

**ROCKY FLATS RSI ANNUAL REPORT 2024**

**Video Meeting Recording Transcript**

**6/17/2025**

**Colleen Maleski:** Hello and welcome to the *Rocky Flats 2024 Annual Report* public meeting. We'll wait just a moment while folks are entering from the waiting room.

I just want to welcome everyone: Good evening and welcome to the U.S. Department of Energy Office of Legacy Management's *Rocky Flats Site 2024 Annual Report* meeting. My name is Colleen Maleski, and I'll serve as your host and facilitator this evening. Please note, this meeting is being recorded. The link to this recording will be publicly available on the DOE website after the meeting.

If you need technical assistance at any time, please feel free to use the chat function to communicate to our tech support. And if you would like closed captions, those are available on the bottom of your screen. Next slide please.

So, our goal this evening is to share key highlights from the *Rocky Flats Site Calendar Year 2024 Annual Report*. The full report is available on the Rocky Flats website and the direct link is available in the chat. I will note it is a lengthy document, so first and foremost know that it may take a few minutes for you to download.

But that's also why we're here tonight. We are here to provide you with insights from the report, so you don't have to read through all five volumes. You'll get the highlights here tonight. I'm joined by many subject matter experts who are going to share a brief history of the Rocky Flats site, as well as an overview of the surface water monitoring, groundwater monitoring, site operations, and ecological monitoring.

The presentation will be followed by a time for Q&A as well as a public comment period. We'll have approximately 15 minutes for each of those. And we'll be ending this evening by around 7:30 Mountain Daylight Time. I'll be going over the key details of those Q&A and public comments. Just on the next slide.

So, we are so grateful that each of you have taken the time out of your evening to join us. We do ask that you follow a few engagement norms to create a respectful environment for your fellow community members. So first and foremost, we invite you to listen, to understand, thoughtfully consider all of the information shared, be respectful of one another and the staff, and assume positive intent of all engaging in the meeting tonight.

Note, to ensure that we are distraction free, participant microphones and cameras will be muted. And so, you can use the Q&A function in zoom, to submit questions at any time throughout the webinar. So, I'll invite you to take a moment to find that Q&A button. It should be in the toolbar at the bottom of your screen. You'll click on that. You'll be able to type your question into the Q&A window and click send. I will note we will save all of the questions for the end of the presentation. Know that we may also combine similar questions, and we will be prioritizing questions that are most relevant to the content shared tonight about the *2024 Annual Report*. And we'll be sharing out an email address if your questions don't get answered this evening if we run out of time. Or, if they're not as relevant to the topic tonight, we will be sharing an email address where you can get those questions answered. And following the Q&A, we will open the floor for public comment. I'll be giving many more instructions at that time. But we'll be inviting you to raise your hand. And that's the time when you'll be asked, and be invited to be able to unmute to provide that public comment. But again, I'll be going through all of those details when we get to that portion of the meeting.

So first and foremost, let's get started. I'll now invite Michelle to provide an overview of the Office of Legacy Management and the Rocky Flats Site.

**Michelle Franke:** Yeah, thank you. Next slide please. Thank you all for joining tonight. I am Michelle Franke, the site manager for the Rocky Flats Site. I work for Department of Energy, Office of Legacy Management. And I'm here tonight to give you a very brief overview of the Office of Legacy Management and what we do, and then a brief history of the Rocky Flats site for those who aren't as familiar with it or are maybe tuning in for the first time. And then I'll turn it over to our subject matter experts to talk about each section of the 2024 annual report.

So, the Office of Legacy Management was established in 2003 by the Department of Energy to manage and maintain sites that were used during the Manhattan Project or the Cold War for various purposes and then were cleaned up and may need some long-term stewardship of the sites or recordkeeping of the sites. And so, we are the ones who get those sites after

they're cleaned up and closed, and ensure that we're meeting our post-closure obligations and ensuring that the sites remain protective of human health and the environment, and that the records are maintained.

And to do this work, we have a large contractor staff that helps us complete things like groundwater monitoring treatment system maintenance, records keeping, and public outreach as well. And so, you can see that the Office of Legacy Management has sites ranging from Alaska to Puerto Rico. So, all across the country, very diverse sites. And, of course, the one we're here to talk about tonight is Rocky Flats, and we have over a dozen dedicated subject matter experts on this site conducting monitoring and maintenance, which is what we're here to talk about.

So, with that, next slide please. All right. So, a brief background of the Rocky Flats Site. Construction of the Rocky Flats plant began at the site in 1951. And from the early 1950s through the 1980s, the plant produced key nuclear weapons components, namely, plutonium pits or triggers for those nuclear weapons. Production at the plant was done in what was known as the industrial area, which was a 380-acre area that had over 800 structures and you can see what that looked like in the photo on the top right.

Production at the plant closed briefly in 1989, or paused briefly in 1989 to address environmental and safety concerns that were discovered by the FBI and EPA during their investigation of the plant the same year.

And then production started to ramp up again in the early 1990s, but ultimately, with the ending of the Cold War, the mission at the site changed, and so the site transitioned to the Rocky Flats closure project, and cleanup and closure of the site began. So cleanup and closure of the site occurred from 1995 through 2005, and included demolition of the 800 structures on site, as well as a lot of removal of contaminated soil, installation of treatment systems, and just general grading of the site to return the site back as close to the natural landscape as possible.

So, after closure and cleanup was completed in 2005, the site transitioned to a long-term surveillance and maintenance program, which meant that someone needed to take

care of the site long term since there was some residual contamination remaining on site after closure.

