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MEMORANDUM

Date: May 5, 2025

To: City of Portland Water Bureau

From: Todd Alsbury and Ted Brown, Biohabitats, Inc.

RE: First Open Record Period

Subject: Biohabitats Response to Comments in the Record

This memorandum responds to a selection of land use review public comments received at or before the April 16, 2025, hearing that address aquatic resources and water quality impacts associated with the Portland Water Bureau's (PWB) development of the Bull Run Filtration Facility, associated pipelines, and Intertie Site near Cottrell, OR. Biohabitats previously provided an expert opinion memorandum which was included in the land use record as Exhibit N.55. This memorandum builds on that memorandum and uses defined terms and other concepts from that memorandum.

This memorandum also was prepared in conjunction with review of other expert responses provided into the record during the first open record period concurrently with this memorandum, including the "Response to Testimony Related to Pipelines" memorandum (the "**Pipelines Memo**") and the "Response to Testimony Related to Stormwater and Groundwater" (the "**Stormwater/Groundwater Memo**").

Where comments were largely focused on the same or similar topic, they have been grouped together before providing a response. Where comments were unique and singular, a response was provided immediately after the comment.

Most comments received at or before the April 16, 2025 hearing that are related to Biohabitats' area of expertise have already been addressed in the Biohabitats Memorandum at Exhibit N.55 or elsewhere in the record. Accordingly, this memorandum is intended solely as a supplement to Exhibit N.55. The responses below are intended to broadly address the themes and concepts in this selection of public comments. For that reason, these responses are likely to also be applicable to other public comments now in the record or that are placed in the record after the date of this response.

Responses to Opponent Testimony by Topic

This section includes general responses to topics raised in testimony.

Additional Species

Protection of waterways for all aquatic species has been previously addressed in Exhibit N. 55. Several species that are likely to be present in the area were not specifically mentioned in Exhibit N.55 including river otters, macroinvertebrates, freshwater mussels, and crayfish. However, species not specifically mentioned rely on the same characteristics of water quality and aquatic habitat analyzed in Exhibit N.55. Overall, the project will improve all these sources of impairment (sedimentation, pollutants, temperature, hydrology, etc.) when compared to pre-development conditions, which will benefit (rather than adversely affect) all aquatic life, including those species not specifically mentioned in Exhibit N.55.

Filtration Facility Stormwater Management During Construction

The filtration facility water handling during construction consists of a system that collects, treats, and discharges water. As described in the Stormwater/Groundwater Memo, construction activities to manage water included handling both stormwater and perched groundwater seeping into excavations.

This topic is about construction water management and is outside the scope of this proceeding and irrelevant to compliance with MCC 39.7515(B).

After reviewing the Stormwater/Groundwater Memo, and based on Biohabitats' further conversations with the project team, it is Biohabitats' expert opinion that **the past operations of the flow spreader** and construction water management system at the filtration facility generally – including the short time period when the flow spreader was not functioning as designed (see Comment 3 response in Stormwater/Groundwater Memo) and issues with sediment transport noted by commentors and shown in videos provided in the record (see Comment 1 response in Stormwater/Groundwater Memo) – will not have a long-term adverse effect on natural resources (including Johnson Creek) that extends beyond the construction period. We come to this conclusion because, as explained in the Stormwater/Groundwater Memo where quotations are provided:

- "The removal of shallow perched groundwater does not have a long-term impact that will extend beyond construction. Post construction, the shallow

perched groundwater conditions will revert to preconstruction drainage patterns and will be driven by surficial recharge (precipitation). ."

