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Date: August 5, 2023
To: Mr. Alan Rappleyea, Multnomah County Hearings Officer
From: Bruce Prenguber, M.S., Agricultural Economist
Subject: Bull Run Filtration Facility and Pipelines Project - Response to Public Comments Related to Farm Use Impacts in Multnomah County

This memorandum responds to a selection of Multnomah County land use review public comments received as of the date of this response that address accepted farm practices in the Surrounding Lands. Among other analyses, Globalwise previously provided two key reports: "Compatibility of Proposed Portland Water Bureau Filtration Facility \& Pipeline Operations with Surrounding Agriculture," dated September, 2022, which was included in the land use record as staff's Exhibit A. 33 (referred to herein as the "Operations Report"), and "Compatibility of Proposed Portland Water Bureau Filtration Facility \& Pipelines Construction with Farm Traffic," dated June 2023, which was included in the land use record as Attachment 5 to the Applicant's Pre-Hearing Statement, at staff's Exhibit H. 3 (referred to herein as the "Farm Traffic Report"). This memorandum builds on the Operations Report and Farm Traffic Report and uses defined terms and other concepts from those reports.

The responses below are intended to 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.

Several farmers expressed the same or similar concerns regarding dust, noise, and traffic. Response to those topics is collectively addressed first in this memorandum. Where more unique or specific concerns are raised, further responses are given below with the other comments by each farmer. For each farm, I have evaluated the individual and cumulative impacts presented by their testimony and analyzed in the Operations Report, Farm Traffic Report, and prior specific responses included in Exhibit H.3. Taking all of this information into consideration, and looking at it cumulatively, I conclude that neither the filtration facility nor the pipelines will force a significant change in accepted farm practices or a significant increase in the cost of those practices on Surrounding Lands devoted to farm use. This memorandum includes additional details of this farm-by-farm analysis.

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## Farm Testimony Responses by Topic

This section of the memorandum notes broad topic areas identified in testimony from farm operators and provides general responses to that testimony.

## Dust Impacts

Farmers state that airborne dust generated by construction at the filtration facility will travel to their nearby fields and cause health hazards and significant discomfort for field crews and farm employees and managers. In some cases, they say it will require that workers wear extra protective equipment such as a respirator, goggles, and headphones to perform their normal duties. They also state this may cause some employees to seek employment elsewhere. Other farmers argue that dust will impact growth of plants, damage plants, or invite dust mites.

Response to Dust Impact: Dust from the filtration facility site is not even a remote threat to neighboring farms for much of the year because of the high rainfall pattern and surface soil moisture. Dust generation therefore will not occur for about two-thirds of the year.

In those times when dust could be generated, the Water Bureau construction contractors have the needed expertise and measures planned to eliminate or contain dust throughout the filtration facility site. The Applicant's Pre-Hearing Statement (Exhibit H.3), Attachment 8 (the "Dust Control Plans") explains the dust control plans for operation and construction of the filtration facility. The following dust control measures are planned for mitigation of dust generation and dispersal during the dry season:

1) Construction vehicle speeds limited to 10 mph within the filtration facility will reduce dust on temporary paved or gravel road surfaces at the site.
2) Water trucks will operate continuously through the dry season wetting all on-site gravel roads.
3) Water truck passes will be conducted in a manner that applies enough water to control dust but not to an excess that will cause runoff or erosion.
4) Two on-site filling stations will be used for water trucks. Both filling locations will be temporarily paved or stabilized to provide adequate erosion prevention.
5) Limited use of water absorbing (hygroscopic) or lignin products per manufacturers recommendation will decrease the frequency of watering trafficked areas.
6) Wheel wash facilities will be installed and utilized as necessary to control trackout which could otherwise contribute to dust in the surrounding area.
7) Use of cover or other acceptable means (e.g., watering as needed) to retain soils on stockpiles and prevent fugitive dust releases.
8) While loading trucks from stockpile or excavation areas, when practical, conduct loading and unloading activities on the downwind side of the pile.
9) Addition of moisture as needed during the loading operation to minimize the release of dust during loading and or hauling.
10) While loading trucks from stockpile or excavation areas, minimize drop heights and transfer points whenever practical.

Regarding dust generation within pipeline construction zones, the contractors will also follow similar best-practices dust management procedures, which include:

1) The contractor will use on-site water trucks to provide dust control. The on-site water trucks will keep the work area wetted down as necessary to prevent dust from leaving the work area.
2) Temporary aggregate access roads will be used to reduce operation of equipment on bare ground.
3) Paved roads at or near the construction zones will be regularly swept.
4) While loading trucks from stockpile areas, where practical, conduct loading and unloading activities on the downwind side.
5) While loading trucks from stockpile and excavation areas, minimize drop heights and transfer points.
6) Wheel wash facilities will be installed and used as necessary to control track-out on roadways

Compliance with Multnomah County erosion and sediment control permits and compliance with DEQ 1200-CA permit requirements will address the issue some farmers raised of mud, created by dust control practices, leaving the filtration site and pipeline work sites. As part of the 1200-CA permit, for example, DEQ requires that the contractors implement "track-out controls as necessary to ensure that sediment removal occurs prior to vehicle exit (e.g., wheel and tire washing, rumble strips, and rattle plates)." When applying water to reduce dirt generation, the construction contractors will only apply the amount needed for dust mitigation, in order to avoid erosion or mud problems. The proper allocation of water will not create "massive amounts of mud" as alleged in one comment, but there will be sufficient application of water to control dust. The contractors have experience with striking this balance successfully.

The greatly reduced seasonal time periods when dust could be an issue has to be considered for why there is minimal concern for dust generation causing a significant change in accepted farm practices or increased costs of those practices during construction. Farmers have commented that dust is a "serious and significant impact"1, and "the massive amount of dirt and topsoil to be excavated and hauled off will generate quantities of dust and diesel particulate in the air that far exceed what is expected in accepted farm practices." 2 With the above-described dust control best practices in place, even during the limited season when dust can be an issue, dust will be managed and fugitive release of dust to adjoining properties will be held at a minimal level. There is no reason to expect that dust generation from the project will be significant to the point that adjoining farmers would need to implement extraordinary dust control measures or have protective equipment for their employees.

[^0]Furthermore, farms themselves can create excessive dust, and for this reason farms are generally not sensitive to dust from off-site sources. Farm vehicles frequently travel and perform work on dirt roads and through dirt fields. Farms often have dirt roads that run through the middle of fields and are traversed many times per day. Trees and their leaves next to these roads receive large quantities of dust kicked up from these activities. A video provided into the record concurrently with this memorandum illustrates the quantity of dust from a single truck going slowly (10 MPH) on a farm road. Yet, farmers do not manually wash the leaves next to these roads. Instead, the accepted farm practices are that rain and irrigation sprinklers wash the dust off the plants, which is aided by wind moving the dust off of the plants. Irrigation applies water for plant growth in dry weather, which is also when dust blows. Farms would already supply protective equipment for their employees if it is needed. There is no reason to expect that construction activity operating with the dust control plans will result in the problems described by farmers.

Controlling for dust - both through dust reduction as well as mitigation - is an accepted farm practice. Farmers in the Surrounding Lands control dust in numerous ways. Exposure of bare soil in fields is avoided and this can be accomplished by planting vegetation between rows of trees or other harvested crops, use of minimum tillage practices, and adding mulch to soil surfaces. As mentioned above, sprinkler irrigation has the secondary purpose of removing dust from plants and is used to purposely "irrigate" dirt or gravel roads in the same way the Water Bureau will use water truck passes to control dust on the filtration facility site. Slower vehicle speed in fields, and performing field work at optimum soil moisture levels (not too dry) is another practice, as is spraying for dust mites. Wind may also be monitored to determine if it is providing adequate dust control on plants. The minimal additional dust added by the project will not force farmers to do anything more than they normally would do for dust mitigation.

For the reasons stated above, dust generated by the Water Bureau Project at either filtration facility site or at pipeline construction zones will not force a significant change in accepted farm practices and will not cause a significant increase in the costs of accepted farm practices.

## Noise Impacts

Farmers in the vicinity of the filtration facility site expressed concern about excessive noise created by construction activities that will reach their fields and affect their workers. They cite noise caused by construction equipment movement, drilling, loading and unloading trucks, vehicle back-up beeping, and diesel generators.

Response to Noise Impacts: Farming operations, which themselves can generate substantial noise, typically are not sensitive to noise from off-site sources. Additionally, noise will be mitigated by site conditions and noise mitigating measures. First, within the 93 -acre site, construction activity is concentrated toward the center and slightly west. From this main construction area, there is significant distance from where the main excavation will occur and the boundaries of the Water Bureau property before
noise can reach nearby farm use property. This provides an initial source of noise reduction to the properties. As construction continues, berms at the property edges will provide additional noise attenuation.

Second, the construction of the main water treatment facilities involves excavation that descends into the ground. As excavation progresses, sound will be directed upward, not outward from the area of construction. This will limit the noise from excavation that could potentially reach neighboring sites. As construction continues, berms built up from excavated material will be placed at the property edges and will provide additional noise attenuation.

Third, the contractors have developed and will implement a Noise Pollution Control Plan (NPCP) during construction. The contractors will use a sound level meter to check for sound level verification. Among other noise control best practices, that plan requires that: no equipment will be used that has unmuffled exhausts and all equipment will comply with pertinent standards of the U.S. Environmental Protection Agency (EPA); stationary equipment will be located as far from nearby private properties as possible; practices pertaining to dump trucks will limit avoidable practices that generate excess noise such as compression brakes; and the contractor will construct temporary or portable acoustic barriers around stationary construction noise sources if required (for example, such barriers are planned near the raw water tunnel portal in the raw water pipelines easement and could be used around generators or other stationary equipment when located close to the property boundary).

The noise created by tractors and other farm equipment may already require that farmers provide protection for their employees from noise generated in their fields as an accepted farm practice. Because noise will be managed and mitigated at the filtration facility site, farmers will not need to add noise cancelling headsets for their employees working in nearby fields. Farmers will not need to alter any other accepted farm practices as a result of this construction activity.

Regarding noise generated by pipeline construction, in addition to following good construction management practices similar to those described above, this activity moves as the work progresses, so any noise generated is even more temporary than the noise at the filtration facility site.

For the reasons stated above, noise generated by the Project at either filtration facility site or at pipeline construction zones will not force a significant change in farm practices and will not cause a significant increase in the costs of accepted farm practices.

## Traffic Impacts for Farm Travel

Several nurseries express concern that the volume of Water Bureau construction traffic and road closures will force unacceptable delays for them and cause significant financial hardship. Where comments identify individual travel routes, responses are included to the specific farm comments below.

Response to Traffic Impacts for Farm Travel: Farm vehicle and equipment travel on public roads has been extensively discussed in the Farm Traffic Report.

Farmers were identified in the Farm Traffic report by letter. A number of those farmers have now identified themselves in the public record:

- Surface Nursery - Farm Operator F
- Jim and Steve Ekstrom - Farm Operator D
- Don Marjama - Farm Operator N
- R\&H Nursery - Farm Operator Q
- Hans Nelson - Farm Operator X

As explained in the Farm Traffic Report, careful consideration has been given to reduce or eliminate farm travel delays and detours due to the project. The routes of travel for farms that regularly use public roads in the Surrounding Lands have been mapped and studied by Globalwise for several years. This information was utilized by the pipeline design team to schedule when main roads are either closed or have flagger-controlled one-way lane passage. Also, scheduled pipeline construction at critical intersections is timed to occur at seasonal low periods for farm traffic. As detailed in the Farm Traffic Report, 11 constraints have been placed on pipeline construction to reduce farm travel delays and detours. The Water Bureau is also ensuring farmers can maintain local access to fields, including by passage through otherwise closed work zones as needed.

Opponents state that construction will continue for 4 years or more with a high level of impact during that entire period. The often-quoted number of 300 trucks traveling to the filtration facility site per day is a peak number and is not maintained at this maximum level for 4 years. Additionally, the pipeline construction is scheduled for much shorter time periods and is staggered within the local road system to accommodate farm traffic. The longest time pipeline construction is planned in a single segment of road is 14 months and this is in only two road segments, with one of these in Dodge Park Boulevard where there will be one lane of passage. Even within that segment, farm vehicles can route to locations in front of a pipeline construction zone or behind it while the pipeline construction zone inherently moves -- approximately 30 to 50 feet per day for trenched construction and after completion of a section of trenchless construction.

As indicated in the Farm Traffic Report, the pipeline construction plan allows for two road segments to be built so pipeline construction can end as soon as possible. This was preferred by the farmers. Construction Traffic Impact Analysis (the "Construction TIA") done by Global Transportation Engineering dated June 2, 2023 (in the land use record as staff's Exhibit A.230) analyzed impacts to 15 study intersections and roadways related to construction of the Bull Run Filtration Projects. Global Transportation Engineering has supplemented the Construction TIA analysis with the "Bull Run Filtration Facility Carpenter Lane Single-Access Analysis" (the "Construction TIA Update Memo") provided into the land use record concurrently with this memorandum. The Construction TIA Update Memo considers that "Site Access B" is not going to be available for use by construction traffic based on a recent Clackamas County land use decision and provides an updated analysis on that basis. Globalwise has reviewed the Construction TIA Update

Memo and the potential for impacts to farms along the revised haul route and in the Surrounding Lands more generally. Overall, the Construction TIA Update Memo does not change Globalwise's prior analysis and conclusions in the Farm Traffic Report, particularly Section 6.0, related to the addition of vehicle trips to the surrounding road network during construction.

## Traffic Impacts for Product Shipments

Several nurseries explained that they ship products to their customers in semi-truck and trailer loads. The shipments are a mix of trucks being loaded at a single location and also mixed loads that may have combined loads from 2-3 or more farms consolidated in the load. Drivers are dispatched to the farm or farms and if several farms have products for one load the sequence of the load must be flowed so that at destinations the loads can be delivered in the proper order. Nurseries explained that loads are time sensitive, both in terms of when the trucks arrive at the farm for loading and when the deliveries are scheduled. These orders can be very large, and farmers say their reputation is dependent on orders being loaded and shipped on time. Farmer comments are that they believe they will face major disruptions in shipping because the semi-trucks will be disrupted by the amount of pipeline construction in the roads and the large number of construction vehicles that will be added to the local road system in the Surrounding Lands.

Response to Traffic Impacts for Product Shipments: For the same reasons as stated above for farm vehicle and equipment travel, and as discussed in the Farm Traffic Report, the travel of semi-trucks and trailers will be accommodated within the capacity of the roads and will not force a significant change in, nor a significant increase in cost of, accepted farm practices in the Surrounding Lands.

Globalwise studied routes that the semi-trucks will take to headquarters where the loading docks are located. In most cases, there are alternative routes that will have minimal pipeline construction activity. Either by taking the first preferred route, or if the driver chooses to take a detour route, only a minimal delay is expected which would not force a significant change in, or increase in cost of, accepted farm practices.

In considering additional ways to alleviate these concerns, the Water Bureau proposes to supplement the communications strategies in Section 7.0 of the Farm Traffic Report by providing road closure updates through ODOT's TripCheck system. TripCheck is ODOT's one-stop shop for information on traveling near the project and throughout Oregon. People accessing ODOT's TripCheck system can see near real-time traffic congestion information, incidents, continuous winter travel updates, and other valuable tips. The road closure updates will also populate to commonly used commercial mapping and traffic programs and apps, such as Apple, Mapquest, Waze, and TomTom. Checking ODOT TripCheck or other online sources for traffic and road closure information is an accepted farm practice, as farmers share the public roads with other road users and must adapt to changing road conditions and at times use alternative travel routes on public roads to reach their destinations.

Farmers in the Surrounding Lands also have various other accepted farm practices to allow them to adjust to changing conditions on the public road system or other changing conditions such as weather. If for some reason they had to delay planting or harvest because of weather or road conditions, for example, the accepted farm practice includes adding employee hours on other days.

Farm trucks and most other farm vehicles can travel at the posted speed limit on roads. If a driver decides to take an alternate route to reach a farm, they can take a secondary route. The added distance is expected to be less than two miles farther in nearly all cases and therefore it is a matter of a few additional minutes of travel time. This is therefore not a disastrous delay as indicated in several comments by farmers. Combined with the temporary nature of construction and the many constraints placed on pipeline construction discussed in the Farm Traffic Report, construction traffic and pipeline construction will not force a significant change in, nor significantly increase the cost of, product shipment accepted farm practices in the Surrounding Lands.

## Airborne Particulate Impacts

Several farmers comment that air quality will negatively impact them and their employees due to dust, diesel fumes, and airborne construction debris. One farmer stated that this will be so significant that they will need to supply their employees with respirators at significant cost when working in the adjoining field.

Response to Particulate Impacts: Regarding dust, that has been addressed in the Response to Dust Impacts. Regarding diesel fumes, all vehicles working on the project will meet applicable standards for vehicle emissions. The filtration facility will follow air pollution control measures to meet air quality standards, including the City of Portland Clean Air Construction (CAC) requirements, as described in the Construction Supplemental Information memorandum submitted concurrently into the land use record with this memorandum. When diesel trucks are not in operation, the engines will be shut off. In the few cases where diesel generators will be used on the site, they will be turned off when not in use. No other specific airborne particulate was identified by farm commenters. However, site activity is monitored so that miscellaneous materials that could blow off site are monitored by construction personnel with instructions to properly dispose of it. Combined with the temporary nature of construction, airborne particulate will not force a significant change in, nor significantly increase the cost of, accepted farm practices in the Surrounding Lands.

## Loss of Agricultural Land

Several farmers comment that the filtration facility site is prime agricultural land, and that farmland is being lost at an alarming rate in the area. Similar concerns relate to the pipelines.