And so, at that point, we retained what is known as the Central Operable Unit that stayed with Department of Energy. And there's a map on the next slide depicting what that looks like. But that's essentially the center— thank you— of the former site. So, you can see there the Central Operable Unit outlined in yellow, and that encompasses the former industrial area as well as a small portion of the former security buffer, which was largely undeveloped land that surrounded that industrial area.

So, again, we retained the Central Operable Unit, and that's where we conduct our monitoring and maintenance on the site. And that's what we're here to talk about tonight. And that's what's documented in our *2024 Annual Report*. And then the surrounding area, which is outlined in yellow— or sorry, in green— was transferred to the U.S. Fish and Wildlife Service to eventually become the Rocky Flats National Wildlife Refuge. And this was done because the site was investigated during cleanup and closure and released as unlimited use, unrestricted exposure through what is known as the CERCLA Superfund cleanup process. So essentially, there was a lot of sampling done. There's a lot of investigation done that determined that that portion of the site could be turned into a wildlife refuge and would be safe for that use and for the public to use.

At the site, the monitoring that we do, the reporting we do, the maintenance we do is all governed by what is called the *Rocky Flats Legacy Management Agreement*, which is also known as the RFLMA. And that is a tri-party agreement between ourselves, the Colorado Department of Public Health and the Environment, and the U.S. Environmental Protection Agency. And those are our two regulators at the site.

And the *Rocky Flats Legacy Management Agreement* outlines, as I said, the monitoring and maintenance we do, as well as the reporting. And so, that's what governs our activities on site. And it also includes a consultative process with the regulators. So, if there are issues on site, we can consult with them and determine a path forward to ensure that the site remains protective of human health and the environment.

Next slide please.

So, I'll give you a few quick highlights from the annual report before I turn it over to our next subject matter expert. Here, first and foremost, water quality at our points of compliance, which is where water ultimately leaves the site, met all of our standards that are in the *Rocky Flats Legacy Management Agreement* in 2024. We didn't have any violations of institutional or physical controls observed at the site, and no adverse biological conditions were observed.

Our team took a total of 326 groundwater, surface water, and treatment system samples during calendar year 2024, and those are all documented in the—in the annual report. And we'll discuss some of them today. Additionally, we completed ecological monitoring that shows that revegetation efforts at the site have been and continue to be very successful. And we have a wide variety of wildlife that utilize the site.

And lastly, we completed design and on-site preparations for the full-scale uranium treatment component, which will be installed at what is called the Solar Ponds Plume Treatment System. And we're hoping to install that treatment system later this year. So, you'll hear about it during next year's annual meeting and in a future report. And the design and on-site preparations will be discussed by the subject matter experts today.

So, if you have any questions as they go through that information, feel free to drop them in the Q&A. So with that, I will turn it over to the next speaker.

**Colleen Maleski:** Thank you, Michelle. I'd like to now welcome George. He'll be presenting tonight on the surface water monitoring. And as a reminder, if you have any questions about the content being shared, you are welcome to put those in the Q&A feature throughout the presentation and we'll be answering those at the—at the end of the presentation. Thank you. George, over to you.

**George Squibb:** Good evening, everybody. My name is George Squibb. I'm the surface water lead at the site and I've been here for 33 years, working with surface water monitoring. So, I'll be talking about the surface water monitoring part of the annual report,

and then I'll turn it over to John. And Karin will talk about the other aspects of— of the report.

So, I'll start off by— I want to talk about, sort of, like, sort of the how and the where and the when we do sampling. So, this map here shows, as Michelle noted before, the— the dotted black outline is the Central Operable Unit. So that's the— the portion— the land that the DOE maintains. And— and as she mentioned, our points of compliance, the two— the two locations on the right side of the map, that's actually east and downhill and downstream. Those— those pink triangles are our two points of compliance.

On the north is WALPOC, which is our location on Walnut Creek. And then, in the south, at the bottom of the— of the map is WOMPOC. That's the location on Woman Creek. Now, these locations - we have a specific set of analytes that are the analytes of interest, and these are the analytes that occur at those locations at sufficient concentrations that warrant monitoring.

So, at both of our points of compliance, we monitor for plutonium, americium, and uranium. And then up at WALPOC, we also monitor nitrate because it's downstream from the— from the solar - former solar ponds— ponds area— plume area. So, we have nitrate contamination in that creek.

The way we monitor is we use automated monitoring. So, we have— at these locations, we have continuous flow measurement. And that flow measurement, done by a flow meter, can control an automated sampler that collects samples. So, the higher the flow rate, the quicker we collect samples; the lower the flow rate, the slower in frequency we collect those samples.

Those samples are collected into a large bottle, what we call a composite sample. And we periodically go out and retrieve that large bottle. And then, we send the water into the laboratory for analysis. So, what that allows us to do is allows us to, say, collect a composite sample over two or three weeks. And then the concentration that we measure in that bottle is representative of the water that flowed off the site during that period.

Now, both of these locations are positioned where they are because they monitor all of the surface water that flows off the site. So, in the— in the—the two drainage basins that

drain the site. And the site is configured so all the water goes to these two— these two locations. Once we have that information, we calculate compliance parameters to demonstrate compliance with our water quality standards.

At both locations, the Remedy performance standard measurement is the 12-month rolling average of the— of the constituent concentrations. And then, we also— and we also calculate the 30-day average. Either of those averages, if they exceed our water quality standard, can trigger a reportable condition. And as Michelle discussed previously, a reportable condition is an issue that triggers a consultation between the three RFLMA parties. And then the RFLMA parties get together and decide if there's any mitigating action or appropriate response based on that reportable condition.

