From:	Joel Geier
To:	Benton Public Comment
Cc:	SCHUETZ Petra
Subject:	LU-24-027 annotated version of verbal testimony given May 6th 2025
Date:	Wednesday, May 7, 2025 6:19:29 AM
Attachments:	GeierVerbalStatement2025-05-06 annotated.pdf PlanningCommissionSlides.pdf

Dear CDD staff,

Attached please find a PDF version of the script which was the basis for my verbal testimony as given last evening.

I've annotated this to include information on ODF rules regarding heron rookeries as requested by Commissioner Biscoe, and also notes on where to find supporting details in my previous written testimony and documents submitted for the record.

Also attached is a digital version of my "slides" which I printed out beforehand, in the hope that the Commissioners would be able to have these to follow along. You have my printed copies already, but perhaps it's useful to have the digital version for the files.

Yours sincerely,
Joel Geier
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Corvallis OR 97330
clearwater@peak.org

My name is Joel Geier, resident at 38566 Hwy 99W Corvallis, on the east side of Tampico Ridge. Two neighbors are kindly ceding their time: Dick Woodcock (# 65) and Vicki Druliner (# 68).

My neighbors and I appreciate that you've been asking keen questions on issues that **do** affect the character of the area and **will** pose a public burden. I'll focusing on the following topics which are relevant to these criteria:

- Impacts of the construction period
- Risks to water wells and natural springs
- Risk for the new landfill to become an additional source of an arsenic plume
- Risk to the Willamette basin aquifer below E.E. Wilson Wildlife Area
- Ongoing disturbance to the Great Blue Heron colony

My background includes a bachelor of science and master's studies in mining engineering, plus a Ph.D. in geology, specializing in groundwater flow through fractured bedrock. I've worked internationally on that topic for 38 years. I also like birds, and do bird conservation research as a side gig. That includes recent peer-reviewed work published in the journal, *Avian Conservation and Ecology*. I served 8 years as Audubon Christmas Bird Count regional editor for Oregon, and continue in that role for Nevada.

My first topic is impacts of construction

The applicant is proposing to build what amounts to a brand-new landfill. And they're not just working with the lay of the land *(See slides p. 2).*

In technical terms, they plan to dig a great big hole on the north end of Tampico Ridge, and a not-quite-so-big hole for brand-new leachate ponds. For the bigger hole, they'll need to move 3-1/2 million yards of rock. That's bigger than the pile of rubble from the Seattle Kingdome.

They're going to do a lot of blasting, maybe even daily and for how long? One year? Two years? We don't know. And they haven't assessed the impacts.

You don't have to be a trained mining engineer to know that blasting is loud. Their noise study should have included that, but it didn't.

Noise isn't the only issue, there's also seismic disturbance. Does having your windows rattle at irregular intervals count as "seriously interfere"? I'd think so, especially in an earthquake zone where all of us know that the next "big one" is getting overdue.

That's a lot of disturbance up front, for what could end up as just a few years of landfill capacity, if the annual tonnage cap is lifted.

But there's also a **risk to our water wells and springs on adjacent properties.**

When you dig a big hole in the ground, water tends to flow in. That lowers the water table around your hole, and that effect tends to spread.

How far does the effect spread? It depends on the geology. In my written testimony I've given more technical details. But to put it simply: If this big hole cuts into a fractured zone in the basalt that serves as an aquifer for nearby residences, our wells could go dry.

Again, the applicant hasn't assessed the effects of construction. They haven't investigated groundwater below Tampico Ridge any more than 100 yards south of the new landfill's footprint. They haven't even compiled a list of neighboring wells and springs. They haven't presented any groundwater models to evaluate the risks.

We and our neighbors rely on our wells for drinking water, livestock, vegetable gardens and even small farms. Loss of a reliable well would **seriously interfere** with our use of our property, no doubt about it.

Then there's arsenic. Again, I've provided written testimony with more technical details. This could be big topic all on its own, maybe even a good topic for a Ph.D. dissertation, for some aspiring grad student.

