

ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670

(303) 412-1200

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

Special COVID-19 Announcement

Board of Directors Meeting

Monday, June 7, 2021, 8:30 – 10:30 AM

Due to COVID-19 social distancing requirements, the Rocky Flats Stewardship Council Board of Directors will meet via WebEx, with an internet/phone link provided by separate notice. The meeting is open to the public. Following the direction of local governments and other public entities throughout Colorado, public engagement is being modified for this virtual meeting.

To ensure the meeting participants are able to hear the information being presented and the members of the Board of Directors are able to engage in conversation, the following meeting-specific protocols have been developed:

1. Public comments during the 8:40 am (approximate time) public comment period are limited to three minutes. Participants must sign up in advance by emailing a request to speak to info@rockyflatssc.org. Requests must be made no later than 5:00 pm (MDT), Thursday, June 3, 2021. Persons submitting requests after this deadline will not be allowed to speak during the public comment period.
2. Public comments on the DOE Annual Report presentation are limited to written comments. Comments must be sent to info@rockyflatssc.org. All comments sent by 5:00 pm (MDT), Thursday, June 3, 2021, will be forwarded to the Board of Directors prior to the meeting. Comments sent during or following the meeting are also accepted.
3. All written comments, including those sent during or following the meeting, will be posted on the Stewardship Council website.
4. DOE has agreed to respond in writing to comments offered on that agency's report. Those responses will be posted on the Stewardship Council website.

Please direct any questions to dabelson@rockyflatssc.org

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Board of Directors Meeting – Agenda

Monday, June 7, 2021

8:30 – 10:30 AM

VIA WEBEX

Email info@rockyflatssc.org for WebEx details

- 8:30 AM Convene/Introductions/Agenda Review/Meeting Protocols
- 8:40 AM Public Comment: Comments are limited to the Consent Agenda and non-agenda items. See the “Special COVID-19 Announcement” for details.
- 8:50 AM Business Items (briefing memo attached)
1. Consent Agenda: Approve checks
 2. Executive Director’s Report
- 9:00 AM Receive Stewardship Council 2020 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 2020 Financial Audit**
- 9:15 AM Host DOE Annual Meeting (briefing memo attached)
- DOE will brief on site activities for calendar year 2020.
 - DOE has posted the report on its website and will provide a summary of its activities to the Stewardship Council.
 - Activities included surface water monitoring, groundwater monitoring, ecological monitoring, and site operations (inspections, maintenance, etc.).

Public Comment on DOE Briefing: As explained in the “Special COVID-19 Announcement”, all comments must be submitted in writing.

10:15 AM Board Roundtable – Big Picture/Additional Questions/Issue Identification

Adjourn

Upcoming Meetings:

September 13, 2021

November 1, 2021

Business Items

- List of Stewardship Council checks

2020 Financial Audit

- Cover memo
- Draft financial audit

10:36 AM
05/13/21

**Rocky Flats Stewardship Council
Check Detail 2021**

April 9 through May 12, 2021

Type	Num	Date	Name	Account	Paid Amount	Original Amount
Check	2090	05/12/2021	Century Link	CASH-Wells Fargo-Operating		-28.67
				Telecommunications	-28.67	28.67
TOTAL					-28.67	28.67
Bill Pmt -Check	2091	05/12/2021	Crescent Strategies, LLC	CASH-Wells Fargo-Operating		-7,895.91
Bill		04/30/2021		Personnel - Contract	-7,750.00	7,750.00
				TRAVEL-Local	-17.92	17.92
				Postage	-17.99	17.99
				Telecommunications	-110.00	110.00
TOTAL					-7,895.91	7,895.91
Bill Pmt -Check	2092	05/12/2021	Fiscal Focus Partners, LLC	CASH-Wells Fargo-Operating		-4,000.00
Bill	1452	04/15/2021		Annual Audit	-4,000.00	4,000.00
TOTAL					-4,000.00	4,000.00
Bill Pmt -Check	2093	05/12/2021	HUB International Colorado	CASH-Wells Fargo-Operating		-2,767.61
Bill	2021Quote	05/12/2021		Insurance	-2,767.61	2,767.61
TOTAL					-2,767.61	2,767.61
Bill Pmt -Check	2094	05/12/2021	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-710.00
Bill	21-28	04/30/2021		Accounting Fees	-710.00	710.00
TOTAL					-710.00	710.00
Check	2095	05/12/2021	VOID	CASH-Wells Fargo-Operating		0.00
TOTAL					0.00	0.00
Bill Pmt -Check	2096	05/12/2021	The Hartford	CASH-Wells Fargo-Operating		-500.00
Bill	34 SBA ...	05/11/2021		Insurance	-500.00	500.00
TOTAL					-500.00	500.00

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MEMORANDUM

TO: Board
FROM: David Abelson
SUBJECT: 2020 Stewardship Council Financial Audit
DATE: May 18, 2021

Attached for your review is Fiscal Focus Partners' draft 2020 financial audit of the Rocky Flats Stewardship Council. They did not find any material deficiencies and issued a clean audit.

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 both the Board and staff are managing the finances in accordance with applicable laws and regulations.

Eric Barnes will present the audit to the Board and will be prepared to answer your questions. The Stewardship Council will need to formally accept the audit at the meeting.

Action Item: Approve motion accepting Stewardship Council's 2020 audit

Rocky Flats Stewardship Council
FINANCIAL STATEMENTS
With Independent Auditor's Report
December 31, 2020

Rocky Flats Stewardship Council

BASIC FINANCIAL STATEMENTS

December 31, 2020

Independent auditor’s reportI

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

We have audited the accompanying 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, 2020, and the related notes to the financial statements, which collectively comprise the Council's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes 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.

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements 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 entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities and each major fund of Rocky Flats Stewardship Council, as of December 31, 2020, and the respective changes in financial position thereof, and the respective budgetary comparison for the General Fund for the year then ended in accordance with accounting principles generally accepted in the United States of America.

I

Fiscal Focus Partners, LLC

Other Matters

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 appropriate operational, economic, or historical context. Our opinion on the basic financial statements is not affected by this missing information.

Greenwood Village, Colorado
April XX, 2020

DRAFT

ROCKY FLATS STEWARDSHIP COUNCIL
STATEMENT OF NET POSITION
December 31, 2020

	Governmental Activities
ASSETS	
Cash and cash equivalents	\$ 209,472
Grant funds receivable	3,058
Total assets	212,530
LIABILITIES	
Accounts payable	9,466
Total liabilities	9,466
NET POSITION	
Unrestricted	203,064
Total net position	\$ 203,064

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, 2020

<u>Functions/Programs</u>	Program Revenue			Net (Expense) Revenue and Changes in Net Position	
<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	\$ 125,654	\$ -	\$ 134,665	\$ -	\$ 9,011
Total primary government	\$ 125,654	\$ -	\$ 134,665	\$ -	9,011
General revenues:					
Interest income					32
Total general revenues					32
Change in net position					9,043
Net position - beginning					194,021
Net position - ending					\$ 203,064

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

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Draft - Subject to Revision - 4/14/21

ROCKY FLATS STEWARDSHIP COUNCIL

BALANCE SHEET
GOVERNMENTAL FUND

December 31, 2020

	<u>General Fund</u>	<u>Total Governmental Funds</u>
ASSETS		
Cash and cash equivalents	\$ 209,472	\$ 209,472
Grant funds receivable	3,058	3,058
Total assets	<u>212,530</u>	<u>212,530</u>
 LIABILITIES AND FUND BALANCES		
LIABILITIES		
Accounts payable	9,466	9,466
Total liabilities	<u>9,466</u>	<u>9,466</u>
 FUND BALANCES		
Unassigned:		
General government	203,064	203,064
Total fund balances	<u>203,064</u>	<u>203,064</u>
 Total liabilities and fund balances	<u>\$ 212,530</u>	
 Net position of governmental activities		<u>\$ 203,064</u>

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, 2020

	Total General Fund and Governmental Funds
REVENUES	
Grants	\$ 125,165
Contributions from local governments and nonprofit organizations	9,500
Interest income	32
Total revenues	134,697
EXPENDITURES	
General government	
Annual audit	4,000
Accounting fees	4,480
Attorney fees	14,264
Administrative service	374
Insurance	3,474
Local government	288
Meeting expense	200
Personnel - contract	94,300
Postage	564
Subscriptions/membership dues	950
Supplies	50
Telecommunications	1,500
Travel - local	295
Travel - out of state	450
Website	465
Total expenditures	125,654
Net change in fund balances	9,043
Fund balances - beginning	194,021
Fund balances - ending	\$ 203,064
 Change in net position- Statement of Activities	 \$ 9,043

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, 2020

	Original and Final Budget	Actual	Variance with Final Budget Favorable (Unfavorable)
Revenues			
U.S. Department of Energy - Office of Legacy Management	\$ 139,000	\$ 125,165	\$ (13,835)
Contributions from local governments	10,000	9,500	(500)
Carry over - Rocky Flats Coalition of Local Governments	7,100	-	(7,100)
Interest income	-	32	32
Total revenues	156,100	134,697	(21,403)
Expenditures			
General government			
Personnel	93,000	94,300	(1,300)
Travel	7,300	745	6,555
Equipment	500	-	500
Supplies	1,200	250	950
Contractual	39,500	23,406	16,094
Insurance	4,000	3,474	526
Postage	1,500	564	936
Printing	2,000	-	2,000
Subscriptions/membership dues	2,400	950	1,450
Telecommunications	2,700	1,500	1,200
Website	2,000	465	1,535
Total expenditures	156,100	125,654	30,446
Net change in fund balance	-	9,043	9,043
Fund balance - beginning of year	177,989	194,021	16,032
Fund balance - end of year	\$ 177,989	\$ 203,064	\$ 25,075

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

Rocky Flats Stewardship Council
NOTES TO FINANCIAL STATEMENTS

December 31, 2020

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, 2020, 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, 2020

Government-wide and fund financial statements

The government-wide financial statements include the statement of net position and the statement of activities. These financial statements include all of the activities of the Council. Both statements distinguish between governmental activities, which normally are supported by taxes and intergovernmental revenue, and business-type activities, which rely to a significant extent on fees and charges for support.

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 expenses of a given function or segment is 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.

Rocky Flats Stewardship Council

**NOTES TO FINANCIAL STATEMENTS
(continued)
December 31, 2020**

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.

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 estimated fair market 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:

Rocky Flats Stewardship Council

NOTES TO FINANCIAL STATEMENTS

(continued)

December 31, 2020

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.

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, 2020, the Council had \$203,064 of fund balance 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.

Rocky Flats Stewardship Council

**NOTES TO FINANCIAL STATEMENTS
(continued)
December 31, 2020**

Note 2 – Cash and Investments

Cash and investments as of December 31, 2020 are classified in the accompanying statements as follows:

Statement of net position:	
Cash and cash equivalents	<u>\$ 209,472</u>

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, 2020, 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, 2020.

The Council's cash deposits at December 31, 2020 are as follows:

	<u>Carrying Balance</u>	<u>Bank Balance</u>
Deposits with financial institutions	<u>\$ 209,472</u>	<u>\$ 209,472</u>
Total cash and cash equivalents	<u>\$ 209,472</u>	<u>\$ 209,472</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.

Rocky Flats Stewardship Council

**NOTES TO FINANCIAL STATEMENTS
(continued)
December 31, 2020**

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, 2020, the Council had no investments.

Note 3 – Capital Assets

An analysis of the changes in capital assets for the year ended December 31, 2020 follows:

	<u>Balance 12/31/19</u>	<u>Additions</u>	<u>Deletions</u>	<u>Balance 12/31/20</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, 2020, 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, 2020, the Council had no restricted net position.

As of December 31, 2020, the Council had unrestricted net position of \$203,064.

Rocky Flats Stewardship Council

NOTES TO FINANCIAL STATEMENTS

(continued)

December 31, 2020

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, 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.

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

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Kim Griffiths

MEMORANDUM

TO: Stewardship Council Board of Directors
FROM: Melissa Weakley and David Abelson
SUBJECT: DOE's 2020 Annual Report Briefing
DATE: May 18, 2021

DOE will present an overview its 2020 Annual Report of Site Surveillance and Maintenance Activities, which can accessed here:

https://www.lm.doe.gov/Rocky_Flats/Annual_Reports/2020/S32449_RFS_CY20_Overview.pdf. Annual Report highlights are included below.