Moving upstream, the three locations that are in green there — I guess they're green circles. Those are what we call our points of evaluation. Those are— those locations are positioned closer to the former industrial area. So, they're closer to the source terms. At those locations we monitor for, again, plutonium, americium, and uranium.

But we also monitor for four metals: chrome— chromium, beryllium, cadmium, and silver. Those locations are a little different than the point of compliance is as— they're meant as, sort of, an indicator location for potential water quality issues that could occur at our downstream points of compliance.

That said, we also calculate 12-month rolling averages at those locations, and those 12-month rolling averages, if they were to exceed our water quality standard, can also trigger a consultation between the RFLMA parties to determine a path forward or any kind of response.

The last two locations are— I guess they're like, magenta-pink circles. Those two locations are— are— are what we call our surface— our surface water— our surface water performance locations. And they look for any kind of impacts to surface water that could be originating with the present landfill, in the north on No Name Gulch.

And it's called the present landfill, but it is a closed landfill.

And then on the south is the original landfill in Woman Creek. Those locations we monitor for volatile organic compounds, things, you know, that's like— I guess an example

would be like, say, brake cleaner or a solvent. We— and we also look for semi-volatile organic compounds at the present landfill treatment system and— and metals at both of those locations.

I think that's all I have for this slide we can go to—

Now, I'll just briefly go over the results for 2024. For the performance monitoring in Woman Creek, downstream of the original landfill, all of the, the samples during the year— which we collect quarterly grabs and continuous flow paced samples at that location— they— all those concentrations were acceptable and below the standards during the year. At the present landfill, with the exception of boron, all constituents were below the applicable standards and acceptable during the year. That system is primarily designed to treat, volatile organic compounds and not metals. We do see boron over the standard. And we have pretty— pretty— pretty routinely for some time now.

The currently— the RFLMA parties are in the process of determining a path forward regarding that boron and whether or not there should be any mitigating action or— or— or response. You can see some of those contact records discuss that path forward there out on the website. And you can also see, discussion in previous reports.

Can we go to the next slide, I guess, please?

Again, as I mentioned, our RFLMA points of evaluation— that's actually a picture there of our— our point of evaluation on South Walnut Creek — that's GS10. And during the— the entirety of calendar year 2024, there were no concentrations that caused reportable conditions at our points of evaluation.

Next slide please. And the same—one back, one back, one more please. Yep.

So, the last there is our points of compliance monitoring. And that's a picture of WOMPOC on Woman Creek. And we had no reportable conditions at our points of compliance during 2024 either. So, I guess I'll hand it over to John, now.

**Colleen Maleski:** Thank you, George. Yes, we'll be transitioning from surface water to groundwater monitoring. So— and operations. So, John, I will welcome you to join us and to share your update.

**John Boylan:** Okay. Thank you. Thank you very much. My name is John Boylan. I also work for RSI, the contractor to DOE for the Rocky Flats Site. And I'll tell you about the groundwater monitoring and operations in calendar year 2024.

The monitoring network is divided among four different classifications of wells. And then there are also treatment system locations. And this— the bullets that you see here, spell out the different classifications at the top. We've got 10 what we call RCRA wells, or Resource Conservation and Recovery Act. That's a legal act. Those wells monitor for impacts from the two closed landfills. Again, that's the original landfill and the present landfill. Even though the present landfill isn't presently operable, it's closed, we still call it that. Those wells are monitored quarterly.

And then we have nine area of concern, or AOC wells, and a surface water support location that are monitored semiannually. These locations have reportable conditions defined for them. George has described what reportable conditions referred to. This is where, the concentrations reported at a location may meet the criteria in the RFLMA, the *Rocky Flats Legacy Management Agreement*, to cause a consultation among Department of Energy, EPA, and the State to determine a path forward. The AOC wells and the surface water support location are the only such groundwater monitoring locations that have reportable conditions defined for them. And that's set forth in the RFLMA if you want to look at it for more— more information. They're located— these particular locations are in the bottoms of drainages. They look for contaminants that might be discharging to and impacting the surface water quality.

Then there are 27 sentinel wells. Those are— also sent— pulled semiannually. They're downgradient of plumes — groundwater contaminant plumes — also downgradient of treatment systems. And within the drainages they look for evidence that the plumes might be migrating towards the surface water, or maybe there is a problem at a treatment system.

And then there are 42 evaluation wells. They're only sampled every other year because they are largely within plumes, and up in the top of the— on the pediment surface

in the center of the Central Operable Unit, or what we call the site. Conditions don't change very rapidly there. And so, they only require monitoring every other year. And we do those—monitor the evaluation wells in the second quarter of even numbered years. So that included calendar year 2024.

And then, as I mentioned before, the nine treatment system locations, seven of them are sampled semiannually and two are quarterly.

Next slide.

This network was established after many years of pre-closure sampling. We had approximately 1,500 monitoring wells and over the years of sampling those we defined the areas of groundwater contamination being impacted by the historic operations. There are all within what's now called the Central Operable Unit, or the site, that's managed by DOE.

The impacted groundwater is monitored using the 88 RFLMA monitoring wells that I just summarized in the last slide, that are defined and divided up into those classifications. And then the samples are analyzed for constituents that were selected in the early 2000s based on the nearby facilities or features, such as a building or some sort of process, the contaminants that may have been identified during the pre-closure characterization work, and the monitoring objectives. And that's all spelled out in the RFLMA as well in some of the tables there.

