plus reserve increases with certain exceptions. Revenue in excess of the Fiscal Year Spending limit must be refunded unless the voters approve retention of such revenue.

TABOR requires local governments to establish Emergency Reserves. These reserves must be at least 3% of Fiscal Year Spending (excluding bonded debt service). Local governments are not allowed to use the Emergency Reserves to compensate for economic conditions, revenue shortfalls, or salary or benefit increases

As an enterprise (Note 1), management believes that the Council is exempt from the provisions of TABOR. However, TABOR is complex and subject to interpretation. Ultimate implementation may depend upon litigation and legislative guidance.

DOE Annual Report Briefing

- Cover memo
- Excerpts of the annual report

ROCKY FLATS STEWARDSHIP COUNCIL

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www.rockyflatscc.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

MEMORANDUM

TO: Stewardship Council Board of Directors
FROM: Melissa Weakley
SUBJECT: DOE's Quarterly Report Briefing
DATE: May 19, 2023

DOE will present an overview its *2022 Annual Report of Site Surveillance and Maintenance Activities*, which can be accessed here:

https://lmpublicsearch.lm.doe.gov/lmsites/43570_rfs_cy22_annual_final.pdf. Annual Report highlights are included below.

- **Site-Wide/Central Operable Unit (COU):**
 - The annual Site-wide inspection was conducted on March 31. No evidence of violations of the institutional or physical controls was observed. No adverse biological conditions (e.g., unexpected mortalities) were observed. A depression was found on top of the pediment south of former Building 906 (B906) (east of former B881). It was determined to be a former manhole. The depression was filled with native soil.
 - The former building areas (B371, B771, B881, and B991) were inspected each quarter and after major precipitation events. No significant changes (e.g., excess erosion or subsidence) noted.
- **Present Landfill (PLF):** The PLF was inspected quarterly and after significant precipitation events. No significant issues were observed.
- **Original Landfill (OLF):** The OLF was inspected monthly and after significant precipitation events. No significant issues were observed.
- **North Walnut Creek Slump (NWCS):** The hillside east of the Solar Ponds Plume Treatment System is the site of a slump (the NWCS) that is monitored as a best management practice.
 - Slump movement continued through 2022. The hillside has moved from 4 to 6 feet along the scarp since the hillside was regraded in 2017.
 - Minor regrading was performed to maintain positive drainage and install additional erosion controls.
 - Groundwater elevations continued to be measured via piezometers installed at the NWCS.
- **Groundwater Collection and Treatment Systems:**
 - The East Trenches Plume Treatment System effluent discharge gallery was replaced in February.

- A design subcontractor was selected to conduct testing and design of a full-scale uranium treatment component at the Solar Ponds Plume Treatment System (SPPTS). Coprecipitation was selected as the optimal treatment technology. Pilot testing began in the fall. Design of the full-scale component is anticipated to be completed in 2024.
- Uranium samples from several of the SPPTS piezometers with the highest uranium concentrations were analyzed to determine natural versus anthropogenic uranium content. All samples were determined to contain predominantly natural uranium.
- **Groundwater Monitoring** (see attached Monitoring Location figure):
 - Although the amount of precipitation measured onsite was approximately equivalent to the average, groundwater recharge was poor, and some locations were dry for part or all of the year.
 - There were no reportable conditions at any Area of Concern (AOC) wells. The trichloroethene (TCE) result from AOC well 10304, however, exceeded the RFLMA standard in the 4th quarter (2.7 µg/L, compared to the standard of 2.5 µg/L). Elevated TCE in this well has occurred in the past. If the 2nd quarter 2023 sample from AOC well 10304 (located in the Woman Creek drainage downgradient of the 903 Pad) has a TCE concentration that exceeds the RFLMA standard, a reportable condition will be triggered and consultation among the RFLMA Parties will be conducted.
 - Groundwater monitoring results can be accessed in the link above, from pages B-370 to B-399.
- **Surface Water Monitoring:**
 - A total of 74 samples were collected from routine sampling locations (see attached Monitoring Location figure).
 - Analyte concentrations at all Point of Compliance (POC) monitoring locations (WALPOC on Walnut Creek and WOMPOC on Woman Creek) were below reportable conditions in 2022.
 - Two reportable conditions occurred at Point of Evaluation (POE) monitoring locations (see attached Table 1). Both reportable conditions had ended as of December 31, 2022.
 - A reportable condition occurred at POE GS10 for the 12-month rolling average uranium concentration (discussed at the February 2023 Board meeting).
 - A reportable condition occurred at POE SW027 for the 12-month rolling average plutonium concentration (discussed at the February 2023 Board meeting).
 - All other POE analyte concentrations remained below reportable levels throughout 2022.
 - Surface water monitoring results can be accessed in the link above, from pages B-370 to B-399.
- **Ecological Monitoring:** 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-strand
 - Mulch.
 - No active black-tailed prairie dog towns were observed within the Site boundaries.