Response to Loss of Agricultural Land: The filtration facility site is owned by the City of Portland and was purchased in 1975 for the specific reason to provide for the future
needs to upgrade treatment and supply water from the Bull Run for the residents of Portland and nearby areas. The zoning is MUA-20 and community use is allowed as a conditional use. No re-zoning is required to change the use from farming to a water filtration facility that will serve approximately one million people in the greater Portland region. Customers include the Pleasant Home Water District in the Surrounding Lands.
While the soil is high quality for farming, it is not exceptional or rare. The U.S. Department of Agriculture's soils agency, Natural Resources Conservation Service (NRCS), classifies nearly all of the soils on the Water Bureau site as Cazadero silty clay loam. The NRCS places Cazadero silty clay loam with slopes of 0 to 8 percent in land capability class $2 e$ (e for erosive) if non-irrigated. Irrigation water is supplied from two of the adjoining farmers who are tenants on the Water Bureau property. Class 2 soils have moderate limitations that prevent them from being classified as prime class 1 soils.

The lack of a well on the Water Bureau property is a limitation for crops that can only be grown by extending irrigation pipes from wells on the tenant farmers' properties. The alternative of securing a permit to drill a well takes years in most cases and may not be approved unless the applicant has a senior water right.

For the impact test of land use approval, the City of Portland property and other easement areas of the pipelines are not in the Surrounding Lands, but rather are part of the project area. Therefore, the removal of this property from farm use is not a factor in the decision to grant the conditional use of the filtration facility. Nonetheless, the Water Bureau is taking measures to minimize the amount of farmland removed for pipeline and road construction and is also taking comprehensive measures to restore the land disturbed during construction to high productivity for farming. See Exhibit A.35, Agricultural Soils Restoration Plan. These soil restoration practices are similar to accepted farm practices for soil reconstruction of disturbed soil during and after installing subsurface farm infrastructure such as drain tile or pipelines. At the filtration facility site, the 93 acres of land is about 85 acres in actual crop production after subtracting the land with timber and roads, and only a portion of that will be used for the filtration facility, leaving a substantial, 15-acre upland area that could be returned to farming in the future.

The filtration facility site is not currently in farm use. The City of Portland is not under any obligation for Surface Nursery, R\&H Nursery, or anyone else to continue to farm this property.

The main reason for the past loss of farmland in the Surrounding Lands, and the impetus for future loss of farmland, is that land use planning has allowed residential development to expand in so many places within the Surrounding Lands.

## Responses to Abutting Farm Operator Testimony

This section is organized by farm and includes specific testimony in italics along with the detailed responses. This section addresses abutting farm uses to the filtration facility site and pipelines. The next section addresses non-abutting farm uses.

## E. 36 Written Testimony from Shawn Nerison, Surface Nursery (Farm Operator F)

Surface Nursery is concerned that the Water Bureau construction traffic volume and road closures will force unacceptable delays for this nursery and cause significant financial hardship.

Comment - "The construction of the filtration plant \& pipelines on and around our property will be completely prohibitive to the continuation of our normal farming operation at Surface Nursery. Construction and operation of the PWB plant will severely impact Surface Nursery's normal farm operations and accepted farming practices. It is inevitable that there will be times that Surface Nursery will be completely inaccessible due to the full closure planned on Lusted Road as well as the massive road repair and construction on roads surrounding the nursery that our employees drive to work on and that we rely on to move our crews, trees, and equipment."

Comment- "The planned construction on these roads and others also means that there will be times when not only will employees not be able to reach the farm and report to work, but semi-trucks, farm equipment, and farm trucks hauling equipment on large trailers will be unable to enter or exit the farm. The inability of employees to access the farm and the restricted mobility of farm operations will have devastating financial impacts ultimately resulting in trees not being able to be managed properly and customer orders not being prepared, loaded and shipped. When employees are unable to get to work, production is halted. When employee commute times are extended due to delays, detours, and closures on their usual routes to and from work, they will seek work at a different nursery where the commute is easier, resulting in loss of work force which will negatively impact productivity. Impacted productivity is ultimately reflected in the number of orders completed."

Comment - "The impact from reduced workforce efficiency and productivity will directly impact Surface Nursery's bottom line, and even as little as one order not completed or not completed on time can result in a financial loss of up to $\$ 100,000$ or more. Losing any order leaves me with unsold trees I've already paid employees to dig and prepare for shipping. These losses will be compounded the longer the construction at the main site and on area roads is sustained."

Comment - "Surface Nursery needs to maintain unrestricted operations to effectively respond to these changes. For instance, if weather conditions affect the loading schedule in other parts of the country, I may reassign employees to work on different tasks in other locations until they are required for loading. This involves moving crews,
equipment, and rearranging field tasks at different sites promptly. However, the estimated construction period of 4-5 years, as stated by PWB, poses a significant obstacle to carrying out normal farm operations for Surface Nursery. It particularly hampers our ability to quickly adapt and redirect our workforce."

## Response - See Response to Traffic Impact for Farm Travel and Response to Traffic Impacts for Outbound Shipment of Farm Products.

It is important to note that the pipeline construction zone in Lusted Road will never pass by the entrances to Surface Nursery's headquarters. Full road closure does not mean local traffic cannot pass through a construction zone. Where no detour is available, farm traffic will be treated similarly to emergency vehicles and will be flagged through otherwise closed work zones. It also does not mean that farm vehicles cannot route to locations in front of a pipeline construction zone or behind it while the pipeline construction zone moves approximately 30 to 50 feet per day. The pipeline construction contractors will not leave Surface Nursery headquarters "completely inaccessible" due to the construction planned for Lusted Road. In fact, the numerous entrances to Surface Nursery on Lusted Road will not be closed.

As stated previously in Globalwise's response to Surface Nursery's comments dated April 4, 2023 (included in the land use record as Attachment 6 to the Applicant's PreHearing Statement, at staff's Exhibit H.3), Globalwise has carefully studied Surface Nursery and the potential impact of the Water Bureau Project on Surface Nursery. This has included several in-person meetings with Mr. Nerison. I have also reviewed the location of fields farmed by Surface Nursery based on information supplied to me by Mr. Nerison. My analysis of farm fields agrees with the field locations of Surface Nursery and the routes taken by Surface Nursery as listed by Surface Nursery in the attachment to their public comments dated June 29, 2023. Surface Nursery is Farm Operator "F" in Exhibit H.3.

Mr. Nerison stated in our face-to-face meetings that Surface Nursery emphasizes mobility for traveling between headquarters and fields as well as from farm field to farm field. Mr. Nerison includes this same statement in his June 29 comments that "I have multiple, open route options to ensure the safety of my employees and efficient mobility of my equipment." This same point was also expressed by other nurseries in the Surrounding Lands and shows that Surface Nursery follows the accepted farm practice of using alternative routes as needed to reach their farm fields. The personal experience of Water Bureau staff attending a meeting with Surface Nursery in 2018 included Lusted Road being closed for County road work, and having to detour around the closure in order to access Surface Nursery's headquarters. Inherently, part of the accepted farm practices for using the public road network is detouring around road closures for utility installation in the right of way.

Explanation of how nurseries manage vehicle mobility is explained in the Farm Traffic Report. Surface Nursery utilizes many accepted farm practices for farm travel flexibility and mobility. Those practices significantly reduce negative impacts related to construction activity that occur in the public right of way. For Surface Nursery, those
include: 1) use of farm road networks which reduce public road travel, 2) re-routing on roads to use alternative field access points as needed which can include customary field access points but also include alternative locations to exit from public roads where there are no impediments to tractor or other off-road vehicle access, 4) hauling equipment on trailers to destinations, particularly when the location is more distant from headquarters and 5) altering the sequence of travel to fields to reduce total road travel time when it is common to farm several fields in a single day.

Furthermore Mr. Nerison's comments emphasize slow-moving tractors driven on roads. Mr. Nerison, in his public testimony, said tractors average 13 miles per hour, much higher than tractor speed in his written testimony. Surface Nursery can also move tractors loaded on trucks and trailers. Furthermore, most trips are taken by non-tractor farm equipment on roads that travel at speeds more commonly at or near the posted road speed limit. This includes crew buses, pick-up trucks for supervisors and managers, supply vehicles, and larger trucks. In these cases, the resulting delay times are minimal. It is a mischaracterization to indicate that most farm vehicles are moving "slower than the regular traffic."

Mr. Nerison states "a typical workday is from 7:00 AM to 4:30 PM but shifts to earlier times when operationally necessary." Mr. Nerison also states that "Most if not all nursery work, especially field work, is done during daylight hours, so the work schedule might change throughout the year to accommodate the available hours of daylight."

The severe alleged impacts on Surface Nursery are unfounded. At a high level, as explained in the Farm Traffic Report, the transportation engineer has shown that the road network has the capacity to handle the traffic impacts of construction with Travel Demand Management (TDM) strategies proposed by the Water Bureau. More specifically here, the description of work hours means that in late spring, summer, and early fall months, farm equipment will often be on the road before pipeline construction crews and construction vehicles begin operations. Much of the first daily movement of Surface Nursery vehicles will occur with no interruption or delay from construction activity. It also means that at the end of the day farm vehicles will be returning to headquarters before the main afternoon commute traffic. Regarding employee travel to Surface Nursery, given the early start of field operations, employees will also arrive at the farm headquarters before the start of both pipeline construction and the construction vehicle traffic on roadways each workday. There is no reason to make the claim that employees will seek work elsewhere.

Mr. Nerison has stated "Trips per day between the main farm location and off-site fields range from 1 to 10 round trips or more, and involve tractors, pickups, and our employee farm buses." While many trips may occur per day it is impractical for most of those trips to be slow-moving tractors moving back and forth from fields to the headquarters. Rather, crew buses and supervisor and supply vehicles that travel at or near posted road speeds are the primary vehicle traffic.

Surface Nursery claims that they will only use Dodge Park Boulevard to reach their field along lower Lusted Road for employee safety reasons and that they will not have reasonable access due to road construction.

Comment - "The alternative routes currently being suggested are not suitable for our tractors or trailers to navigate. We are explicitly prohibited from using Lusted Hill that is East of Cottrell due to safety concerns, and rightfully so, as it is an unsafe road for our purposes. I have numerous concerns regarding the routes that will be available during construction and its potential impact on Surface Nursery. The connecting roads between Oxbow and the locations our employees need to reach are equally problematic. They are no better than Lusted Hill in terms of safety. These routes present unnecessary risks to the well-being of our Surface employees. They are illequipped to handle high volumes of traffic and have a history of accidents. It is essential to consider the well-being of our employees and ensure their safety. We need a route that is conducive to the transportation of our trailers and equipment without needlessly endangering them."

Response - The Water Bureau has a pipeline constraint (See page 6 of the Farm Traffic Report, constraint \#7) to keep Dodge Park Boulevard east of Cottrell Road open with one lane of passage when working on pipeline construction for the express reason that Surface Nursery and other farms can continue to use Dodge Park Boulevard to reach their fields in Lusted Flats near the Sandy River. The Water Bureau is providing access on Dodge Park Boulevard to accommodate Surface Nursery and other nurseries that wish to only use this route for farm equipment travel. This will support tractors and other slow-moving vehicles that Surface Nursery wants to send down that road. Furthermore, pipeline construction constraint \#2 supports farm traffic by restricting construction on Dodge Park east of Cottrell to August through October, the period of time during the year that nurseries indicated their traffic is at its lowest. This was specifically included in order to maintain 2-lane traffic the rest of the year during busier farming seasons.

Furthermore, construction vehicles will not regularly use the road segment of Dodge Park Boulevard that goes down to Lusted Road. Other vehicles which move at higher speeds can still reach lower Lusted Road on other roads. As to other detour routes, the Water Bureau has proposed specific conditions of approval to fix the County's deferred maintenance prior to use during the construction period in order to ensure they are in a safe condition. The traffic engineer finds that they are designed to handle the volume of traffic proposed.

Surface Nursery claims employees and managers will not have timely access to supplies at local stores.

Comment - "It's important that my employees and I have reliable access to nearby towns to pick up things needed for urgent repairs and prevent a disruption to normal operations."

Comment - "Regular pickup and delivery of farm supplies is another component of normal farm operations at Surface Nursery. Me and our foremen make multiple trips daily to check on crews at offsite locations and/or pick up parts or other supplies from various suppliers in town (most commonly to Gresham, Troutdale, Sandy, Clackamas, Oregon City, Wilsonville, etc.)."

Comment - "We typically receive one large annual shipment (of supplies) that may come by commercial freight truck but the rest are delivered by a regular company pickup and frequency is based on operational needs, but generally not more than one delivery from a pickup per week."

Surface Nursery claims vendors could refuse to continue offering necessary services to the nursery.

Comment - "Servicing the portable restrooms is done on a schedule set by the service provider. Disruptions to this schedule, such as road closures on roads surrounding Surface Nursery, could result in the provider cancelling the contract."

Response - It is highly speculative to assume that service providers will stop offering services to Surface Nursery. It is also not based on an accurate understanding of the traffic impacts. This comment assumes significant ongoing delays and disruptions to road travel. However, analysis by the Water Bureau's transportation engineer shows that intersection delays due to Water Bureau construction vehicle traffic will be minimal and mitigated. Furthermore, as detailed in the Farm Traffic Report, pipeline construction plans employ constraints on pipeline construction scheduling to minimize travel delays when farm vehicle detours may be necessary. For these reasons, travel in all of the above cases cited by Mr. Nerison, which are in vehicles that can travel at normal posted roadway speeds, will result in minimal delay times.

Surface Nursery claims that their slow-moving vehicles will face unsafe conditions with the increased presence of large construction vehicles.

Comment - "Facing delays and detours or interference from increased traffic could create unsafe situations on these roads because the reduced speeds at which we safely drive will cause drivers unfamiliar with our roads to want to pass unsafely."

Response - It is speculative and unfounded to argue that drivers of vehicles contracted to the Water Bureau would pass farm vehicles unsafely. All construction trucks will be operated by trained, licensed drivers that receive comprehensive safe driver training and are directed to follow this training at all times. This training will include safety related to slow moving vehicles such as tractors that are on the roads. Mr. Nerison also points to nursery shipping truck drivers for their operations who "are not from this area and are not familiar with our community's network of rural roads." Page 4. It is disingenuous to be concerned about Water Bureau drivers but not the truck drivers that service his and other nursery operations.

Surface Nursery claims dust will be a serious farm use impact to them. They also allege that excessive airborne particulate from dust, diesel particulate and construction debris will negatively impact them.

Comment - "Noise and dust from the construction of this road and the constant use of this road will have a significant impact on nursery operation and accepted farm practices and will expose myself and my employees to noise and dust levels much higher than normal and expected in nursery work."

Response - The Water Bureau's construction contractors follow many construction practices to control and mitigate dust generation so it will not be released in significant quantities to nearby farm use property including Surface Nursery. These practices are stated above in Response to Dust Impact.

Comment - "Dust and compromised air quality from dust, diesel particulate and construction debris in the air is another serious and significant impact on our employees' health.

Response - Regarding dust, this is addressed in Response to Dust Impact. Regarding diesel fumes and other construction debris this is addressed in Response to Airborne Particulate Impacts.

All construction vehicles working at the filtration facility will meet the required air quality emissions standards. When vehicles and equipment are not in active operation, their engines will be turned off. The construction site will not have generators running 24 hours per day. For these reasons the health of Surface Nursery employees and the owner will not be compromised by working near the filtration facility construction site.

Surface Nursery claims there will be excessive noise, dust, and other impacts from use of the southern access road (no longer planned).

Comment - "If PWB is allowed to build the filtration plant on this farm property and access it through our fields, not only will myself and my employees working in adjacent fields be exposed to high levels of construction noise completely out of character from noise associated with accepted farming practices, but also massive amounts of dust and construction debris and particulate in the air."

Response - The Water Bureau's construction contractors follow many construction practices to control and mitigate dust generation so it will not be released in significant quantities to nearby farm use property including Surface Nursery. These practices are stated above in Response to Dust Impact.

Furthermore, given the Clackamas County decision, the Water Bureau will not be accessing the filtration facility during construction using the road referenced in this comment ("access it through our fields").

Comment - "Spraying water on the construction site is not a valid or logical dust mitigation plan because the amount of water needed to hold down the dust from this project will result in massive amounts of mud, which construction crews and equipment cannot operate in. The reason construction will focus on the drier months of the year is the same reason spraying the site with water to mitigate the dust will not work. Construction vehicles and haul trucks can't drive on muddy, watered-down roads, and waiting for a water truck to water the roads will only cause delays to the construction process, resulting in either extending the construction and its disruptions to our farming practices or they will abandon watering altogether, neither of which is an acceptable solution."

Response - The response to this comment is largely addressed previously in Response to Dust Impact. Additionally, the construction contractors specifically state that when applying water to reduce dirt generation, they will only apply the amount needed for dust mitigation, in order to avoid erosion or mud problems. The proper allocation of water will not create "massive amounts of mud" as alleged in the comment, but there will be sufficient application of water to control dust. The contractors have experience with striking this balance successfully.

Comment "Diesel fumes have another major impact on myself and my employees. Adding a water truck to keep the dust down on the haul route only increases our exposure to sustained diesel fumes from the hundreds of trucks and other construction equipment per day using our road through the middle of our field and active work site."

Response - Airborne particulates have been previously addressed. Regarding this comment and diesel fumes, the construction vehicles will not be traveling on the south entrance road so there will not be "hundreds of trucks and other construction equipment per day using our road through the middle of our field and active work site." It is erroneous to say the location of the proposed road would go through the middle of the Surface Nursery field. The emergency access road is proposed at the far eastern edge of the Surface Nursery field which is the location requested in discussions with Mr. Nerison and it is the location with the least impact on their farm use.

Comment "When construction on the plant starts, the constant line of traffic that will be on the road through our field, within feet of our employees and trees, will consist of heavy-duty dump trucks and haul trucks likely pulling trailers, contractors and crews in diesel pickups, heavy duty construction vehicles towing in equipment and generators, and a diesel water pump truck constantly trying to keep all the dust down. A water truck trying to keep up with spraying down the dust will just be adding to the dust and the diesel fume problem. There will also be diesel generators operating 24 hours a day, creating high volumes of noise and diesel exhaust throughout the main site anywhere power is needed as that site is currently an empty farm field. Exposure to these high concentrations of diesel exhaust and diesel particulate matter can result in dizziness, headaches, and eye, nose, and throat irritation. Prolonged exposure can
increase a worker's risk of cardiovascular, cardiopulmonary, and respiratory disease, as well as lung cancer."