- **Site-Wide:** The annual Site-wide inspection was conducted on May 31, 2020.
 - No evidence of violations of the institutional or physical controls was observed.
 - A sinkhole identified on the southeast side of former B881 in December 2019 remained approximately 3 feet in diameter but increased in depth by approximately 3 inches, as observed during a weather-related inspection in April. The sinkhole was filled in and compacted in November 2020.
- **Present Landfill (PLF):** Per the Rocky Flats Legacy Management Agreement (RFLMA), the regulatory document that guides agency activities, the PLF was inspected quarterly during 2020. One weather-related inspection was combined with the second quarter inspection after a significant precipitation event in April. No significant issues were observed.
- **Original Landfill (OLF):** Per the RFLMA, the OLF was inspected monthly. One weather-related inspection was combined with the second quarter inspection after the April precipitation event. The OLF was also monitored weekly as a Best Management Practice.
 - Minor maintenance of the OLF cover was conducted throughout the year to fill small cracks, animal burrows, and erosion rills as they were identified.
 - The OLF Stabilization Project was completed in August 2020; no significant slumping at the OLF hillside was observed during 2020.
- **North Walnut Creek Slump (NWCS):** The NWCS, located on the hillside east of the Solar Ponds Plume Treatment System (SPPTS), was monitored monthly (see attached DOE **Figure 5**).
 - Slope creep continued through 2020, with greater movement during wetter periods (total movement of 3 to 4.5 feet along the scarp since the hillside was regraded in 2017).
 - Groundwater elevations continued to be measured via piezometers installed at the NWCS. Additionally, geotechnical investigation fieldwork was completed in September 2020. The groundwater and geotechnical data will be used to assess slope stability and help determine the path forward for this unstable hillside (evaluation planned for 2021).

- **Solar Ponds Plume Treatment System (SPPTS):** The SPPTS continued to treat nitrate effectively. The lagoon is not designed to treat uranium, although some uranium is removed.
 - Effluent concentrations of nitrate met RFLMA standards throughout the year, except for a short period in January when cold temperatures impaired bacterial activity and nitrate concentrations rose slightly. (This short-lived, temperature-related rise in nitrate levels was also observed in the winter of 2019.)
 - Potential uranium treatment technologies for the SPPTS are being studied. The procurement of a design subcontractor to conduct final pilot testing, technology selection, and design for a full-scale uranium treatment component at the SPPTS was postponed due to COVID-related restrictions. Testing, design, and construction of the uranium treatment component is now scheduled for the 2021–2023 timeframe.
 - A line of boreholes was drilled immediately west of the western end of the SPPTS groundwater collection trench. Geotechnical samples are being collected to investigate if the area immediately west of the SPPTS collection trench may be an area where groundwater contaminated with nitrate or uranium bypasses the collection trench, particularly along a former utility corridor. Data collection will continue in 2021.
- **East Trenches Plume Treatment System (ETPTS):** The ETPTS now treats water from both the East Trenches and the Mound Site. Effluent concentrations met all applicable RFLMA standards throughout the year.
- **Groundwater Monitoring:** Groundwater quality was largely consistent with that in previous post-closure years.
 - 2020 was statistically a dry year at the Site (approximately 7 inches of precipitation, as compared to the annual average of approximately 12 inches), which led to an increased number of dry wells during the fourth quarter.
 - Area of Concern (AOC) well 10304, located in the south-central portion of the COU, was reportable for trichloroethene (TCE) (i.e., above the RFLMA standard of 2.5 ug/L) in 2019 but was not reportable in 2020 (concentration of 2.3 ug/L), possibly because of dry conditions.
- **Surface Water Monitoring:** A total of 111 samples were collected from routine sampling locations.
 - Analyte concentrations at all Point of Compliance (POC) monitoring locations (WALPOC on Walnut Creek and WOMPOC on Woman Creek) and at all Point of Evaluation (POE) monitoring locations (SW093 on North Walnut Creek, GS10 on South Walnut Creek, and SW027 on the South Interceptor Ditch) were below reportable levels during 2020 (see attached DOE **Figure 3** for locations).
- **Ecological Monitoring:** Revegetation and wetland monitoring activities were conducted.
 - Revegetation efforts continue to be successful; approximately five acres were treated with herbicides to control noxious weeds.
 - No active black-tailed prairie dog towns were observed within the Site boundaries.

Attachments

2020 Annual Report Cover Page, Table of Contents, Abbreviations, and Executive Summary

Overview of 2020 Contact Records (Table 1)

North Walnut Creek Slump

Water Routing Schematic

Historical and Post-Closure Contaminant Concentration Figures

- Plutonium
- Americium
- Uranium
- Nitrate

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

Calendar Year 2020

Overview

April 2021



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

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Appendixes

Appendix A	Hydrologic Data
Appendix B	Water Quality Data
Appendix C	Landfill Inspection Forms, Fourth Quarter CY 2020
Appendix D	Data Evaluation Flowcharts Reproduced from the RFLMA
Appendix E	2020 RFLMA Contact Records and Written Correspondence

Abbreviations

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>
IC	institutional control
LM	Office of Legacy Management
minsaf	minimum safe
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
POU	Peripheral Operable Unit
RFCA	<i>Final Rocky Flats Cleanup Agreement</i>
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 (LM) is responsible for implementing the final response action selected in the final *Corrective Action Decision/Record of Decision for Rocky Flats Plant (USDOE) Peripheral Operable Unit and Central Operable Unit* (CDPHE et al. 2006), 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 Rocky Flats property: the Peripheral Operable Unit (POU) and the COU. The COU consolidates all areas of the Site 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 portions of the Site 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, and continued monitoring and maintenance.

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 under, and as described in, the *Rocky Flats Legacy Management Agreement (RFLMA)* (CDPHE et al. 2007), executed on March 14, 2007. Attachment 2 to the RFLMA, last revised in December 2018, defines the COU remedy surveillance and maintenance requirements. The requirements include environmental monitoring; maintenance of the erosion controls, ICs, access controls (i.e., signs), landfill covers, and groundwater treatment systems; and operation and maintenance of the groundwater treatment systems.

The last RFLMA minor modification that updated water quality standards and practical quantitation limits 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 2018-05. 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) 2020 (January 1–December 31, 2020) are as follows:

- The SARS-CoV-2 (coronavirus) pandemic affected work on and for the Rocky Flats Site. On March 26, 2020, DOE initiated “minimum safe” (minsaf) operational requirements and protocols in response to the coronavirus pandemic. This entailed minimizing staff presence and activities at all LM sites, including the Rocky Flats Site and the associated office building. Routine field and office activities were affected by these restrictions; only

activities determined by DOE to be most critical to the Site remedy were performed, as was the ongoing Original Landfill (OLF) Stabilization Project. These minsafe protocols were extended through May 17. Work restrictions were reduced slightly beginning May 18, allowing additional field activities to be conducted.

- The annual Site inspection was completed on May 31, 2020. The majority of items encountered were debris or trash on the surface that were either picked up during the inspection or subsequently removed. A couple of areas showed minor depressions near former building areas. Site field operations subject matter experts evaluated those areas, and none appeared to be significant. No evidence of violations of institutional or physical controls was observed, and no adverse biological conditions were noted during the inspection.
- Annual verification that the Restrictive Notice (CDPHE and DOE 2017) remains in the Administrative Record and on file in Jefferson County records was conducted on March 16, 2020.
- As a best management practice (BMP), the former building areas (B371, B771, B881, and B991) were inspected each quarter in 2020 and after significant precipitation events in April. A sinkhole identified on the southeast side of former B881 in December 2019 remained approximately 3 feet in diameter but increased in depth by approximately 3 inches, as observed during the April 24 weather-related inspection. The sinkhole was filled in and compacted in November 2020.
- The inspections of the COU after precipitation events identified no significant changes in erosion, depressions, or subsidence, nor were other issues of concern noted at former building areas B371/374, B771/774, B881, B991, remaining Original Process Waste Lines and New Process Waste Lines, the Ash Pits, or the East Trenches.
- Site road maintenance during the first quarter of 2020 included snow removal and minor road repair. The CY 2020 Roads Maintenance and Repair Project was completed in fall 2020. The roads were regraded, road base was added as needed, rock crossings were maintained, and dust suppressant was applied on the primary routes to aid in dust control.
- COU boundary fence signs were inspected quarterly during CY 2020. No significant issues were encountered. Signs were reinstalled as needed, usually after wires broke or due to disturbance by elk and deer. The COU gate solar system was upgraded in CY 2020 to improve operability during cloudy weather and during extensive use.
- Maintenance, repair, replacement, and monitoring of Site erosion control features continued through 2020.
- The Present Landfill (PLF) was inspected quarterly during CY 2020. A weather-related inspection was combined with the second quarter inspection. No significant issues were observed during these inspections.
- No evidence of adverse biological conditions (e.g., unexpected mortality or morbidity) was observed during CY 2020 monitoring and maintenance activities.

Original Landfill

- The OLF was inspected monthly during CY 2020. An additional weather-related inspection was combined with the April monthly inspection. The OLF was also inspected weekly as a BMP. Minor issues were found throughout the year.

- No slumping was observed at the OLF during CY 2020. Minor maintenance of the OLF cover was conducted throughout the year to fill small cracks, animal burrows, and erosion rills as they were identified, using hand tools such as shovels and rakes. Biennial berm maintenance was performed and fill added to sections of selected berms in the fourth quarter.
- The OLF Stabilization Project began in August 2019 and was successfully completed in August 2020. The project improved hillside stability on the east and west sides of the landfill. The main, central landfill area remains stable as constructed in 2005.
- Permanent drains were installed as part of the OLF Stabilization Project. These drains eliminated the need to operate pumps in the temporary groundwater intercept wells, which had been previously winterized on September 25, 2019.
- The siphon system installed at Seep 10 in 2018 was removed during the first quarter of 2020 and replaced with a permanent drain as part of the OLF Stabilization Project.

North Walnut Creek Slump

- Measurement of groundwater elevations in the functioning piezometers installed at the North Walnut Creek Slump (NWCS) continued in 2020; some of these piezometers no longer function due to hillside movement. The NWCS has shown a maximum displacement of approximately 3.9 feet since August 2017 due to slow creep. Total movement of approximately 3 to 4.5 feet along the scarp has occurred since the hillside was regraded in 2017. Soils are also heaving along the toe of the slope due to the continued movement. A majority of this movement occurred in the June–August 2018, July–August 2019, and May–July 2020 periods. The average monthly creep (i.e., movement downhill) is about 1.7 inches, but it varies with precipitation.
- In October 2019, a swale and road rock crossing was completed upgradient of the NWCS to divert surface runoff away from the slump area.
- Additional geotechnical investigation fieldwork was completed in September 2020, which included four borings, three of which were completed as inclinometers and one completed as a piezometer.
- In fall 2020, minor regrading was performed at the toe of the slope to move heaving soils away from a RFLMA monitoring well.

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 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 2020.
- The ETPTS solar/battery power facility received maintenance upgrades primarily to replace batteries that had reached the end of their operational lifespan. The 96 lead-acid batteries were replaced with eight lithium-iron-phosphate batteries, the solar panel circuitry was streamlined, selected electrical components were upgraded, and damaged solar panels were replaced. Six of the newer lead-acid batteries were retained to power heaters for the new lithium-iron-phosphate batteries in the event of extended cold weather, and two others were

installed at the Solar Ponds Plume Treatment System (SPPTS) to replace batteries with corroded terminals.

- The SPPTS continued to effectively treat nitrate via the nitrate treatment unit (lagoon) initially constructed in 2016 and upgraded in 2018. Effluent nitrate concentrations met RFLMA water quality standards throughout the year except for a short period in January when cold temperatures impaired bacterial activity and nitrate concentrations rose slightly. The lagoon also continued to reduce uranium concentrations.
- The procurement of a design subcontractor to conduct final pilot testing, technology selection, and design for a full-scale uranium treatment component at the SPPTS was postponed due to coronavirus restrictions. Uranium treatment at the SPPTS will be subject to final testing, design, and construction in 2021–2023.
- A passive drain was installed in an open-bottomed vault at the SPPTS that experiences seasonal flooding that endangers equipment. This drain eliminates the need for field staff to periodically pump the vault dry.
- A line of boreholes was drilled immediately west of the western end of the SPPTS groundwater collection trench. During the drilling, geotechnical samples were collected and the boreholes completed as piezometers. A test pit was also excavated in the same area and included the collection of geotechnical samples and the completion of a standpipe piezometer. These piezometers are being used to investigate the potential for collecting additional groundwater for treatment at the SPPTS, particularly from a former utility corridor that previously contained a buried storm drain. Before the drain was removed, it prevented the collection trench from being extended farther to the west during its construction in 1999. Data collection will continue in 2021.
- Two test pits were excavated south of the SPPTS to investigate selected components of the Interceptor Trench System. One was completed as a standpipe piezometer.

Water Monitoring

- Given that 2020 was an even-numbered year, all 88 RFLMA groundwater monitoring locations were sampled during the second quarter, including the 42 Evaluation wells that are located primarily in contaminant source areas.
- Groundwater quality at the Site in 2020 was largely consistent with previous postclosure years. However, one Evaluation well in the Vinyl Chloride Plume source area produced a sample with contaminant concentrations that were anomalously low, by two to three orders of magnitude. A follow-up sample was collected that confirmed these low results. There were no reportable conditions at any Area of Concern wells.
- Statistical calculations performed using analytical data from Resource Conservation and Recovery Act wells monitoring the OLF and PLF produced results that were identical or nearly so to those in prior years.
- The amount of precipitation measured in CY 2020 was much less than average. According to measurements from 1993 through 2019, the calculated average precipitation measured at Site gages was 12.22 inches; the total precipitation measured in 2020 was 7.38 inches, approximately 60% of the average. This led to an increased number of dry locations during the fourth quarter sampling activities.