- "[W]ater has been discharged towards Johnson Creek as regulated and permitted by the Oregon Department of Environmental Quality (DEQ). Issues with sediment transport noted by commentors and shown in videos provided in the record were also reviewed by DEQ. The Water Bureau proposed, and DEQ approved, corrections and process improvements to address the temporary issue. The DEQ approval letter is attached to [the Stormwater/Groundwater Memo]. Those DEQ-approved corrections and process improvements have been implemented at the construction site."
- Prior to water being discharged from the flow spreader, it goes through a treatment system that reduces sediment/turbidity to a level approved by DEQ.
    - "[W]ater quality samples taken from Johnson Creek show no exceedance of DEQ's standard for turbidity, which allows up to a 10% cumulative increase in downstream turbidities."
- "[T]he Filtration Facility site makes up only a small portion (about 11%) of the Johnson Creek watershed that feeds the reach of Johnson Creek adjacent to the Filtration Facility site … Accordingly, the overall impact of the construction-related flows from the DEQ-reviewed event, relative to total flow at Johnson Creek in a storm event, was small."
- Overall, flow spreader events involved short-term concentrated flows that caused minor erosion and sedimentation in Johnson Creek. The amount of sediment contributed to Johnson Creek in the pre-developed condition (a farm field) would be far more than occurred because of the temporary flow spreader construction-related flows. Similarly, the prior agricultural use of the property led to rapid changes in stream flows (flashy flows) associated with turbid runoff that did not have the chance to infiltrate into the ground as it otherwise would in a natural landscape. The long-term effects from the temporary flow spreader construction-related flows are negligible in comparison to the long-term benefits the project will have of reducing erosion and sediment loading that occurred with pre-development agricultural land use. There may have been short term impacts to water quality associated with turbidity and sedimentation, but they were not of the level that would lead to direct or long term adverse impacts. It is unlikely that water temperature in Johnson Creek was impacted by the short-term release of stormwater and groundwater as it occurred at a time of year when contributing flow would be similar in temperature as water in Johnson Creek.

Additionally, after reviewing the Stormwater/Groundwater Memo, and based on Biohabitats' further conversations with the project team, it is Biohabitats' expert opinion that **going forward** (if or when construction resumes after this remand proceeding) the flow spreader, and construction stormwater management system at the filtration facility site more generally, will not have an adverse effect on natural resources (including Johnson Creek). We come to this conclusion because, as explained in the Stormwater/Groundwater Memo where quotations are provided:

- The Filtration Facility site "construction water management systems will be further modified for improved performance (that is, beyond what DEQ has required)" as follows:
    - "Two points of discharge will be employed – the current discharge at the flow spreader (Point of Discharge #2) and the culvert discharge on the western property line (Point of Discharge #1) – with up to a maximum of approximately 500 gpm (1.1 cfs) discharged to each location. This maximum can be maintained up to the 25-year recurrence, 24-hour duration storm event. Discharge from the flow spreader will generally correlate with the timing of runoff from precipitation events. [T]hese discharge rates are significantly lower than the pre-development 2-year storm event peak discharge rates [which is the most restrictive flow control requirement in the MCDCM] – 17% of the 2-year event at Point of Discharge #1 and 24% of the 2-year event at Point of Discharge #2."
    - "[T]he flow control requirements outlined in the Multnomah County Design and Construction Manual (MCDCM) align with the flow control performance standards in the Portland Bureau of Environmental Services Stormwater Management Manual (SWMM) that are designed to address potential hydromodification (the alteration of natural flow patterns that results in the degradation of a stream) impacts by limiting the post-development flow to 50% of the pre-development flow for design storm events (beginning with the 2-year design storm). These construction stormwater discharge rates will be well below that standard."
    - "Discharge from the flow spreader will generally correlate with the timing of runoff from precipitation events."

- PWB will "remove the rip rap and instead establish the plantings described in Exhibit N.59 [the permanent flow spreader design] below the flow spreader."
    - This removal of the rip rap and installation of plantings includes grading the slope below the flow spreader to be level and not concentrate flows.

  - "This will be done during the next available window appropriate for plantings (for example, that is generally winter for bare root plants)[.]"
  - PWB will "provide irrigation during the establishment period."
  - The drain rock directly below the flow spreader described in Exhibit N.59 will be installed along with establishment of the plantings.
  - "Establishment of the plantings will involve adaptive management, which may include the use of coir fabric mats or other groundcover that will prevent erosion and sediment transport while plants are established and/or a temporary perforated pipe flow spreader below the areas where vegetation is actively being established."
- "Overall, this strategy will establish the ultimate flow spreader design, including the extensive riparian plantings much earlier in the construction period" allowing additional time so that the operational (post-construction) flow spreader will benefit from significantly more established plantings.
- "The lenses of perched groundwater have now largely been drained, so the quantity of water removed from excavations will be lower than during the initial construction period. Recharge of these lenses, and therefore future dewatering flows, will follow the same pattern as precipitation events."
- PWB has committed to increasing the rate of inspections of the performance of the flow spreader to daily in order to rapidly identify and respond to any new Issues as soon as possible.
- "Over the past few years, the Water Bureau has embarked on a planting program within the SEC zone in the southwest corner of the Filtration Facility site, with the objective of creating an area that functions as a riparian forest even while construction is ongoing, providing both habitat and water quality protection. This work will be ongoing during the construction period."