Next slide.

This map shows the distribution of the monitoring wells at the site. Similar to George's map, the dotted dashed line outlines the Central Operable Unit. And you can see the present landfill on the north, the hatched area, and the original landfill on the south. And both of those are monitored by the RCRA wells — those are the yellow boxes upgradient and downgradient of those landfills.

And if you look closely, you can see — for instance, to the right of the present landfill — you can see orange plus, and to the bottom right of the original landfill, you can see an orange plus. Those are AOC wells. There are some other AOC wells in the drainages, but they're harder for me to describe in words how you can find them. But they're within the drainages, if you look for them. The pink dots are the evaluation wells. Those are the ones

that are monitored every other year, and they are typically in source areas or close to source areas. And then the blue diamonds, those are the sentinel wells, that are monitoring largely the pathways to surface water.

Next slide.

So, as I mentioned earlier, in calendar year 2024, we monitored all of the 88 wells plus the surface water and treatment system locations. The results that we achieved— that we obtained through the laboratory analyses were generally consistent with what we’ve seen in our previous years. The RCRA wells monitoring the two closed landfills produced statistical results almost identical to what we’ve seen in previous years.

And I should point out that the RCRA wells, the sentinel wells, and the evaluation wells all go through a variety of statistical evaluations of the data, that are also described in the RFLMA flowcharts in “Attachment 2” to the RFLMA.

So, the results for the RCRA wells were about what we’ve seen every year in the past decade plus.

The evaluation wells in the source areas continue to produce samples with our highest concentrations, as you’d expect, since they’re largely sited within the plume source areas. The AOC wells downstream of the contaminant plumes, these are the ones that have reportable conditions defined. Those continue to produce samples that met the applicable RFLMA standards. We didn’t have any reportable conditions in 2024.

And if you want more information, a lot of it is available in the *2024 Annual Report*. Which as I think it was, maybe Michelle, or Colleen said, is very large. It’ll take several minutes to download. There’s five volumes, hundreds of pages, thousands— over a thousand if you include the appendices. So, give it some time.

Next slide.

This chart presents just a summary of data from one of our groundwater treatment systems, the East Trenches Plume Treatment System. And this particular treatment system, the ETPTS, as we call it, it met all the applicable RFLMA standards in 2024, as it has done since we did a large-scale reconfiguration of that treatment system. It treats— it actually treats water from what used to be two different treatment systems. And now the

water that's collected at one of them is no longer treated at that system. It instead is piped to the ETPTS for treatment. The predominant contaminant is trichloroethylene. It's a chlorinated solvent. And it's also called TCE. And so, if you look at the chart, the red dots and line shows the— the total— the total concentration of these organics in untreated water that's received at this treatment system.

And then the green dots and line shows what's coming out of the treatment system after this— after the water has been treated. The heavy black vertical line shows when the site closed; you can see that is in late 2005. So, you're looking at data from 2000 through the end of 2024. And you can see, partway through, like a little over halfway through that time frame up, until about 2013, 2014, the green dots show concentrations were above that— the TCE standard, signified by the dashed purple line. And there - then there are some white lines, vertical lines. And those show when we changed the method of treatment from a pass-through media, where the water is just routed through a treatment media — and instead we hooked it— the water— we hooked up a pass— a solar-battery powered air stripper, which is a method of water treatment.

And as you can see to the right of that— those white lines, treatment was much, much more effective after that. So, since that time, we have consistently met our standards. And actually, as you can see, the last two values for the effluent, being a hollow white square on the— on the far right, we had non-detect for TCE. That meant that the lab could not detect it — it was lower than the detection limit, which is much lower than the standard.

Okay. Next slide.

Effluent from the Solar Ponds Plume Treatment System, the SPPTS, met the RFLMA standard for nitrate; that's its primary contaminant. The— we— since closure, we have expanded the collection infrastructure. We now collect more contaminated groundwater at higher concentrations than what was the case prior to closure. So, the fact that the treatment system is working that much better for nitrate is, is a good thing, obviously.

However, the SPPTS was only able to reduce the uranium concentrations, but not meet the standard required for effluent. And Michelle already alluded to the fact that the

uranium treatment component, or UTC, will be installed in the summer of 2025. And that is designed to remove uranium to meet the standard in RFLMA. And you'll be hearing more about that, in our— well, you won't be hearing about it, you'll be reading about it if you follow our quarterly reports. We'll update that content with respect to the UTC.

Uranium at the downstream point of compliance did meet the RFLMA standard.

Next slide.

During 2024, we did some preparation for the incoming uranium treatment component. And this the map on the left — I'll go through a little bit of it — shows you some of what we did.

The uranium treatment component will be housed within a cargo container, a Conex . And it's being prefabricated in the state of Washington. It will then be shipped down here later this summer, and installed. Prior to that installation, to prepare for it, we did a lot of utility work and that included both plumbing and electrical, just so that when that box arrives, it can be placed in the right place on the ground. And the plumbing— the pipes will be there. The electrical will be there. We'll just hook it up and, and we can throw the switch, test it, make sure it works OK. And then go for treating.

What this map is showing you— it's an aerial photo, and the orange lines are subsurface collection pipes that collect groundwater and route it downhill. Downhill is towards the top of that photograph.

You can see that there's a green line that intercepts most of those orange lines. That's the collection trench for the SPPTS, the treatment system. So, those orange lines that are cut across by that green line— the water in those orange lines, the pipes, empty to that trench and go into the treatment system to be treated. Water in the orange lines that are farther downhill, that is, above and— on that photograph— above the green line, that water is collected in the sump and pumped up to be treated also.