Attachments

2022 Annual Report Cover Page, Table of Contents, and Abbreviations

Overview of 2022 Contact Records (Table 1)

Rocky Flats Surface Water and Groundwater Monitoring Locations

**Annual Report of Site
Surveillance and Maintenance
Activities at the
Rocky Flats Site, Colorado**

Calendar Year 2022

Overview

April 2023



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

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Appendixes

(see end of report)

Appendix A	Hydrologic Data
Appendix B	Water Quality Data
Appendix C	Landfill Inspection Forms, Fourth Quarter CY 2022
Appendix D	Data Evaluation Flowcharts Reproduced from the RFLMA
Appendix E	2022 RFLMA Contact Records and Written Correspondence
Appendix F	Uranium Isotopic Compositions and Concentrations of Rocky Flats Water Samples Submitted to Lawrence Berkeley National Laboratory

Abbreviations

AOC	Area of Concern
BMP	best management practice
CAD/ROD	Corrective Action Decision/Record of Decision
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
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
FR	<i>Federal Register</i>
ft	feet
IC	institutional control
LM	Office of Legacy Management
M&M Plan	Monitoring and Maintenance Plan
NOIPD	Notice of Intent for Partial Deletion
NPL	National Priorities List
NWCS	North Walnut Creek Slump
OLF	Original Landfill
OU	operable unit
PLF	Present Landfill
POC	Point of Compliance
POE	Point of Evaluation
POU	Peripheral Operable Unit
RFCA	Rocky Flats Cleanup Agreement
RFLMA	<i>Rocky Flats Legacy Management Agreement</i>
SPPTS	Solar Ponds Plume Treatment System

Executive Summary

The U.S. Department of Energy (DOE) Office of Legacy Management is responsible for implementing the final response action selected in the *Corrective Action Decision/Record of Decision for Rocky Flats Plant (USDOE) Peripheral Operable Unit and Central Operable Unit*, known as the Corrective Action Decision/Record of Decision (CAD/ROD), issued September 29, 2006, for the Rocky Flats Site, Colorado. The CAD/ROD was amended in 2011. In addition to implementing the remedy, DOE is also responsible for ensuring that the response action selected and approved in the final CAD/ROD for the Central Operable Unit (COU), referred to as the Site, remains protective of human health and the environment.

Under the CAD/ROD, two operable units were established within the boundaries of the former Rocky Flats property: the Peripheral Operable Unit (POU) and the COU. The COU consolidates all areas that require additional remedial or corrective actions while also considering the practicalities of future land management of this unit. The POU, currently the Rocky Flats National Wildlife Refuge managed by the U.S. Fish and Wildlife Service, includes the remaining, generally unimpacted areas and surrounds the COU. The remedy selected in the final CAD/ROD for the POU is no action. The CAD/ROD determined that conditions in the POU were suitable for unrestricted use. The U.S. Environmental Protection Agency (EPA) subsequently published a Notice of Partial Deletion from the National Priorities List for the POU on May 25, 2007, and the property was transferred from DOE to the U.S. Department of the Interior in July 2007 to establish the Rocky Flats National Wildlife Refuge. The remedy selected for the COU is institutional controls (ICs), physical controls, environmental monitoring, and continued monitoring and maintenance of accelerated actions completed at the Present Landfill (PLF), Original Landfill (OLF), and groundwater collection and treatment systems.