What we know is that, contrary to the applicant's claims, the high levels of arsenic in wells on the east side of the landfill site are highly unusual for this part of the valley. No one has found such high levels, anywhere else in the Willamette Valley portions of Polk or Benton County. But somehow the applicant has not just one well, but a cluster of five wells with high arsenic.[1]

They acknowledge that they had a leak in the early 1990s, which was responsible for the high arsenic levels discovered in 1994. They claim to have baseline data, but their historic database included with the 2023 annual environmental monitoring report doesn't show any arsenic data prior to 1995 from the well that they're now claiming as "baseline."

And the levels keep bouncing around, despite statements about them being "stable." After I pointed out to Oregon DEQ that the existing permits don't have any site-specific limit to allow for this, lately VLI seems to have proposed Permit-Specific Concentration Limits (PSCLs) for arsenic.

Page 3 shows a plot of arsenic data from their 2024 annual monitoring report which shows their proposed new criteria. Notice the most recent measurements, at far right, have blown right through even these new proposed new limits. In 2023 and 2024 they literally went off the chart, compared to how these data were plotted up until 2022.

Despite that now they want you to believe that the recent observations are "natural," and not a sign of more leaks. Last Thursday their consultant read a memo that gave a complicated explanation about volcanic soils, anoxic conditions and so on.

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1 Compare Plate 1 of *Arsenic in Ground Water of the Willamette Basin, Oregon* by Stephen R. Hinkle and Danial J. Polette, USGS Water-Resources Investigations Report 98–4205, which I have separately entered into the record, as well as data aggregated by the Oregon Health Authority for census tracts in Polk and Benton counties which I summarized in previous written testimony.

In simpler terms, they're claiming that the existing dump, by cutting off air to soils below the liner, has changed the chemistry so that arsenic is now leaching out of the soils. That's an interesting hypothesis, but without more evidence, it's just speculation.

For the sake of argument, let's suppose they're right. What would that mean for your decision?
It means that the new landfill, even if it doesn't leak, could have the same effect by leaching arsenic out of any chemically similar rock and soils beneath it. The new landfill could generate its own arsenic plume which would spread east into the valley, merging with plumes from the existing landfill. The effects would be additive.

As Commissioner Lee noted last Thursday, there are adjacent properties to the east, downhill, most immediately **E.E. Wilson Wildlife Area**. There's also a third dimension to think about: Vertical. **See page 4** which shows a schematic cross-section. As a plume moves out to the east, the sediments get deeper. Below the silts left by the late-Pleistocene Missoula floods, there are older gravels that are part of the **Willamette basin-fill aquifer.** That's a big one. Here's what the Oregon Water Resources Department has to say[2]:

> *Collectively the basin-fill sediment unit contains the largest volume of ground water in storage and has the highest production capacity of all of the hydrogeologic units in the basin.*

(end quote). In other words, this is the aquifer used for high-capacity irrigation wells and even municipal water supplies. You don't want to mess that up. That would be a real **burden on public resources.**

The applicant hasn't evaluated that risk, which arises from this new landfill. They don't even have a good handle on what's happening with the old one.

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2 *Ground Water Supplies in the Willamette Basin*, report by Oregon Water Resources Department and the Oregon Department of Land Conservation and Development, September 2002.

Lastly, I'd like to speak up for the **Great Blue Herons. (**See page 5).

Rumors of their disappearance are greatly exaggerated. Despite repeated disturbance by excavation equipment operating in the proposed development area, in all four nesting seasons since VLI was advised of the need to keep a quarter-mile buffer, the herons haven't abandoned this location. They're nesting right across the highway, within 200 yards of where they nested in 2022. The second photo was from just last Sunday.

They're still under stress, becoming agitated when roadside trash crews, cleaning up the mess from the landfill, walk past their nests. Construction of the proposed new leachate ponds on the Forest Conservation parcel (Lot 1200) would once again impinge on the buffer zone mandated by Oregon Department Forestry. That gives you one more reason to deny this application.