Sandy River

The analysis in Exhibit N.55 covers all area aquatic habitats, including the Sandy River, with a focus on Johnson Creek and Beaver Creek because of their proximity to the project area. The project protects the Sandy River through, for example, a reduction in stormwater discharge rates and improved water quality compared to the pre-developed condition, which contributed more flow and sediment to the Sandy River. Moreover, the closest unnamed tributary of the Sandy River has its confluence over 1.25 miles away from Discharge Point #3 (the only discharge point that ultimately flows to the Sandy River watershed). This distance additionally ensures the Sandy River will not be adversely affected by the project. For these and all of the reasons provided in Exhibit

N.55 for aquatic habitats in the area more generally, the project will not adversely affect the Sandy River, its water quality or aquatic habitat or species.

Stormwater Management Post-Construction (Operations)

This topic has been addressed in Exhibit N.55. PWB will discharge stormwater to Johnson Creek during operation of the Filtration Facility, but it will be done in a manner that will not lead to adverse impacts on the creek – particularly when compared to the pre-development agricultural condition. Prior to construction, the area closest to Johnson Creek -- including inside of the County's Significant Environmental Concern ("SEC") overlay zone – was largely cultivated crop land, with very limited erosion and sediment control, which caused significant turbidity and other impacts to Johnson Creek during runoff events. Prior to the development of the Filtration Facility, agricultural operations on the property combined with similar operations throughout upper Johnson Creek contributed to flashy flows and high levels of sediment that directly impacted aquatic resources by degrading in stream and riparian conditions. Pollutants typically found in agricultural soils (including those confirmed at the Filtration Facility site pre-construction) also made their way into the creek at far higher rates than will occur during operations due to measures already taken and that will be taken before operations to reduce the potential for erosion and corresponding sedimentation of aquatic habitats, as further explained in Exhibit N.55.

The project is designed to reduce impacts to waterways (Johnson Creek, Beaver Creek, and the Sandy River) compared to the previous agricultural use of the project areas that contributed high levels of sediment and flashy flows to critical waterways in the area. The future condition of the project sites will contribute significantly less sediment due to measures taken to remove sediment from stormwater and control flashy flows that can lead to excess erosion and sedimentation of area streams. The planting of native vegetation throughout the project area will also stabilize soils and reduce overall loading of sediment that occurred with the pre-development use.

Specific Responses to Opponent Testimony

Exhibit N.10 Guy Meacham Written Testimony - 04.11.2025
Comment – Pg.2 "The creek is home to Salamanders, Frogs, herons, eagles, otters and so much more. It's even home to returning Salmon closer to Troutdale. While the new Filtration Plant itself is not being constructed in the Beaver Creek Watershed some of the support facilities like the new road being built between Dodge Park Boulevard and Lusted Road do affect it."

Response to Comment:
See Additional Species above.

The road between Dodge Park Blvd. and Lusted Road is not a new road but will be an improvement over the previous farm road in this same location that did not have stormwater BMPs in place to reduce impacts to fish, wildlife, and their habitats. See Exhibit A.77. To meet the stormwater requirements for both stormwater quality treatment and flow control along the pipeline alignment, the project proposes to use dispersion through native vegetation and enhancement of the existing county right of way and the gravel road across agricultural land between Dodge Park Blvd. and Lusted Road with seeded vegetation and amended soils, referred to as filter strips. Filter strips are a common and preferred BMP for ODOT for stormwater quality treatment and flow attenuation, providing filtration and infiltration along vegetated flow paths. See Exhibit A.77 for additional information about the pipelines stormwater system.[1] Overall, the improved road will not adversely affect natural resources.