DOE, EPA, and the Colorado Department of Public Health and Environment (CDPHE) agreed to implement the monitoring and maintenance requirements for the COU in the CAD/ROD as described in the *Rocky Flats Legacy Management Agreement (RFLMA)*, executed on March 14, 2007. Attachment 2 to the RFLMA, last revised in December 2018, defines the COU remedy surveillance and maintenance requirements as described in the CAD/ROD.

The last minor modification of the RFLMA updated water quality standards and practical quantitation limits and was posted on December 12, 2018. This modification was previously discussed in the 2018 Annual Report, “Overview” volume. Details regarding the modification can be found in Contact Record (CR) 2018-05, “Minor Modification of Rocky Flats Legacy Management Agreement (RFLMA) Attachment 2, ‘Legacy Management Requirements.’” Changes to the standards and practical quantitation limits in RFLMA Table 1 became effective on January 1, 2019, to synchronize with the RFLMA monitoring and reporting schedule.

Highlights of the surveillance and maintenance activities conducted at the Site during calendar year (CY) 2022 (January 1–December 31, 2022) are as follows:

- Effects of the coronavirus disease 2019 pandemic on the conduct of work in 2022 were minor. Restrictions were in place to protect personnel (e.g., by requiring masks be worn in certain situations and disinfecting shared surfaces), but these did not limit the ability to do the work necessary to maintain and operate the Rocky Flats Site as required by the RFLMA and supporting documents. All field activities necessary to perform required monitoring and maintenance were conducted safely and successfully.

- The annual verification that the Restrictive Notice (formerly the Environmental Covenant) remains in the Administrative Record and on file in Jefferson County records was conducted on April 4, 2022.
- The annual Site inspection was initiated on March 31, 2022, and completed on April 4, 2022. The majority of items encountered were debris or trash on the surface that were either picked up during the inspection or subsequently removed. No evidence of violations of institutional or physical controls was observed, and no adverse biological conditions were noted. A depression that was identified as a former manhole, approximately 3 feet (ft) wide and 1.7 ft deep, was found on top of the pediment south of former Building 906 (B906) (east of former B881); it was filled with native soil after the inspection. Minor depressions were noted along the northeast boundary of former B881, but these had been previously observed and are already being addressed.
- COU boundary fence signs were inspected quarterly during CY 2022. No significant issues were encountered. Signs were reinstalled as needed, usually after wires broke from disturbance by elk and deer.
- No evidence of adverse biological conditions (e.g., unexpected mortality or morbidity) was observed during CY 2022 monitoring and maintenance activities.
- Several former Building areas (B371, B771, B881, and B991) were inspected each quarter in 2022 as a best management practice (BMP). Weather-related inspections were combined with the second and third quarter inspections on June 2 and August 18, respectively, after precipitation events of 1 inch in a 24-hour period. No significant changes were identified in erosion, depressions, or subsidence, nor were other issues of concern noted in these former Building areas or areas associated with the Original Process Waste Lines, the New Process Waste Lines, the Ash Pits, or the East Trenches. Minor depressions along the northeast boundary of former B881 reported during the 2022 annual inspection were later confirmed to have been addressed.
- Roads, ditches, and rock crossings remained in good condition throughout CY 2022.
- Maintenance, repair, replacement, and monitoring of Site erosion control features continued throughout CY 2022.

Present Landfill

- The PLF was inspected quarterly during CY 2022. The August 18 quarterly inspection was combined with a weather-related inspection, and an additional weather-related inspection was performed on June 2. No significant issues were observed during these inspections. Accumulations of scale and biomass were observed in the north and south manhole outlet pipes of the Present Landfill Treatment System (PLFTS), which is a normal occurrence. These accumulations were removed using a mechanical pipe cleaner during each inspection.

Original Landfill

- The OLF was inspected monthly during CY 2022. The August 18 monthly inspection was combined with a weather-related inspection, and an additional weather-related inspection was performed on June 2. The OLF was also monitored weekly as a BMP. No significant issues were observed during these inspections.
- No slumping was observed at the OLF hillside during CY 2022. Maintenance was conducted throughout the year as needed.