- During 2020, 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 111 samples, composed of 3647 individual aliquots (“grabs”), were collected at the routine surface water locations.
- All RFLMA Point of Compliance analyte concentrations remained below reportable condition levels throughout CY 2020.
- All RFLMA Point of Evaluation analyte concentrations remained below reportable condition levels throughout CY 2020.

Ecological Monitoring

- In 2020, approximately 5 acres at the Site received herbicide application to control noxious weeds and improve the quality of the plant communities.
- Revegetation activities and installation of erosion controls were conducted after several projects to help reestablish vegetation cover and minimize erosion. The project locations that were seeded in 2020 included the OLF stabilization and berm projects, the SPPTS geotechnical investigation project, and the NWCS slump repair project.
- Revegetation monitoring was conducted at several locations, and the successful establishment and sustainability of the plant communities at these locations was documented.
- Evaluation of the forb (wildflower) nurseries at the Site continued to show that native forbs have been successfully established and that the plants are now spreading and expanding beyond their original seeded boundaries at several locations.
- Wetland monitoring confirmed that wetlands are being established at several mitigation locations.
- Wildlife monitoring consisted of observing black-tailed prairie dogs, monitoring bird nesting boxes, and locating active raptor nests. No active prairie dog towns were observed within Site boundaries. In fact, the prairie dog towns adjacent to the COU boundary all appeared abandoned in the second half of 2020, probably due to an outbreak of the plague. Twenty-three of the 25 nest boxes showed evidence of active nesting activities in 2020. The species of birds using the nest boxes in 2020 included tree swallows (*Tachycineta bicolor*) and house wrens (*Troglodytes aedon*). No active raptor nests were observed in the COU in 2020.

General information about the purpose and scope of the annual report, background, RFLMA contact records, and RFLMA modifications is provided in this report, which is one of the five volumes that form the *Annual Report of Site Surveillance and Maintenance Activities at the Rocky Flats Site, Colorado, Calendar Year 2020*.

The other volumes of the 2020 annual report are:

- Operations and Maintenance
- Ecological Monitoring
- Groundwater Monitoring
- Surface Water Monitoring

Table 1. Actions Approved by the RFLMA Parties

Activity	Status as of December 31, 2020	CR No./ CP Date	Approval Date
Solar Pond Influent Vault Drain Line Installation	Actions Implemented. The purpose of this project was to install a gravity drain pipe from a vault to the nitrate treatment unit at the SPPTS. Water occasionally collects in this vault and can damage equipment. To prevent this damage, water must be manually pumped from the vault. The new gravity drain will allow any water that accumulates in the vault (for example, during wet spring periods or heavy precipitation) to drain without requiring staff presence.	2020-01	09/29/2020
Mound Site Plume Collection System Transfer Line Maintenance	Actions Implemented. This project was not performed in 2020. It will restore full flow capacity and maintenance access to the buried transfer line that connects the Mound Site Plume Collection System to the ETPTS. The activity includes removing and replacing faulty cleanouts that cause partial blockage of the line. The blockages were identified in a 2019 video camera inspection and are the result of defective welds in the cleanouts. This maintenance project involves excavation, removal, and replacement of nine cleanouts; a video camera inspection to identify any additional obstructions; repair of any additional obstructions; removal and replacement of protective structures (e.g., bollards, concrete collars), if necessary; and a hydrostatic test of the repaired transfer line. This project is currently being completed in the field at the time of this report's drafting (March 2021).	2020-02	09/29/2020
OLF Stabilization Project with Soil Disturbance Review Plan	Actions Implemented. The project activities described in CR 2019-02 were in process through the end of CY 2019 and into CY 2020. These activities included the installation of reaction blocks (anchor tieback plates) to stabilize the OLF hillside in response to the slumping soil cover. The project was completed in fall 2020.	2019-02	07/12/2019
NWCS Area and SPPTS Subsurface Investigation and Soil Disturbance Review Plan	Actions Implemented. Subsurface investigation activities were performed to gather additional data for geotechnical analysis, including installation of inclinometers, and to install piezometers for the evaluation of groundwater availability. Geotechnical information gathered from this project will be utilized in future decisions to address slumping soils in the area. Field activities associated with the investigation were completed in the second half of CY 2020.	2019-04	08/29/2019
OLF Geotechnical Investigation Work	Actions Implemented. The geotechnical investigation activities described in this CR were completed in summer 2018. This investigation was part of the larger OLF stabilization project that was performed in 2019–2020.	2018-01	02/07/2018
Minor Modifications to the OLF Inspection Form	Actions Ongoing. Approval of this CR allowed the use of a modified inspection form for OLF inspections. Use of the modified inspection form began after approval of the CR. The OLF M&M Plan will be revised to adopt the modified form (anticipated in 2021) now that long-term hillside stabilization measures are in place at the landfill.	2018-02	02/20/2018

Table 1. Actions Approved by RFLMA Parties (continued)

Activity	Status as of December 31, 2020	CR No./ CP Date	Approval Date
NWCS 2017 Maintenance	Actions Implemented. The project activities described in CR 2017-03 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. This field change was approved by CDPHE in late December 2017 (Field Change Concurrence 121917). This project is part of the larger NWCS slope stabilization effort scheduled for completion in 2022–2023.	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 CR have been completed and installation of erosion controls, reseeded, 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 CRs has been completed. For example, if a CR 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 CR are in progress.

Evaluation Ongoing typically applies to CRs 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 CR for the reportable condition are still in progress.

Abbreviations:

CP = consultation posting

ETPTS = East Trenches Plume Treatment System

NWCS = North Walnut Creek Slump

SPPTS = Solar Ponds Plume Treatment System

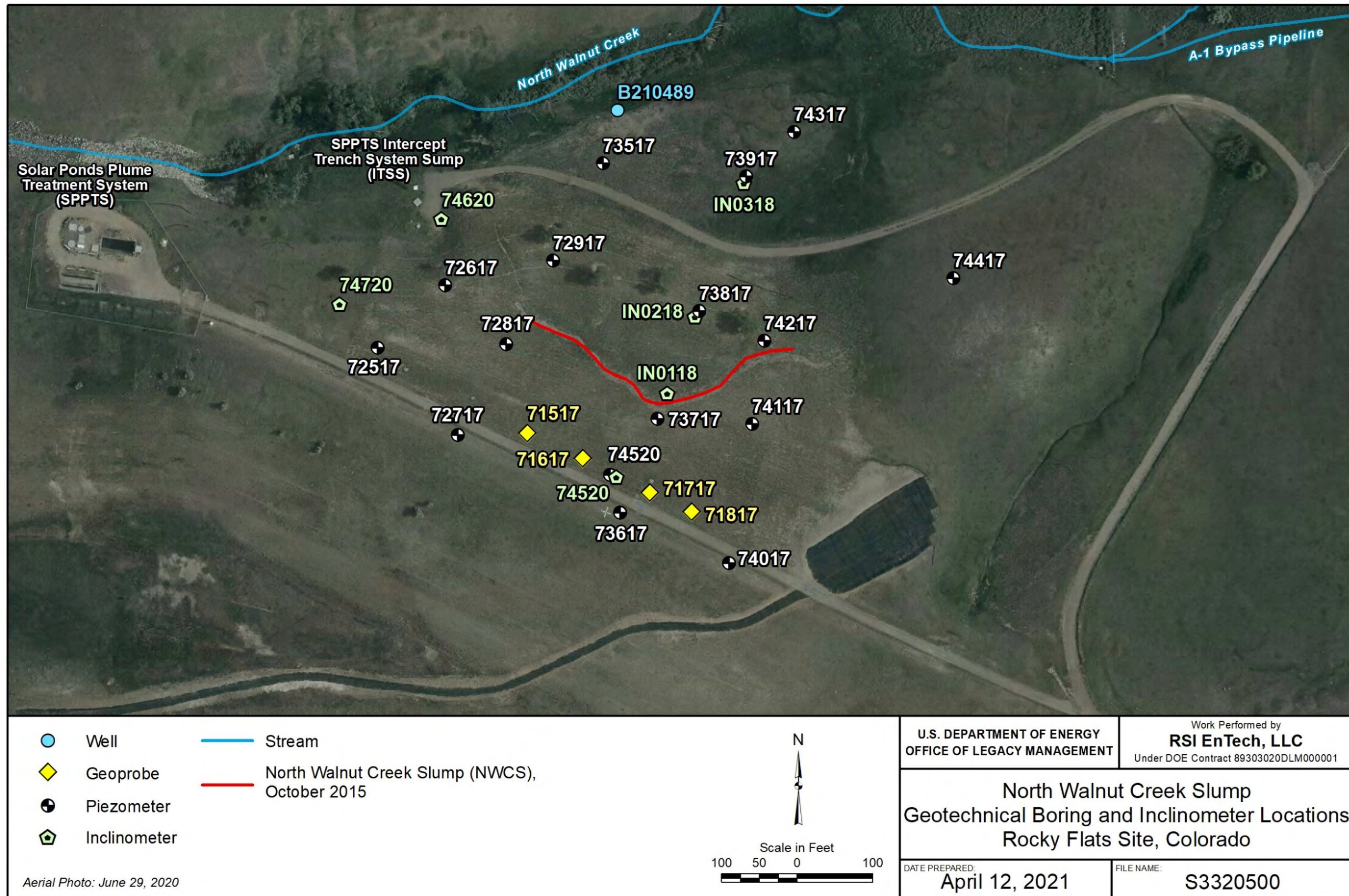


Figure 5. North Walnut Creek Slump Geotechnical Project Features, Rocky Flats Site