Response - As stated above, there will now be no construction vehicles on the emergency access road that is proposed for the far eastern edge of the Surface Nursery field, so those comments are no longer relevant. See the response to the comment immediately above for further explanation of why diesel fumes will not be a significant issue for Surface Nursery employees.

Comment - "This impact on respiratory health is a grave concern. My employees and I will be subjected to unusually high levels of dust and debris plus high concentrations of diesel fumes and particulate from the main construction site and construction traffic and dump trucks hauling loads that will be continuously driving right through our fields, within feet of where we are performing our work tasks. N95-type dust masks commonly used for nursery work are sufficient for normal operations and accepted farm practices, however, they will not be sufficient to protect the health of my employees when subjected to this level of construction dust, diesel fumes, and diminished air quality. It is reasonable to assume, therefore, that we will want to provide an upgraded, filter-based, fully dust, fume \& waterproof respirator mask that is comfortable for each employee to wear for hours at a time. This impact will be present throughout the 4+ years of construction, and will require that each employee has a dedicated, personal respiration mask they can use when near these areas of construction and construction traffic. They will also need to be full-face to offer eye protection from the same contaminants in the air. To allow for respirator masks that may need to be replaced during the year, and for new employees, I would have to purchase 55 sets at $\$ 70$ each, with extra filters (\$495), to be dispersed between 50 employees, with 5 sets in reserve. Total cost for respiratory protection: \$4,345 per year $=\$ 17,380$ for 4 years. However, this impact on accepted farming practices will impact not only employee health, but also employee job satisfaction. It is not an accepted farming practice or normal work duty to have to wear a heavier-duty respirator for hours at a time while performing duties that do not themselves require respiratory protection. Employees do not want to wear extra gear when working outside, especially during warmer months when the need will be the highest due to the peak of construction. The excessive amount of dust on their skin, hair, in their ears and on their clothes every day, in addition to having to wear extra protective equipment such as a respirator, goggles and headphones just to perform their normal duties will cause some employees to seek employment where they will not have to endure years of construction-related impacts on their job duties, their commutes, and especially their health. Replacing an employee who leaves involves the expense of finding, hiring, and training the new employee; and the loss of productivity during the time it takes to do so. Many of my employee's carpool to work, so this will not be a problem of losing just one employee, but it would mean up to 4 employees at once could decide to seek work elsewhere."

Response - Again, there will be no construction vehicles on the emergency access road that is proposed for the far eastern edge of the Surface Nursery field. Surface Nursery employees will not be working next to "trucks hauling loads that will be continuously driving right through our fields, within feet of where we are performing our work tasks." The construction site will be managed so that there will be no unacceptable levels of air borne particulates reaching Surface Nursery employees, as addressed in Response to Airborne Particulate Impacts.

Comment "Plant \& Tree Health: In addition to impacting the health of my employees and my overall labor force in general, the dust and airborne particulate will affect the trees. The massive amount of dirt \& topsoil to be excavated and hauled offsite will generate quantities of dust and diesel particulate in the air that far exceed what is expected in accepted farming practices. The dust and diesel fumes generated by construction traffic through my fields cannot be adequately mitigated as described earlier in this letter.

Excessive amounts of dust will fall onto and cover my plants and trees at a minimum in the field where the construction road will be built within feet of our rows of trees. It is a fact that leaves that are coated in dust or other contaminants have a reduction in photosynthesis that results in growth problems. Dust covering leaves also affects respiration and transpiration which increases leaf temperature which allows the penetration of phytotoxic gaseous pollutants. This leads to the tree or plant having visible damage and becoming unsalable, and it also causes decreased growth and productivity. Dust also carries dust mites which feed on and destroy leaves. The only mitigation for this impact on our trees is to have them monitored daily and hand sprayed with water as needed. I will need to dedicate a minimum of one full-time employee to this task because the trees will need to be checked daily, every day that construction at the main site as well as travel on the construction access road takes place, even when we are not working there. When dust and diesel particulate accumulation is identified as present on leaves, it will have to be immediately washed off by an employee using either hand spraying or tractor spraying, whichever is called for to avoid damaging the tree or flooding the field but that will sufficiently remove the dust from the leaves.

Total cost to wash leaves (based on one employee annual salary at typical starting hourly wage common to the area): $\$ 28,000.00$ each year $x 4$ years estimated of using the access road $=\$ 112,000^{\prime \prime}$

Response - Again, because construction vehicles will not be traveling on the south emergency access road, no "excessive amounts of dust will fall onto and cover my plants and trees at a minimum in the field where the construction road will be built within feet of our rows of trees." See the above Response to Airborne Particulate Impacts and Response to Dust Impacts.

Furthermore, Surface Nursery drives through the middle of their field south of the filtration facility, according to their own statements, many times per day with tractors, pickups, and other diesel equipment. This dirt farm road route of travel goes directly next to their trees on both sides of the road. This well-travelled farm dirt road has handled many Surface Nursery vehicles emitting diesel and gasoline particulates and kicking up dust on dry workdays for many years to farm both this field and to reach and return from 3-4 fields further south and east. Surface does not manually wash these trees to remove diesel particulate (or dust). Also, for approximately 5 months of the year from late spring to fall, Surface Nursery frequently applies sprinkler irrigation water which washes the leaves of their trees as the water drops to the ground as moisture for plant growth. Furthermore, wind will blow dust off leaves. This movement of dust is a natural way dust impacts are mitigated.

Surface Nursery alleges construction noise will significantly affect their farm use.
Comment - "If PWB is allowed to build the filtration plant on this farm property and access it through our fields, not only will myself and my employees working in adjacent fields be exposed to high levels of construction noise completely out of character from noise associated with accepted farming practices, but also massive amounts of dust and construction debris and particulate in the air."

Comment "Noise and dust from the construction of this road and the constant use of this road will have a significant impact on nursery operation and accepted farm practices and will expose myself and my employees to noise and dust levels much higher than normal and expected in nursery work."

Comment "Noise generated from the construction activities (excavating, drilling, jackhammering, diesel-exhaust brakes and back up alarms) at the main site and from the hundreds of trucks driving through our field where employees will far exceed noise levels found in normal farm operations and accepted farm practices in the nursery industry."

And this related Comment "The constant maneuvering of construction equipment at the primary site will completely change the work environment for myself and my employees."

Response - The Water Bureau construction contractors have many practices to control and mitigate noise generation so it will not significantly impact Surface Nursery or any nearby farm use property. See Response to Noise Impacts. Additionally, a number of these comments are focused on the southern emergency access road, which will no longer be used for construction access.

Comment "Normal farm operations and accepted farm practices include regular work in the fields on foot performing essential tasks such as hand pruning and trimming,
working on or moving irrigation, hand spraying, planting, digging, and more. During these activities, the fields are quiet and free of equipment stirring up dust."

Response - I have personally observed Surface Nursery's workers staking trees walking near a tractor and trailer carrying stakes and ties in the nursery field at the filtration facility site. Not all fieldwork is conducted far from moving tractors and the noise of tractors, indeed it is necessary and accepted farm practice for some work - such as staking - to have a team approach where some workers are operating vehicles and others are assisting on foot.

Comment "Again, transporting employees as needed, when needed, to field locations throughout our system is imperative to our farm practices and to maintain normal, uninterrupted farm operation."

Response - The main response to this comment is addressed above in Response to Traffic Impact for Farm Travel. Additionally, crew buses can travel at posted road speeds. They will not be significantly delayed even if the driver chooses to take an alternate travel route.

Surface alleges it is a devastating financial loss to convert the farmland to the filtration facility site.

Comment "Finally, the most devastating and current financial loss caused by the City of Portland allowing PWB to pursue applying to build the water filtration plant is the loss of almost 100 acres of prime agricultural land - land that has never been used for anything but farming. The soil here is unmatched and reported by the USDA to be some of the best in the world. For this much prime agricultural land to be taken out of farm production is devastating to Oregon's agricultural economy, and its character."
"I will not be able to replace this acreage with comparable farmable land that is a reasonable distance to the farm."

Response - See the Response to Loss of Agricultural Land.

Surface Nursery claims that wholesale water customers will withdraw from agreements to purchase water from the City of Portland and drill their own municipal wells which in turn causes Surface Nursery to drill deeper wells at significant expense.

Comment - "Surface Nursery's irrigation wells, including one near the main site of the proposed filtration plant, are all on the Deep Troutdale Aquifer as is common of many area nurseries and farms. A big concern regarding the new filtration plant is that some of PWB's wholesale customers, such as City of Gresham, City of Rockwood, and Tualatin Valley will not be renewing their contracts due to the rate increases and have opted to drill their own wells. When large-scale wells such as those for a municipality are drilled on the same aquifer, local area farmers including Surface Nursery could see
a decline in water availability. This will result in having to dig deeper or drill a new well altogether, an extremely costly endeavor of anywhere from $\$ 100,000$ to $\$ 300,000$ or more for a new well. Damage from construction vibrations at the adjacent site during the 4 to 5 -year period of construction is also a big concern. Sustained vibrations from drilling into and under the ground near a well can cause extensive damage, especially with horizontal drilling, and require repairs that can easily cost $\$ 60,000$ or more. A well belonging to a neighboring property adjacent to the PWB plant site was already damaged in test drilling and had to be replaced. If any of our wells are damaged during irrigation season, the impact would be disastrous and result in dead trees and cancelled orders."

Response - It is a major undertaking for a City or other jurisdiction to secure permits and receive final approvals to secure reliable, cost-effective new water supplies. Gresham and Rockwood have indicated that they will seek to develop groundwater sources from a deep aquifer - much deeper than the "Troutdale Aquifer" that Surface and other nurseries in the area use - in order to reduce the need to buy all of their water from the City of Portland. ${ }^{3}$ Rockwood already operates three wells under an intergovernmental agreement with the City of Gresham. The additional capacity will use an aquifer known as the "Sand and Gravel Aquifer" located approximately 600-1200 feet below the surface. Many jurisdictions already use this "Sand and Gravel Aquifer," and it is a different, deeper aquifer than the "Troutdale Aquifer" that Surface Nursery indicates is used by nurseries in the area. Hydrogeologists analyzed the existing "water demand" for this aquifer: all the water requirements of the water system including domestic, commercial (including farming), municipal, institutional, as well as unaccounted-for water. Considering the existing water demand and annual demand growth rates, including the additional use proposed by jurisdictions, the hydrologists have confirmed that the use of this groundwater by Rockwood Water and Gresham is sustainable.

Regarding the Tualatin Valley Water District, whose service area is approximately 30 miles away from the project site, they are developing a surface water source (Willamette River), not groundwater, to replace supply from the Portland Water Bureau.

Overall, this argument draws large conclusions from an incorrect set of facts and infers that new wells will draw from the same source and that the water rights permitting system and the Oregon Water Resources Department (OWRD) will fail to protect the nurseries' water rights.

Regarding vibration from the project and potential impacts on wells, this has been studied by the Water Bureau in order to ensure wells are protected. It is not true that a "well belonging to a neighboring property adjacent to the PWB plant site was already damaged in test drilling and had to be replaced." This well (on tax lot 2200) was drilled into a shallower aquifer than other wells in the area and had experienced summer

3 Information about the plans of other jurisdictions is taken from publicly available sources.
seasonal issues in the past that also occurred during a summer when geotechnical exploratory drilling was initiated in the area. Because this well was in a shallow aquifer, and therefore had some potential to be impacted by the project's raw water tunnel, the Water Bureau chose to proactively pay for costs to replace the well with one in a deeper aquifer. The Water Bureau performed private well flow tests and water level measurements on the replacement well and 13 additional private wells prior to and following subsequent geotechnical drilling activities. The work concluded that there were no major differences in the performance of the tested wells between the predrilling and post-drilling activities. Other wells in the area are already drilled into deeper aquifers and the Water Bureau's engineers have determined that there is no meaningful risk of damage to area wells from construction-related vibration or from the project generally. This is further explained in the geotechnical memoranda submitted into the land use record concurrently with this document.

Surface Nursery alleges it has already had a large financial loss of revenue from withholding nursery crop production from a farm field.

Comment - "We also have a 3-year loss of revenue from an area in one of our fields between Lusted Road and Dodge Park Blvd, because PWB told us they would be installing a pipeline through that area. PWB instructed us to mark off the area where the pipeline was going to be placed and avoid planting or farming near it. After 3 years, PWB informed us they changed their plans, and that area would not be used and that we could plant on it again. However, we still have a 3-year loss of approximately 4 acres of farmable land. One acre of land planted with our typical stock (in this case we used 5000 acer Griseums and 5000 Double sub-cherries per acre) yields, after cullage and average customer discounts, approximately $\$ 307,104$ per acre over a 3-year cycle. The total loss of these 4 acres of production over this 3 -year period is a loss of approximately \$1,228,416.00."

Response - Even if there was a loss of crop area, the gross revenue is not the suitable measure of loss because it omits the cost of production, and loss of revenue is not a change in the cost of farm practices.

It is unclear which field or property this comment refers to. It appears to reference Schoepper's property, referenced as Farm Use Property "F10" in the Operations Report, which Surface Nursery leases. The Schoepper property is directly to the east of the Ekstrom property, where the finished water pipeline crosses from Dodge Park Blvd to the intertie at Lusted Road following an existing farm road.

The Water Bureau has negotiated with Schoepper - but not signed - a temporary construction easement agreement for approximately 0.9 acres of land in order to allow the needed room to install the pipeline just on the other side of the property line. The easement agreement will be executed after land use approval and is not currently in effect.

The easement will not include crop area. The Water Bureau performed a survey to verify where the crop area starts on the Schoepper property and tailored the temporary construction easement area to only include land that was within the field edge, i.e., not in the crop growing area of the field.

The Water Bureau did not instruct Surface Nursery - or any other farmer - to mark off potential easement areas or to avoid planting or farming near those easement areas. The Water Bureau does not advise landowners or farmers to change their practices in advance of the official appraisal and final negotiation and execution of an easement, or condemnation of the easement if needed. Furthermore, in reviewing imagery captured by Google Earth for time periods from 2019 to 2023, there is no indication of any change in where the planted area ends along the western boundary of this field. There is no evidence that the project has forced Surface Nursery to lose 4 acres of crop producing area on the Schoepper property.

Surface Nursery claims it will lose substantial income from eminent domain proceedings by the Water Bureau to take land from their property south of the filtration facility for an access road to that facility.

Comment - "In addition, losing the land we farmed on the city's parcel, PWB has also started proceedings to take almost an acre of our land through eminent domain, in order to build an access road to their main site for construction. but the loss of farmable land is much greater. This field contains 10,000 trees per acre. The exact amount of land they are claiming for eminent domain is . 92 acres, which holds 9200 trees. The trees in this field are 4600 acer Griseums and 4600 Double sub cherries and have a 3-year growth cycle. The total sales revenue for this . 92 acre (after cullage and customer discounts) is $\$ 283,300.00$, every 3 years.

When PWB takes control of this land, we will be unable to use our existing gravel road which is how our tractors move irrigation pipes and equipment through the fields, so we will have to build and install a new gravel the entire length of the existing one. The cost to put in a road of this length will easily cost $\$ 50,000$. However, installing a new road next to the one that PWB will be taking also means we will have to remove additional rows of trees to make room for the road we need to install, necessary to continue our well-established normal farming operations. It is reasonable to assume the size of land to accommodate the road we need is equal to the size of land that currently is allocated to the road, which is . 92 acres. We have already established that losing .92 acres of producing farmland will have a cost impact of losing \$283,330.00 for every 3-year cycle. Total cost of losing . 92 acres to eminent domain from PWB is the revenue of the .92 acres they are taking, the revenue of the .92 acres we will have to allocate to replace the road they are taking, and the cost of installing the road itself, for a total of $\$ 616,660.00$, of which $\$ 566,000.000$ is a repeating loss of revenue every 3 years."

Response - The Water Bureau is required by fire code to have two entrances to the filtration facility site, which forces the agency to acquire this easement from Surface Nursery. At Surface Nursery's request, this location was chosen along the far eastern edge of their farm property, following an existing farm road / solar power generation facility road. This location, using the existing farm road across the Surface Nursery property, is the nursery's preferred location as stated by the nursery in multiple meetings. The Water Bureau has also worked diligently to take the least amount of cropland necessary for the road which is required to meet road width fire code standards.

The Water Bureau is meeting all requirements of Clackamas County and the EFU zoning, which is the zoning of the Surface Nursery property. The EFU zoning imposes its own test similar to the farm impacts test in the filtration facility site's MUA-20 zone. Even if it were in Multnomah County, for the impact test of land use approval, the road property easement itself is not in the Surrounding Lands, it is part of the project area. Furthermore, the Water Bureau will compensate Surface Nursery for the permanent loss of farmland for the new road. While Surface Nursery claims their current road is gravel surface, it is actually primarily a dirt farm road which presumably will also be a dirt road when it is relocated. There is no cost to construct a dirt farm road. See Response to Loss of Agricultural Land.

Although compensation is not relied on to reduce impacts on accepted farm practices below the level of significance in my analysis, the payments will cover lost income from foregoing the opportunity to raise nursery crops on this private land.

Oral Testimony from Shawn Nerison, Surface Nursery before the Multnomah County Hearings Officer June 30, 2023
Mr. Nerison states that the south property entrance in Clackamas County is EFU land and the Water Bureau is changing the accepted farm practices by converting the land to an emergency access road.

Comment - "Plus, we own all the property south of it from the county line to Bluff Road. And our land is EFU, and EFU states you cannot change the accepted farm practice. Well, that's all it's doing. They want to put a construction road at the very east end of our property and sharing, also, with a neighbor. And they are taking eminent domain of just about almost one acre of our land that we no longer get to use. So when they take, through eminent domain, and take this land, now we have lost that farmland which roughly raises about 9,200 trees. And now we have to make a road on the other side of it. And we will have trees there, and we will have employees realistically working within 20 feet of this construction road going up and down. The diesel fumes, the noise, and then it comes right out by the grade school. I don't even see how this can even be permitable."