North Walnut Creek Slump

- Measurement of groundwater elevations in piezometers at the North Walnut Creek Slump (NWCS) continued in 2022. The total vertical displacement along the NWCS scarp since the hillside was regraded in August 2017 is approximately 4 to 6 ft. Soils are also heaving along the toe of the slope as a result of this movement. A majority of the movement occurs annually from May to July. Based on monthly surveys, the average monthly creep (i.e., movement downhill) in previous years has been about 1.7 inches, but in a relatively drier 2022, it was approximately 0.2 inch per month. A swale and rock crossing installed in 2019 to direct surface runoff away from the NWCS continues to function, as do the inclinometers and piezometer installed in 2020. In April 2022, minor regrading was performed at the scarp face to maintain positive drainage and install additional erosion controls.

Groundwater Collection and Treatment Systems

- The groundwater collection and treatment systems continued to intercept groundwater and remove contaminant load before the groundwater reached the receiving surface water.
- The Mound Site Plume Collection System (MSPCS) effectively and efficiently transferred collected groundwater to the East Trenches Plume Treatment System (ETPTS) for treatment. The treatment component at the ETPTS, a solar-powered air stripper, treated the combined influent to meet all applicable RFLMA water quality standards throughout 2022.
- The ETPTS effluent discharge gallery was replaced in February 2022. Segments of the effluent piping were also replaced or repaired as necessary.
- The ETPTS air stripper underwent a technical inspection by a representative of the manufacturer and was determined to be in excellent operating condition.
- The Solar Ponds Plume Treatment System (SPPTS) continued to effectively treat nitrate via the nitrate treatment component (lagoon) initially constructed in 2016 and upgraded in 2018. Effluent nitrate concentrations met RFLMA water quality standards throughout the year. The lagoon also continued to reduce uranium concentrations.
- A design subcontractor was selected in 2022 to conduct bench- and pilot-scale testing to identify a suitable technology for uranium treatment and to design and oversee construction of a full-scale uranium treatment component. Bench testing was completed in 2022 and coprecipitation was selected as the optimal treatment technology. Pilot testing began in fall 2022 and is scheduled to be complete in spring 2023. Design of the full-scale component will follow, with construction scheduled to be completed in 2024.
- The solar/battery power facility at the SPPTS was replaced in 2022 with one resembling the facility at the ETPTS (i.e., panels attached to a conex container that contains the batteries and electrical components). The original solar and electrical components were donated, and the batteries were recycled. The capacity of the new facility was increased to address the estimated needs of the future uranium treatment component.
- Water-level data continued to be collected through 2022 from a line of piezometers installed in 2020 immediately west of the western end of the SPPTS groundwater collection trench. In addition, these piezometers were evaluated for groundwater availability via pump testing and found to be poor producers. Finally, uranium samples from several of the piezometers with the highest uranium concentrations were analyzed using high-resolution isotopic methods to determine natural versus anthropogenic uranium content. All were determined to contain predominantly natural uranium.

