



Rocky Flats Site, Colorado, Report Summary

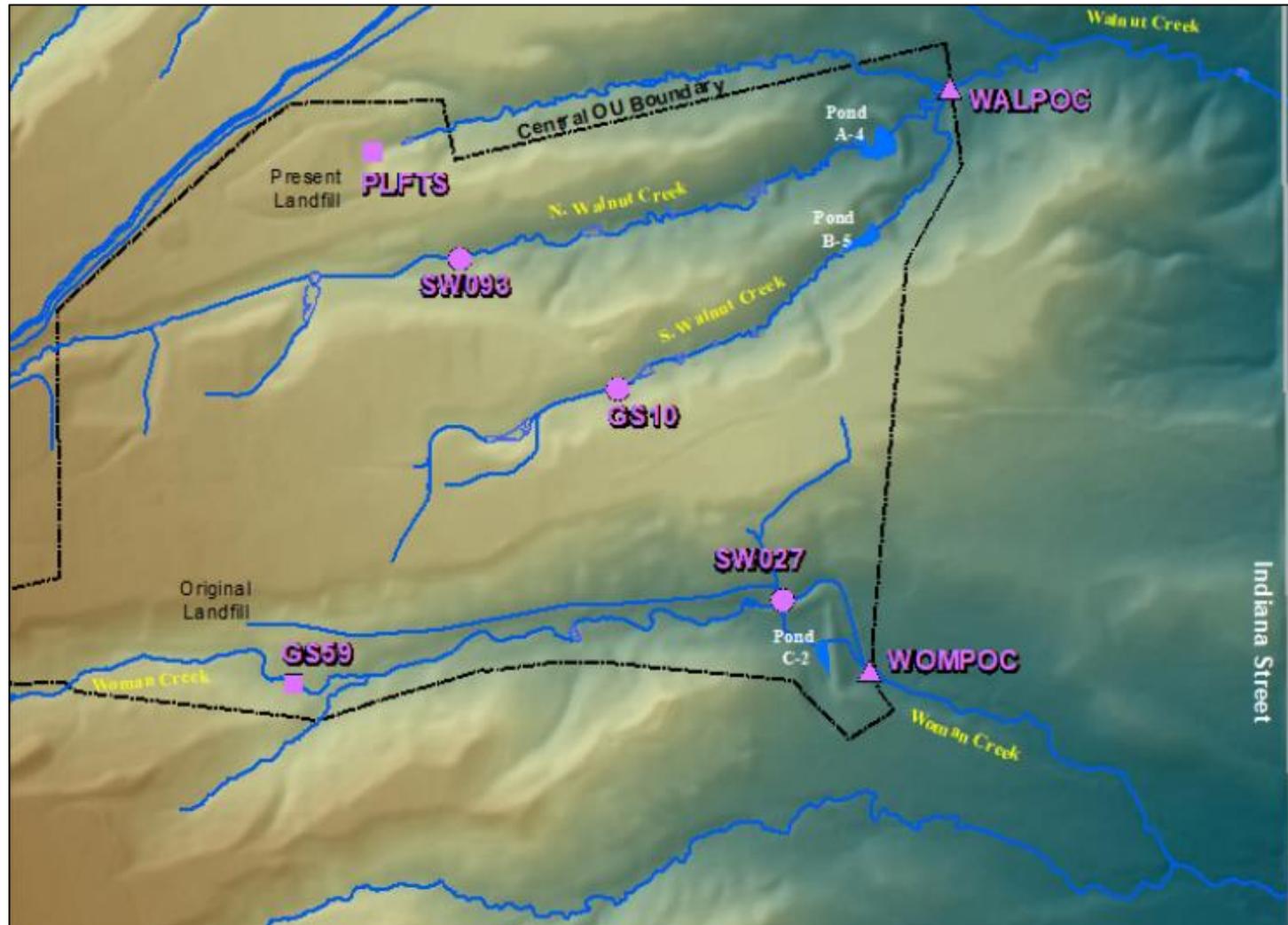
First Quarter 2023



Surface Water Monitoring



Selected Rocky Flats Legacy Management Agreement Surface Water Monitoring Locations



Landfill Performance Monitoring

- Original Landfill — Woman Creek, location GS59
 - All quarterly concentrations were below applicable RFLMA standards during the first quarter of 2023
- Present Landfill — location PLFSYSEFF (system effluent)
 - All quarterly concentrations were below applicable RFLMA standards during the first quarter of 2023