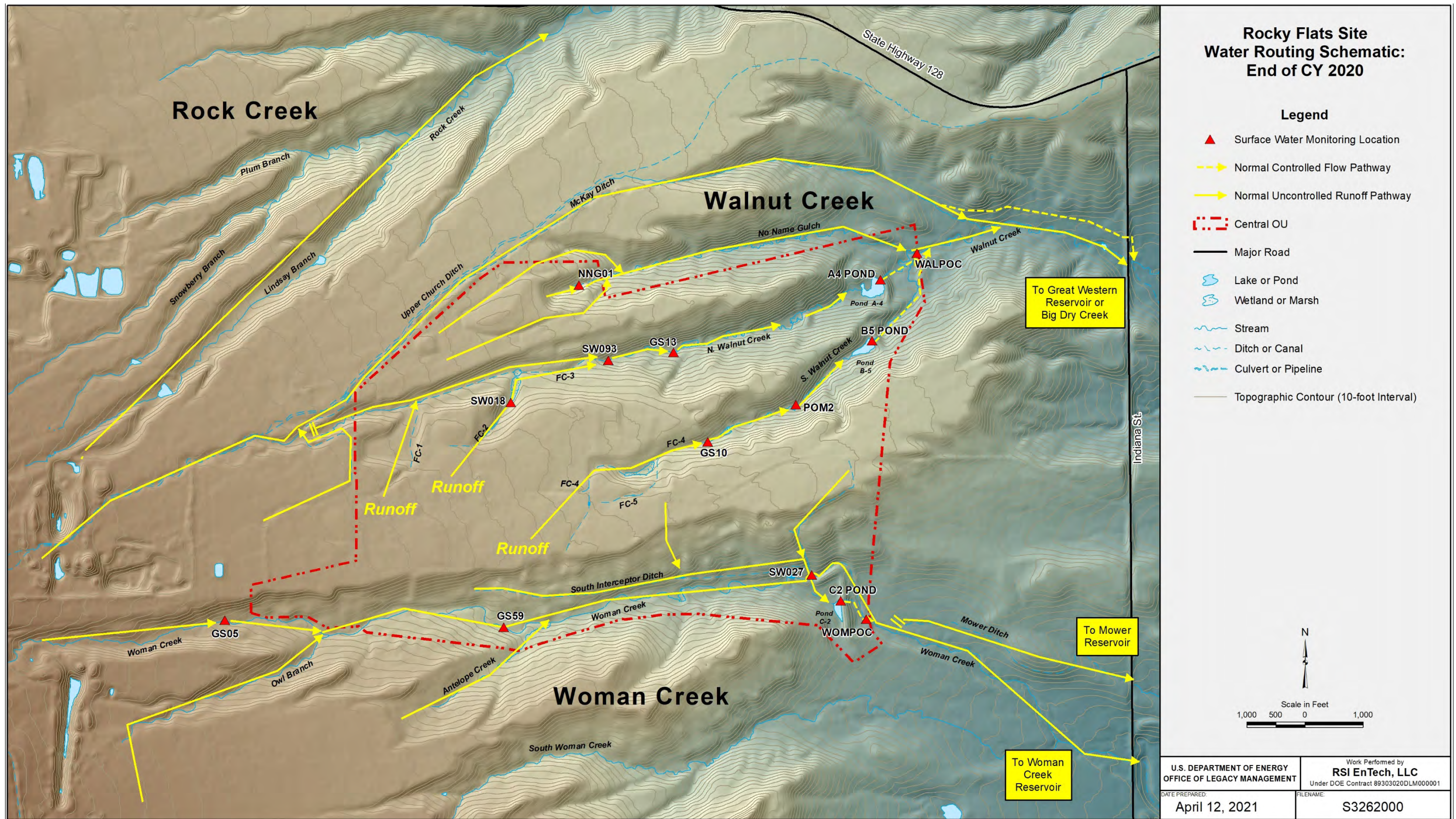
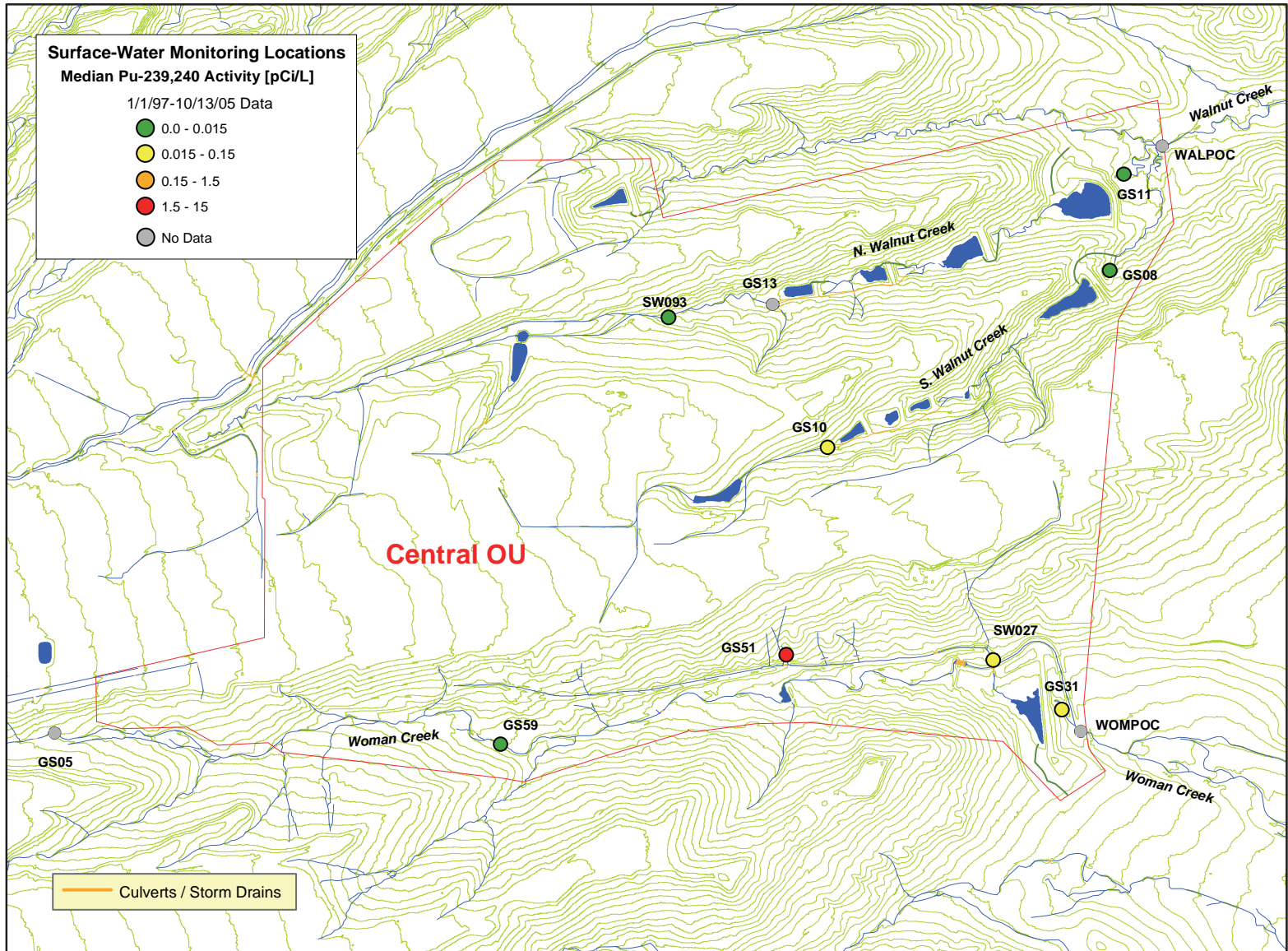
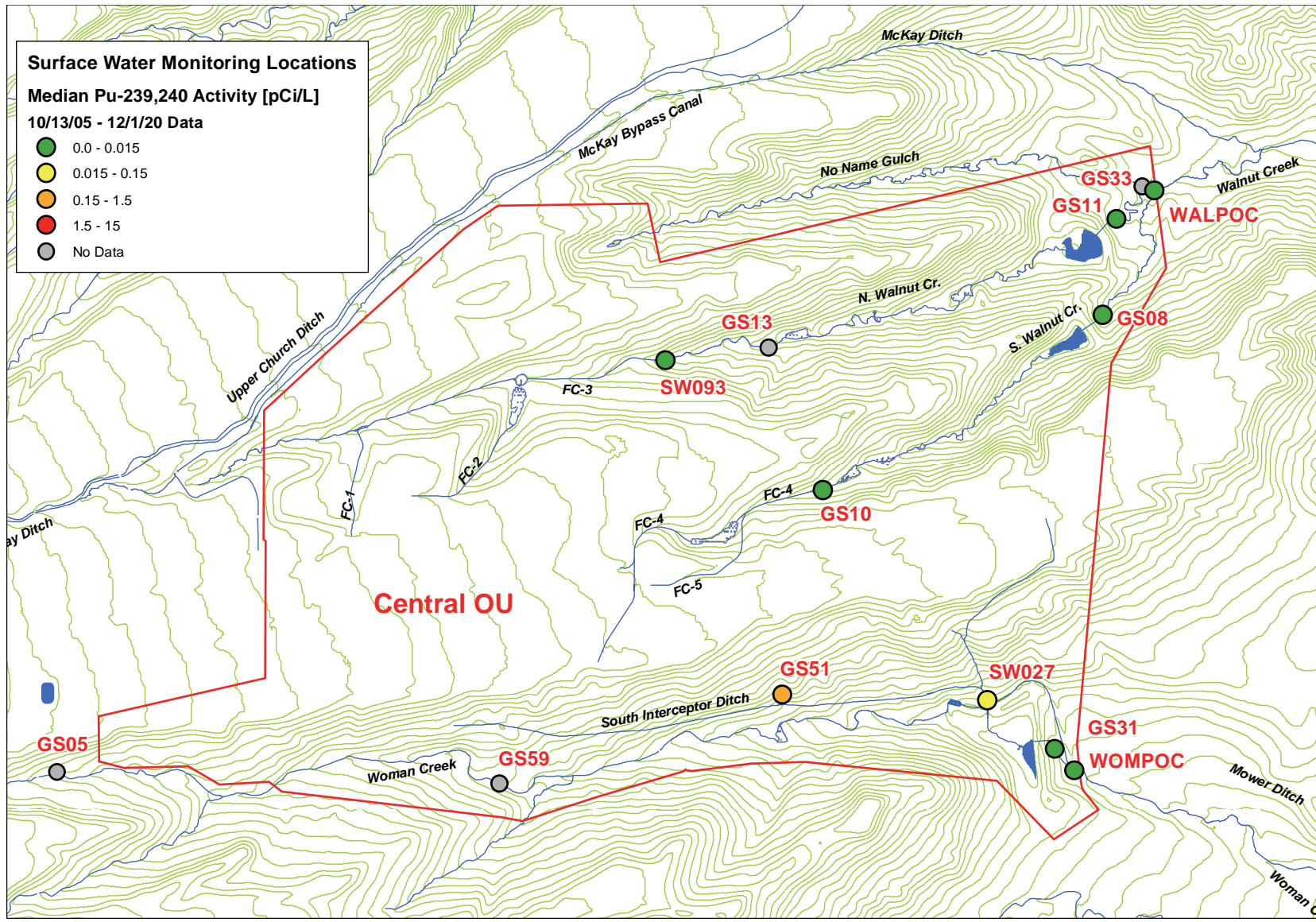


Figure 3. Rocky Flats Site Water Routing Schematic: End of CY 2020



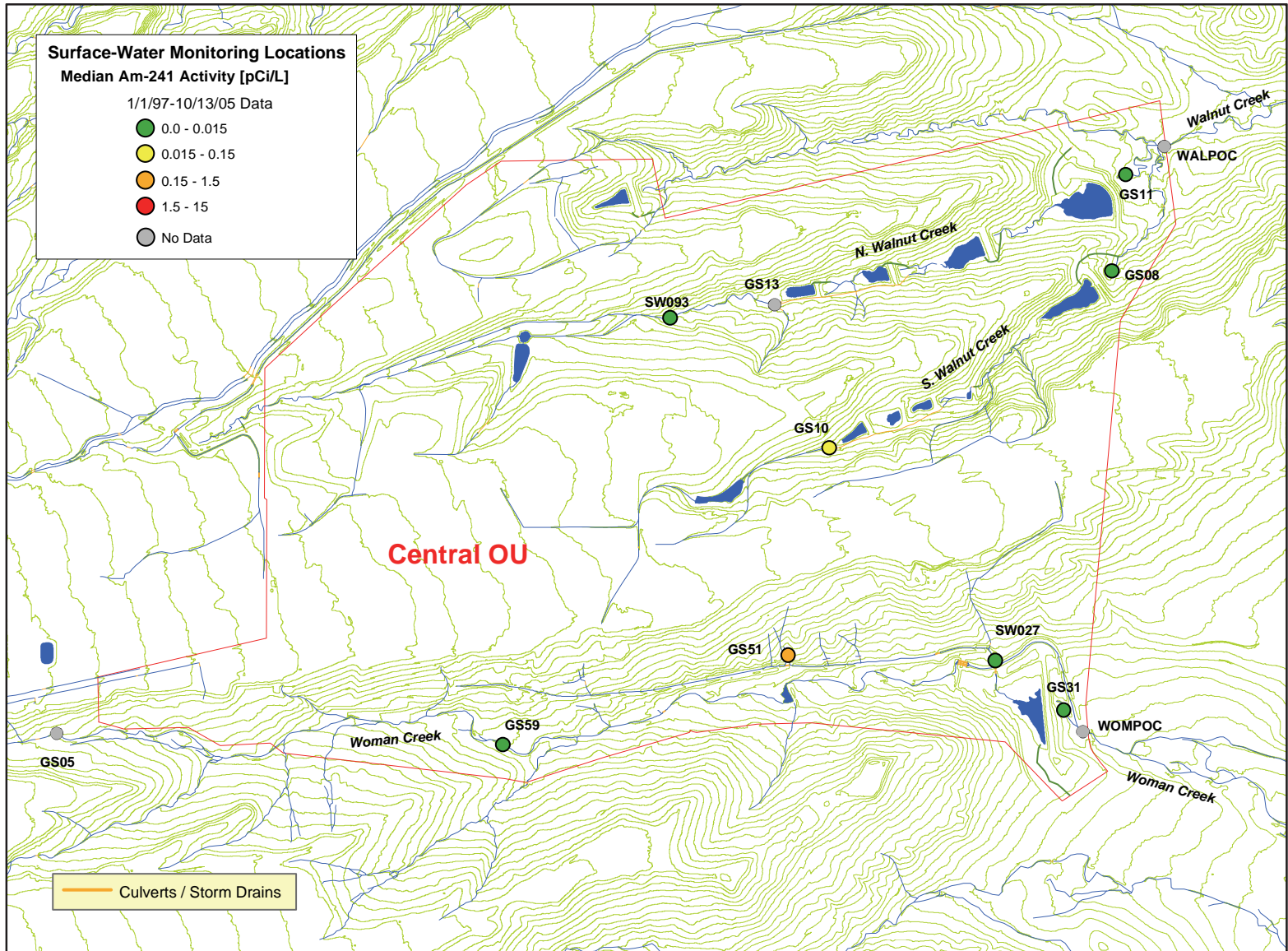
Note: Only locations with four or more results are mapped.