Water Monitoring

- Because 2022 was an even-numbered year, the 42 RFLMA wells classified as Evaluation wells were scheduled to be sampled. All other RFLMA wells were also scheduled to be sampled. Although the amount of precipitation measured onsite was approximately equivalent to the average, groundwater recharge was poor, and some locations were dry for part or all of the year. This decrease in groundwater availability was also reflected in sharp decreases in the volumes of water treated by the treatment systems.
- Groundwater quality at the Site in 2022 was largely consistent with previous postclosure years. There were no reportable conditions at any Area of Concern (AOC) wells. However, the trichloroethene result from AOC well 10304 in the fourth quarter of 2022 exceeded the corresponding RFLMA standard; if the second quarter 2023 sample from this well also has a concentration that exceeds that standard, a reportable condition will be triggered and consultation among the RFLMA Parties will be conducted in accordance with the RFLMA.
- Statistical calculations performed using analytical data from Resource Conservation and Recovery Act wells monitoring the OLF and PLF produced results that were nearly identical to those in prior years.
- The amount of precipitation measured in CY 2022 was slightly greater than average. According to measurements from 1993 through 2021, the average annual precipitation measured at Site gages was 12.1 inches; the total precipitation measured in 2022 was 12.9 inches. However, dry conditions persisted at a few wells and treatment system volumes were reduced. The timing of the precipitation may have contributed to the relatively poor groundwater recharge.
- During 2022, the surface water monitoring network at the Site fulfilled the targeted monitoring objectives required by the RFLMA. The routine RFLMA surface water network consisted of eight gaging stations and six surface water grab-only sampling locations. A total of 74 samples, composed of 1836 individual aliquots (“grabs”), were collected at the routine surface water locations.¹
- CY 2022 was a dry year with flows at the Points of Compliance (POCs) being significantly reduced. Flows at WALPOC and WOMPOC were 1% and 32% of the 2012–2021 average, respectively. All RFLMA POC analyte concentrations remained below reportable condition levels throughout CY 2022.
- A reportable condition at RFLMA Point of Evaluation (POE) GS10 for the 12-month rolling average uranium concentration started on August 31, 2022. Details for the consultation between DOE, CDPHE, and EPA can be found in CR 2022-03, “Reportable Condition for Uranium at Point of Evaluation (POE) GS10.” As of December 31, 2022, the 12-month rolling average concentration for uranium at GS10 had dropped below the 16.8 micrograms per liter standard, ending the reportable condition. Additional information is included in Section 4.2.1 of the Surface Water volume.
- A reportable condition at RFLMA POE SW027 for the 12-month rolling average plutonium concentration started on May 31, 2022. Details for the consultation between DOE, CDPHE, and EPA can be found in CR 2022-04, “Reportable condition for plutonium at Point of Evaluation (POE) SW027.” As of July 2022, no flow had occurred at SW027 for more than 12 months, and, therefore, there are no data to calculate 12-month rolling averages

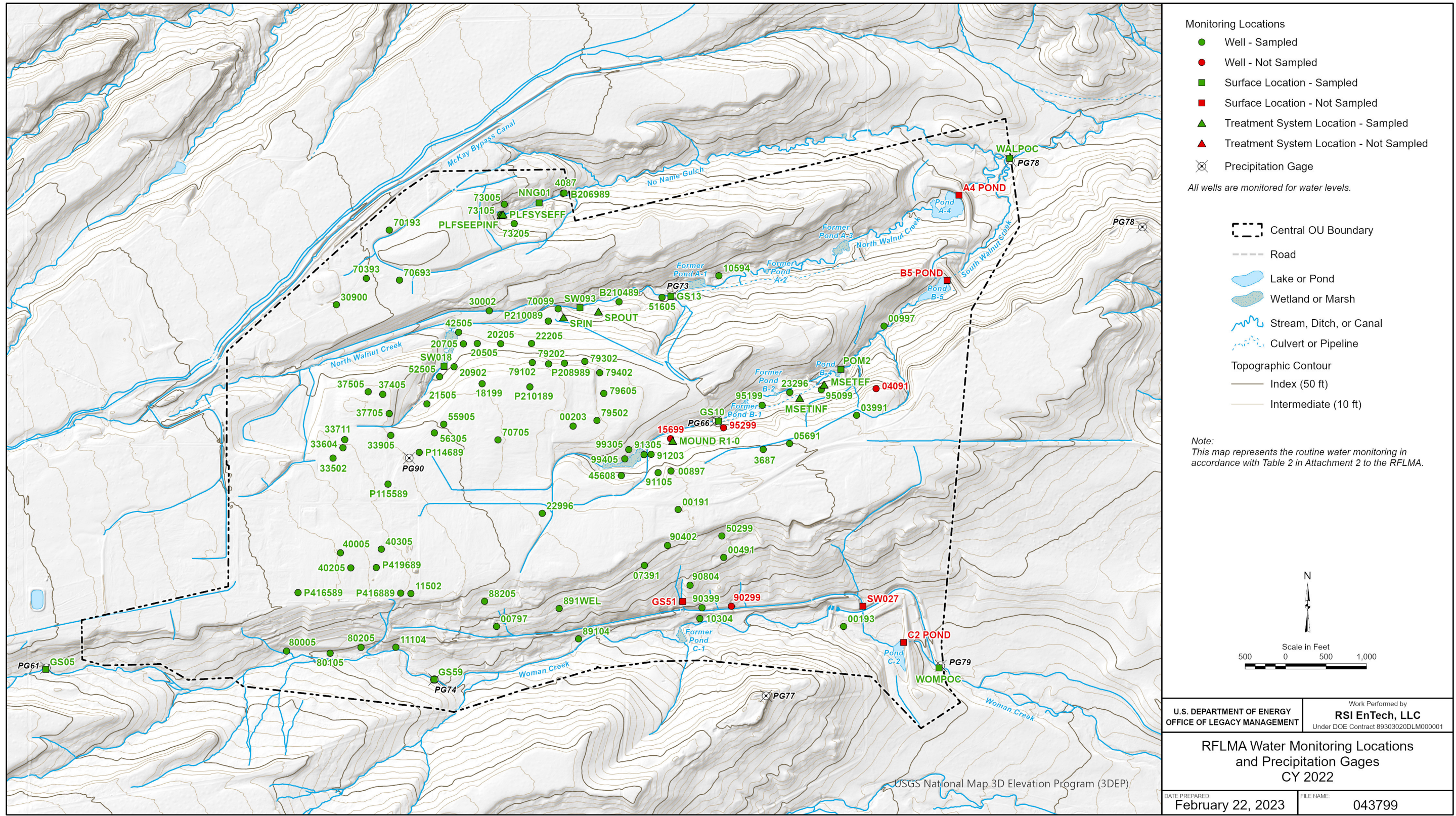
¹ Location GS51 is currently operated as a source evaluation location in support of Point of Evaluation (POE) SW027; GS51 sample counts are included here.