Point of Evaluation Monitoring

- 12-month rolling average uranium concentrations at location GS10 were above the RFLMA standard of $16.8 \mu\text{g/L}$ starting on March 31, 2023
 - Reportable condition under RFLMA
 - See RFLMA Contact Record 2023-01
 - Reportable condition concentrations were 18.4-19.2 mg/L
 - Uranium no longer reportable as of May 31, 2023
 - Concentrations at Walnut Creek Point of Compliance (downstream of GS10) remained well below $16.8 \mu\text{g/L}$



Rocky Flats Stewardship Council
tour at GS10



Point of Compliance Monitoring

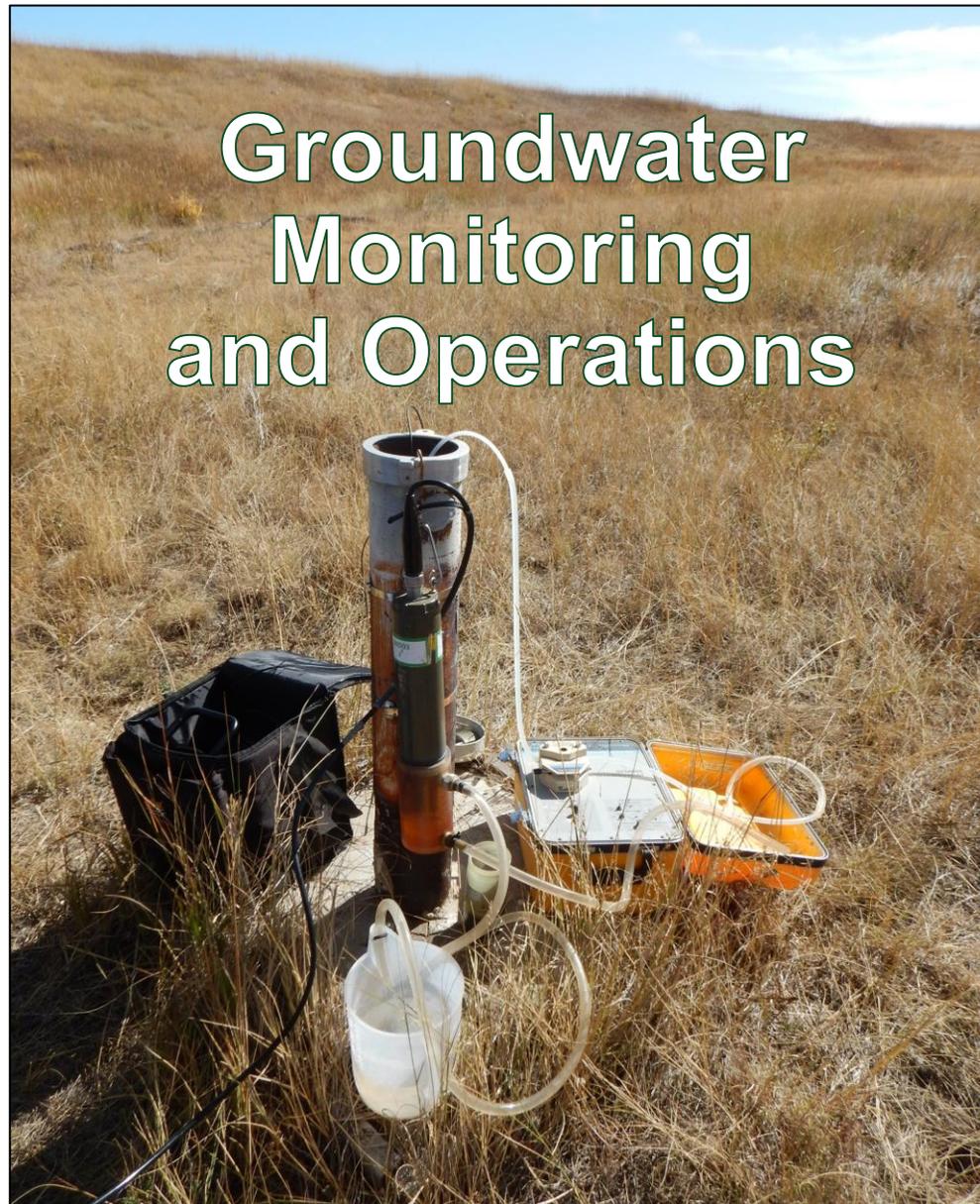
- No RFLMA POC analyte concentrations were reportable during the first quarter of 2023