Exhibit N.10 Guy Meacham Written Testimony - 04.11.2025
Comment – Pg.2 "Beaver Creek is also being adversely affected by the PWB Filtration Plant construction on Lusted Road. An area of field that never had water runoff has been packed and graveled, so it is no longer permeable. I have documented on several occasions muddy water running off this site and down the road into Beaver Creek."

[1] Note that the Exhibit A.75 Finished Water Intertie Site Stormwater Drainage Report and Exhibit A.77 Pipelines Stormwater Management Report are each marked as a 60% design for review purposes. However, the authors of those reports, from Jacobs and Emerio, have confirmed to Biohabitats that the design has not changed between 60% and 100% design. Additionally, the conclusions in Exhibits A.75 and A.77 were verified based on higher rainfall levels than assumed in the PAC Tool.

Response to comment:
This comment is about construction water management, and as such is outside the scope of this proceeding and irrelevant to compliance with MCC 39.7515(B). As explained in the Pipelines Memo, the issue referenced was short term and has been resolved. After reviewing the Pipelines Memo, it is Biohabitats' expert opinion that the event described involved short term concentrated flows that caused minor sedimentation into the upper reaches of Beaver Creek and will not have a long-term adverse effect on natural resources (including Beaver Creek) that extends beyond the construction period. Accordingly, this is a construction impact that is outside the scope of this proceeding.

Exhibit N.10 Guy Meacham Written Testimony - 04.11.2025
Comment – Pg.2 "If this small area can have such significant runoff, then I can't even image what negative consequences the millions upon millions of gallons running off the surface of the main site on Carpenter Lane into Johnson Creek are having. Even if the water is filtered before leaving the site it's still going to be dumping millions of gallons of extra water into the headwaters of Johnson Creek every time it rains there is nowhere else for it to go. This will obviously have an adverse effect on the creek and the natural resources the creek supports."

Response to Comment:
To the extent this comment is about construction water management, see Filtration Facility Stormwater Management During Construction above.

To the extent this comment is about post-construction (operations) water management, see Stormwater Management Post-Construction (Operations) above.

Exhibit N.14 Jennifer Hart Written/Video Testimony
"This has been the PWB's plan all along after doing some reviewing the Stormwater Management Plan (Land Use Permits and Plans, T1-2024-0004 page 13). This is currently, adversely effecting Johnson Creek and its habitat. When the Plant is in operation PWB will continue to dump stormwater in Johnson Creek. This southwest corner of the plant is a SEC-Water Resource Area. PWB cannot mitigate the stormwater. This is a violation of MCC 39.77515(B) and Chapter 5 of the Multnomah Comprehensive Plan. Therefore the condition Use permit must be denied."

Response to comment:

To the extent this comment is about construction water management, see Filtration Facility Stormwater Management During Construction above.

To the extent this comment is about post-construction (operations) water management, see Stormwater Management Post-Construction (Operations) above.

Exhibit N.15 Patsy & Ken Carlson Written Comments
"We have deep concerns in regards to the effects your pipeline down Dodge Park Blvd will have on springs that feed into Beaver Creek. We know of 4 springs in total along Dodge Park Blvd. One spring is the headwater of the south fork of Beaver Creek. The other 3 feed the middle fork of Beaver Creek. Our address is 34163 SE Dodge Park Blvd. Our family has been here for more than 80 years on 20 acres bordering the south side of Dodge Park Blvd. We would like to know what your experts know about these springs and that they will not be disrupted by your pipeline construction. These springs feed water to beaver Creek which as you know provides water to various wildlife along its route. We need to know that these springs will not be rerouted or detoured in any way."

Response to Comment:
This comment is responded to in the Pipelines Memo, which explains that, in part because groundwater is found only below the bottom of the excavated depth of the pipeline installation, the pipeline installation and later operation will not change groundwater flows or reduce the flow from existing springs into Beaver Creek. Accordingly, there will be no construction impact (which would be outside the scope of this proceeding) nor long term impact that could adversely affect natural resources in the area.

Exhibit N.28 Jennifer Hart Written Comments
"The daily pumping of around a million gallons of groundwater, overflow pond water and storm water thru a Flow Spreader into Johnson Creek adversely affects and alters the ecosystem of the Creek."