after June 30, 2022, ending the reportable condition. Additional information is included in Section 4.2.2 of the Surface Water volume.

- All other RFLMA POE analyte concentrations remained below reportable levels throughout CY 2022.

Ecological Monitoring

- In 2022, approximately 113 acres were sprayed with herbicides to control a variety of weed species in the COU. Of the 113 acres, 20 acres were broadcast sprayed, 91 acres were spot treated, and 2 acres were treated using the cut stump method.
- Revegetation activities were conducted at the ETPTS discharge gallery after maintenance activities were performed.
- Vegetation enhancement was conducted via interseeding of various native species and planting willow stakes.
- Several areas along the 903 hillside were seeded and treated with engineered wood-strand mulch. Pretreatment and posttreatment vegetation monitoring was conducted.
- Revegetation monitoring was conducted at several revegetation locations, and the successful establishment and sustainability of the plant communities at these locations were documented.
- The forb (wildflower) nurseries at the Site were evaluated, and the establishment of the native forbs and spread of plants beyond their original seeded boundaries at several locations were documented.
- Wetland monitoring confirmed the continued establishment of mitigation wetlands at several locations.
- Wildlife monitoring consisted of observing black-tailed prairie dogs (*Cynomys ludovicianus*), monitoring bird nesting boxes, documenting bird nesting activity, and noting elk (*Cervus canadensis*) activity and damage to resources at the Site. No active black-tailed prairie dog towns were observed within the Site boundaries; however, prairie dog activity was noted both northeast and southeast of the Site boundaries. Elk continue to damage both equipment and vegetation onsite.