Woman Creek Point of Compliance



Groundwater Monitoring and Operations

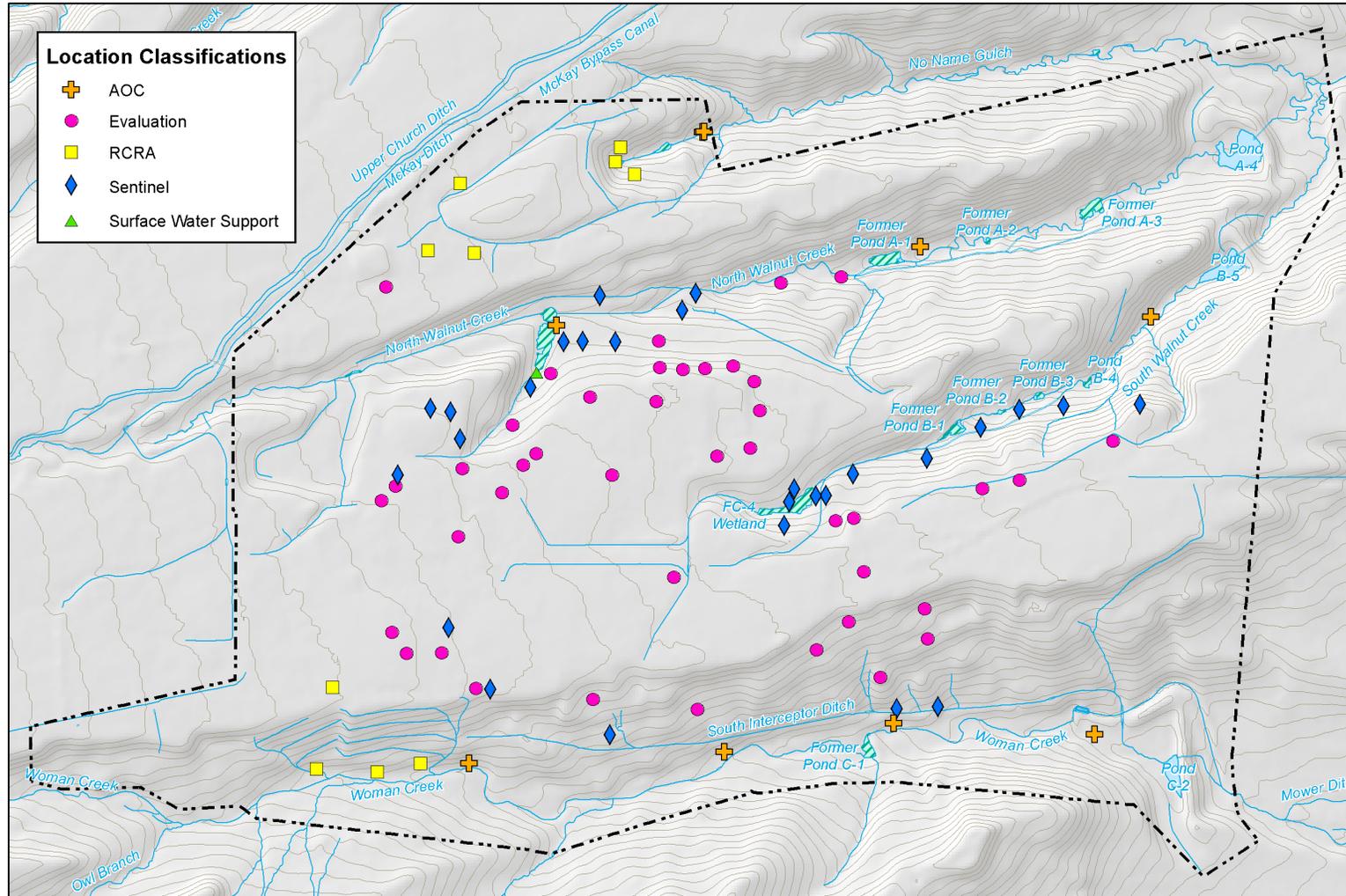


RFLMA Groundwater Monitoring Network Overview

- No changes to the monitoring network
- 10 Resource Conservation and Recovery Act wells (quarterly)
 - Evaluate potential impacts from OLF and PLF
- 9 Area of Concern wells and one Surface Water Support location (semiannually)
 - Located in drainages downstream of contaminant plumes
 - Evaluate for plumes discharging to surface water
- 27 Sentinel wells (semiannually)
 - Downgradient of treatment systems, near plume edges, and in drainages
 - Monitor for plumes migrating to surface water and treatment systems
- 9 treatment system locations (seven semiannually, two quarterly)