Figure 91. Median Plutonium Concentrations for January 1, 1997–October 13, 2005



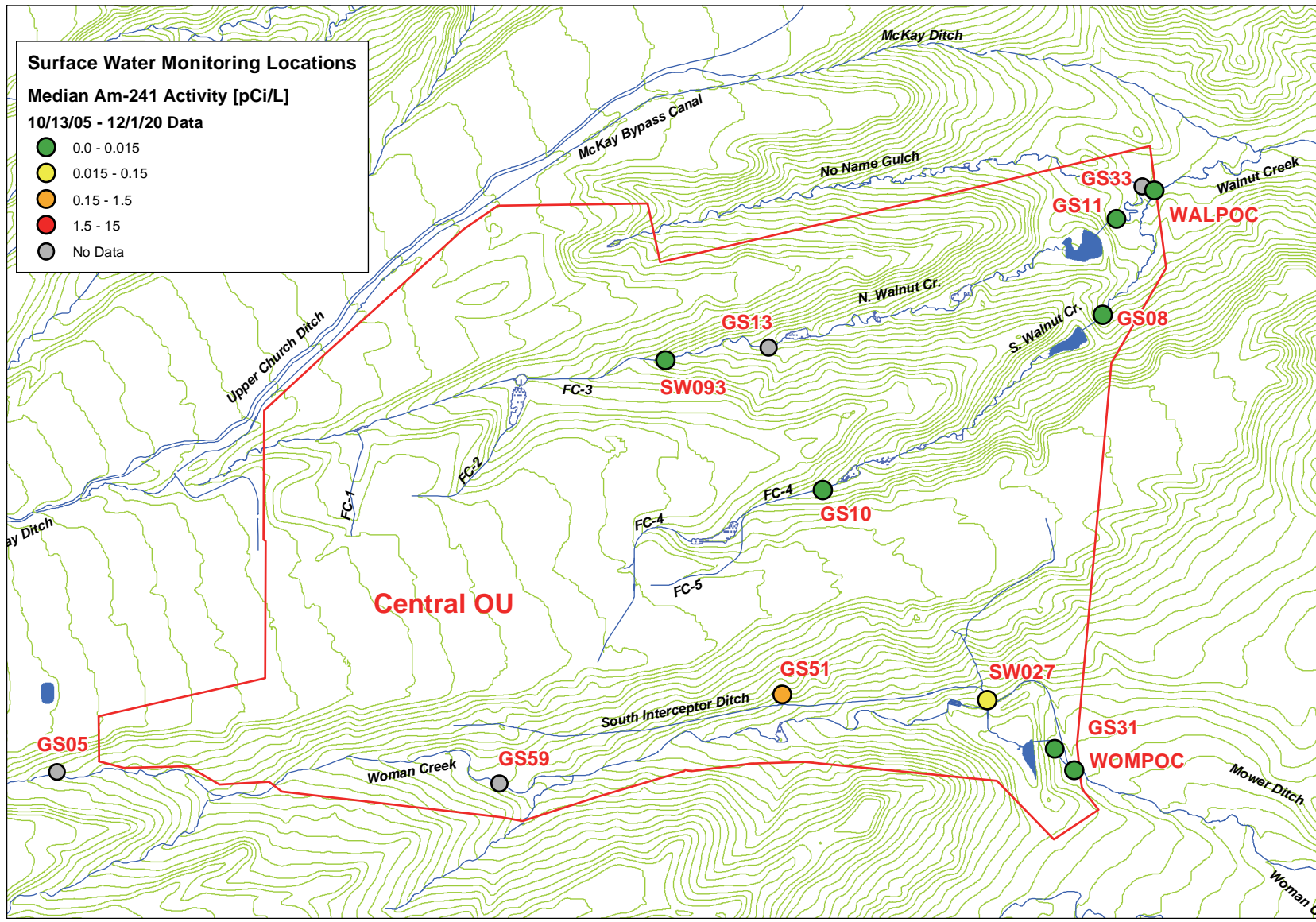
Note: Only locations with four or more results are mapped. Dams A-1 through A-3 and B-1 through B-4 were breached in 2009–2012.

Figure 92. Postclosure Median Plutonium Concentrations



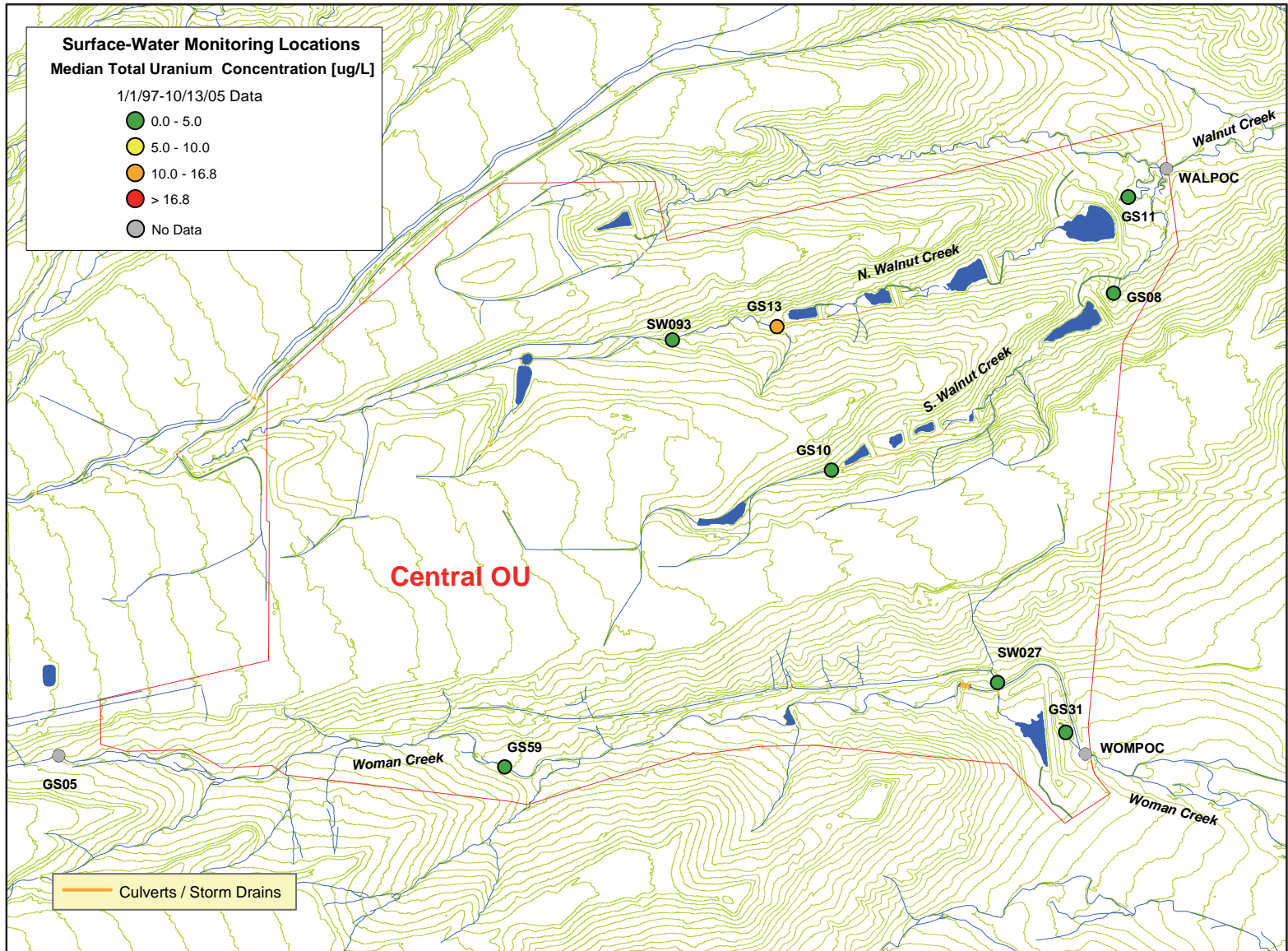
Note: Only locations with four or more results are mapped.

Figure 93. Median Americium Concentrations for January 1, 1997–October 13, 2005



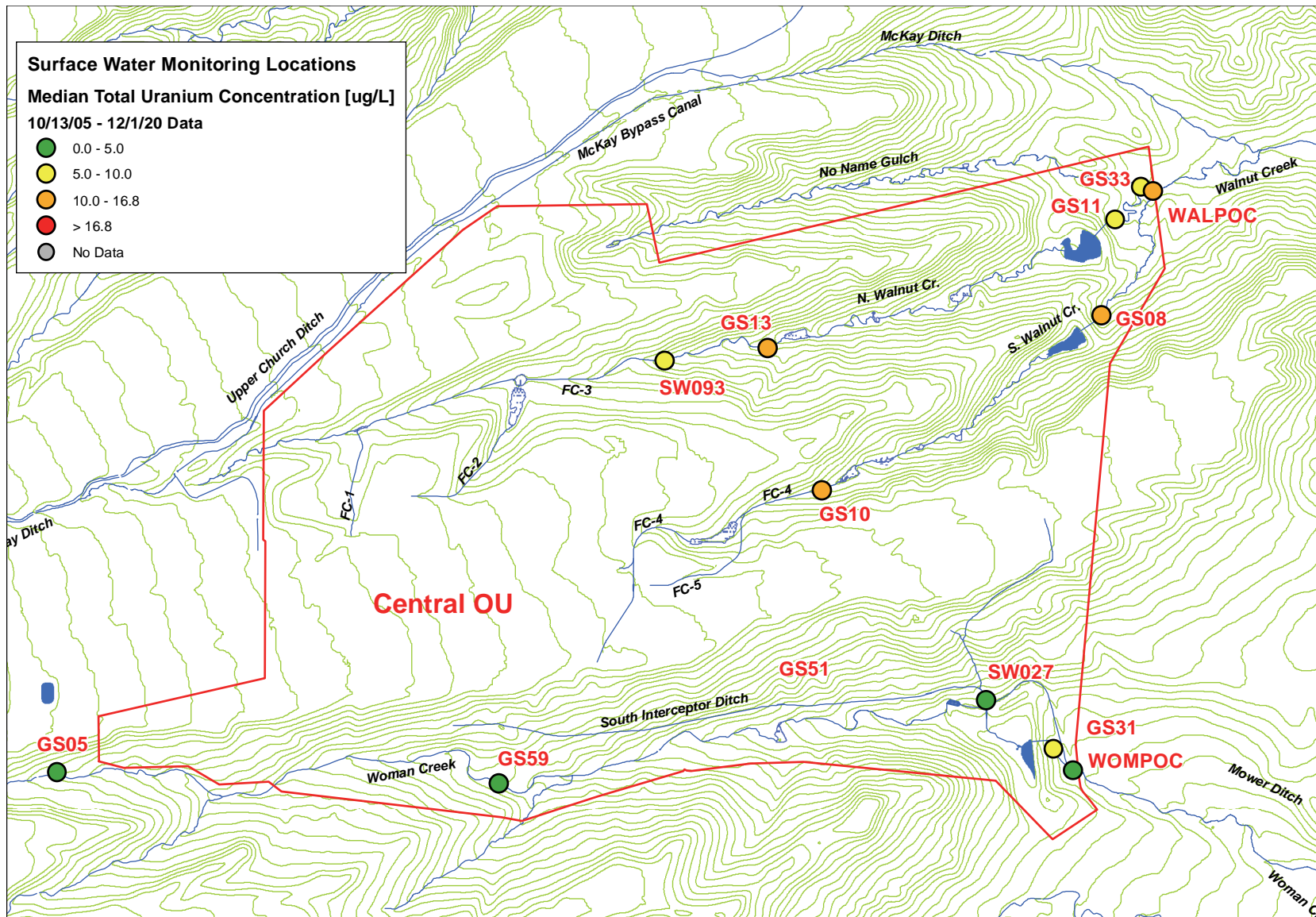
Note: Only locations with four or more results are mapped.