Response to comment:
To the extent this comment is about construction water management, see Filtration Facility Stormwater Management During Construction above.

To the extent this comment is about post-construction (operations) water management, see Stormwater Management Post-Construction (Operations) above.

Exhibit N.33 Suzanne Courter Written Testimony
"Another natural resource system that is altered by their need to pump water is the naturally occurring springs in the area that are now drying up. We have always had several springs flowing on our property. One would consistently surface near our paved driveway and run downhill next to the pavement freezing over in winter. This winter there was no spring and no frozen water on the ground and there won't be again in the future because of their pumping."

Response to Comment:
This comment is responded to in the Groundwater/Stormwater Memo. After reviewing that memo, it is Biohabitats' expert opinion that any impacts on springs will not have a long-term adverse effect on natural resources that extends beyond the construction period. Accordingly, this comment is about a construction impact that is outside the scope of this proceeding.

Exhibit N.33 Suzanne Courter Written Testimony
Pg. 1 –"Beaver Creek is a stones throw away and the Scenic Sandy River is just beyond that. I can personally walk from my house to all three bodies of water. All three are vital functioning natural systems providing life to fish and other wildlife, water for human existence, agriculture and livestock and all three are in danger of being contaminated by the water filtration plant. Johnson Creek is a "Significant Environmental Concern" (SEC) labeled body of water that is the life source for protected species of fish and also provides life source to other wildlife in it's riparian corridor. The filtration plant will always need to pump water out of the facility in order to prevent their overflow ponds from actually overflowing. This procedure will not end when construction ends and the endangered salmon and other wildlife dependent on Johnson Creek will continue to be affected. Besides the contaminated water, dirt and erosion sediment is also being deposited altering the shape and flow of the creek forever."

Response to comment:
To the extent this comment is about construction water management, see Filtration Facility Stormwater Management During Construction above.

To the extent this comment is about post-construction (operations) water management, see Stormwater Management Post-Construction (Operations) above.

Regarding the Sandy River, see Sandy River above.

Exhibit N.41 Jennifer Hart Written Testimony
Pg. 1 - "*The proposed site is situated near critical waterways, … I am particularly concerned about the river otters that inhabit these rivers and creeks, as they rely on clean, healthy waters for their survival."*

Response to Comment:
See Additional Species above.

To the extent this comment is about construction water management, see Filtration Facility Stormwater Management During Construction above.

To the extent this comment is about post-construction (operations) water management, see Stormwater Management Post-Construction (Operations) above.

Exhibit N.41 Jennifer Hart Written Testimony
"The location of the filtration plant raises significant environmental concerns. Johnson Creek serves as a vital waterway and a crucial habitat for various wildlife species, including river otters, which are a protected species in Oregon. Currently, the PWB is discharging water into Johnson Creek, and several field tile lines are directing runoff into Beaver Creek, located across from the Lusted Road Pipeline intertie. This runoff has resulted in increased silt downstream, clogging culverts and clouding the streams and adjacent ponds. The discharge from the proposed filtration plant could further disrupt the delicate balance of this ecosystem, jeopardizing not only river otters but also countless other species that inhabit the area."

Response to Comment:
"River otters" "other species" – *See* Additional Species above.
"Directing runoff into Beaver Creek" - Refer to response to Exhibit N.10 Guy Meacham Written Testimony on Pg. 4.
"Discharge from the proposed filtration plant" - see Stormwater Management Post-Construction (Operations) above.

Exhibit N.43 Cottrell CPO & PHCA Adverse Effects Report
Pg, 7 – "Further protections exist at the federal level. The Sandy River is designated as a Wild and Scenic River, granting it additional safeguards under the Wild and Scenic Rivers Act. This designation helps protect water quality, fish and wildlife habitats, and recreational values along the river corridor. The proposed project site is about 750 feet

from the boundaries of the corridor designated Scenic and Natural 1 of the Sandy River (Figures 1 and 2). The area is also home to federally protected species, including Chinook salmon, steelhead trout, northern spotted owl, wolverine, and red tree vole, necessitating strict environmental oversight. Agencies such as the U.S. Forest Service, Oregon Department of Fish and Wildlife (ODFW), and the National Marine Fisheries Service (NMFS) enforce regulations to prevent habitat degradation, pollution, and erosion near the river. Due the project's size, proximity to a Wild and Scenic River, and use of federal funding, we surmise that construction of this project without completing an Environmental Impact Statement (EIS) would be a violation of the National Environmental Policy Act."