RFLMA Groundwater Monitoring Network

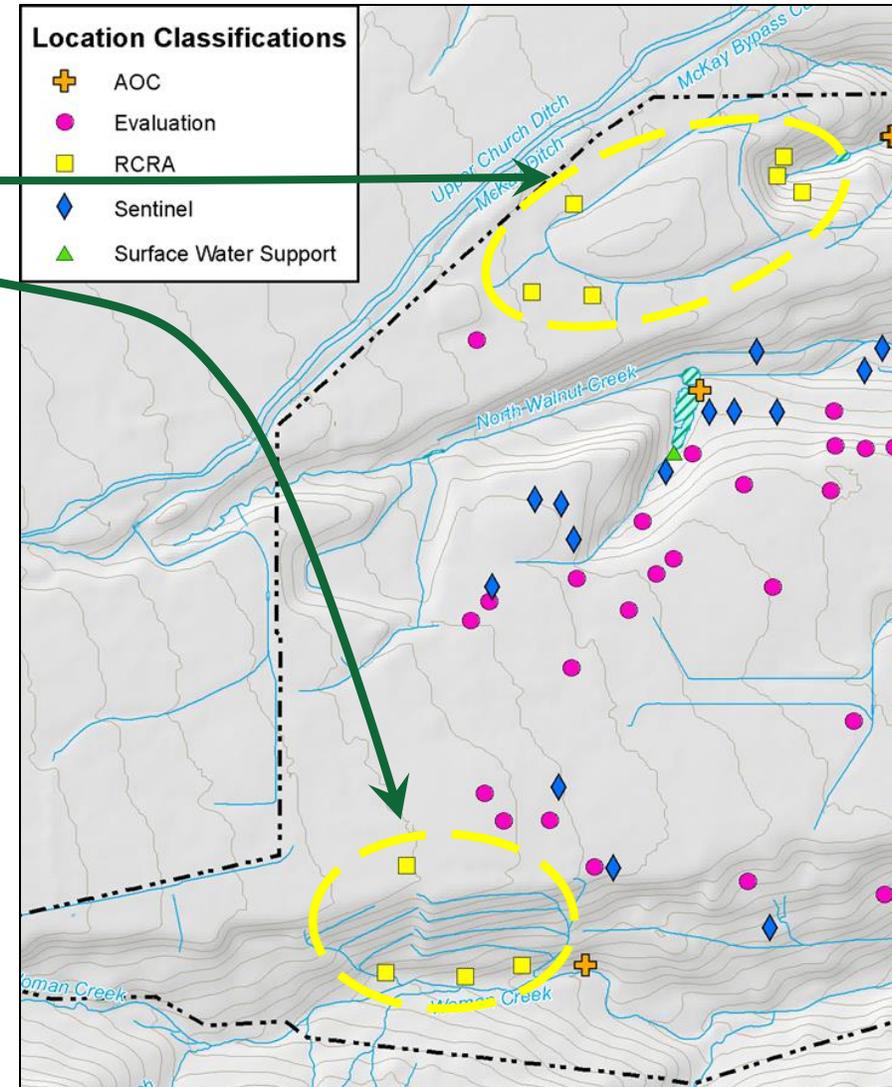


Groundwater treatment system locations omitted for clarity



RFLMA Monitoring in First Quarter 2023

- RCRA wells monitoring OLF and PLF
 - 6 at PLF
 - 4 at OLF
- Results were generally consistent with previous data
 - Statistical evaluation will be included in the annual report for 2023



Other Activities in First Quarter 2023

- Solar Ponds Plume Treatment System
 - Continued uranium treatment testing
 - Sub-zero cold snaps caused freezing of some components, but supported planned testing under extreme conditions
 - Design of full-scale uranium treatment component scheduled to begin in late 2023
 - Planning for subsurface effluent discharge gallery maintenance in April 2023 (see CR 2022-05)