Figure 94. Postclosure Median Americium Concentrations



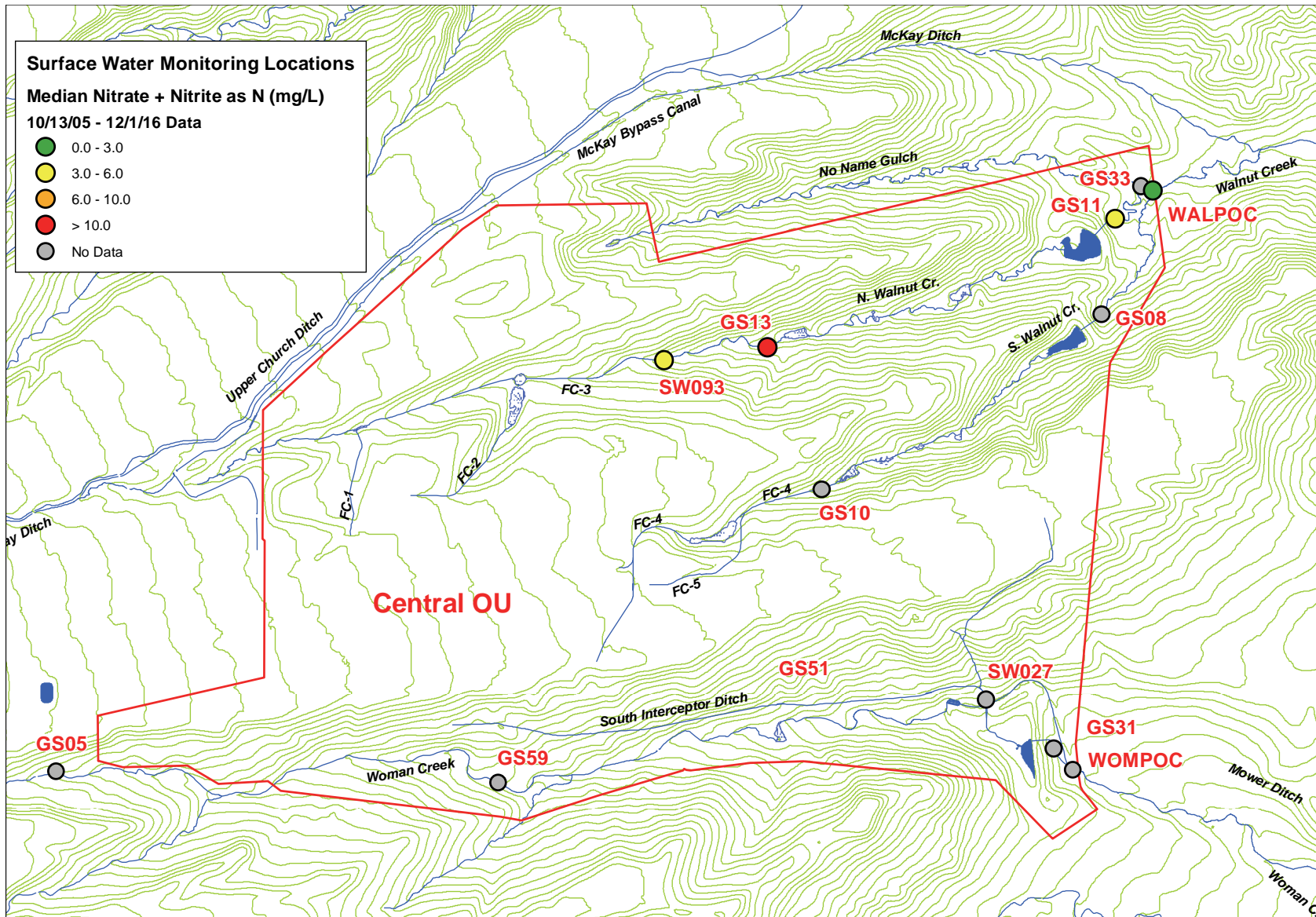
Note: Only locations with four or more results are mapped.

Figure 95. Median Uranium Concentrations for January 1, 1997–October 13, 2005



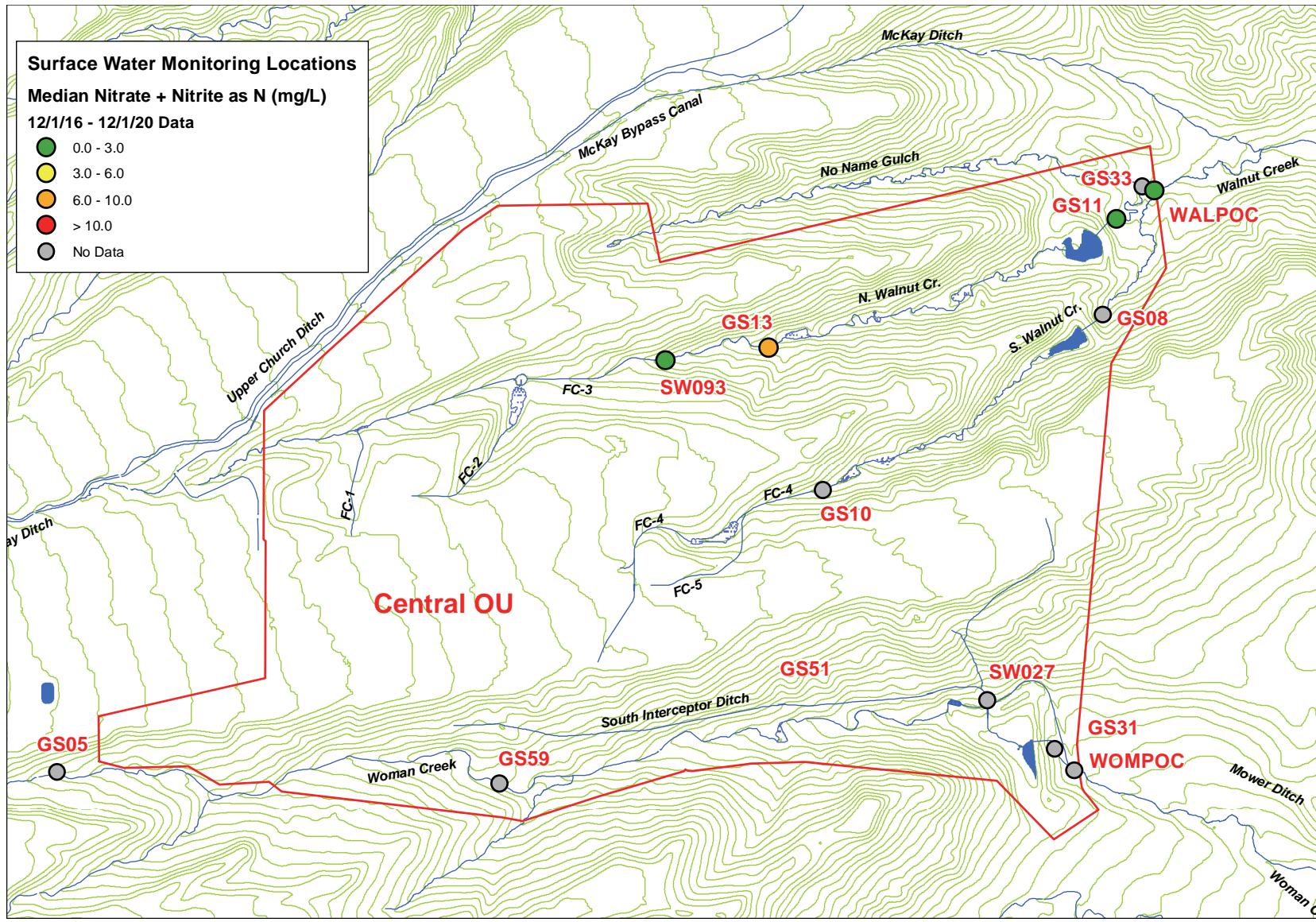
Note: Only locations with four or more results are mapped.

Figure 96. Postclosure Median Uranium Concentrations



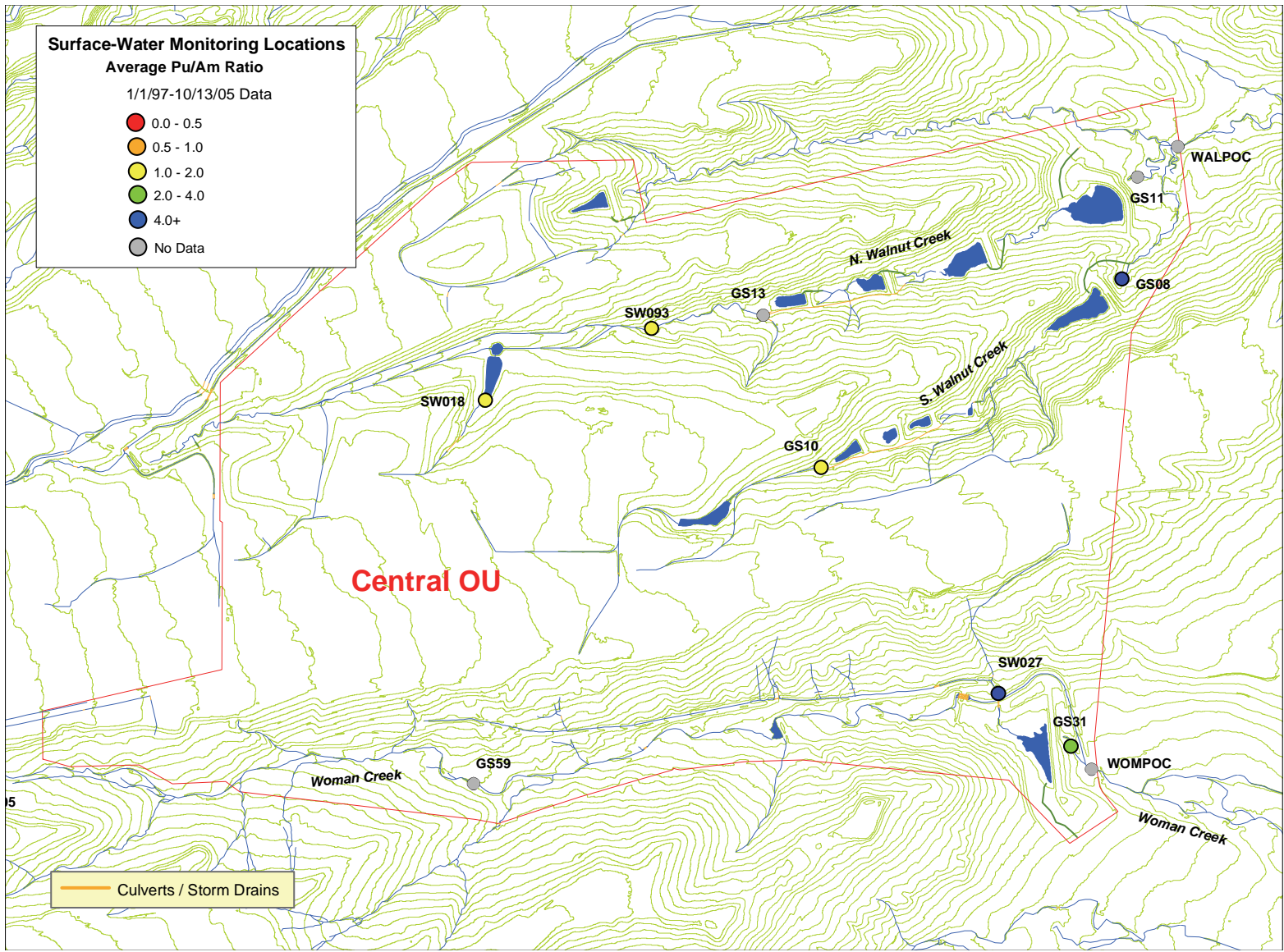
Note: Only locations with four or more results are mapped.

Figure 97. Postclosure Median Nitrate + Nitrite as Nitrogen Concentrations (October 13, 2005–December 1, 2016)



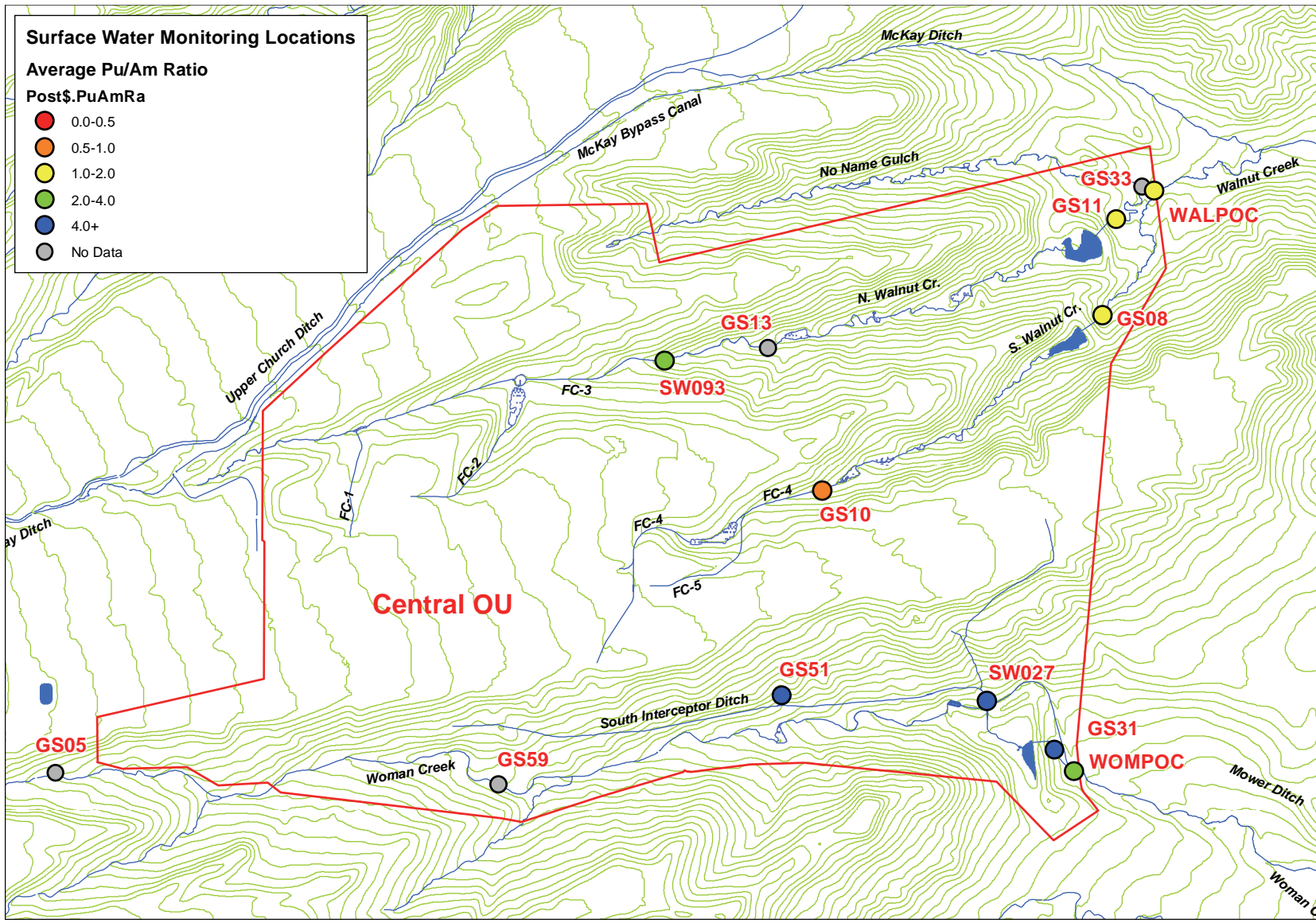
Note: Only locations with four or more results are mapped.