Abbreviation: ft = feet

Figure 1. Rocky Flats Site Water Monitoring Locations and Precipitation Gages in 2022

Table 1. Actions Approved or Under Evaluation by the RFLMA Parties

Activity	Status as of March 1, 2023	CR No./ CP Date	Approval Date
NWCS Exploratory Test Pits	Actions Implemented. This project included excavating temporary exploratory test pits or slot trenches to locate two pipelines and any associated bedding material associated with a utility corridor to gather relevant information related to groundwater flow in the area.	2022-01	10/05/2022
Review of Boron Analytical Results at the PLFTS	Evaluation Ongoing. These actions regard the evaluation of boron in the effluent of the PLFTS and the path forward. DOE will conduct additional opportunistic sampling for 1 year starting with the fourth quarter of CY 2022, after which the RFLMA Parties will conduct a follow-up consultation to determine if additional actions are warranted at that time.	2022-02	02/02/2023
Reportable condition for uranium at POE GS10	Actions Implemented. These actions regard the reportable condition for the 12-month rolling average concentration for uranium at POE GS10, which exceeded the applicable RFLMA Table 1 standard of 16.8 micrograms per liter. DOE provided notification of this reportable condition to the agencies and the public via email on September 14, 2022. DOE will continue monitoring as required and maintain accelerated sample analysis for GS10.	2022-03	02/02/2023
Reportable condition for plutonium at POE SW027	Evaluation Ongoing. These actions regard the reportable condition for the 12-month rolling average concentration for plutonium at POE SW027, which exceeded the applicable RFLMA Table 1 standard of 0.15 picocurie per liter. DOE provided notification of this reportable condition to the agencies and the public via email on September 15, 2022. Monitoring continues at POE SW027 and at the downstream Point of Compliance WOMPOC. Supplemental monitoring also continues at tributary location GS51 (former 903 Pad area). Vegetation and erosion controls upstream of location GS51 and the areas identified within this contact record continue to be evaluated and maintained.	2022-04	02/02/2023
SPPTS discharge gallery replacement	Actions Ongoing. This maintenance activity will replace the SPPTS discharge gallery. The work includes removal and replacement of the old discharge gallery piping and gravel bed (washed gravel, geotextile, and riprap).	2022-05	02/28/2023
Minor modifications to the OLF inspection form	Actions Ongoing. Approval of this contact record allowed the use of a modified inspection form for OLF inspections. Use of the modified inspection form began after approval of the contact record. The OLF M&M Plan will be revised to adopt the modified form (anticipated in 2023) now that long-term hillside stabilization measures are in place at the landfill.	2018-02	02/20/2018

Table 1. Actions Approved or Under Evaluation by RFLMA Parties (continued)

Activity	Status as of March 1, 2023	CR No./ CP Date	Approval Date
NWCS 2017 maintenance	Actions Implemented. The project activities described in CR 2017-03, “North Walnut Creek Slump 2017 Maintenance and Soil Disturbance Review Plan,” were conducted from early spring 2017 through the end of 2017. The bulk of field activities for the geotechnical drilling portion of the project were completed in December 2017; however, three inclinometers were installed as a field change in early January 2018 as documented in the CDPHE-approved Field Change Concurrence 121917. This project is part of the larger NWCS slope stabilization effort scheduled for completion in 2023–2024.	2017-03	3/27/2017

Notes:

Actions Implemented means that the original activities (e.g., installation of wells, treatment system upgrades) authorized by the approved contact record have been completed and installation of erosion controls, reseeding, or both is in progress or completed. This designation does not necessarily signify that the larger project (i.e., follow-on actions or data evaluation) that may be authorized by different contact records has been completed. For example, if a contact record approved the installation of piezometers for collection of water-level measurements, the **Actions Implemented** designation simply means that the piezometers were installed, not that data collection or evaluation of data for the project is complete.

Actions Ongoing means that the original activities (e.g., installation of wells, treatment system upgrades) authorized by the approved contact record are in progress.

Evaluation Ongoing typically applies to contact records documenting reportable conditions. This designation means that the actions (e.g., additional sampling, mitigating actions) included in the plan and schedule for the evaluation of the approved contact record for the reportable condition are still in progress.

Abbreviations:

- CP = consultation posting
- ETPTS = East Trenches Plume Treatment System
- NWCS = North Walnut Creek Slump
- PLFTS = Present Landfill Treatment System
- POE = Point of Evaluation
- SPPTS = Solar Ponds Plume Treatment System

ACRONYMS

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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.

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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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Acronym or Term	Means	Definition
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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Acronym or Term	Means	Definition
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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Acronym or Term	Means	Definition
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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Acronym or Term	Means	Definition
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.