Response - See the response to the Surface Nursery comment immediately above.

Comment - "We have approximately 55 tractors, so I would say there is probably an average of about eight at a time in different locations. We have seven locations. The tractors drive back and forth. With this traffic, some of our tractors average about 13 miles an hour. That's not going to happen. If you can picture our SMVs and signs on the back and flashing lights, and dump trucks want to pass a tractor going that slow, it's not going to be good."

Response - Each of these comments have been addressed previously in my response to Mr. Nerison's written testimony. Note that this testimony contradicts previous testimony by Mr. Nerison where he said many of their tractors travel at 3 to 8 mph .

Comment - "I'm concerned about our workers in the field. Very close. Fumes. We have some people that are immune compromised. They can't be out in the dust and stuff like that. I can't even imagine this going on. We will be working within 20 feet of it."

Response - Each of these comments have been addressed previously in my response to Mr. Nerison's written testimony.

## H.22a Written Testimony by Pat Holt, R\&H Nursery (Farm Operator Q) <br> A notable quantity of this testimony is identical to Surface Nursery's testimony, discussed above. To the extent the concepts are similar or identical, the responses above are applicable here as well.

R\& H claims that their concerns expressed in interviews were not addressed.
Comment - "Please consider this statement my response of opposition to the overall land use application as well as my opposition to the farm, traffic, and construction impact reports. I was interviewed at length for these reports, and none of my concerns were addressed."

Response - Mr. Holt does not indicate what specific concerns he expressed that were not addressed in the Water Bureau reports. However, his concerns were included in farmer concerns discussed on pages 113-115 in the Operations Report and also in the Farm Traffic Report.

R\&H Nursery contends that converting the City of Portland property to non-farm use is alleged to possibly "forever change the scope of urban sprawl."

Comment - "Before I get into some of the specifics of the impacts this industrial plant will have on my nursery and the surrounding rural area I would like to address what I feel will be the most dramatic affect for Oregon if this land use application is approved, this is the loss of almost 100 acres of prime, valuable, and highly productive farm land.

The State of Oregon is losing productive farm land at an alarming rate, and I feel if you rule in favor of the industrial filtration plant on historical farmland it could forever change the scope of urban sprawl onto rural farm land."

Response - See Response to Loss of Agricultural Land. The 93 acres of land is about 85 acres in actual crop production after subtracting the land with timber and roads, and only a portion of that will be used for the filtration facility, leaving a substantial, 15-acre upland area that could be returned to farming in the future. It is an overstatement to claim that this property's conversion to a community use "could forever change the scope of urban sprawl onto rural farmland." This land use application does not request a zoning change for any property.

The main reason for the past loss of farmland in the Surrounding Lands, and the impetus for future loss of farmland, is that land use planning has allowed residential development to expand in so many places within the Surrounding Lands. This has in turn brought about the need for more public services and infrastructure.

R\&H claims they will contend with detours from on-going construction that could create unsafe travel for the nursery and cause increased cost for overtime, more employees because of road delays and lost revenue from shipments being disrupted.

Comment - "Transporting employees, farm equipment and trees between field locations of my nursery is a regular activity. Moving tractors and equipment to fields not adjacent to the farm site involves hauling them using farm vehicles. Trips per day between the main farm location and leased fields off site range from 1 round trip to 6 round trips or more. Detours from ongoing road construction or interference from increased and re-routed traffic could create unsafe situations on these roads because of the reduced speeds at which we safely drive. It is not possible to plan and predict every time equipment may need to be transported on local roads, and any delays in doing so costs me money in the way of having to pay overtime, having to hire more employees to get the workload completed because other employees are delayed on the roads, and ultimately lost revenue if orders are unable to be filled on time according to customer needs."

Response - Regarding safety of employees on roads, The Water Bureau requires all contractors and subcontractors to conduct road safety training and use safe driving practices while operating in the area. All construction trucks will be operated by trained, licensed drivers that receive comprehensive safe driver training and are directed to follow this training at all times. This training will include safety related to slow moving vehicles such as tractors that are on the roads.

Regarding time delays on roads, for moving farm equipment, see the Response to Traffic Impact for Farm Travel.

R\&H Nursery claims that wholesale water customers will withdraw from agreements to purchase water from the City of Portland and drill their own municipal wells which in turn causes R\&H Nursery to drill deeper wells at significant expense.

Comment - " $R$ \& H Nursery's well is adjacent to the main site of the proposed filtration plant and is on the Deep Troutdale Aquifer as is common of many area nurseries and farms. A big, concern regarding the new filtration plant is that some of PWB's wholesale customers, such as City of Gresham, City of Rockwood, and Tualatin Valley stated in local news articles that they will not be renewing their contracts due to the rate increases and have opted to drill their own wells. When large-scale wells such as those for a municipality are drilled, local area farmers including R \& H Nursery may see a sharp decline in water availability. This may result in having to drill a new well, an extremely costly endeavor of anywhere from $\$ 100,000$ to $\$ 300,000$ if obtaining a permit for a new well is possible. Damage from construction vibrations at the adjacent site during the 4+ years of construction is also a big concern. Sustained vibrations from drilling into and under the ground near a well are known to cause damage, and require costly repairs that could top $\$ 60,000$. I believe that test drilling on their site has already damaged a neighbor's well on an adjacent property and had to be replaced. If construction causes my well to be damaged or put out of commission during irrigation season it will have a devastating impact on my business. Any disruption to my irrigation program will result in a huge financial loss to my nursery."

Response - See response above to similar comments from Surface Nursery on pages 2223.

R\&H Nursery claims that their employees will face costly disruption from delays and/or detours for overtime for farm equipment travel on roads and for disruption of order fulfillment.

Comment - "Another part of normal nursery operations at R \& H Nursery is preparing orders for shipments. This includes digging trees in fields, hauling those trees to holding yards, and organizing trees in those areas for upcoming loading. Employees typically use tractors and farm vehicles to access fields on Carpenter Lane and Cottrell Rd to collect the trees that have been dug for upcoming orders and move them to the holding yard or loading areas at the main farm site. For off-site locations employees transport tractors and other equipment to the site with a farm vehicle. Trees are dug and moved to the holding/loading areas at the main farm site throughout the year. For any of these trips to be delayed or detoured on roads is a costly disruption, causing extended work hours and overtime rates to be paid to employees in order to maintain the normal operational schedule and avoid a disruption of order fulfilment."

And a related Comment - "Typically, once an order is scheduled to be shipped, a truck broker schedules the load and lets the nursery know when the truck will be there and when it will need to be finished loading and leaving to get to the next place on time.

The trucks are often arranged through a broker who works to get the customers total order onto a truck and delivered to the customer. Customers are not local and the trucks are delivering to out-of-state locations. The drivers are long-haul commercial truck drivers. They are not from the local area and are simply following the order of a load sheet from which they cannot deviate. Trucks often have multiple nurseries that will be loading into the same trailer, and the trailer needs to be loaded in a specific order. Trucks can't deviate from their stops and go to another nursery out of order due to road delays and closures. If there are known delays or closures on the roads leading to and from my nursery, I face the potential of losing customers and orders. Customers may be warned to not purchase nursery stock from me because of road closures, detours and delays that prevent trucks from getting to each stop on time causing major issues in the loading chain. Loss of customer orders would be devastating. Orders can be anywhere from $\$ 5 k$ to over $\$ 100 k$. When a truck is delayed getting to or from a nursery there are multiple consequences, ranging from a reduction in invoice or sale, damaged trees, lost income and unhappy customers. Ultimately brokers and customers may avoid purchasing product from nurseries with shipping issues, even if not the fault of the nursery itself. The wholesale nursery market is very specialized, and nurseries share information amongst each other. Shipping delays and order fulfillment issues may result in negatively impacting the reputation of the nursery. According to their application, construction impacts of the PWB filtration plant are expected to last a minimum of 4 years, which will have an obvious and sustained, permanent negative impact on my nursery."

Response - See Response to Traffic Impact for Farm Travel and Response to Traffic Impacts for Product Shipments.

R\&H Nursery claims service providers could decide to cancel their services due to rad congestion.

Comment - "The portable restrooms at the main farm are serviced weekly year-round. Servicing the portable restrooms is done on a schedule set by the service provider. Disruption of this schedule, such as road closures on roads surrounding R \& H Nursery may result in the provider cancelling the contract."

Response - See response above to similar comments from Surface Nursery on pages 1617.

R\&H claims the filtration facility construction will seriously disrupt their farm travel and product shipping.

Comment - "Although there are some periods of the year where certain activities are busier than others, a nursery is a fluid, dynamic business that depends on numerous factors that necessitate complete readiness but also flexibility. For example, weather and market conditions are major factors that can cause orders to be delayed or moved
up, requiring a shift in priorities and work assignments to accommodate those immediate schedule changes, sometimes with little to no advance notice. $R$ \& H Nursery must remain unencumbered by limitations that could hinder its ability to respond to these changes and others. For example, there are times when weather in other parts of the country has affected my shipping plans, and caused an order to be moved up. I had to suddenly get the customer's trees to the loading area right away, which involved moving crews and equipment to different locations and re-assigning work tasks throughout the farm. I also need to be able to quickly act on a land lease opportunity that would benefit my operation, and need to be able to access that land and not be hindered by 4+ years of road construction in the area. The estimated construction period presents a huge encumbrance to my ability to carry out normal farm operations for R \& H Nursery, and especially will interfere with the ability to quickly adapt and redirect workforces. A repeated, sustained disruptive situation such as the construction of PWB' s plant, pipeline, and infrastructure will have devastating and permanent consequences to my farm business, and as such the construction period should be equally considered as part of the overall impact of the land use application submitted by PWB."

Construction and operation of the PWB plant will severely impact R \& H Nursery's normal farm operations and accepted farming practices. PWB plans to widen the East end of Carpenter Lane to be used as the primary access for the plant. Currently, Carpenter Lane is a local, rural road with no shoulder and no lane striping. The East end of Carpenter Lane is and has always been a dead-end, rural road with private farm and residential access only. Upgrading the use class of this portion of Carpenter Lane solely for PWB' s access to their industrial site will be a hugely disruptive project to residents and farming operations. It is possible that there will be times that $R \& H$ Nursery will be completely inaccessible due to the massive road renovation and construction on the East end of Carpenter Lane, and at the intersections of Carpenter \& Cottrell Rd and Cottrell Rd \& Dodge Park Blvd, all of which are necessary access points for R \& H Nursery. The planned construction on these roads and others also mean that there may be times when employees will not be able to reach the farm and report to work, and semi-trucks, farm equipment, and farm trucks hauling equipment will be unable to enter or exit the farm. The inability of employees to access the farm and the restricted mobility of farm operations will have devastating financial impacts ultimately resulting in trees not being able to be managed properly and customer orders not being prepared, loaded and shipped. When employees are unable to get to work, production is halted. When employee commute times are extended due to delays, detours and closures on their usual routes to and from work, they may seek work at a different nursery where the commute is less stressful, resulting in loss of work force which will negatively impact productivity. The months when the most construction may be done on the surrounding area are the same months that are typically the busiest in the nursery industry. The impact from reduced workforce efficiency and productivity will directly impact $R$ \& $H$ Nursery' s bottom line.

Comment - "During the construction of PWB' s plant. the estimated number of daily dump truck trips it will take to move the massive amount of soil PWB plans to have excavated and moved off the site on Carpenter Lane will be prohibitive to the normal farming operation at R \& H Nursery. Interference with semi-trucks entering and exiting the loading area is a major concern. These over the road trucks are unable to be rescheduled to accommodate traffic delays, detours and road closures. They have a set pick-up order to adhere to so they can make the proper deliveries. It is also dangerous for semi-trucks to navigate alternative routes when main roads are closed."

Response - See Response to Traffic Impact for Farm Travel and Response to Traffic Impacts for Product Shipment.

Furthermore, Globalwise has studied the potential impact of the Water Bureau Project on R\&H Nursery. This has included several in-person meetings with Mr. Holt. I have also reviewed the location of fields farmed by R\&H Nursery based on information supplied to me by Mr. Holt.

R\&H will be able to reach the small fields they farm north of Carpenter Lane with minimal delay during road construction. Road construction for both Cottrell Road and Carpenter Lane will be conducted in half road-width increments to accommodate local access, including R\&H Nursery. There are no ditches or other physical barriers to entry of these fields along Carpenter Lane which gives easy access to nearly every field edge on that road. The field to the east of Cottrell Road near Carpenter Lane can also be accessed because farm vehicles have only a shallow ditch to traverse.

Some farm equipment can exit R\&H from a driveway on Cottrell Road and avoid the intersection of Cottrell Road and Carpenter Lane.

R\&H claims dust and noise from filtration facility construction activity will cause significant impacts on their farm operation.

Comment - "Dust and noise from the construction site will have a significant impact on nursery operations and accepted farm practices. My employees will be exposed to noise and dust levels much higher than normal and expected in nursery work. It is in the nursery's best interest to generate as little dust as possible, for employee's health as well as the health of the trees and plants. We achieve this by spacing out tractor work in fields, avoiding field work on foot when a tractor is doing row work nearby, and by avoiding tractor work in windy conditions so as not to lose additional top soil. Normal farm operations and accepted farm practices include regular work in the fields on foot performing hand pruning and trimming, working on or moving irrigation, planting, digging, and more. During these activities, the fields are quiet and free of equipment stirring up dust. In addition to the main construction site adjacent to $R$ \& H's fields, Carpenter Lane will be seeing hundreds of dump trunks per day hauling loads of dirt and debris from the site. R \& H Nursery employees regularly work in the container yards and loading areas adjacent to Carpenter Lane, and will be subject to levels of dust and particulate in the air stirred up by the constant traffic and dump
trucks coming on and off the construction site and driving directly next to these work areas.

Noise generated from the construction activities at the main site and from these hundreds of trucks on Carpenter Lane far exceeds noise levels found in normal farm operations and accepted farm practices at R \& H Nursery. In order to protect the hearing health of our employees, I may need to purchase industrial- quality hearing protection for my employees, beyond the scope of what is expected with accepted farming practices.

This impact on respiratory health is very serious. My employees may be subject to unusually high levels of dust and particulates from the construction site that borders $R \& H$ Nursey's fields, as well as construction traffic and dump trucks that will be continuously driving up and down Carpenter Lane that borders the loading area, fields, and holding yards of the main farm site, which are all frequent work locations for my employees. N95-type dust masks commonly used for nursery work are sufficient for normal operations and accepted farm practices, however, they may not be sufficient to protect the health of my employees when subjected to this construction dust and reduced air quality."

Response - See response above to similar comments from Surface Nursery on pages 1920. See Response to Airborne Particulate Impacts.

See Response to Noise Impact and Response to Dust Impact above.

R\&H claims there will be negative impacts on plant growth.
Comment - "In addition to impacting the health of my employees and my overall labor force in general, the dust, diesel fumes and airborne particulate may affect my trees. The massive amount of dirt \& top soil to be excavated and hauled off-site will generate quantities of dust that far exceed what is part of normal farming practices. The majority of the industrial plant will be built on the western edge of the construction site that borders my fields; diesel fumes and dust drift is inevitable and cannot be adequately mitigated with water. Excessive amounts of dust and diesel fumes generated from hundreds of dump truck trips per day plus traffic from work crews, PWB employees, contractors, construction vehicles, etc., will fall onto and coat my trees and plants. Plants that are coated in dust have a reduction in photosynthesis that results in growth problems. Dust covering plants also affects respiration and transpiration which increases leaf temperature which allows the penetration of phytotoxic gaseous pollutants. This leads to the tree or plant having visible damage and generally there is decreased productivity. The only mitigation for this impact is cost prohibitive."

Response -See the Response to Airborne Particulate Impacts. See the Response to Dust Impacts.

Construction vehicles carrying excavation materials traveling by the R\&H headquarters on Carpenter Lane and on Cottrell Road will have loads watered as needed during the dry season to mitigate for fugitive dust.

Other airborne particulate will not impact the trees because diesel particulate will not fall on leaves in sufficient amounts to constitute a problem with tree health.
Furthermore, a nearby nursery has a dirt farm road passing through the middle of their field. Dust and exhaust fumes reach trees within feet of the dirt road. Nurseries have stated they drive on their roads many times per day. On dry days, significant levels of particulate are in the air from driving on these dirt roads, as video provided by the Water Bureau graphically illustrates. Accepted farm practices for farm travel generate significant dust and other airborne particulates. Nurseries provide no protection for their trees from this dust other than sprinkler irrigation in dry periods of the year. Since construction vehicles will follow dust control procedures as needed and the vehicles meet air emission standards, construction activity during the temporary construction period will not significantly impact plant growth.

R\&H Nursery states that the security of their headquarters is jeopardized by the presence of the filtration facility in the nearby area.

Comment - "The construction and the presence of a massive, industrial complex such as PWB's water filtration plant will have a huge permanent impact on my nursery business. Increased visibility from construction traffic and then ongoing employee traffic, deliveries, and public tours during normal operations presents massive security concerns. $R$ \& $H$ is not a retail nursery nor open to the public. There are minimal office staff at R\&H Nursery, and unless it is lunch time, employees are out in the fields and not at the main farm area.

Increased visibility from daily staff and visitors driving by, delivery drivers, contractors, and facility tours, presents a valid security concern and liability risk from people wandering into the farm property, the loading areas, holding yards and container yards."

Response - With regard to security during filtration facility construction, there is no reason to expect that any construction-related employees would be "wandering" in the vicinity of the R\&H headquarters. R\&H headquarters is about one-quarter mile from the entrance to the filtration facility. All construction personnel will not be walking that distance from the construction site.