Figure 98. Postclosure Median Nitrate + Nitrite as Nitrogen Concentrations (December 1, 2016–December 31, 2020)



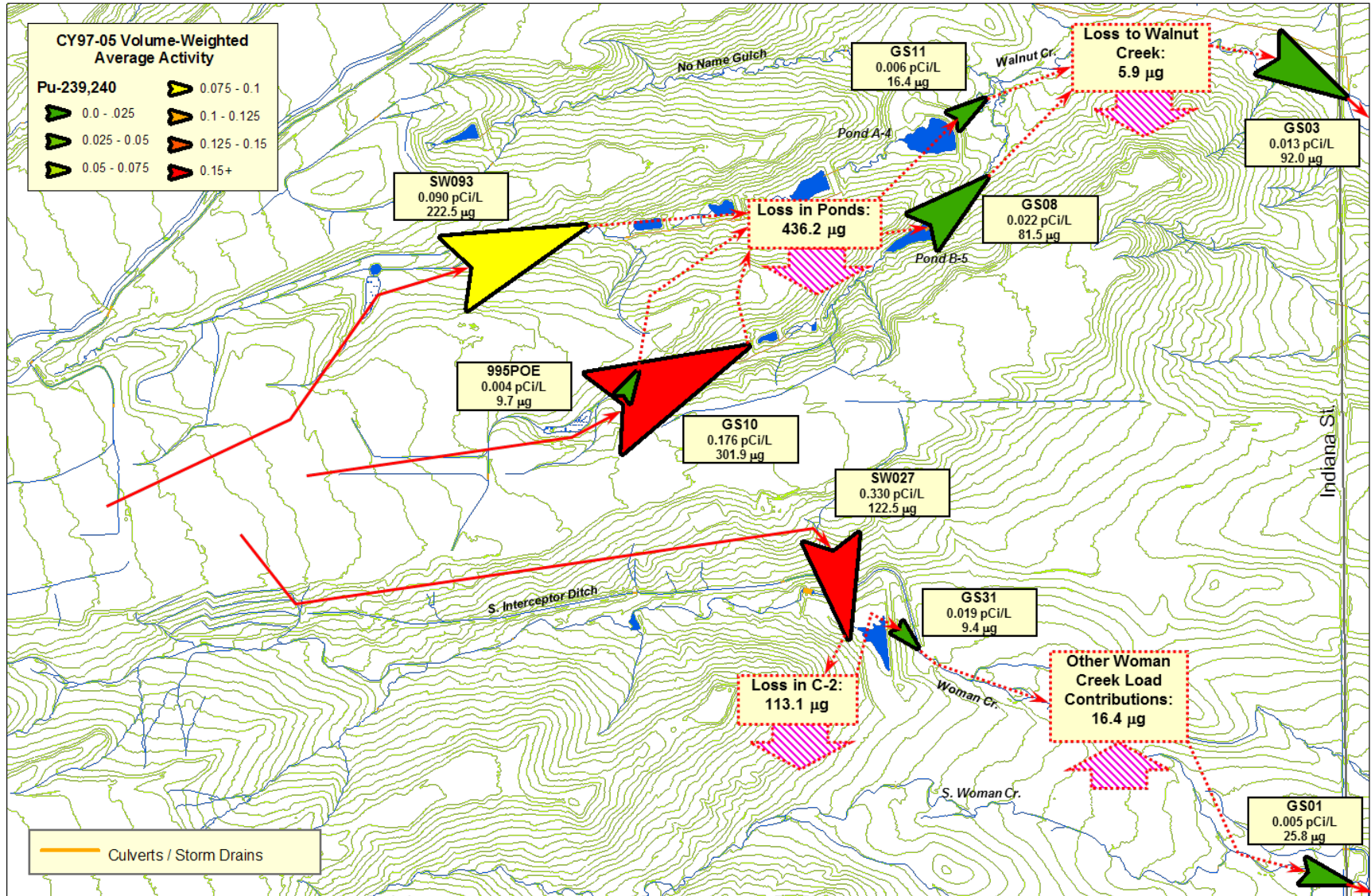
Note: Only locations with four or more results are mapped.

Figure 99. Average Plutonium/Americium Ratios for January 1, 1997–October 13, 2005



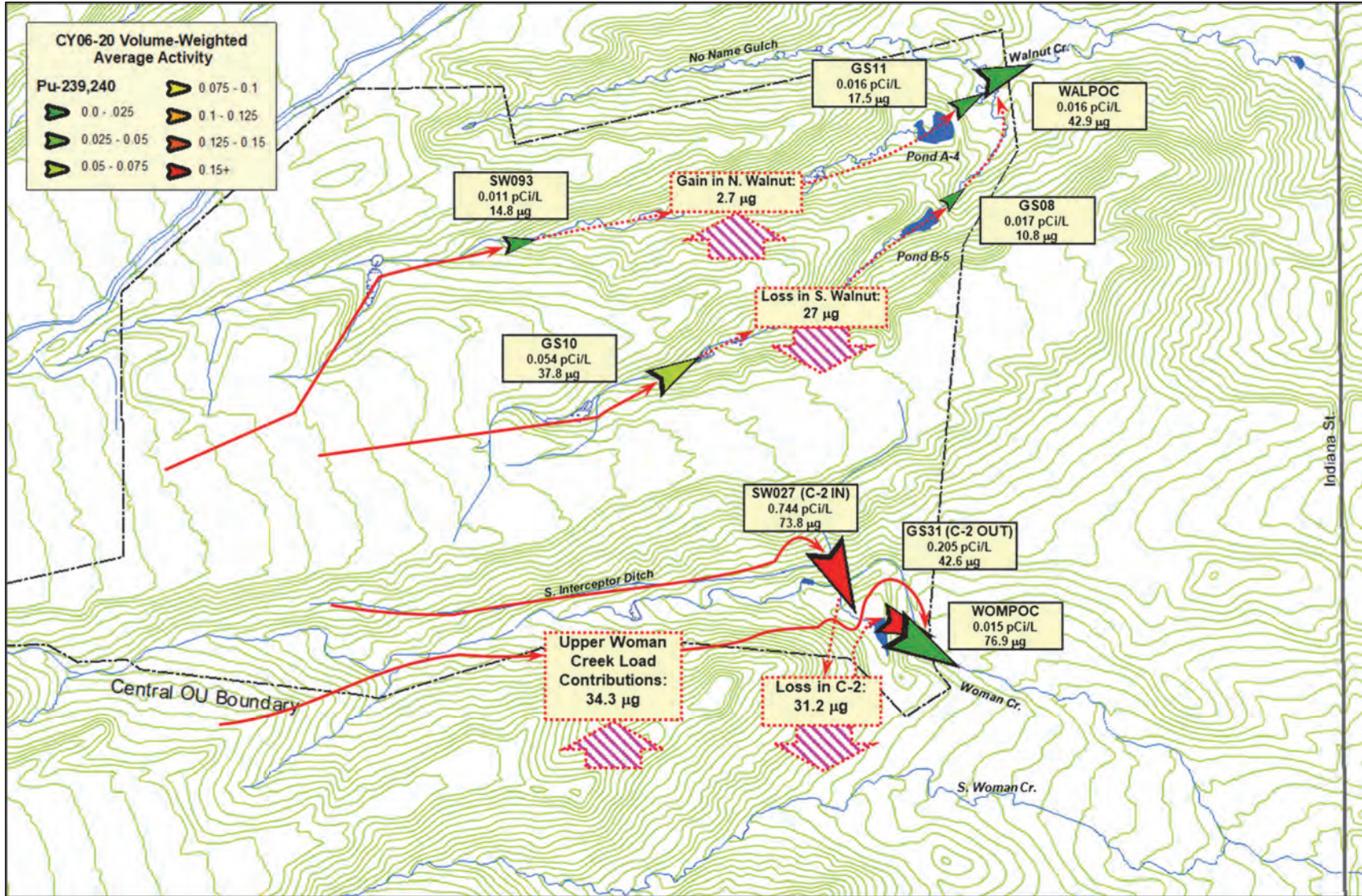
Note: Only locations with four or more results are mapped.

Figure 100. Postclosure Average Plutonium/Americium Ratios



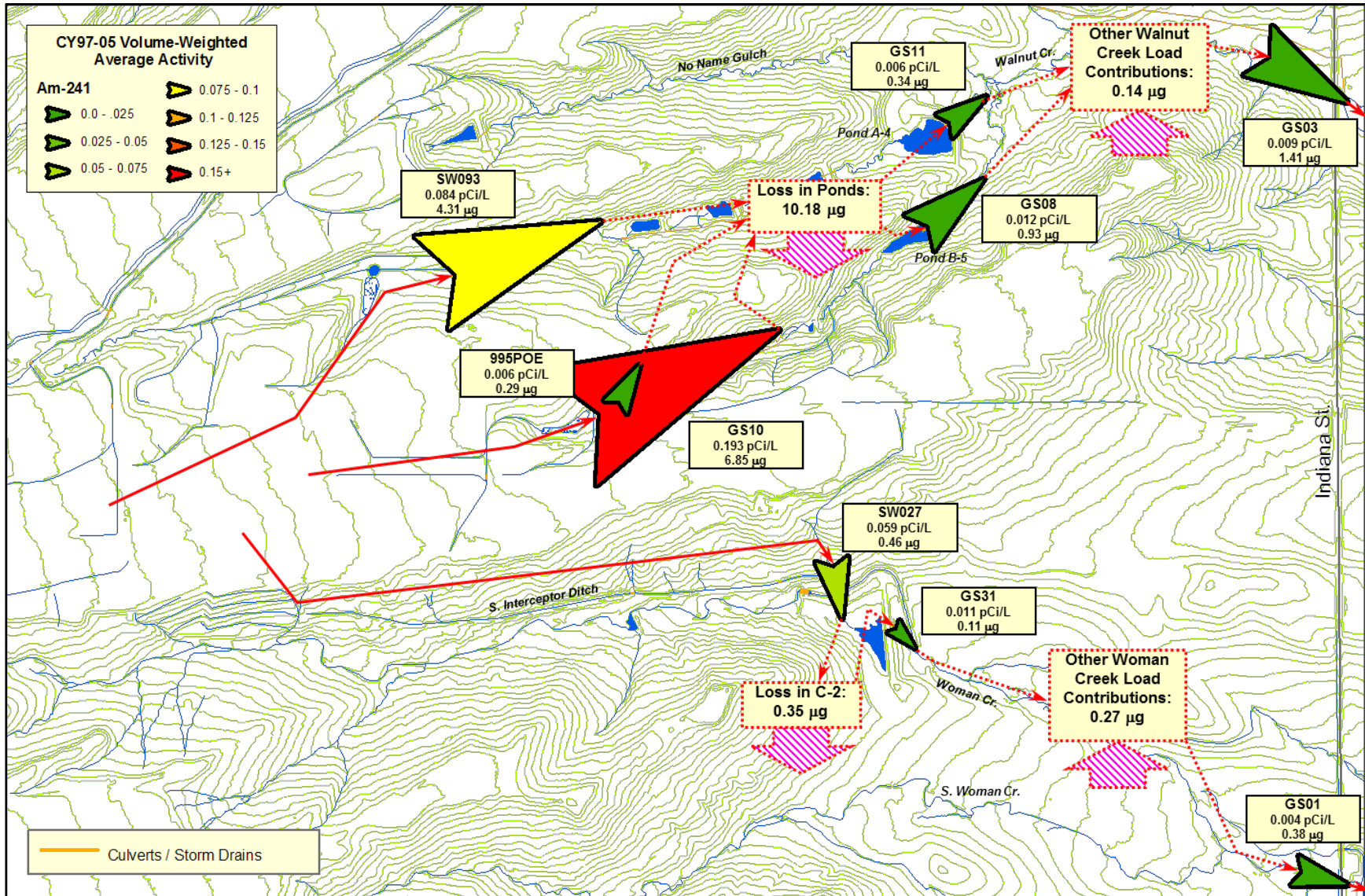
Notes: Location symbols are sized proportional to the calculated average annual load and colored according to the activity ranges in the legend. Monitoring at GS01 and GS03 was discontinued on October 1, 2015.