Uranium treatment component testing lab
at the SPPTS





Site Operations

North Walnut Creek Hillside

Quarterly Sign Inspections

- RFLMA physical control
- Signs inspected quarterly
 - Signs reattached or replaced as needed

Additional Inspections

- Inspections of former building areas (B371, B771, B881, and B991) as a best management practice
 - Conducted quarterly and as a response to a significant precipitation event



Site Operations: Present Landfill

- Performed quarterly inspection on February 21, 2023
- No inspections in response to significant precipitation events were required in the first quarter
- Landfill is in good condition
 - No issues identified during inspection



PLF east face



Site Operations: Original Landfill

- Monthly inspections performed on January 17, February 21, and March 23, 2023
- No inspections in response to significant precipitation events were required in the first quarter
- In addition, OLF is walked down weekly as a best management practice
- Routine maintenance performed on berms, channels, and erosion controls
- Landfill in good condition
 - No slumping observed
- Settlement monuments surveyed quarterly
 - Vertical settling at each monument was within design limits



OLF Berm Seven with
Turf Reinforcement Mat



North Walnut Creek Slump

- Slump monitoring points are surveyed monthly as a best management practice
 - Data indicate the NWCS moved 0.1 foot during the first quarter of CY 2023
 - Data from visual observations and monitoring show slope creep (approximately 5 feet lateral movement since August 2017)
- Groundwater elevation measurements in piezometers continued in 2023
- We continue to collect data and evaluate it to develop a more comprehensive path forward for the hillside area





Ecological Monitoring



Rabbit captured on wildlife camera

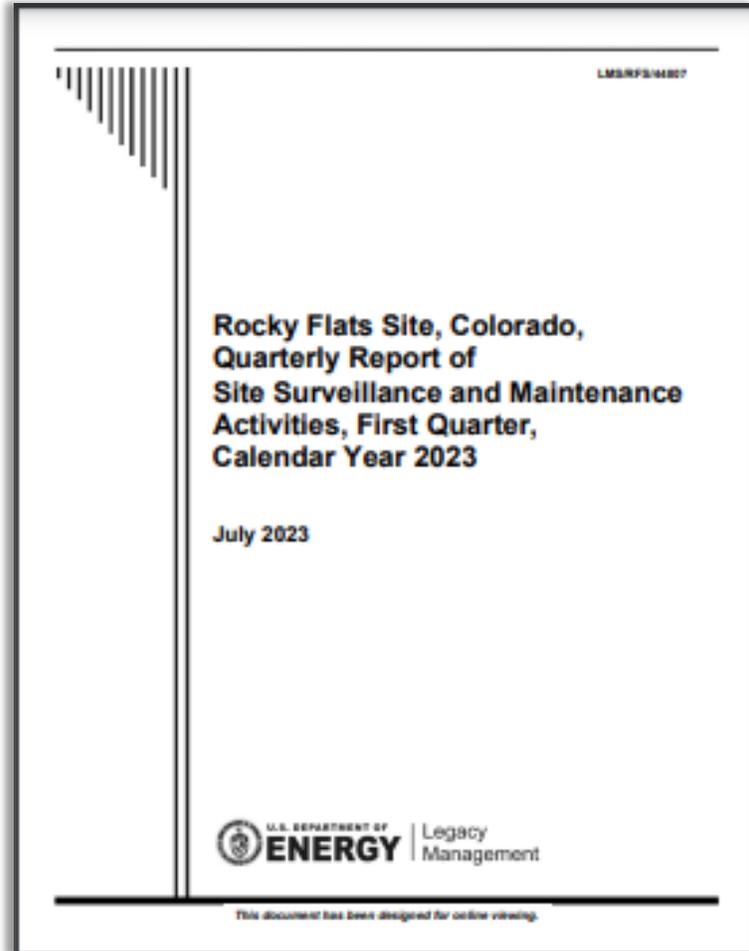
Ecological Management and Monitoring

- Vegetation
 - Reseeding — NWCS exploratory test pit disturbance area
 - Interseeding — native grass and shrub seed mix
- Wildlife
 - Prairie dog survey — no active prairie dog towns within the COU
 - Wildlife movement — added wildlife crossing



Elk using wildlife crossing





For more information, visit:
<https://www.energy.gov/lm/rocky-flats-site-colorado>

For additional details on any items noted here, please view the Rocky Flats 2023 first quarter report at:
https://lmpublicsearch.lm.doe.gov/lmsites/44807_rfs_1q23.pdf