Regarding security during operation of the filtration facility, there will be a maximum of 10 , busy employees at any shift and again due to the distance between the R\&H headquarters and the facility site, there is no expectation that security at R\&H headquarters would be compromised by "wandering" personnel. There will be few visitors to the filtration facility, particularly as the request for public tours was removed from the application. There is no reason to expect visitors will "wander" outside the
fenced perimeter of the facility site, but instead will have a specific reason for needing to visit the filtration facility, fulfil that purpose, and leave. If any construction personnel, employees, or visitors are leaving the site, they will be driving or riding in vehicles with no reason to stop before reaching their intended destination.

## Additional Oral Testimony from Pat Holt, R\&H Nursery before the Multnomah County Hearings Officer June 30, 2023

Mr. Holt stated his concerns were not addressed in the Globalwise report.
Comment - "Please consider this my statement of opposition to the proposed Portland Water Bureau's industrial water treatment plant and my opposition to the agricultural compatibility report composed by Globalwise, Incorporated. I was interviewed multiple times and at length for this report. None of my concerns were raised."

Response - This comment has been addressed previously in my response to Mr. Holt's written testimony.

Mr. Holt is concerned about the large impact this Project has a large impact on the loss of farmland in Oregon.

Comment - "What I do want to address today is the larger effect to the state of Oregon and our farmland if this application is approved. This is a loss of almost 100 acres of prime valuable and highly productive farmland that we can never get back. The state of Oregon is losing farmland at an alarming rate. I feel if you rule in favor of this proposed industrial plant on historical farmland, it could forever change the scope of urban sprawl onto rural farmland across the state."

Response - This comment has been addressed previously in my response to Mr. Holt's written testimony. See Loss of Agricultural Land. As has been noted before, at the filtration facility site, the 93 acres of land is about 85 acres in actual crop production after subtracting the land with timber and roads, and only a portion of that will be used for the filtration facility, leaving a substantial, 15 -acre upland area that could be returned to farming in the future. However, in specific response to this comment, there was an estimated 1.539 million acres of harvested irrigated cropland in Oregon in 2017, the last year of published information from the USDA Census of Agriculture. 4 Seventy acres are an insignificant amount of land in comparison (0.0045\%).

Other factors have much more impact on the loss of farmland than this property for farm use. High value for land and the conversion to houses have caused loss of farmland to a far greater degree than this project for needed infrastructure for a public utility.

[^1]
## H. 2 Written Comments from Pleasant Home Neighborhood Association Attorney Jeffrey Kleinman regarding R\&H Nursery

The attorney claims that the driveways onto Carpenter Lane and Cottrell Road for R\&H nursery will have unmitigated traffic impacts.

Comment - "Mary and Ronald Roberts own the commercial nursery property at 34828 SE Carpenter Lane, at the southeast corner of Carpenter Lane and Cottrell Road. In order to accommodate farm traffic, including in-and-out traffic by farm vehicles moving between rows of crops, the property has, and has had, five driveways onto Carpenter Lane as well one onto Cottrell Road. ...

Thus, five of these very active farm driveways are located on the stretch of Carpenter Lane upon which PWB has proposed to direct all its construction traffic. The resulting impact upon the nursery operation could not be mitigated even if most of that traffic entered and left [t]he site via Bluff Road instead, unless all workers, supervisors, incoming construction materials, and outgoing excavated dirt were transported via dirigible. As the Bluff Road entry is to be blocked following completion of construction, even future employee and ongoing truck traffic entering and leaving the facility via Carpenter Lane would cause a significant change in the nursery's accepted farm practices."

Response - See the Response to Traffic Impacts for Farm Travel and Traffic Impacts for Product Shipments.

R\&H Nursery has many driveways, both on Carpenter Lane and on Cottrell Road. Additionally, R\&H Nursery has well-developed internal roads to reach the plant growing areas and fields that are networked with the farm driveways. The figure below shows the property owned by the Roberts outlined in blue with the general location of the network of internal roads and accesses shown in red. The separate (not outlined in blue) property over which the farm roads travel along Cottrell is owned by Patrick Holt, who runs R\&H Nursery (Testimony in Exhibit H.22). R\&H uses multiple accesses to Cottrell on the Holt property in addition to the many driveways on the Roberts property.

One driveway on Carpenter Lane provides access to the loading dock and also has an area for receiving and holding plants prior to loading. This area is shown with a yellow star on the aerial photos below. This driveway access does not have multiple other internal access pathways accessible to the semi-truck required for deliveries.

[^2]

R\&H Nursery network of internal roads and driveways, shown in red, and loading dock, shown with a yellow star.

The multiple nursery driveways plus the well-developed internal road system allows the nursery to follow its accepted farm practice of flexible access and mobility. If, for example, one driveway is temporarily occupied by a vehicle or a large supply delivery, another driveway may be utilized to reach other areas of the nursery. The only exception is the driveway at the loading dock. Otherwise, any of the major driveways can be entered to travel to any other location in the nursery.

For the driveway at the loading dock, the potential for conflict with traffic from the project on Carpenter Lane would only arise if traffic is queued on the roadway, preventing or delaying access to the loading dock driveway. Other than the potential for queuing, project traffic will move at normal roadway speeds and access will not be significantly delayed. The driveway is located on the south side of Carpenter Lane, which dead ends after the project site to the east. According to Dana Beckwith, Global Transportation Engineering, the transportation engineer for the project, the filtration facility site will have sufficient storage onsite to allow for staging of trucks delivering and hauling materials. For this reason, no eastbound traffic would be queued directly in front of the driveway to impact entering R\&H traffic. 6 Mr. Beckwith indicated that westbound traffic could potentially queue on Carpenter Lane ahead of the intersection with Cottrell Road during peak construction traffic. While queuing on a public road would not prevent access to the loading dock or other driveways, it could make it less convenient or cause some delay for an exiting R\&H vehicle. For this reason, the Water Bureau will include in the project's Traffic Control Plan a requirement that accommodation be made to ensure driveway access to R\&H's loading dock and nursery plant holding area is not unreasonably delayed. That traffic control accommodation can be in the form of stop control or a flagger or other measures that would create a gap in traffic to allow R\&H nursery traffic to exit the site. Mr. Beckwith indicated that these types of traffic control measures can be used for temporary traffic control to facilitate traffic movements and create gaps in traffic at the loading dock access. With extremely low existing traffic volumes, these types of measures are feasibly implemented.

The many alternative perimeter driveway access points and the interconnection of the roads at R\&H Nursery plus the use of traffic control measures at the nursery's loading dock entrance will allow for R\&H to move in and out of the nursery as needed without significant delay during the temporary construction period. Overall, the traffic on Carpenter Lane will not force a significant change in accepted farm practices nor force a significant increase in cost in those accepted farm practices for R\&H Nursery.

## H. 5 Written Testimony from Jim Ekstrom, Ekstrom \& Schmidt Nursery (Farm Operator D)

Mr. Jim Ekstrom is concerned that the Water Bureau's Project will convert prime farmland to non-farm use, including land from one of his fields.

6 Entering traffic would be coming from the west because of the dead end of Carpenter Lane to the east.

Comment - "I'm speaking to express my strong disapproval of Portland Water Bureau trying to take prime farmland to site their filtration plant. The land they are planning to take is some of the finest farmland in east Multnomah County specifically around Carpenter Lane, Dodge Park, and Lusted Road. I am not sure if the land is zoned EFU or MUA but placing a 90-100 acre Industrial plant on either of these zones would never be acceptable in any other case. This will create a strong precedent for future developments trying to encroach on farmland."

Response - See the Response to Loss of Agricultural Land.
Regarding the Ekstrom property, it is also zoned MUA-20 and again no zoning change is required for constructing the pipelines which are classified as a community service use. The Water Bureau's plan for the pipelines will take the minimum amount of land possible for permanent use and restore the remaining land so the nursery can return it to farm use. All easements are along the field edges which permits the large remaining field area to be farmed as a contiguous unit. The Water Bureau will allow Ekstrom and Schmidt Nursery to raise any of their trees within 5 feet of the buried pipelines, and smaller trees over the pipelines so long as the nursery keeps these plants at shallow root level. The intent is to work with the nursery to maximize crop production as described in Exhibit A.35, the Agricultural Soils Restoration Plan, while also protecting the pipelines from potential damage. A new all-weather gravel road will be constructed over the old dirt farm road to help reduce the final footprint of land taken out of production.

Mr. Ekstrom states that the Water Bureau plans to take acreage from his field for pipeline construction which will be environmentally detrimental and a permanent farmland loss.

Comment - "The Portland Water Bureau plans to place $51 / 2$ feet pipes on the eastern property line of the property. This would take a 65-100 feet wide parcel of land and run the length of the property, taking about four acres of prime farmland out of production. This equates to 38,000 to 40,000 carbon sequestering plants per year for a value of about $\$ 250,000$ to $\$ 300,000$ per year. At the NE property corner where the property connects to Lusted Rd., the Portland Water Bureau wants to locate a valving station (the intertie) that would require a large building and an additional acre of land. This would be roughly 5 acres of land in total that is at risk of being taken out of productive farming. Also, the additional land that would have to be sacrificed as a spray buffer would increase the acreage that would be lost forever."

Response - The Water Bureau has carefully designed the all-weather access road, pipelines, and intertie in consultation with the Globalwise agricultural expert in order to retain the maximum amount of land in crop production and allow for the remaining cropland in the Ekstrom field to be farmed as a contiguous unit. Specific details relating
to the Ekstrom property can be found in the Operations Report at page 138-142, related to farm use property "F11."

Note that the proposed conditions of approval in the staff report would require a change in the permanent easement area previously analyzed. Transportation Condition $9 . b . i v$, on page 14, requires that "Maintenance access to the Pipelines on the property shall use the northeast access" near the intertie. This requires that the permanent easement include an area to the south that bumps out to allow for the turnaround of pipeline maintenance vehicles (rather than exiting by crossing the property and then proceeding onto Dodge Park Boulevard). The total area of the access easement will be reduced from 1.46 acres to 1.32 acres (net 0.14 acres) because the easement no longer follows the southern property line to get to the existing access to Dodge Park on the western edge of the property. Revised easement areas have been provided into the land use record concurrently with this memorandum. I have reviewed the revised easement areas.

Mr. Ekstrom has greatly overestimated the loss of cropland acreage. He indicates it is approximately 5 acres, but my analysis is the loss of net cropland is between 1.8 and 1.9 acres with the new easement areas. I assume the difference is that Mr. Ekstrom is not considering the disturbed land will return to crop production. However, the Water Bureau will follow a rigorous plan to return the soils to high productivity and will permit the nursery to grow plants up to and even over the pipelines using appropriate precautions to keep tree roots and all field work a safe distance away from the pipelines. The revised easement areas do not create any change in the analysis or conclusions regarding farm use property "F11" in the Operations Report.

Note that the farm will benefit from the use of the all-weather gravel road that will be built to replace the dirt farm road. With soil restoration and the small amount of land lost to crop production, there will be no significant change in accepted farm practices and there will be no significant increase in cost to continue farming the field using the accepted farm practices.

Regarding Mr. Ekstrom's estimate of revenue loss, this is not the proper factor because cost is the element for consideration for the impact test. There will be no changes in accepted farm practices conducted in this field and the costs will not significantly increase because a minor amount of the land area is removed from crop production.

Compensation will be paid to the property owners for the loss due to the interruption of growing and selling nursery crops on the small portion of the Ekstrom field impacted by construction of Water Bureau pipelines and the intertie. However, this compensation is not relied on to reduce impacts on accepted farm practices below the level of significance in my analysis.

Oral Testimony from Jim Ekstrom, Ekstrom \& Schmidt Nursery before the Multnomah County Hearings Officer June 30, 2023

Mr. Jim Ekstrom is concerned that the filtration facility will remove high quality farmland from crop production.

Comment - "I'm speaking to express my strong disapproval of Portland Water Bureau trying to take prime farmland to site their filtration plant. The land they are planning to take is some of the finest farmland in east Multnomah County specifically around Carpenter Lane, Dodge Park, and Lusted Road."

Comment - "This would create a strong precedent for future developments trying to encroach on farmland."

Response - See response to the nearly same comment above.

Mr. Ekstrom is concerned that the Water Bureau cannot return soil disturbed by pipeline construction to its former productivity for crop production.

Comment - "The Portland Water Bureau communicated to us they will replace the layers of soil exactly how they are now so the land will not be harmed. Anyone with the slightest bit of soil or geological knowledge knows that's not possible, especially a farmer.

> A test pit was dug this spring in the intertie area. It was about 12 to 15 feet deep, six-foot wide. After the soil was replaced exactly as it was taken out -- laugh out -loud -- much of the soil from the bottom of the pit is still on the surface. If they can't replace the soil correctly in a small area, how do they expect to do it on a ditch that's 2300 feet long, 50 feet wide, and ten to 25 feet deep. There is a tremendous difference in topsoil and base clay layers when it comes to growing plants. I've farmed in this area for over 40 years and farmed over existing Portland Water Bureau pipelines, and plants do not grow the same."

Response - Dr. Denny Mengel, the Water Bureau's soils expert, has provided supplemental responses to specific concerns in a memorandum titled "Response to Testimony of Agricultural Soils Impact" submitted into the land use record concurrently with this memorandum. Please refer to that memorandum response to this comment.

Oral Testimony from Steve Ekstrom, Ekstrom \& Schmidt Nursery before the Multnomah County Hearings Officer June 30, 2023

Mr. Steve Ekstrom is concerned that the pipeline construction through their field will result in a significant cost increase for their nursery.

Comment - "It is my understanding that the Portland Water Bureau is going to continue the road through our current crop and finish another 2,000 feet, 1500 feet of road which will take out about an acre of our production which could be up to 8,000 plants. And that's not including the intertie section.

The intertie section is about a half acre -- a little over a half acre, so we will be also losing about 4,000 plants there. So that's $\cdot 2 \cdot$ about 12,000 plants permanently displaced from •production. So that will be a significant cost increase for us and even if we can find ground. I mean, we are losing farm ground left and right out in our area."

Response - See response to nearly the same comment by Mr. Jim Ekstrom.

Mr. Steve Ekstrom is concerned that the way a test hole dug on their property was refilled shows the Water Bureau cannot property restore topsoil.

Comment - "As my dad had mentioned, they dug a test pit which greatly raised the question of their competency. They had an engineer come out, test where all our tie lines are. He said, "Okay, this is where we can dig." He dug a hole and hit a tie line. Right there where the intertie section is there is multiple tie lines coming in which cross underneath the road into the north fork of Beaver Creek.

Comment - And when they do dig this pit, as my dad said, they put the soil back, and it will be perfectly productive. Well, it is a clay pit where they dug that -- and now it is going to greatly, if we are even able to plant on top of that, we will lose production. I mean, plant sizes will be half the size, I would imagine, on some of our most productive ground, as he said."

Response - Dr. Denny Mengel, the Water Bureau's soils expert, has provided supplemental responses to specific concerns in a memorandum titled "Response to Testimony of Agricultural Soils Impact" submitted into the land use record concurrently with this memorandum. Please refer to that memorandum response to this comment related to the productivity of the soil.

As to the tie lines, this incorrect. The contractor requested from the Ekstroms (and the prior landowner) some mapping or indication of the location of the tie lines prior to commencing work, but none was available or provided. This infrastructure is made of clay, so it is not possible to locate from above ground, as is possible with metallic pipe. The only way to find them (without being provided some record of the location), is to dig, disrupt, and repair them, which is what occurred. This test pit is in the location of the future intertie, and provided information about the location of the tie lines in order
to ensure that there will be no significant impact on the balance of the system caused by construction of the intertie.

Mr. Steve Ekstrom is concerned that they will need to build a road on the field side of the temporary construction easement area to drive equipment and they will take extra time getting to fields.

Comment - "We are going to have to build farm roads outside of the temporary easement to be able to get our equipment in and out. We are going to have to -as Jesse said, we run about ten trucks a day back and forth between properties. If we can't go down Altman as we typically do, we will add three to five minutes per trip at ten trips a day. That's a significant cost to our employee -"

Response - An area on the field side of the temporary construction easement would require about 0.43 acres to temporarily drive farm vehicles. There would be compaction of soil that would be remediated. Loss of plant growing area would be compensated but again this is not relied upon in order to assess the significance of the potential impact. This small amount of land temporarily lost to crop use that is restored to productivity does not result in a significant change in accepted farm practices or significant increase in costs for accepted farm practices for growing nursery crops on this farm unit.

Regarding the travel time to take detours, it should be pointed out that the Ekstrom fields have a second field access on Dodge Park Boulevard and the nursery also farms property south of Dodge Park. There are alternate routes to all fields that the nursery farm in this area. It should also be noted that Ekstrom and Schmidt's headquarters is over 2.6 miles from this field. They are highly mobile and already move long distances to reach this field as well as other fields, and they take alternate routes depending on road and traffic conditions. Moving between fields and taking longer routes as needed is a part of their business operations and is an accepted farm practice. This added travel time is not a significant increase in the cost of their accepted farm practices and does not force a change in their accepted farm practices. See the Farm Traffic Report for more information.

## E. 17 Written Testimony of Lauren Courter, West Slope Farms

Ms. Courter states that Globalwise did not contact them to discuss the Water Bureau Project impacts on their farm.

Comment - "Although we are immediately adjacent to the proposed site, pipeline, and transportation route, the Portland Water Bureau and their agricultural consultant, Globalwise, Inc., did not interview us nor include our farm in their agricultural impact study (Multnomah County Exhibit A. 33 - D. 1 Agricultural Compatibility Study). Our farm is located within Globalwise's "Core Analysis Area" Figure 3), but no effort was put forth to investigate potential effects to our farm.

Furthermore, Figure 4 of their study indicates that our farm cultivate nursery crop, which is inaccurate."

Response - It is false and misleading to state Globalwise made no attempt to interview Mr. or Mrs. Courter or investigate the potential effects on their farm. There were two attempts to contact Mr. or Mrs. Courter, once by leaving a voice message on October 12,2021 , and once by follow up email that same day. No reply was received.

Because the Courters did not respond, I was left to determine their farm use with the aid of Google Earth imagery. The blueberry bushes were incorrectly thought to be nursery plantings. I could not determine that they have what might be considered farm animals under building cover or pasture using aerial imagery.