Response to Comment:
See Sandy River above. Also see Upland Habitat memo. In addition, applicable NEPA requirements were addressed during the application process for the federal funding (EPA WIFIA loans).

Exhibit N.43 Cottrell CPO & PHCA Adverse Effects Report Pg. 21-22
"In the winter of 2025, residents observed a substantial volume of water being discharged into Johnson Creek following several days of dry weather (Figure 12). Upon inquiry, the onsite foreman for Kiewit, Mr. Goldschmidt, explained that groundwater was being pumped from the construction site into the creek at a rate of approximately 1 million gallons per day, or 3-4 cubic feet per second (cfs) over a typical 11-hour workday. This operation was occurring daily and was expected to continue as long as groundwater infiltrated excavated sections of the construction site. In short, PWB is using Johnson Creek like a cannel instead of respecting it as a natural waterway. It should be noted that this section of Johnson Creek is designated by the County as an area of Significant Environmental Concern."

"The headwaters of Johnson Creek typically experience flows ranging from 1-10 cfs. Rapid fluctuations in stream flow, such as those caused by PWB's groundwater pumping activities, can have significant ecological consequences for fish, macroinvertebrates, and amphibians. These impacts stem from changes in flow dynamics, water temperature, dissolved oxygen levels, and potential shifts in water chemistry. Unfortunately, PWB and its contractors appeared to be unaware of these effects. When neighbors raised concerns with foreman Goldschmidt, he remarked that the groundwater discharge was "good for the creek," revealing a startling lack of understanding of stream ecology and the potential risks of sudden, unnatural flow changes."

"Fish species in small creeks are adapted to natural flow variations, and the sudden daily influx of water caused by human activity can disrupt their habitat. For example, if the groundwater is significantly colder or warmer than the creek water, rapid temperature shifts could stress fish, affecting their metabolism, feeding behavior, and reproductive cycles. Additionally, sudden increases in flow alters sediment transport, potentially displacing eggs or reducing habitat quality for juvenile fish."

"Macroinvertebrates, such as aquatic insects, are highly sensitive to changes in flow and water chemistry. The daily fluctuation in discharge may lead to habitat instability, particularly for species that depend on consistent substrate conditions. Increased flow could also wash away smaller, less mobile macroinvertebrates, reducing overall biodiversity and disrupting the food web."

"Amphibians, particularly those with aquatic larval stages, depend on stable water conditions for survival and development. Rapid, daily fluctuations in flow may strand eggs or larvae, disrupt breeding sites, or alter water temperature in a way that impacts development. Amphibians are also sensitive to changes in dissolved oxygen and potential shifts in pH or pollutant levels that may accompany groundwater inputs. If groundwater contains contaminants or has significantly different chemical properties than the creek water, this would negatively impact amphibian populations."

Response to comments:
To the extent this comment is about construction water management, see Filtration Facility Stormwater Management During Construction above.

To the extent this comment is about post-construction (operations) water management, see Stormwater Management Post-Construction (Operations) above.

Pg. 10 - "Ultimate Use Effects – Filtration Facility, Associated Structures, Grounds: ….
→ Potential changes to macroinvertebrate assemblages due to altered riparian and streambed
→ Potential toxic effects to invertebrates and macroinvertebrates from stormwater runoff."

Response to Comment:
See Additional Species above.

See Stormwater Management Post-Construction (Operations) above.

Additionally, there will be no adverse impacts to macroinvertebrates due to altered riparian conditions and streambed as the project does not propose any removal or disturbance of riparian vegetation along Johnson Creek. In fact, there will be substantial improvements that will increase the current riparian buffer width along Johnson Creek, improving conditions for macroinvertebrates and all other aquatic species compared to the pre-development conditions.

Exhibit N.43 Cottrell CPO & PHCA Adverse Effects Report
Pg. 52 - "Like fish, the effects of increased sedimentation, toxic runoff, temperature increases, and increased flashy flows to amphibians have occurred and will continue to occur during construction and throughout the operation of the completed facility"

Response to comment:
To the extent this comment is about construction water management, see Filtration Facility Stormwater Management During Construction above.