And then in 2024, we collected— we installed a new collection feature called the attenuation feature. And that is that meat cleaver shaped, kind of turquoise blue, shape.

And, what that is, is a, kind of a large, collection— covered collection— designed structure to which we connected a pipe — that you can see the dashed line that's also in

that same blue shading — that connects to the dashed orange line, which is a part of the old, orange array of subsurface pipes. But, from our exploratory excavations a couple years ago, it didn't look like it was fully connected to that. And so, rather than let the groundwater seep through the hillside, you can see it would be intercepted as it goes towards the north. It would be— it would have opportunity to be intercepted by several other orange lines. But we just installed this new pipeline to give it a direct pathway to that attenuation feature, the AF, from which it'll go into the treatment system.

So, all of that was done in preparation for this UTC coming in; there will be additional solar added to the— the new cargo container that will be placed to help improve the— the electrical components and give us plenty of power for the new loads that will be required.

Next slide.

We also sample five wells for plutonium and americium. These are sampled semiannually. They're sentinel wells. Three of them are downgradient of former building 771, which was one of the plutonium-focused buildings. And two are located downgradient of former building 371. As in previous years, all the data from those samples were marked as non-detect, but we still get a number. The numbers did not exceed the RFLMA standards. And I should point out that research done at Rocky Flats has shown that the groundwater at Rocky Flats is not an effective transport mechanism for these constituents. But we do monitor plutonium and americium for community assurance.

Next slide.

OK. I'm going to hand it over to Robyn.

**Colleen Maleski:** Yes. Thank you, John. So, thank you for the groundwater update. And we'll be moving next to— to site operations with Robyn. I will remind you, throughout the presentations, you are welcome to— thank you to the many participants who have already put questions in the Q&A function. And you are welcome to put those questions in throughout the presentations.

If, for any reason, you do not see that functionality, please do chat as we'll either help you find that function or, if you chat us the— the question, we can help get that moved over if you're not able to see that function. So Robyn, over to you for site operations.

**Robyn Collard:** Everybody I'm Robyn Collard, I am the project manager for the Rocky Flats site. And I'll be covering the site operations.

Next slide, please.

OK. All field activities were conducted safely and successfully. We had our annual inspection and it was with no violations or institutional or physical controls. No significant subsidences or erosion were found. Our roads were evaluated year-round. In the current year 2024, only localized and minor repairs were needed. As you can see, here's the map and you can see the hash marks of the present landfill — only in name, it's not used now. And the original landfill. And we'll talk about those later.

We did find an empty 55-gallon black drum. Black color is indication of the drum that it was not used to contain any radioactive material. We did radiological and chemical screening and it did not identify any contaminants or background levels. The drum was removed and it will be disposed of in accordance with applicable regulations. CDPHE and EPA agreed that no additional sampling on the drum was needed.

Next slide, please.

Our signs and fence inspections, we do these quarterly. Wildlife and wind at Rocky Flats is one of the most common causes of damage, and the signs and fences are repaired or replaced as needed.

Next slide, please.

The present landfill: we do quarterly, and weather-related inspections. And we did those, and they were performed with no significant issues that were identified.

Next slide, please.

And the original landfill: subsidences and consolidation of the original landfill were monitored monthly. We have eight landfill settlement monuments that are surveyed

quarterly. And conditions were within our design criteria. No slumping was observed at the OLF hillside during the current year 2024.

Next slide.

Oh, thank you.

**Colleen Maleski:** Thank you. Robyn. So, thank you for the update on site operations. And we'll welcome our final presenter, Karin, to talk about ecological monitoring.

**Karin McShea:** Good evening. My name is Karin McShea. I am the site ecologist at Rocky Flats.

Next slide, please.

And I'll be talking about vegetation management and monitoring. And on the next slide we'll talk about some wildlife monitoring that we do at the site.

So, talking about vegetation management. We use an integrated pest management approach at Rocky Flats. So, we use all kinds of tools in our toolbox to manage weeds and vegetation. One thing that we—we do is noxious weed control. And in 2024, we used all kinds of tools, like I said, herbicide app—application. We used a carefully selected set of herbicides and applied those to about 290 acres of land. And the majority of that was spot application.

We also pulled noxious weeds by hand. So that's mechanical treatment. And we also reseeded and revegetated some areas. And that also helps with noxious weeds.

And the photo that you see on the top left there is a photo of a Russian olive tree that's a noxious weed that we treated. And in this case, we cut the stump and then treat the stump with the herbicide to reduce regrowth.

So, then we also, like I discussed, we do revegetation and vegetation enhancement and we do that—the vegetation enhancement—to increase vegetation cover and diversity on site. One of the—one of the things that John mentioned earlier was that pipeline that we installed in 2024. So, that did disturb some area, some ground. And we did we revegetate that with a native seed mix. So, we're also monitoring that. And we're going to monitor that

area for the next several years to make sure that the revegetation takes— takes— goes on as predicted. Hopefully it's successful. And then we also, interseeded, so, we place some— not— some native seed on parts of the original landfill area just to help, again, to increase the vegetation cover and diversity. And we also applied some wood straw, which is an erosion control that we use on site. And that helps both to retain soil in place but also provide some— some moisture for the seeds to germinate.