Ms. Courter claims that dust from the excavation of soil and its hauling, plus other construction activity including use of a road directly west of their farm will have negative impacts.

> Comment - "Extreme dust generation from large scale excavation, the movement and hauling of soil, transportation of construction materials, and the transportation of workers across a five to seven year construction period will certainly impact crop growth, berry production, and crop processing. Given the amount of traffic anticipated to frequent the access road directly west of our property along the property line, no mitigation can adequately alleviate the dust aerosolization, dispersement, and settlement on my blueberry crop. Poor air quality from the dust will prevent us from tending to the bushes in the fall and winter for pruning, amending the soil, and applying herbicide in the spring, and harvesting in the summer. Dust would settle on the leaves and branches of our well-established, highly productive 40+ year old bushes and inhibit bud and leaf growth, photosynthesis, flower production, pollination by our honeybees, and berry development. The berries that do emerge will take longer to ripen and once harvested will require extra time for processing. Normal processing requires rinsing the berries once before sale and consumption. Added accumulated dust will require extra time for additional rinsing to ensure clean berries. Decreased production will also decrease revenue for our farm."

Response - See Response to Dust Impacts regarding dust from the excavation and movement of soil at the filtration facility.

The comment about dust from "the access road directly west of our property along the property line" refers to the southern access road, which will no longer be used for construction. Therefore, construction dust will not be significant from that road.

Ms. Courter states that their farm animals are sensitive to noise and they will be disturbed by construction noise.

Comment - "Of the animals we raise, our goats are very sensitive to noise and will hide with any loud disturbances. Sustained and loud noises from construction and operation will undoubtedly frighten and stress out our animals, specifically the goats. We have one breeding female and she will not nurse her young kids with loud noises occurring."

Response - I was raised on a farm with goats and pigs as well as other livestock. I am familiar with the accepted farm practices for raising these farm animals as well as their reactions to noise. I have also been in contact with an Oregon State University Extension specialist concerning goats and their sensitivity to noise. That specialist said that goats, as well as other farm animals, acclimate to noise. For this reason, construction noise would not have a significant impact on the goats or other farm animals nor force a change in related accepted farm practices or the costs of those practices. However, if the property owner has a concern, the Water Bureau will provide the sound-deadening remedy of placing hay bales around a livestock pen or other facility to provide relief from construction sound. The Extension specialist said that this is an accepted farm practice for relief from noise.

Ms. Courter states that siting the filtration facility would have a significant impact on the farming productivity across two counties.

Comment - "The proposed site for the filtration facility is located on 90+ acres of existing farmland with active, productive farming situated within a large residential and agricultural community. If this proposal is approved, this land will be converted from residential-agriculture use under MUA-20 to industrial use. This would be a significant and devastating impact to farming productivity spanning two counties.

Comment - "Furthermore, it will negatively impact and permanently destroy future farmland production in these areas. Local farmers and soil scientists with the Oregon Department of Agriculture agree that the valuable topsoil will not recover from the dredging of trenches, construction, and heavy equipment needed to establish the connectivity of redundant 7-9 foot diameter pipes. As a result, the raw and treated water pipeline alone will destroy approximately 10-15 acres of valuable soil across two counties."

Response - See the Response to Loss of Agricultural Land.

## Oral Testimony of Lauren Courter, West Slope Farms LLC

Ms. Courter expressed concern that dust will cause problems with caring for their blueberries and will inhibit the growth of the crop.

Comment - "Extreme dust generation from large-scale excavation, the movement and hauling of soil, transportation of construction materials, and the transportation of workers across a four-plus year construction period will undoubtedly impact crop growth, berry production, and crop processing. Given the frequent traffic on the access road directly west of our property line, no mitigation will adequately alleviate the dust on my blueberry bushes. Poor air quality from the dust will prevent us from tending the bushes in the fall and winter for pruning, amending the soil, and applying herbicide in the spring, and harvesting in the summer. Dust will settle on the leaves and branches of our well established, highly productive 40-plus-year-old bushes and inhibit bud and leaf growth, photosynthesis, flower production, pollination by our honeybees, and berry development. The berries will no longer ripen, and once harvested, will require extra time processing. Added dust will require extra time for additional rinsing to ensure clean berries. Decreased production will also cause decreased revenue for our farm."

Response - This comment is responded to in Response to Impacts for Dust.

## E. 19 Written Testimony of Ian Courter, West Slope Farms LLC

Mr. Courter states that dust would impact their blueberries and that road closures and increased traffic are a negative impact on farm traffic.

Comment - "Dust and other airborne debris created during the aggressive sevenyear construction period would necessitate washing of our berries, which is not currently needed; and heavy industrial traffic on our country roads would create a serious hazard for existing residents and farm workers."

Response - See the Response to Dust Impacts, Response to Particulate Impacts, and Response to Farm Traffic. Regarding farm worker safety along roads, most farm workers doing field work are 10 to 15 feet or more from the edge of a field near a public road. This is sufficient to prevent any potentially dangerous contact.

Regarding safety for drivers of tractors and others driving farm vehicles on public roads, the drivers of construction vehicles will receive comprehensive safe driver training. They are also directed to follow this training at all times. This training will include safety related to slow-moving vehicles such as tractors that are on the roads.

Furthermore, regarding farmworker safety, this comment may primarily apply to the emergency access road near the Courter property. This road will be infrequently used only for emergency access to the filtration facility and therefore will have no significant impact on farm workers in the nearby field.

Mr. Courter states that many problems will continue after construction.

Comment - "Once construction is complete, many of the same problems would persist. Moreover, my family would not be able to live and farm near tanks filled with toxic chemicals and trucks frequently offloading hazardous materials."

Response - Mr. Courter's comment is vague as to which of the alleged impacts he previously listed will be detrimental to his farm use after construction is complete. Nonetheless, dust, other airborne particulate, noise, and worker safety, will not affect the Courter farm because of the distance of his farm from the filtration facility, the lack of any airborne emissions from a water filtration facility, and the lack of traffic in the vicinity of the Courter property. See the Operations Report.

There will be no changes needed in the accepted farm practices for the Courter farm. There will also be no significant increase in the costs of accepted farm practices due to the operation of the filtration facility or the presence of the emergency access road.

## E. 20 Written Testimony of Suzanne Courter, farm affiliation unknown

Ms. Suzanne Courter is concerned a nursery near the filtration facility has already been affected and cites one example.

Comment - "How is the PWB protecting farm land from adverse impacts of nonfarm uses? MUA-20 lands are supposed to limit the impacts to adjoining farm and forest lands and to respect their rights to manage and protect those farm and forest lands. PWB has already affected farming practices adjacent to the site plus negatively affecting that nursery's loss of income even before land use approval. The nursery next to the site is owned by a single woman that has already lost $1 / 3$ of her nursery crops due to this proposed plant and stands to possibly lose enough business if this project is built to close down her nursery business entirely."

Response - See Response to Loss of Agricultural Land related to Surface Nursery (the "nursery next to the site") and use of the Water Bureau's property for farming.

The Water Bureau is protecting farm use in the Surrounding Lands in many ways. For pipeline construction, the routes follow roadways to the extent possible, staying out of EFU and MUA-20 zoned land. When pipelines go through EFU or MUA-20 land, the alternatives were reviewed and the route through the fields and the area disturbed was chosen for the least farm use impact, such as by following existing farm roads. Disturbed soils in fields are restored to high productivity as quickly as possible. The schedule for pipeline construction has been developed with 11 constraints to assist farmer movement but also complete the construction as soon as possible, which farmers requested. For the filtration facility, the construction traffic is managed so that the intersections are kept within Multnomah County's Level of Service Standards, allowing farm vehicles to move with limited delays and, if farmers choose detours, the alternate routes are available to the maximum extent possible. Dust and noise plans will guide construction at the filtration facility so that nearby farms are not impacted.

Traffic safety is managed with all drivers of construction equipment provided with training to follow safety protocols for farm vehicle travel and specific road conditions in this area. Road conditions will be managed with updates entered in the Oregon Trip Check system so farmers can easily monitor and adjust to roads with the best traffic conditions. See Response to Traffic Impacts for Farm Travel.

Ms. Suzanne Courter stated that farmers will be rerouted to reach fields because of road closures and increased construction traffic affecting their business and increasing business costs.

Comment - "Significant changes to farming practices will definitely occur with road closures, rerouting of traffic and the addition of hundreds of extra trucks per day. Many nursery operations are divided between several different fields which requires tractors and farm trucks driving between locations on the rural roads of the area. Farmer's and nurserymen's income will be affected because of loss of income or increased cost to do business."

Response - See Response to Traffic Impact on Farm Traffic and Response to Traffic Impact for Product Shipment. Also see the Farm Traffic Report.

## Responses to Non-Abutting Farm Operator Testimony

This section is organized by farm and includes specific testimony in italics along with the detailed responses. This section addresses non-abutting farm uses.

## E. 1 Written Testimony of Jennifer Hart, farm property owner

Ms. Hart states the Agricultural Study Area addresses a relatively small area.
Comment - "2. I also noticed the Agricultural Study did a impact study of a 1/2 of mile from the proposed facility. Most Nurseries have many fields. Therefore, this cut out several nurseries fields that will be impacted on the Lusted Flats Tier- Han's Nelson's, Nelson's-Rannow Field, Surface, and Marjama fields.

Nurseries and farmers in $1 / 2$ mile radius not mentioned- Diamond Nursery, hydroponic strawberries on Proctor, Plantmad Nursery, Sandyview Acres Nursery and others."

Response - The reference to the one-half mile area around the filtration facility is a reference area that makes up part of the Core Analysis Area analyzed in the Operations Report. This in-depth review was used to look first at the types of farms closest to the proposed filtration facility site which logically would have the most potential for impact. Each individual tax parcel, 62 in total, was evaluated and inventoried to the extent possible for determining farm use of property. Nurseries and other types of farms
outside the Core Analysis Area were also contacted including some named in this comment.

The factor mentioned in the comment, that farms travel to different fields, is found in both the Core Analysis Area and the Surrounding Lands. Therefore, by extension, the Surrounding Lands are appropriately evaluated. See Section 6.0 of the Operations Report.

Ms. Hart claims removing the filtration property from agricultural use defies Multnomah County's Comprehensive Plan pertaining to farmland.

Comment - "This Proposed Industrial Plant will take over 90 acres of fertile agricultural land that has been used for decades for economic gain. It is in a Farming and Agricultural Rural Community. Putting an Industrial Plant and Pipelines through EFU and MU2O land defies the Multnomah County Comprehensive Plan - Farm Land 3. 6 thru 3.16, West of the Sandy Policies and Strategies.

Response - See the Response to Loss of Agricultural Land.

Ms. Hart claims wells and water rights of farmers will be negatively impacted by the Water Bureau Project.

Comment - "Concerns of wells and water rights in the area, putting Nursery and Residential properties at risk. PWB has already caused issues. with a well on neighboring property. Farms and properties have water rights. PWB does not addresses risks and mitigation."

Response - See the response to Surface Nursery regarding the circumstances of the well in the shallow aquifer.

Ms. Hart alleges the Water Bureau has already forced a significant change in farming practices by causing Surface Nursery to forgo planting nursery stock on her property.

Comment - "This [Water Bureau action] has already caused a change in farming in the area. Surface Nursery did not plant 1.7 acres of my property that they lease from me. PWB has easement for pipelines. Surface lost several $\$ 100,000$. Not planting 1.7 acres of the easement due to the trees being pre sold. Surface Nursery, was concerned trees were going to have to be pulled before they were ready."

Response - The Water Bureau's existing pipeline easement on Ms. Hart's property in Clackamas County was granted by the previous property owner in 1985. That pipeline easement is not proposed for use at this time. Any discussions the Water Bureau had with Surface Nursery regarding pipeline construction at that location were preliminary
relating to a prior plan and no specific notification of near-term construction was given to Surface Nursery. Any plans for construction of pipelines on this and other farm use properties in Clackamas County ended about 18 months ago.

Ms. Hart claims soil will be ruined from pipeline construction.
Comment - "Putting pipes through fields and with the 100 foot construction easement will ultimately ruin the soil. The soil will never yield the nursery stock as it did before construction. This has happened in several fields in the area."

Response - As stated above, the Water Bureau decided to not pursue plans to construct pipelines through the Hart property. Therefore, with regard to this property, the comment is a moot point. On other properties in the current alignment for pipeline construction, robust plans for soil restoration are in place as explained in Dr. Denny Mengel's memorandum titled "Response to Testimony of Agricultural Soils Impact" and his original report, Exhibit A.35, Agricultural Soils Restoration Plan.

Ms. Hart claims there will be farm worker safety concerns due to construction traffic on roads used by farmers.

Comment - "This Industrial Plant if built will cause farmers to have more safety concerns of being on heavy and increase speed limit roads, ultimately forcing them to have to add agricultural buildings to their outlying fields, to store equipment, thus eliminating the safety concerns of the roads."

Response - See Response to Impacts for Farm Travel. Also see the Farm Traffic Report.

Ms. Hart claims taking land by eminent domain will result in the farmer being paid less than the land is worth for continued farming.

Comment - "Taking land from farmer thru eminent domain is terrible. They can plant at least 10,000 trees per acre bare root. Therefore, they are getting paid agricultural acreage price for the land, when they plant tree for years to come and make several hundreds of thousands on a 3 year crop of bare root trees. That is changing farm practices!"

Response - First, the Water Bureau will only take the minimum amount of farmland necessary for the utility purpose which is a community use. Second, in eminent domain the landowner will be paid what appraisers determine other farmers are currently paying for farmland. This is the fair market exchange in the land market. The high profit associated with nursery farming drives up the price farmers are willing to pay for farmland and this is reflected in the appraiser's valuation. This is not inherently unfair to the farmer whose property is involved in eminent domain. Farmers can appeal the valuation if they think it is too low, and the price will be determined by a court.

## E. 16 Written Testimony of Rod Park, Park's Nursery

Mr. Park claims there is no analysis of construction traffic for the Farm Impact Test.
Comment - "The September 2022 Compatibility of Proposed Portland Water Bureau Filtration Facility \& Pipeline Operations with Surrounding Agriculture report is flawed because it concludes little impact from traffic on farmlands and farm operations from traffic impacts. This report appears to depend upon the analysis by Global Transportation Engineering dated September 2nd, 2022, Portland Water Bureau Bull Run Filtration Project Analysis."

Response - The Operations Report is intended to only address the operation of the Water Bureau Projects. A separate report, the Farm Traffic Report, does address traffic impacts on agriculture for the construction period and references the Global Transportation Engineering report for Construction TIA as it has been amended.

Mr. Park claims the study area, referred to in the farm use reports as the Surrounding Lands, is not sufficient for determining the impact area.

Comment - "The scope of the study reflected by the map (Exhibit A. 31 pg.2) does not geographically represent the farm community of this area for either the construction or operations of the proposed facility. By not having a larger representative scope, the traffic impacts to the farmlands in the community are not evaluated as required. (Farm Impact Test) The traffic to the proposed site does not just appear at the edge of the map referenced, then just disappears when leaving. The western boundary should be at least to the eastern edge of the Metro UGB. The northern boundary should be I-84. The eastern boundary to the Sandy River to the City of Sandy. The southern boundary should be across Hwy 26 to Kelso Road to Boring/Damascus. These boundaries are representative of the farmlands and farming community which should be studied for the traffic generated from construction and operations."

Response - The Surrounding Lands as presented in the Operations Report was selected after extensive study of agriculture around the filtration facility and the pipelines route. The criteria used by Globalwise to define the Surrounding Lands uses six factors to determine the Surrounding Lands (page 20 of Exhibit A.33). The Surrounding Lands were mapped after six months of study. The criteria were selected after discussions with farmers to understand what types of nurseries and other farms are in the area. The first criterion is including an area covered predominantly by current, active "farm use." The other five criteria are: 1) zoning, 2) agriculture in character, 3) consideration of natural barriers, 4) transportation, and 5) other impacts which includes lands close to the pipelines to include both externalities and sensitivities.

The potential area of impact to transportation of farm crops was a factor in the selection of the Surrounding Lands and was evaluated based on operational and, later, construction traffic evaluations from Global Transportation Engineering. The proposed Surrounding Lands were also proposed to Multnomah County Land Use Planning in the pre-application process for their input before finalization.

The fact that some nursery loads are filled by two or more nurseries, some of which might be long distances from the Water Bureau projects, does not require a study area larger than is defined in the Water Bureau reports. Both for operations and construction traffic, Global Transportation Engineering evaluated key intersections in the Surrounding Lands and concluded that, with TDM strategies, impacts to intersection and roadway operations due to construction or operations traffic from the Project will be minimal even under conservative analysis assumptions that take into consideration roadway closures due to pipeline construction. In preparing this response, the transportation engineer at Global Transportation Engineering, Dana Beckwith, confirmed via email that there are no significant impacts shown by his analysis in the Surrounding Lands study area and that traffic will tend to disburse and have less impact as it moves further away from the filtration facility and pipelines. Given that response, the Surrounding Lands as selected and analyzed is fully adequate.

Mr. Park argued that added traffic negatively impacts farm use of roads.
Comment - "I do know from experience; traffic does negatively impact farming operations such as:

- Trucks, tractors, and other farm equipment movements from location to location.
- Employees in both their ability to get to and from work along with other movements as needed between farm locations.
- The delay in deliveries of supplies such as fertilizers, sawdust, bark dust, harvesting supplies, etc. due to road closures and traffic congestion.
- Land impacts from the use of herbicides, pesticides, liming and fertilizing of fields due to increased interaction with traffic and the need for additional buffer setbacks to avoid potential conflicts.
- The movement of plant materials from various locations for lining out and transplanting along with transporting harvested material to the dock facilities."

Response - See the Response to Impacts for Product Shipments as well as responses to similar arguments in the Surface Nursery testimony.