To the extent this comment is about post-construction (operations) water management, see Stormwater Management Post-Construction (Operations) above.

See Additional Species above.

Exhibit N.43 Cottrell CPO & PHCA Adverse Effects Report
Pg. 53 - "Therefore, flashy flows that are created by the filtration plant construction and operation will negatively impact reproductive success of amphibians in the Johnson Creek watershed."

Response to comments:
Refer to response to Exhibit N.43, page 13 of this document.
To the extent this comment is about construction water management, see Filtration Facility Stormwater Management During Construction above.

To the extent this comment is about post-construction (operations) water management, see Stormwater Management Post-Construction (Operations) above.

Exhibit N.47 Andy & Shannon Gale Written Testimony
"Within the creek, we have observed salamanders, freshwater mussels, crayfish, small trout, and a river otter. Since the start of construction of the treatment plant, this vibrant ecosystem has been disrupted by the displacement of construction noise heard a mile away and an increase in soil run off into Johnson Creek. The result has been a reduction in wildlife both in and along the creek. The recent LUBA remand order, stopping construction, has only reinforced this observation as the wildlife slowly returns."

Response to Comment:
Comment related to construction and therefore outside the scope of this proceeding.

Noise has not been identified as a risk to aquatic species except for pile driving and other high amplitude construction related practices that occur underwater. Underwater noises can travel significant distances leading to changes in behavior and even death in aquatic species if they are close enough to the noise producing impact. There is no risk of high amplitude noise from construction activities (or for that matter operations) that would impact aquatic species in Johnson Creek as there is no underwater work proposed. Construction activities and the project site more generally are a sufficient distance away to prevent risk of adverse impacts related to noise.

To the extent this comment is about construction water management, see Filtration Facility Stormwater Management During Construction above.

Exhibit N.48 Charles Ciecko Written Testimony
"C. Applicant materials specify ""pipeline drains"" in both raw and finished water pipelines. It is assumed that these drains are utilized when pipelines must be emptied for the purpose of repair or maintenance activities. Applicant provides no information about either the quantity or chemical content of water that will be discharged or how the discharged water will be managed. In the case of the the raw water pipelines, 2 @72"" pipes will extend 1200 feet and then rise approximately 230 ft to the surface at the proposed filtration plant site. Assuming only the water from the tunneled pipes is drained, 604,908 gallons of water will be discharged under pressure of 230 ft. of head. This volume has the capacity to cause localized ponding, erosion or run-off into local drainage swales and protected watercourses. "

Response to comment:
This has been addressed in the Pipelines Memo. Considering, in particular, the BMPs in place for conducting standard draining of pipes in drinking water systems, the pipeline drains will not adversely affect aquatic habitat or water quality in the project area.

Exhibit N.52 Pat Meyer Written Testimony
Pg. 1 "The massive volumes of approved stormwater runoff from the construction site now regularly flow directly into the Johnson Creek headwaters. This runoff carries with it sediment, chemicals, elevated temperatures, and unnatural flow patterns that are fundamentally altering the habitat."

Response to comment:
See Filtration Facility Stormwater Management During Construction above.

Exhibit N.53 Anthony Kinen Written Testimony
"*In addition to the decline in area wildlife, I have noticed significant flooding and silt deposit find their way into the North Fork of Beaver Creek. This creek is a vital habitat for several species of animals. In years past, I have never seen the creek go over its banks or its the roads that are on my property. This year the creek was over the road and banks for close to a month straight. The amount of silt that I have seen come into the property both from the bottom of Lusted road, which flooded three times this year, and though the drainage creek accost the street from the site is very alarming. The drainage creek will run muddy brown for days after a rain event. This was never a problem even with active farmaing happening on that field."*

Response to comment:
See Exhibit N.10 Guy Meacham Written Testimony - 04.11.2025 Comment – Pg.2. See page 7, 8 above.