Thank you for your diligence and your attention to these issues. I'll be happy to answer any questions.[3]

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3 Testimony by Debbie and Norm Johnson dated 8/23/2020 submitted for the applicant's previous expansion application, LU-21-047, included the following information (emphasis added on final sentence which may also pertain to the poplar nesting area):

The project location hosts a great-blue heron rookery which was documented by the Oregon Department of Forestry in a Notification of Operations (NOAP) under NOAP ID: 2019-551-05885. Great-blue herons are colonial nesters, and as many as 20 heron nests have been observed in the rookery.

Under the Oregon Forest Practices Act heron rookeries are protected. Between February 15 th and July 31 st no forest operations (including truck traffic) are allowed within one-quarter mile of active nest trees *and trees cannot be harvested within 300 feet of heron nests.*

Heron rookeries are also protected under the Benton County Development Code as a "Goal 5"resource. According to 87.210 (Sensitive fish and Wildlife Habitat Overlay) a 600-foot area around the great-blue heron rookery must be protected and a site-specific management plan is needed to ensure that "proposed uses and activities will not destroy or result in the abandonment of these areas. [Ord 91-0080, Ord 93-0098]"

Although anecdotal information suggests that the rookery, or portions of the rookery have moved since the 2019 ODF NOAP was filed, a site-specific management plan is needed before the Coffin Butte conditional use permit can be considered. The management plan should evaluate the quality of heron nesting habitat at the location documented in the ODF NOAP as well as any other locations that are currently in use or have been used in the past. If a previous heron rookery location offers better nest tree structure, then that location should be preserved so that the rookery has an opportunity to move back.

Topics

Impacts of the construction period

Risks to wells and springs

Risk for the new landfill as an additional source of arsenic

Risk to the Willamette basin aquifer

Ongoing disturbance to Great Blue Heron nesting colony

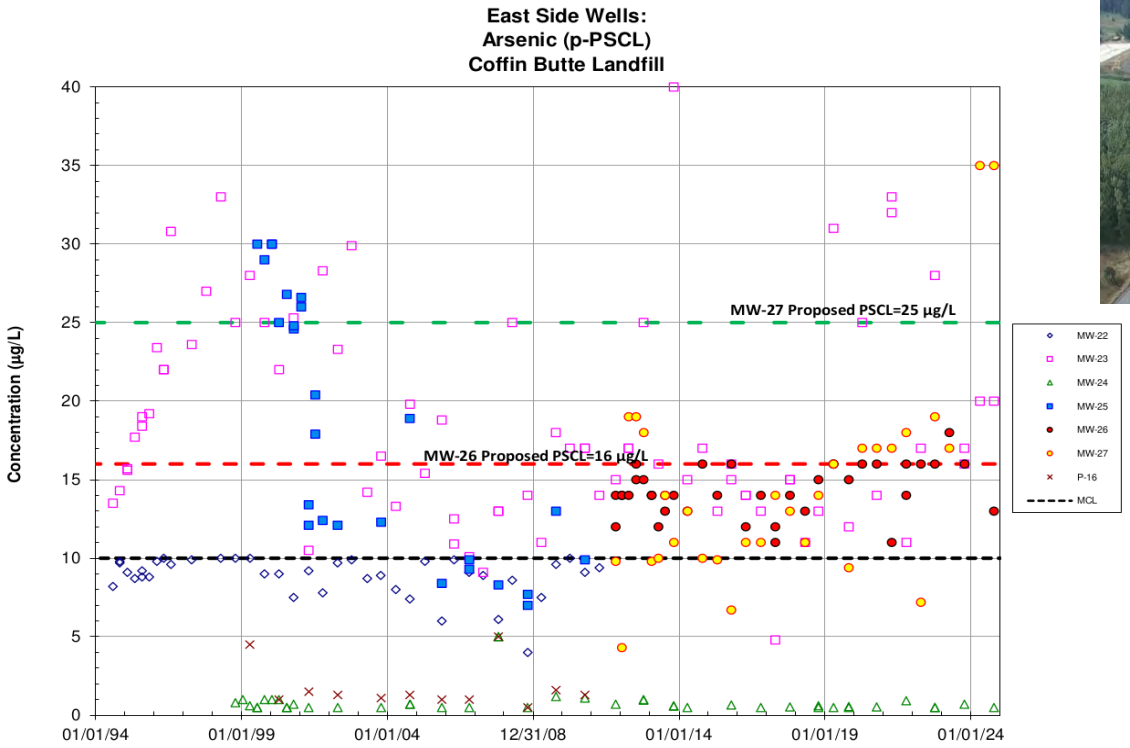
(to accompany testimony by Joel Geier, May 6, 2025)