Additionally, each of the examples listed in the comments are accepted farm practices conducted on public roads shared with other public road users including construction vehicles and employees commuting to construction sites. The Construction TIA shows
that the road system has capacity for the construction trips necessary with TDM strategies. See the Farm Traffic Report for additional information.

Mr. Park describes the cooperative shipping of nursery products to distant markets and is concerned about the potential loss of business for nurseries if truckloads are delayed.

Comment - "The Oregon nursery industry is very far from our markets as most of our products are shipped east of the Mississippi River. Transportation costs are of prime concern to our clients. We try to overcome this obstacle by cooperative shipping of our plant materials. A semi-truck is often loaded by multiple nurseries for delivery to either one client or to multiple clients. As such a semi-truck may need to cross the region multiple times and if delayed, creates increased shipping and labor costs. There is the very real danger we will lose clients and markets if they can obtain the similar plants from other parts of the country closer to the market."

Response - See the Response to Impacts for Product Shipments and the Farm Traffic Report.

Oral Testimony from Rod Park, Park's Nursery, before the Multnomah County Hearings Officer June 30, 2023

Comment - "The September 2022 Compatibility of Proposed Portland Water Bureau Filtration Facility \& Pipeline Operations with Surrounding Agriculture report is flawed because it concludes little impact from traffic on farmlands and farm operations from traffic impacts. This report appears to depend upon the analysis by Global Transportation Engineering dated September 2nd, 2022, Portland Water Bureau Bull Run Filtration Project Analysis."

Response - See the response to this comment in the written testimony of Mr. Park.
Comment - "Also the study area is far too small. It should range, in my opinion, from the effect of I-84 to at least the metro region's urban growth boundary on the east side, south along up to Sandy out to Kelso Road, and then back in towards Damascus. This is more consistent with how the actual farm community operates in this particular •area."

Response - See the response to this comment in the written testimony of Mr. Park.

## E. 26 Written Testimony of Dan Brink, farm affiliation unknown

Mr. Brink states the Water Bureau Project interferes with agricultural activities and preserving farmland.

Comment - "Zone MUA-20 plays a vital role in supporting agricultural activities and preserving valuable farmland. Granting an exception for 100 acre water treatment facility would result in the loss of agricultural land, hampering farming operations and potentially displacing farmers. It is crucial to prioritize the preservation of agricultural resources as they contribute to the local food supply, the regional economy, and the overall sustainability of the county."
Response-See Response to Loss of Agricultural Land. Multnomah County's MUA-20 zone is intended to provide for community uses which are needed in this semi-rural area. The Surrounding Lands are a mix of farmland and considerable residential and business development. It is also true that water supply/delivery services have historically been here for well over 100 years. The zone balances protecting existing agricultural land and the need for community uses. Furthermore the property is not 100 acres and the net loss of cropland would be 70 acres if 15 acres is returned to crop land use after construction.

## H. 7 Written Testimony of Andrea Culver

Ms. Culver is concerned that traffic on Bluff Road will produce dust, particulate matter, and noise that will impact crops and livestock.

Comment - "Personally, if the construction traffic that is proposed uses Bluff, our produce will be negatively effected. In order to maximize the usage of our acreage, the orchard, berries and garden are all situated close to Bluff Road. Dust and fumes will contaminate all that we grow. Noise of the dump trucks going over the uneven roadway could make our sweet dairy cow nervous or spook her. We rely on her milk production. A calm mama cow also ensures a calm calf. We rely on our chickens being able to roam our acreage and forage for bugs and seeds to produce the most nutritious eggs."

Response - Regarding dust, particulate matter ("fumes"), and noise, see the Response to Dust Impacts, Response to Particulate Impacts, and Response to Noise Impacts.

I have prepared accepted farm practices for blueberries, beef production, and chicken egg production in the Operations Report. In addition, I was raised on a farm and am familiar with farm practices regarding berry production, dairy milk production, and rabbit production. The Culvers are located on Bluff Road approximately 0.4 miles from the proposed filtration facility site.
Existing vehicle travel along Bluff Road, including the roads passing by the Culver's small farm, have the same noise type and volume as the trucks which will be hauling construction materials. Based on the testimony, the Culver's farm animals are accustomed to the existing traffic-generated noise and apparently are now yielding acceptable amounts of milk, eggs, meat, and any other products. Noise from the construction activity will be more frequent for the temporary construction period, but not louder than existing truck traffic. As noted above, I have been in contact with an Oregon State University Extension specialist concerning the sensitivity to noise of farm animals.

Based on that conversation with the specialist, I understand that farm animals adapt to general traffic noise of the type which the construction vehicles produce, which the Culvers' animals are already accustomed to hearing.

Since roaming chickens are not currently an issue, there is no expectation that this will become a problem with additional construction traffic on Bluff Road.

Therefore, there will be no significant change in accepted farm practices and no significant increase in the cost of accepted farm practices for the Culvers.

## Oral Testimony of Andrea Culver

Andrea Culver had the same oral testimony about loss of farmland as her written testimony.

## H.16/H. 34 Written Testimony of Holly H. Martin

Ms. Martin is concerned that the project will affect clients of their agritourism7 business.
Comment - "We are in agribusiness/agritourism. At one point, we were the largest grower of Monkey Puzzle trees in the state, as Elk Pass Nursery. We also grow peonies and are busy in June taking flowers to the Gresham Farmers Market and inviting the public out to our farm for open field days, where they walk in the peony patch, take photos or paint, get flowers cut to order and pick out the peonies they want to grow themselves. In addition to the peonies, people tell us they love coming out to enjoy the beautiful, peaceful surroundings. We also have two truffle orchards (dba TrufNoire) and will be sponsoring winter hunts, in which the rural atmosphere and quiet country character of the area are an important part of the appeal (not to mention the ridiculously cute truffle hound who lives with us)."

Comment - "While we are not right next door to the facility itself, we will suffer the effects of the construction and on-going operations of this facility if it is approved. We have to go right by the facility site whenever we go into Gresham, Troutdale or Portland, and most of our agribusiness clients take the same routes coming to us. Our peaceful community will be disrupted by heavy truck traffic too close to schools, road delays/ closures during construction, and ruined roads that were not designed for the weight of those trucks."

Response - Ms. Martin describes her farm as small and family operated. There is no mention of employees. The acreage growing truffles, peonies, and Monkey Puzzle trees are a small share of the total property.

7 Note that tourism is not a farm use covered by the farm impacts test and should not be considered for land use approval.

Peonies and truffles have extended seasons for sales from late spring to fall, and even winter in the case of truffle harvest. These extended seasons and the specialization of client sales allow for lower labor requirements. This product specialization also means client contact is direct. This high degree of contact is an accepted farm practice, and results in close client communication such as when to come to the farm and even the best routes to take.

Clients driving to the Martin farm for peonies or truffle hunting will be in vehicles that drive at posted speeds with several route options and can choose an alternative if desired.

The Martin farm is approximately 3.2 miles from the filtration facility by a route using Dodge Park, the road Ms. Martin indicates is most often used to reach the farm. Dodge Park is open during pipeline construction with a single lane of passage and flagger control. Additionally, during the relatively short time that pipeline construction is in Dodge Park Boulevard, there are multiple alternative routes available as well, such as Lusted Road, Bluff Road to Proctor Road, and Bluff Road to Hudson Road.

For Monkey Puzzle Tree specimens (larger trees), a large, specialized truck will be contracted to dig and transport one or more trees to the planting location. The accepted farm practice is coordination of transportation between the farm, the buyer, and the transportation services firm. Delay times should be minimal with the flagger control and open lane service, even if Dodge Park Boulevard is in pipeline construction when a Monkey Tree will be shipped. See the Response to Impacts for Product Shipments and the Farm Traffic Report.

Other than harvest transport, the work at the Martin farm consists of other accepted farm practices such as hiring seasonal labor, periodically purchasing supplies and inputs such as plants, fertilizers, chemicals, and irrigation equipment, and maintenance of equipment and vehicles. All of these accepted farm practices will not change due to the construction or operation of the filtration facility or the pipelines. While some customers may be slightly delayed in reaching the farm there are also available alternative routes. In the case of Monkey Tree shipment, the transport contractor can be advised to allow slightly more time to reach the farm if transport is needed during pipeline construction at Dodge Park Boulevard.

Therefore, there is no significant change in accepted farm use practices and no significant increase in the cost of accepted farm practices.

## H. 21 Written Testimony of Larry Bailey, President Multnomah County Farm Bureau

Larry Bailey claims that the analysis of externalities and sensitivities disregards the negative impact of the Water Bureau Project on farmers in the Surrounding Lands.

Comment - "PWB would have you believe that farmers' concerns are unfounded and even commissioned a report to support this assertion (Exhibit A.33), which is referenced throughout and incorporated into PWB's permit application. That report, which appears to have been created not to ensure protection of agriculture in East Multnomah County but instead to provide PWB with a defensible position against our concerns, clearly articulates reasons why farmers' concerns are nonsensical and should be ignored. In fact, that report goes so far as to blanketly argue that no phase of the proposed project will have any impact on any accepted farming practice in East Multnomah County. The report quite dishonestly argues that this is the case because "the filtration facility and its operation will generate no perceptible changes or externalities outside the boundary of the facility" and that "there are no sensitivities of the proposed filtration facility which could potentially cause significant changes in or significantly increase the cost of accepted farming practices in the Surrounding Lands" (Exhibit A.33, page 112)."

Response - The report referenced is the Operations Report. The Operations Report was prepared with farm-by-farm analysis, extensive interviews with farmers, and multiple interviews with other knowledgeable people who work with Oregon farmers. The report is a comprehensive review of accepted farm practices for the types of agriculture in the Surrounding Lands and the potential impacts of the project on those practices based on years of work by Globalwise both evaluating project design documents and providing input to the project team. The analysis is also a comprehensive evaluation of fourteen potential externalities that the operation of the filtration facility and pipelines could impose on farmers. The analysis also addresses two sensitivities during pipeline and facility operations.

The Operations Report correctly concludes that none of the farms analyzed will be forced to significantly change their accepted practices due to the operation of the filtration facility and the pipelines. Also, with the efforts of the Water Bureau to accommodate farmers as described at length in the two Globalwise reports on compatibility, farmers will not have significant increases in cost of following their accepted farm practices. The carefully designed pipeline construction schedule is just one example of that accommodation. Mr. Bailey provides no evidence that disputes these conclusions.

Comment - "...I want to specifically describe for you how Portland Water Bureau's proposed water treatment facility will have detrimental impacts on local farmers and will quantitatively impact the ability of our members to pursue accepted farming practices in East Multnomah County. In fact, PWB separately has admitted that just the pipeline aspect of the proposed project "will affect agricultural lands and ongoing agricultural operations" in the area (Exhibit A.35, page 2).

Response - The report referenced is Exhibit A.35, the "Agricultural Soils Restoration Plan." This comment quotes the first sentence of the introduction to the report. This quotation is taken out of context from the Agricultural Soils Restoration Plan and how it addresses return of soil productivity when the pipeline construction is completed. The
effect on agricultural land referenced in the quoted sentence refers to the short-term effect from construction, not longer-term impacts.

In its totality, the Soils Restoration Plan is a set of comprehensive actions that the Water Bureau will conduct before, during, and after pipeline construction to return the soil to its pre-construction condition and support the long-term productivity of the land.

The conclusion of the soils expert is: "Implementation of avoidance measures, minimization measures, Best Management Practices (BMPs), mitigation measures, and monitoring discussed in the Plan will result in agricultural lands and agricultural infrastructure disturbed by the project being returned to their pre project conditions" (Exhibit A.35, page 16).

Mr. Bailey and others who argue that the Water Bureau is unconcerned about farmland protection are ignoring the extensive efforts the Water Bureau is undertaking to protect farmland, including that the Water Bureau has proposed primarily locating pipelines in the public road right-of-way and along existing farm roads to avoid further disruption of farm use in cropland.

Comment - "During the construction phase, which we understand is projected to last four years (Exhibit A.230, page 2), it is impossible to argue that local farms will not experience significant transportation disruptions. Stated differently, the proposed facility will have significant, observable, and detrimental impacts "outside the boundary of the facility." In fact, PWB's construction traffic study estimates an average truck volume of nearly 900 trips per day and a peak truck volume, which is projected to last over a year, of nearly 1500 trips per day (Exhibit A.230, page 8). Spread over the assumed 11-hour work day, this amounts to one truck every 30 seconds. During this timeframe, farm equipment, which often travels at 5-10 miles per hour, will be competing with this fast-moving construction traffic for space on our local roads, nearly all of which lack shoulders (Exhibit A.230, page 3)."

Response - All construction vehicles, including the trucks hauling construction materials, will observe safety procedures on all roads, including speed limits. This commenter's exaggerated description of expected roadway conditions has already been addressed. See Response to Traffic Impact for Farm Travel and Response to Traffic Impacts for Product Shipments and the Construction TIA and Construction TIA Update Memo.

Comment - "In addition, the construction phase will close several of our main thoroughfares for extended periods of time. During these closures, local farmers will not only have to contend with the above-discussed construction traffic but also with the congestion associated with the re-routing of local traffic to avoid the closures. The combination of increased traffic and increased drive distances will cause a concrete and measurable decrease in farm profitability.

For example, the closure of Dodge Park Blvd for pipeline construction, together with the high concentration of traffic at the intersection of Carpenter and Cottrell Roads,
will double the length of a one-mile trip from the corner of Dodge Park and Cottrell to the corner of Dodge Park and Altman Roads (assumes re-routing to Lusted Road, and a similar analysis may be performed for the closure of Lusted Road). While this may seem inconsequential for vehicles traveling at 55 miles per hour, it is a nearly 30minute round-trip delay for a farm vehicle traveling at 5 miles per hour and will only be worsened by the additional congestion. This results in a significant decrease in overall productivity for farms that must travel these redirected routes."

Response - Refer to the Response to Traffic Impact for Farm Travel and Response to Traffic Impacts for Outbound Shipments. One key action that minimizes traffic impacts is the seasonal schedule for planned pipeline construction work. Farmers are accommodated by keeping the main farm-traveled intersections open for most of the year, with closing intersections only in months when farm equipment and semi-truck shipments are at their low point. These schedules to accommodate farmer traffic were developed with Globalwise's input to the project team.

Where pipeline construction requires closures, local farm access will still be maintained. Furthermore, pipeline work is constantly moving along a road segment, so the active work zone keeps moving. The closure schedule reported by the Water Bureau is the entire duration when work is planned. Statements about the long duration focus on the entire duration and dramatically overstate the impact for farmers who need access within the segment of roadway. Farmers will continually be entering fields in front of the work zones as well as behind them.

Farm vehicles, especially the slowest moving equipment such as tractors, have increased mobility in the sense they use points of field entry that do not necessarily require a farm road for access. Also, it is accepted farm practice for both farmers and the semi-trucks that haul farm products to customers to take detours, when desirable, and to load slowmoving vehicles onto larger vehicles that can travel at roadway speeds. Much of the farm vehicle travel is in pickups and larger trucks as well as crew buses that move at or near posted road speed. They do not take excessive time if they take a detour route. The Water Bureau has consulted with Globalwise to be careful to not close companion roads available for farm use that will add undue additional time to detour routes when taken.

The statement that Dodge Park Boulevard will be closed is not correct. Dodge Park Boulevard will not be closed. During the pipeline construction, which will move along the road area as construction progresses, Dodge Park Boulevard will be flaggercontrolled with one lane of passage.

Comment - "For farmers, time is of the essence. Many farming activities are directly tied to local weather patterns. For example, spraying can only be done when there is little to no wind, often for only a few hours in a given day and a small number of days each week. The presence, absence, or likelihood of rainfall also must be considered, further limiting the time window for application of certain pesticides. Many other accepted farming practices, such as planting and harvesting, have similar limited time
windows. Loss of productive time during these limited time windows is especially detrimental to accepted farming practices."

Response - Again, refer to the Response to Traffic Impact for Farm Travel and Response to Traffic Impacts for Outbound Shipments. Also see the response to the previous comment.

Comment - "The proposed water treatment facility also will have more long-term impacts on accepted farming practices. PWB's consultants may argue that the impacts of disrupting native soils in order to bury a large pipeline on agricultural lands can be effectively mitigated, and that the soil can be returned to its original productivity. However, the farmers, who have real-life experience with such activities, tell a very different story. I urge you to carefully consider their testimony to this effect."

Response - Refer to the response to previous comment by Mr. Bailey regarding native soils and pipeline construction. Additionally, the soils expert has provided supplemental responses to specific concerns in a memorandum titled "Response to Testimony of Agricultural Soils Impact" submitted into the land use record concurrently with this memorandum. Please refer to that memorandum for specific comments regarding productivity.

The Water Bureau pipeline route traverses only three farmers' properties with pipeline construction, following existing farm roads rather than cropland to the maximum extent possible. This minimizes the total area disturbed and additionally the Water Bureau will take comprehensive measures to restore the maximum amount of farmland to crop use to productivity after construction, including allowing for defined farming within permanent easement areas.

Comment - "The report commissioned by PWB (Exhibit A.33) would have you believe that there will be no interrelation between activities performed at the proposed water treatment facility and nearby farms. We strongly disagree and submit that the proposed facility does have sensitivities that have the potential to "cause significant change in or significantly increase the costs of accepted farming practices in the Surrounding Lands." For example, while the report goes to great lengths in arguing that the facility will not generate dust that will be detrimental to farming activities, it completely ignores the potential impacts that dust from farming activities will have on the "open water areas" of the proposed facility. Any farmer can attest to the fact that mowing, tilling, disking, plowing, and the like, all generate dust. Any farmer can also attest to the fact that this dust travels long distances. While the presence of buffer areas around the proposed water treatment facility might be argued to mitigate risk from pesticide drift, these buffers cannot, and will not, stop dust generated from farming activities from entering these open water areas."

Response - The analysis of the Operations Report is accurate in the assessment that the filtration facility has been specifically designed to avoid sensitivity to the accepted farm practices of all nearby farms. The analysis evaluated all farms in close proximity to the facility site and their farm practices. The Water Bureau's facility design engineers have considered farm generated dust and farm pesticide use as potential issues. The facility design will not be impacted in either case.