Figure 101. Relative Average Annual Plutonium Loading Schematic: CY 1997–2005



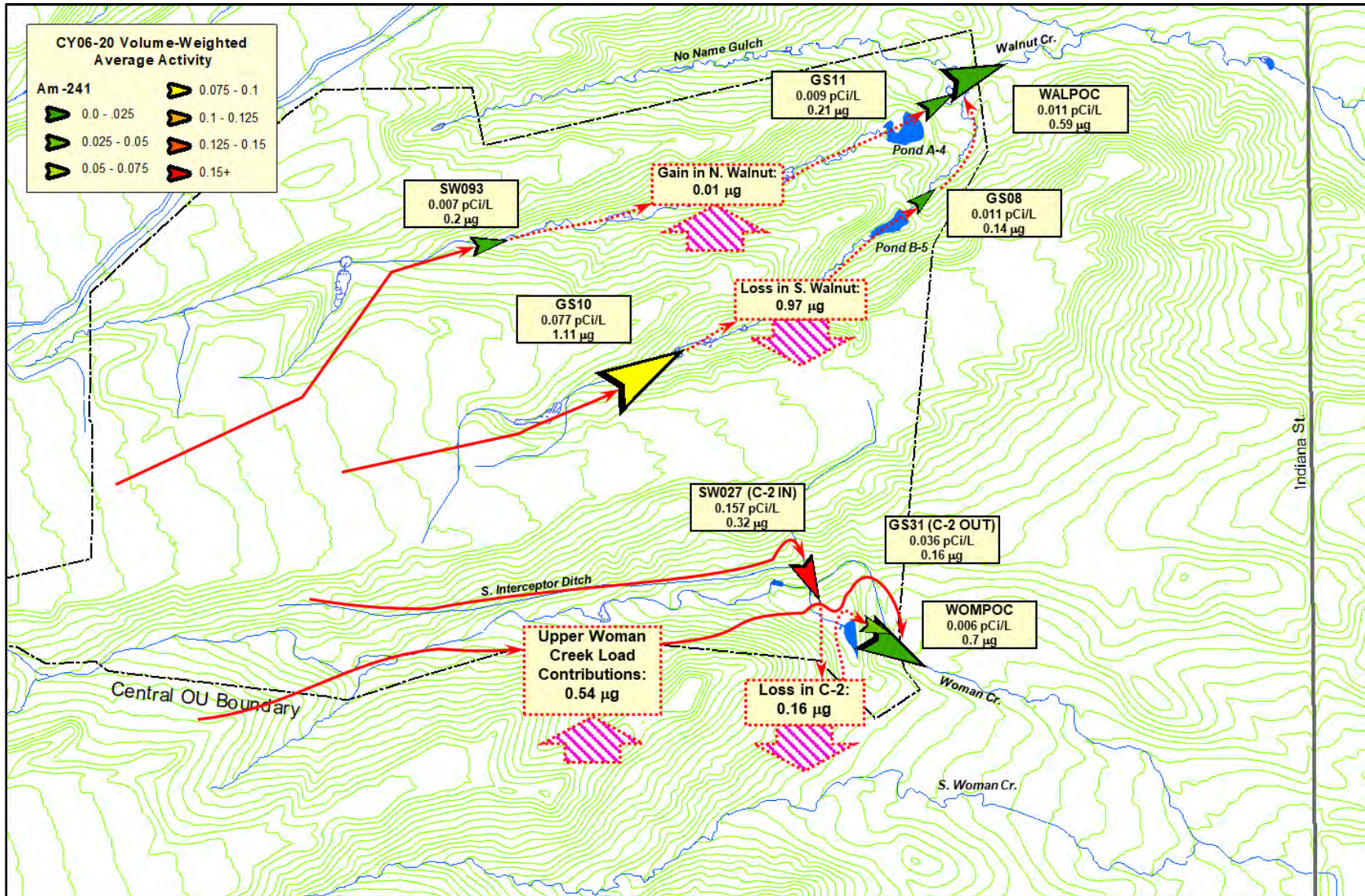
Notes: Location symbols are sized proportional to the calculated average annual load and colored according to the activity ranges in the legend. Monitoring at WALPOC and WOMPOC began in late 2011.

Figure 102. Relative Average Annual Plutonium Loading Schematic: CY 2006–2020



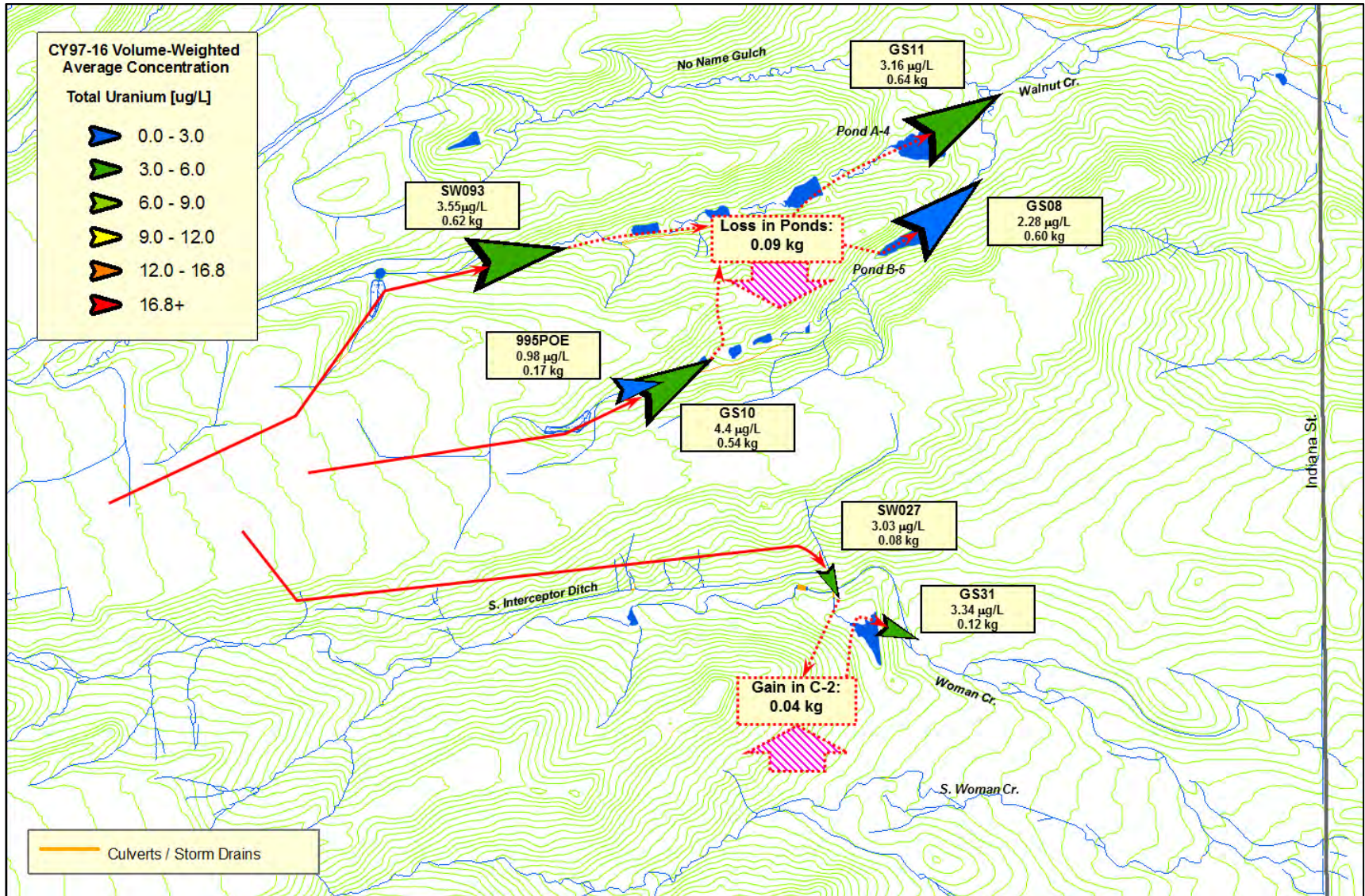
Notes: Location symbols are sized proportional to the calculated average annual load and colored according to the activity ranges in the legend. Monitoring at GS01 and GS03 was discontinued on October 1, 2015.

Figure 103. Relative Average Annual Americium Loading Schematic: CY 1997–2005



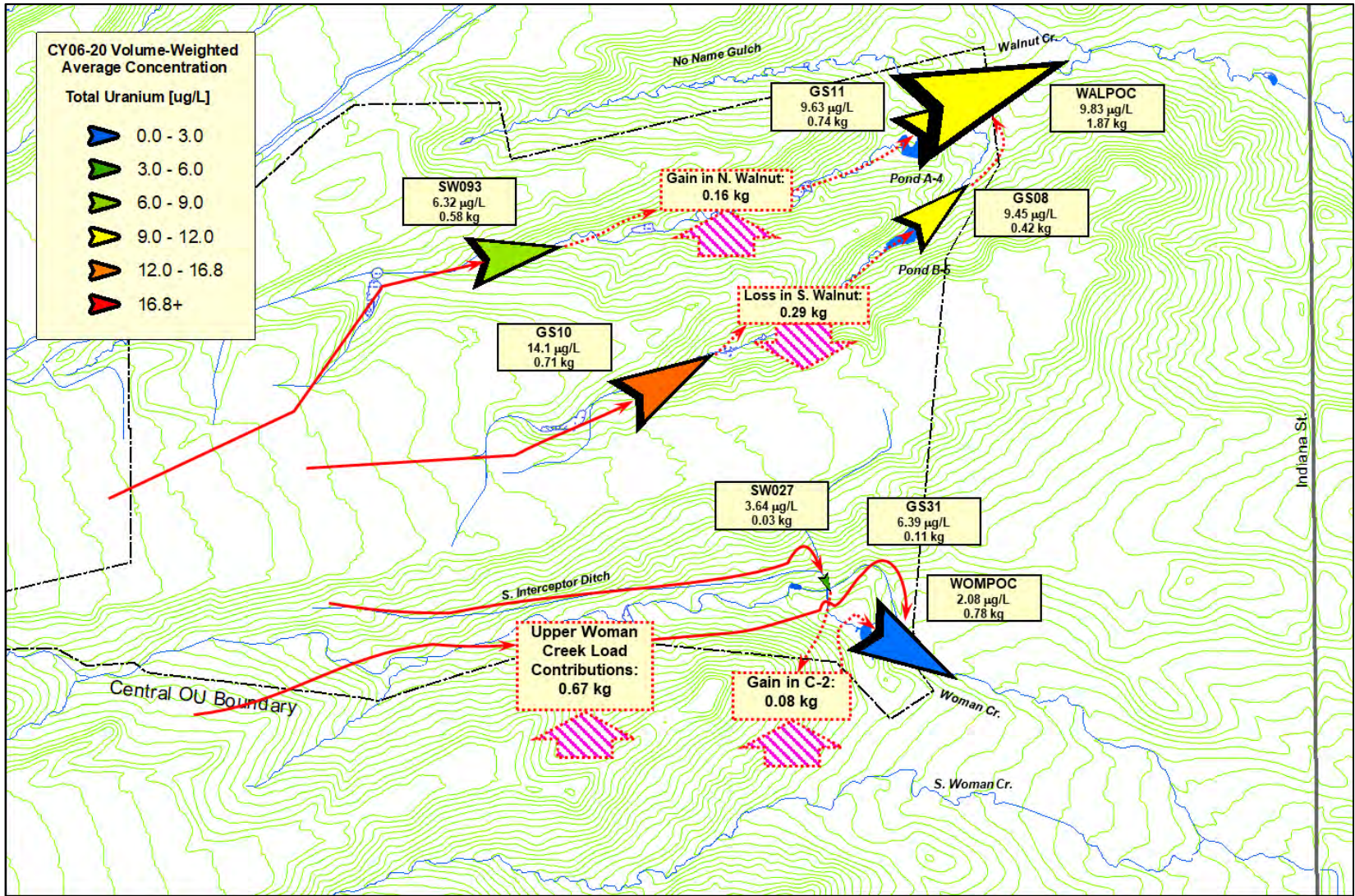
Notes: Location symbols are sized proportional to the calculated average annual load and colored according to the activity ranges in the legend. Monitoring at WALPOC and WOMPOC began in late 2011.

Figure 104. Relative Average Annual Americium Loading Schematic: CY 2006–2020



Notes: Location symbols are sized proportional to the calculated average annual load and colored according to the activity ranges in the legend. GS01 and GS03 not shown because uranium analyses did not begin until 2003.

Figure 105. Relative Average Annual Uranium Loading Schematic: CY 1997–2005



Notes: Location symbols are sized proportional to the calculated average annual load and colored according to the activity ranges in the legend. Monitoring at WALPOC and WOMPOC began in late 2011.

Figure 106. Relative Average Annual Uranium Loading Schematic: CY 2006–2020

Appendix

- Acronym List

Rocky Flats Acronym List
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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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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.