Planned excavations: Impacts not evaluated

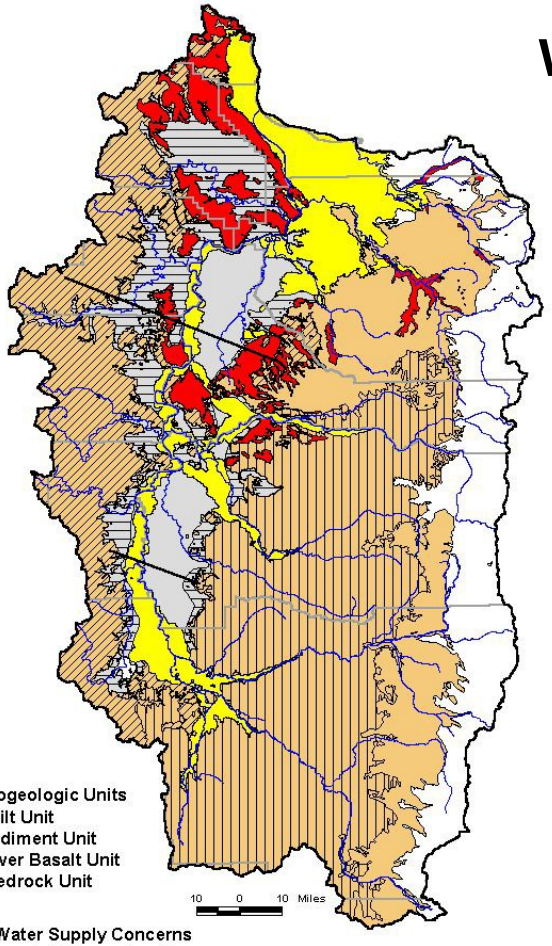
3.5 million cubic yards:
1.4 times more rubble than from the Seattle Kingdome implosion.

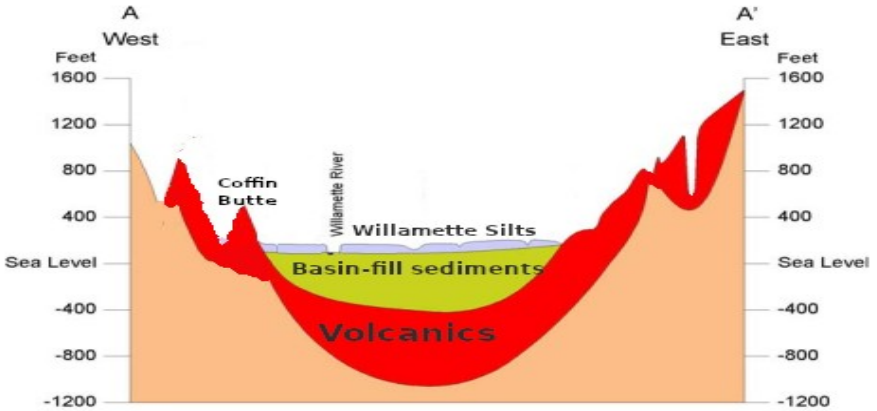
Arsenic Concentrations
East-side wells 1994-**2024**

Data from 2024 Annual Environmental Monitoring Report



Willamette Valley basin-fill aquifer





Adapted from: *Ground Water Supplies in the Willamette Basin,* Oregon Dept. of Water Resources

Heron colony: Not abandoned yet!

April 2025: Herons nesting approx. 200 yards east of the “east rookery” after disturbances on adjacent lot in 2022, 2023, 2024, and ongoing in 2025.

Excavation activity on March 14, 2025 within 200 yards of the nesting area in the poplars (“east rookery”).

Herons still on nests May 4, 2025