Exhibit N.67 Craig Trimple Written Testimony
"Our family has lived in this area for over 75 years and Johnson Creek runs through our property. The amount of runoff being dumped into the creek has the creek at a level above all but the worst storms we have had. The amount of sediment in the water is unprecedented. The creek is usually about 6 to 8 inches deep and clear. It is now running at about 2 feet and very muddy and has been so for several weeks. This has to have an environmental impact to the natural resources of the creek and all species that live in and use the area."

Response to comment:
See Filtration Facility Stormwater Management During Construction above. Additionally, it is highly unlikely that this portion of the Johnson Creek watershed runs clear and 6 to 8 inches deep throughout the winter and during heavy rain events that may occur at any time of year. The upper portion of the watershed is primarily agricultural land that regularly contributes high levels of sediment into the creek due to lack of effective measures to reduce sediment inputs (e.g., riparian buffers, upland vegetative cover). The Filtration Facility will manage stormwater in a manner that will not lead to adverse impacts like those that occurred prior to development of the project. See Stormwater Management Post-Construction (Operations) above.

Lauren Corter Remand Hearing Oral Testimony
"This is a federally designated river that has been classified as remarkable, scenic, recreational, and has values of geologic and fish, and wildlife values."

Response to comment:
See Sandy River above. Also see Upland Habitat memo.

"There are permanent threats to the local ecosystem. The farmland community water resources, including our groundwater, which they're pumping into Johnson Creek, forests, and aesthetic resources. Because the Water Bureau did not complete an EIS, they cannot articulate the effects that have occurred and will continue to occur. LUBA has asked them to quantify effects, but the damage has been done. And they come here today with a massive engineering report, but empty-handed with the very thing LUBA has asked them to be prepared with."

"It is well documented that the northern red-legged frogs, the cascade frogs, the newts and salamanders use the headwaters to lay egg masses in the late winter and early spring. They use the calm waters edge in the grasses and the duff to rear. However, during this time, a million gallons of water pumped from the site has caused erosion and sedimentation, likely disrupting this process and altering the area's amphibian population. The Water Bureau comes today with no wildlife inventory, no quantitative assessments, and no mention of amphibians."

Response to comment:
To the extent this comment is about construction water management, see Filtration Facility Stormwater Management During Construction above.

To the extent this comment is about post-construction (operations) water management, see Stormwater Management Post-Construction (Operations) above.

The photo from the Cotrell CPO report documenting presence of a Cascades frog, *Rana cascadae* (August 22, 2023), located at 45°27'40.7"N 122°18'00.8"W, within Johnson Creek riparian habitat appears to be an error. The Cascades frog is typically found at higher elevations in mountainous areas ranging from 2500-6000 feet (https://www.oregonconservationstrategy.org/strategy-species/cascades-frog/). Regardless, as explained in Exhibit N.55, the project will improve water quality and reduce impacts on aquatic habitat compared to pre-development conditions for all aquatic/semi-aquatic species present in Johnson Creek in the area, including the Cascades frog if it were present here.

Multnomah County

LUP Hearings <lup-hearings@multco.us>

Applicant's First Open Record Period Submission -- T3-2022-16220

Zoee Powers <zpowers@radlerwhite.com> Mon, May 5, 2025 at 11:47 AM
To: LUP Hearings <lup-hearings@multco.us>
Cc: "Peters, David" <David.Peters@portlandoregon.gov>, Renee France <rfrance@radlerwhite.com>, Zoee Powers <zpowers@radlerwhite.com>

Multnomah County Staff,

At this link, please find the applicant's submissions into the record for the First Open Record Period of T3-2022-16220 on remand:

https://radlerwhite.sharefile.com/d-sc32887acc9964f03b16e192384a89def

I have personally endeavored to make sure these are all searchable, unlocked/editable, and of a proper size. I understand that in our last submission we missed recognizing that one of the documents was locked by an engineer's stamping procedure and it caused additional work for staff. Please let me know if you have that issue again and I will have the document corrected.

Thank you,

Zoee Lynn Powers

Partner

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Website: www.radlerwhite.com

Pronouns: She/her

Work Hours: I work normal business hours all days except for Tuesdays. On Tuesdays, I work until 2:30 PM and then return around 7 PM. If you have an urgent matter on a Tuesday afternoon between 2:30 PM and 7 PM, please call my legal assistant, Brittany, at 971.634.0216. Brittany will be able to contact me.