And we also conduct monitoring. So, as Michelle showed you the photos of— in the late 19— 1990s, that industrial area was full of buildings and parking lots and roads. So, when that was all removed, all those areas had to be revegetated and we conduct monitoring on a yearly basis to make sure that the revegetation is successful and continues to be successful.

And it depends on the— the areas— the type of monitoring that we conduct depend on what areas were disturbed. So, we do different monitoring techniques in Preble's mouse habitat, which is one of our species that's listed as threatened. We also conduct different type of monitoring depending if it's in a wetland area. And as Michelle mentioned, the monitoring in 2024 showed that our revegetation is— continues to be successful.

Next slide, please.

We also conduct wildlife monitoring. And wildlife monitoring we conduct in two different ways. We conduct formal monitoring as well as informal or incidental monitoring. So, we look for wildlife anytime we're on site. For prairie dogs, we conduct formal monitoring on a quarterly basis. And— and we go out and make sure— we look for any prairie dog burrows within the COU. And in 2024, we did not see any prairie dog burrows or towns within the Central Operable Unit.

We also conduct bird nest monitoring, the preconstruction surveys for bird nests, specifically. Last year, we conducted preconstruction survey - surveys for— for that pipeline project that John mentioned. We went ahead and— went into the area and looked for nesting birds before the project started to make sure that we weren't impacting any birds with project activities.

We also look for and observe elk. We have— our elk population on-site has increased in the past couple of years, and they're very curious and large animals. And so, they do cause, they do cause some damage, as Robyn mentioned, to some of our fences and infrastructure. And so, we do install wildlife crossings along our fence line to facilitate their movement, kind of reduce some of the damage they might be causing to our infrastructure.

And the photo down on the right, you can see elk using those wildlife crossings. And that photo was taken with a wildlife camera that we use to monitor, kind of, more— less— less obvious wildlife out at the site, like bobcat, for example.

And finally, in 2024, we did not observe any adverse biological conditions. And that's defined just mainly as unexpected mortality of vegetation or wildlife.

So that is the kind of a summary of ecological activities.

Next slide, please.

And as a reminder, the annual report is posted on the public website. So, there's a lot more detail on everything that we've discussed today on the different— in the different volumes. So please, go ahead and— and read the annual report. Thank you.

**Colleen Maleski:** Thank you. Karin. And I believe that link should also be in the chat box.

So that's where you can access the full report if you're looking for more details. So, thank you, Michelle, George, John, Robyn and Karin, for all of the insights. And we'll now be moving into a Q&A period. Thank you to the many attendees who have already submitted questions. And so, as a reminder, throughout the rest of the Q&A period, you are welcome to continue to submit questions via the Q&A feature in zoom.

So, a few notes on how Q&A will work. So, we will be prioritizing questions that are most related to the topics we've covered tonight or that were covered in the 2024 annual report. And we may combine multiple questions if there are many questions on a similar topic. That will allow us to— to get through many more subjects tonight.

And as a reminder, if you do not get your question answered live tonight, we do hope that you will email us at [RFinfo@lm.doe.gov](mailto:RFinfo@lm.doe.gov). And we'll— we'll get you a response there. If we do

not get to your question tonight. So, I think that our panel is— is ready to present. So. Excellent.

So, let's start, perhaps— Michelle. We actually have a question. So, this is a unique format tonight of how you are presenting to the public. This is a— a new format this evening. So, there's a question from the audience of, "How will updates on the site be delivered to the public, now that the Rocky Flats Stewardship Council has been dissolved?"

**Michelle Franke:** Yeah, and that's a great question. And I thank you for asking that question. We will be communicating with the public how we have been communicating with the public. So, we have our public website where we post updates, we post our reports. There's also a link to another website where we store our sampling data. So, you can go in and see the data that we collect.

Additionally, we have an email distribution. And so, if you're not on that email distribution but you're interested in getting alerts about the site, I encourage you to email us at the email address that will be displayed at the end of this and ask to be added to that. And through that we send out announcements. We'll send out announcements when things are posted.

And if there are any contact records from our consultations with the regulators, those are also announced through the forum. And then, of course, these public meetings, we do intend to have an annual public meeting to replace, in part, the Stewardship Council meeting. And so, we look forward to seeing you at those meetings.

**Colleen Maleski:** Thank you. Michelle. John, I think I'll, turn it over to you. We have some questions on groundwater. So, first and foremost, wondering, what are the source of nitrates in the groundwater treatment monitoring?

**John Boylan:** OK, so, nitrate is not in the groundwater at Rocky Flats naturally. It's only there as a result of site operations, meaning pre-closure Rocky Flats plant operations, and in particular, nitric acid was heavily utilized in some of the production processes.

And over time, and through usage, the nitric acid becomes less viable, less potent, less useful — kind of worn out, you might say. And— and— yet, there's a whole lot of it. A lot of— gallons and gallons and gallons, hundreds— thousands of gallons of this stuff. So, what they would do is put these in the former solar evaporation ponds, which, is the reason for the name of the solar ponds plume treatment system.

Those solar evaporation ponds were not initially designed not to leak. And that was just kind of a state-of-the-art back then. The ponds were later reconfigured to not leak, but by that time there was a contaminant plume, with nitrate contaminated groundwater in— in the area. And that particular contaminant plume flows towards North Walnut Creek.

And that's why the solar ponds plume treatment system is located where it is so that it can intercept that groundwater plume. That's got the higher— higher concentrations of nitrate and treated so that the— the nitrate is predominantly present in that one area of the former solar evaporation ponds. And it's there because of the way the work was done out there.

I hope that answers your question.

**Colleen Maleski:** Thank you. John. While we're on the topic of sources, George, I think I'll turn it over to you. There's a question about what the source of boron is near the present landfill.

**George Squibb:** So as far as we can tell, the boron is associated with the wastes that are in the landfill. We don't see boron at any other locations on the site. Boron in a landfill can be associated with construction materials, building materials, household products. So that's— in all likelihood, that's— that's the source of that boron.

**Colleen Maleski:** Thank you. George. And while we're on the topic of boron, Michelle, I'm wondering, there's a question of if drinking water in the area has a higher-than-normal level of boron.

**Michelle Franke:** Right. So just to reiterate, this site is not a source of drinking water. So, that would be the first thing I would say. And I'm not familiar with the water data around the site and maybe where you would get your drinking water from. But I will say the present landfill has higher levels of boron than we see elsewhere on site.

**Colleen Maleski:** Thank you. Michelle. Go ahead, George.

**George Squibb:** And I'd like to add, you know, if you want to know where your drinking water comes from, you get ahold of your city, and they— like I was just looking at city I'm from— I live in Boulder. And so, I was looking at the drinking water report for Boulder. And boron's not on their list as something they look for. And that may be because it's not something they historically have seen or whatever. But I know that your municipality, or wherever your— your— your drinking water comes from, would have a report and would be able to answer your questions about what's in your drinking water.

**Colleen Maleski:** Thank you, George. John, we have a question of, "What kind of treatment technology does the UTC provide and why and how was it selected?"

**John Boylan:** The uranium treatment component is the— the culmination of many years of treatability studies from small laboratory based in a jar — multiple jars — to bench scale studies, which are just a little bit larger, to pilot scale, which is significantly larger, but not— not large enough to be— be the sole treatment system.

The, the technology that's being used is called co-precipitation. It's a big word, but basically what it means is we add a chemical to the water, and mix it with the water, and then it forms, kind of, little clumps that then settle down to the bottom of the water. And

what happens is the uranium, will — it's called sorb — it'll stick, basically, to those little clumps. And so, by the stuff, settling out to the bottom of the water column in— inside the UTC, the cargo container — this isn't being done outside in the ground. And then, we remove that— that sludge that builds up and the water that's— from which that has settled, the uranium has been removed to that to meet the— the RFLMA standards so it can be discharged to— and actually, it's not discharged, it's then routed to the nitrate treatment component to treat the nitrate.

But we tried a number of other options. And those are described in the last 2 or 3 annual reports. They included passing the water through something called bone char, which is cattle bones that have been burned in a special way and ground up. And that worked okay, but not very— not as well as co-precipitation.

We tried ion exchange resins, which is another granular component that can be designed specifically for uranium. But in this application, it was non-ideal because it required pretreatment in order to get the— the ion exchange resins to— so that they wouldn't clog up real quickly.

And we tried several other approaches as well. But co-precipitation was the one that was— was— it performed the best, was economically feasible at full scale. So that's the one that was selected for use.

**Colleen Maleski:** Thank you. John. Karin, I have a couple wildlife questions for you. So first, “What other wildlife have you observed on site besides elk, birds, and prairie dogs?”

**Karin McShea:** That's a good question, we see a lot of raptors. So, some birds. There's also a lot of raptors. As I mentioned, we've seen some bobcat, some bears, a lot of carnivores, coyotes. And we also have, amphibians and reptiles and a lot of insects as well.

**Colleen Maleski:** Excellent. And I think this might be for, either Michelle or Karin. There's a question of, “Is it possible to make some of those wildlife camera images publicly available?”

**Michelle Franke:** Yeah, that is a great question.

**Karin McShea:** We do include some of the images in our reports. So that's— you know, and in this presentation, we use those images for those purposes. But yeah, absolutely, we can talk about that.

**Michelle Franke:** Yeah, we can discuss that, see if that's something we can do.

**Colleen Maleski:** Karin, this is a partnership question. So, you had talked about the way you are treating the plants on site. And so, there's a question of, "Does DOE work with the Butterfly Pavilion to ensure that the herbicides you're using are safe for invertebrates?"

**Karin McShea:** It's a good question. We don't directly work with the Butterfly Pavilion, I know that's really close by. But, we do work very closely with the Fish and Wildlife Service because, like I mentioned, we have the Preble's mouse, which is a threatened species of mouse, and a lot of our weed treatment does occur— and vegetation management does occur in habitat. And so, we work very closely with the Fish and Wildlife Service and they review all of our herbicides that we use in that— in those habitats.

And I also want to mention that we follow the Colorado Department of Ag [Agriculture] Licensing requirements for herbicide application in Colorado.

**Colleen Maleski:** Excellent, thank you. Karin. We have a couple of questions related to any potential changes. So, I think, Michelle, one question here is, "Are there any changes in funding for Rocky Mountain— Rocky Flats management that are expected over the next few years?"

**Michelle Franke:** Yeah, that's a really good— great question. And thus far, we haven't received any indication that there will be a significant change in funding. But we are looking

at different funding scenarios and discussing different options to ensure that we can continue to meet our regulatory requirements and make sure that the site remains protective of human health and the environment moving forward, even if our budgets do change a little bit in the next few years.

**Colleen Maleski:** Excellent, thank you. And similarly, there's a question of if any changes to the Nuclear Regulatory Commission will impact LM's management of Rocky Flats.

**Michelle Franke:** Yeah, another great question. Short answer is no, it won't impact the - what we do at Rocky Flats. Ultimately, our requirements and regulations are documented in our *Rocky Flats Legacy Management Agreement* and our regulators, EPA and CDPHE, are part of that agreement. And so, I don't anticipate any changes to the Nuclear Regulatory Commission impacting the site.

**Colleen Maleski:** Thank you, Michelle. I think this one might be for you as well. So there's a question of, "How often are Rocky Flats staff, out on the site performing those monitoring and inspection?"

**Michelle Franke:** Yeah, wonderful question. Our site staff are on site nearly every weekday, just about the entire year. So, we do have quite a presence on site.

**Colleen Maleski:** Excellent, thank you. And, I think there's one more here. There's a question about the level of plutonium that is detected on site. And, "Is it safe in any amount for people to live near?"

**Michelle Franke:** Right, another wonderful question. So, at closure, the site was sampled. Specifically, the soil was sampled extensively in addition to the groundwater and surface water, to delineate the different areas of plutonium and— and see what was left on site after contaminated soil was removed. And so, the average on site is about 2.3 picocuries

per gram. Across the site, the standard we had to clean up to was about 50 picocuries per gram — so well below that standard. As far as is any plutonium safe? Ultimately, it's a question of risk. We cleaned up to a risk level. The chance of— of having cancer due to the plutonium on site is less than one in one million. So, again, I think it's a risk question, but I would say ultimately, the way we cleaned up the site is protective of human health and the environment.

**Colleen Maleski:** Excellent. Thank you. So, it looks like those are all of the questions we have at this time. So, I'll, I'll pause one moment in case there's any more that are coming in, but I think otherwise we'll get ready to, to move into the public comment period. I'll note that if any questions, of course, this may, spur additional questions, over the next few weeks or, you know, of course, over the coming year. So, if any questions do arise, you can use that email address that is in the chat function to "RFinfo." And we'll get any additional questions that arise, so that you can get those answered.

So, we'll be moving into the public comment period. And so, public comment is ultimately an opportunity for community members to voice your thoughts and your opinions on relevant topics.

And the relevant topic here tonight is, of course, the *2024 Rocky Flats Site Annual Report*. And so, we will be opening it up for a period of public comment. Of course, the engagement norms that we went over at the beginning of this meeting still— are still in— are still in play here. And if we can go to the next slide, I'll go over some details of how the public comment will work.

So, we will be doing public comments on a first come and first serve basis until the public comment period is over. So, we will have up to 20 minutes for those public comments. And I will invite you to take a look— we are not yet. I will make sure that you know when it is open, so when you can raise your hand.

But, if you want to find that functionality right now, that is how we will be going through that process. So, it should be on that same bar as where you have the Q&A function. That is where the raise hand function is. You're welcome to try it out now, if you

would like. We'll raise—we'll lower all of the hands before we get the public comments started. So, feel free to find that function now.

Similar to Q&A, if you—if we run out of time and you're not able to provide your comment live tonight, we will invite you to share your thoughts via the email at [RFinfo@lm.doe.gov](mailto:RFinfo@lm.doe.gov). And that is also where you will—if you have any visuals or anything you'd like to send to us. Unfortunately, you will not be able to share any visuals or share your screen during the public comment period. But, if you would like to send those, that is the email address you can use.

So, I think that those are the majority of the logistics. In terms of the way this will work, you will have the opportunity to speak once, and you will have up to two minutes to speak, as Kaitlin has the—the screen, you'll have the timer right on—right on the presentation slide. So, you will be able to see how much time you have remaining.

I will also note, you are not able to transfer your time to other participants. So, you'll have one opportunity to speak for two minutes and you cannot transfer that to others.

We'll ask that you ensure your comment is related to the topic that we had tonight, the *2024 Rocky Flats Site Annual Report*.

And we ask, of course, to please be civil and constructive. If there are any abusive or inappropriate behavior, we will reserve the right to—to redirect or to shorten your comment time. If it's truly disruptive, we will ask to mute or remove you from the meeting. So, I think everyone will be following those—those public engagement norms of—of civil and constructive. So, we appreciate that, creating a great environment for the entire community here tonight.

So, I will announce the speaker when it is your turn. And when you hear your name, you will actually see a button pop up that will invite you to unmute. So, you will be able to unmute yourself to share those public comments.

I think those are all of my logistics for the evening. And so, we will open up the public comment period now, and we'll—we'll look forward to—to hearing your thoughts.

And I don't know if any of you— I know there were a few folks that could not find the Q&A function. If you cannot find the raise hand function, you were also welcome to send us a chat, and we'll get you in the queue as well.

My mom was a kindergarten teacher, so I'm currently practicing my wait time. So, we're not seeing any— any attendees raising their hand, so I will— I will talk for at least another minute. So, if you— if you do have something that— that pops up, we will welcome you to— to share that.

And of course, if you are— if you do not have your public comment ready to share tonight, we will have that email address in the chat box for you to be able to— to share those thoughts and comments, via "RFinfo" after the meeting.

So I think with that, Kaitlin, if we can go to the next slide. Michelle, would you like to close us out with a few closing thoughts?

**Michelle Franke:** Absolutely. I just want to thank everyone who attended. Thank you for the wonderful questions and engagement. We really appreciate it, and we look forward to talking with you in our next public meeting. In the meantime, if you have any questions, you can email that "RFinfo" email address on the screen. And if you want to dig more into the site and look at some of our documents, there's our link to our public website as well. So, thanks again. Appreciate it.

**Colleen Maleski:** Thank you for joining. The recording will be available on the website after this meeting. Thank you, have a good night.