Mark Graham, Senior Principal Engineer for Stantec, confirms that the analysis of why the filtration facility will not force changes in accepted farm practices due to dust follows much of the same reasoning as was explained for pesticides in Mr. Graham's report included in the record as staff's Exhibit A.41. The open basins near the property lines will contain water recycled from the residuals stream which will be returned to the head of the treatment process. The flocculation, sedimentation, and filtration basins are set much farther into the site and are therefore less subject to dust impacts. Any dust settling into these basins would be removed through the remaining sedimentation and/or filtration processes.

The Water Bureau can operate the filtration facility without sensitivity to farmers that follow accepted farm practices as stated in the Operations Report.

Comment - "Finally, it is impossible to ignore the impact that this accelerated removal of farmland will have on the overall farming community of East Multnomah County. Farms do not operate in a vacuum. They rely on a supply and distribution infrastructure that is stronger, and more readily available, when there is a critical mass of farms in the area. Our community already has experienced the loss of several local farm suppliers over the past few years, including tractor, chemical, and irrigation component suppliers. These losses cause farmers to wait longer, and travel farther, for necessary supplies, decreasing their productivity and increasing the carbon footprint of their farms. The site of the proposed water treatment facility amounts to approximately $2 \%$ of the highest-value, irrigated farmland in Multnomah County overall, and a much higher fraction of the irrigated farmland in East Multnomah County. Conversion of this land to industrial use strains an already strained farming infrastructure in East Multnomah County, and this impact cannot be ignored, mitigated, or recovered."

Response - See the Response to Loss of Agricultural Land. The Water Bureau is not ignoring the potential for impact on the farm community in East Multnomah County, as evidenced by the Water Bureau's extensive efforts to reduce the potential for impacts from this Project. This Project is clearly not an "accelerated removal" of farmland. The Water Bureau has owned this property since 1975. For almost 50 years the Water Bureau has allowed local farmers to raise nursery crops on this land. Only when the City of Portland now is under a federal mandate to address water filtration for the health of its customers is it proposing a change to a community use as allowed within the current zoning designation of this property.

## H.22d Written Testimony of Jeff and Mona Ayles

Mr. and Mrs. Ayles state that dust will create problems for their crops.
Comment - "Our orchard and veggie garden is all organic along with our blueberry field. Construction up the hill will create an endless amount of dust that will settle down on everything who knows what will be in all that dust with construction smells polluting the air."

Response - See Response to Dust and Response to Particulate Impacts.

## H.22e Written Testimony of Rick and Carol Bartha, farm affiliation unknown

Mr. and Mrs. Bartha state a concern for the impact on farm workers.
Comment - "We are also concerned about the safety of the agricultural workers in their trucks, tractors and farm vehicles. Our roads were not meant to carry the amount of traffic this project would bring. Our roads are already in terrible shape causing us to look like drunk drivers serving to miss all the potholes."

Response - See Response to Impacts for Farm Travel. The Water Bureau will employ contractors whose drivers all receive training on safety protocol and specific procedures and instruction when driving in this area. Drivers will be instructed to obey all speed limits and to drive safely when near slower farm vehicles.

## H.23g Written Testimony of Angela Parker, Hawk Haven Equestrian Center

Ms. Parker states the Carpenter Lane is not an appropriate road for semi-truck traffic from the Project and her equestrian business would be significantly harmed.

Comment - "To propose that Carpenter Lane is an appropriate thoroughfare for industrial traffic is a crazy and dangerous proposition. Our road is already poorly maintained and filled with potholes. Regular semi traffic would no doubt aggravate this issue and quickly render the roadway nearly unusable. Even if the semi drivers are willing to submit to the 25 mph speed limit Carpenter Lane it feels unwise to be regularly transporting hazardous chemicals on such a small and bumpy rural country Lane."

Comment - "My clients appreciate the country feel on Carpenter Lane and feel safe taking their horses out on our road for riding. I do not see Carpenter Lane being a particularly safe place for equestrian traffic if the proposed Industrial facility is executed as planned and I imagine my clients will feel the same."

Comment - "If my horse boarding clients feel unsafe on Carpenter Lane I have to expect a number of them will in time decide to relocate their horses elsewhere. I also expect that attracting new clients will be less viable. The loss of just one boarding client will be a hardship in excess of $\$ 600$ each month that horses' stall remains empty. If clients have had bad experiences and/or serious accidents, as sadly not unlikely to happen as animals try to adjust to potential changes in character regarding the traffic on Carpenter Lane, the word of mouth in the equestrian community may make obtaining new boarding clients on my farm a less likely event."

Comment - "Several of my clients commute half an hour or even excess of an hour to escape the traffic and bustle of the city and spend some time with their animals and our country landscape. Proposed construction and road closures may double these commute times, perhaps forcing some to reduce their lesson schedules. If my clients aren't able to visit the farm as frequently and are forced to cancel their lesson appointments my farm is losing income and my clients will be unhappy. This results in an additional monetary hardship of \$55 for every appointment my clients may be unable to make given longer commute times and their already busy schedules."

Response - Ms. Parker's equestrian facility is located at 33536 SE Carpenter Lane. The Water Bureau is not proposing that this section of Carpenter Lane, which is between Cottrell Road and Altman Road, be the route for any construction traffic (truck or commuter) nor the detour route for any pipeline closure. While the Construction TIA includes a figure that shows this segment of Carpenter Lane as a potential detour route for local traffic, the Water Bureau understands the concerns of local residents and will not include Carpenter Lane west of Cottrell as a detour option in traffic control plans or signage.

The equestrian facility is nearly one mile from the entrance of the proposed water treatment facility and there will be no added traffic on Carpenter Lane for most of this distance. There is no reason to believe that the customers of Ms. Parker will feel unsafe or find it less enjoyable to ride their horses in the vicinity of the equestrian center on Carpenter Lane during the temporary construction period or thereafter.

As stated in the Construction TIA and the Construction TIA Update Memo, the level of Service in the intersections in the Surrounding Lands will remain within Multnomah County Standards. Therefore, customers of the equestrian center should not have any significant delays in reaching this business.

Therefore, the construction and operation of the Project will not change any accepted farm practices for the equestrian center nor will there be any significant increase in costs of those accepted farm practices.
H.24m Written Testimony of Jennifer Hart, farm property owner

Ms. Hart states the Water Bureau Project will change the way farming is conducted.
Comment - "the proposed industrial plant will change the way of farming in the area. It is taking 100 acres of prime farmland out of production. This land is in a Rural Reserve. Surface Nursery was farming the land where the proposed site is located. Not farming that land-surface is losing $1 / 3$ of their business."

Response - See Response to Loss of Agricultural Land and the response to the similar Courter comment above.

## H.26d Written Testimony of Jesse Nelson, Hans Nelson Nursery (Farm Operator X)

Mr. Nelson states that road closures and increased traffic are a negative impact on farm traffic.

Comment - "Road closures and hugely increased traffic would change the way we operate the farm. If Dodge Park Road is closed I have no way to move large implements to our other location. The increased traffic also is a huge impact on moving employees between farms. There is times in the season where we make lots of trips on the roads. Most of the traffic during the day is farm traffic and having dump truck drivers and Portland drivers don't mix. The people that live out here respect the roads and give slow vehicles space. Drivers from out of the area you can tell and drive way too fast and if this plant is allowed it will be way less safe."

Response - See Response to Traffic Impact on Farm Traffic. Also see Farm Traffic Report.

It is speculative and unfounded to argue that drivers of vehicles contracted to the Water Bureau would pass farm vehicles unsafely or not give them space. All construction vehicles will be operated by drivers that receive comprehensive safe driver training and are directed to follow this training at all times. This training will include safety related to slow moving vehicles such as tractors that are on the roads.

The Water Bureau is not proposing to close access on Dodge Park Boulevard. Dodge Park Boulevard will be open to one lane of traffic with flagger control. This is one of the constraints on pipeline construction the Water Bureau has implemented specifically to accommodate Hans Nelson Nursery and other nurseries that want to only use this route for farm equipment travel. Furthermore, pipeline construction constraint \#2 supports farm traffic by restricting construction on Dodge Park east of Cottrell to August through October, the period of time during the year that nurseries indicated their traffic is at its lowest. This was specifically included in order to maintain 2-lane traffic the rest of the year during busier farming seasons. These constraints will support tractors, other slowmoving vehicles, and long-load vehicles that Hans Nelson Nursery or other nurseries
want to send down that road. Other vehicles which move at higher speeds can also reach lower Lusted Road on other roads.

Mr. Nelson states that this proposal to build at the filtration facility site would contribute to an on-going loss of farmland/soil.

Comment - "Also as a person who uses the beautiful soil we have it is insane that Portland Water Bureau wants to destroy 100 acres of prime farm land to put an industrial plant in a rural farming community. They should be ashamed of themselves. Farmland is being lost at an alarming rate and a local government that prides itself on sustainability and reducing impacts is making one of the biggest impacts it could by placing this type of facility and on wonderful farming soil that could produce for centuries."

Response - See the Response to Loss of Agricultural Land.

## Oral Testimony from Jesse Nelson, Hans Nelson Nursery before the Multnomah County Hearings Officer June 30, 2023

Mr. Nelson has concern for road safety in reaching a field in the lower Luster Road area.
Comment - "We have had close calls in the past of •drivers that are in a hurry. The added construction traffic will only increase these dangers. To get the digging machine to the other farm, we use a semi-truck using a lowboy trailer, and Dodge Park Boulevard is the only safe option. Alternate routes have cliffs on one or more sides, zero shoulder, and very limited visibility. The county has placed length restrictions on them for these reasons."

Response - As stated above in response to a similar written testimony comment, the Water Bureau is not proposing to close access on Dodge Park Boulevard. Dodge Park Boulevard will be open to one lane of traffic with flagger control when work is being performed, which will only occur during the time of year (August through October) when nurseries indicate that their traffic is at its lowest. This is Constraint \#2, one of the constraints on pipeline construction the Water Bureau has implemented specifically to accommodate Hans Nelson Nursery and other nurseries that want to only use this route for farm equipment travel. This will support tractors, other slow-moving vehicles, and long-load vehicles that Hans Nelson Nursery or other nurseries want to send down that road. Other vehicles which move at higher speeds can also reach lower Lusted Road on other roads.

## Mr. Nelson states that road closures and increased traffic are a negative impact on farm traffic.

Comment - "The construction of the site will greatly impact our nursery operation. The •increased traffic will make it more dangerous for my employees to get to
work. If Dodge Park is closed, there is no safe alternative access for our second farm, and we are very dependent on weather and need to be able to act quickly when we have the opportunity.

If we get delayed in planting or harvesting, we could have a complete failure of the crop that we planted two to fours years previous. We plant in the spring when we have good weather windows, and that can change on a dime. And during the year, we move mowers, sprayers, stakes, tractors, irrigation supplies, employees. We irrigate -- well, let me get down here."

Response - See Response to Traffic Impact on Farm Traffic. Also see the Farm Traffic Report.

Again, the Water Bureau has taken the concern of Hans Nelson Nursery into consideration regarding their route of farm travel to lower Lusted Road and will keep Dodge Park Boulevard open with one lane of traffic and flagger control.

Comment - "I was interviewed for the agricultural impact analysis report by Globalwise, Exhibit A.33. During the interview, I explained our traffic patterns and routes, and I was not mentioned in the report even with Globalwise knowing that we rely on these roads.

After reading the report generated by Globalwise, I have no idea how they concluded there is no impact."

Response - The report referenced by Mr. Nelson (the Operations Report, Exhibit A.33) addresses farm impacts only during the operation of the filtration facility and the pipelines. Impacts for farm use during construction are addressed in the Farm Traffic Report. Also see Response to Traffic Impacts on Farm Traffic.

The information provided by Mr. Nelson was used by the Water Bureau to create specific constraints on pipeline construction to address the road use impacts on Hans Nelson Nursery, as explained in the prior responses to his comments.

## H.28a Written Testimony of Mark Shull, Commissioner of Clackamas County, farm affiliation unknown

Mr. Shull claims that this project will lead to the further loss of farmland in this area, particularly EFU zoned lands.

Comment - "The loss of Exclusive Farm Land zoned lands could start the beginning of the end for even more EFU lands, forever altering the landscape that is so loved by our people. We must preserve our limited farm land."

Response - The filtration facility site is zoned MUA-20, not EFU. The minimal amount of EFU land for the emergency access road follows an existing farm road and solar energy facility road. See also the Response to Loss of Agricultural Land.

## H.28a Written Testimony of Dean and Patricia Walter, farmers

Ms. Walter is concerned about noise from the filtration facility site.
Comment - "Little did we know that all of our 70s we would be plagued by the noise from trucks and construction for at least 5 years."

Response - Farm use of the hay field on the Walters property will not be impacted in any way by noise from the filtration facility construction activity. See Response to Noise Impacts.

## H. 38 Written Testimony of Ryan Marjama, Don Marjama Nursery (Farm Operator N)

Mr. Marjama states that the Water Bureau Project has not considered farming mobility and the impact this Project will have on farm use of the roads.

Comment - "The massive filtration and pipeline project has failed to take the importance of farming mobility into account. Road construction, pipeline construction, main site construction and all the closures, delays and detours that will result from this 'plan' will essentially paralyze nurseries that need to move crews, equipment and trees from their main location to off-site locations. When these off-site locations are leased rather than owned, the only logical move for the farmer is to let go of leased lands that become too difficult and costly to reach and maintain. Even with lands owned by the nursery it's a huge financial impact to not be able to reach their fields. But, as stated above, the loss of lease lands hurts the land owner too, and is a financial loss for all parties involved."

Response - See Response to Traffic Impacts for Farm Travel and Response to Traffic Impacts for Product Shipment.

The impacts described in this comment are speculative and not substantiated by analysis. The Construction TIA shows that road travel time will not be significantly impacted by the added Project traffic associated with construction.
Mr. Marjama states that increased traffic will create unsafe conditions and impact employee retention and hiring.

Comment - "Facing delays and detours or interference from increased traffic could create unsafe situations on these roads because the reduced speeds at which we safely drive will cause drivers unfamiliar with our roads to want to pass unsafely. It is not possible to plan and predict every time equipment may need to be transported on local roads, and any delays in doing so costs us money in the way of having to pay overtime, having to hire more employees to get the workload
completed because other employees are delayed on the roads, and ultimately lost revenue if orders are unable to filled on time according to customer needs."

Response - See Response to Traffic Impact for Farm Travel and Response to Traffic Impact for Product Shipment. See the Farm Traffic Report.

It is speculative and unfounded to argue that drivers of vehicles contracted to the Water Bureau would pass farm vehicles unsafely. All construction trucks will be operated by trained, licensed drivers that receive comprehensive safe driver training and are directed to follow this training at all times. This training will include safety related to slow moving vehicles such as tractors that are on the roads.

Again, the Construction TIA shows that road travel time will not be significantly impacted by the added Project traffic associated with construction.

Mr. Marjama states that interference with shipping to customers will occur.
Comment - "Don Marjama Nursery loads customer orders on common carrier, over the road trucks during normal hours of operation and on normal workdays, in a designated loading area at the main headquarters. Our loading activities have never caused any interference with pedestrian or vehicle traffic on Bluff Road. Trucks for customer orders are often arranged through a broker who works to get the customers total order onto a truck and delivered to the customer. Customers are not local, and the trucks are delivering to out-of-state locations. The truck drivers for these shipments are common carrier over-the-road commercial truck drivers. They are typically following the order of a load sheet or designated route from which they cannot deviate. Sometimes our trucks are also loading at other area nurseries into the same trailer, and it needs to be loaded in a specific order according to the customer or broker. Trucks can't deviate from their stops and go to another nursery out of order due to road delays and closures. If we're the only wholesaler on that truck, they definitely can't just come a day later or earlier according to our local road issues. There is an end customer to satisfy and deliver that load to, and unless inclement weather makes it unsafe to do so, schedules must be strictly followed. If there are regular delays or closures on the roads leading to and from my nursery, we will lose customers and orders which would be devastating and negatively affect our bottom line. When a truck is delayed getting to or from a nursery there are multiple consequences, ranging from a reduction in invoice or sale, damaged trees, lost income and unhappy customers. Ultimately brokers and customers will avoid purchasing product from nurseries with shipping issues, even if not the fault of the nursery itself. Shipping delays and order fulfillment issues will result in negatively impacting the reputation of our nursery as well, which could put a nursery out of business. According to their application, construction impacts of the PWB filtration plants are expected to last a minimum of 4 years but could take even longer, which will have an obvious and sustained, long-term and potentially permanent negative impact on our nursery."

Response - See Response to Traffic Impact for Farm Travel and Response to Traffic Impacts for Product Shipments. See Farm Traffic Report.

Comment - "General maintenance and repair of farm equipment \& buildings is performed routinely and as needed. It's important that myself and our employees have reliable access to nearby towns to pick up things needed for urgent repairs and prevent a disruption to normal operations.

Regular pickup and delivery of farm supplies is another component of normal farm operations at Don Marjama Nursery. We often make multiple trips daily to check on crews at offsite locations and/or pick up parts or other supplies from various suppliers in town (most commonly to Gresham, Troutdale, Sandy, Clackamas, Oregon City, Wilsonville, etc.).

Outside deliveries to the nursery include: Supplies needed for typical nursery operations from various suppliers; sand, mulch, potting soil, burlap, baskets, pots, wire, tape, fertilizer, shears, shovels, gloves, etc. Parts and supplies needed for regular maintenance and repair are also ordered and delivered to the farm on an as needed, often next-day basis. These supplies, as mentioned above, are delivered to the main farm location on Bluff Road by pickups on a weekly basis on average, but more or fewer trips may be necessary as operational needs determine."

## Response - See Response to Traffic Impact for Farm Travel and Response to Traffic Impact for Product Shipment. See the Farm Traffic Report.

As stated previously, the Construction TIA analyzed impacts at study intersections and roadways related to construction of the Bull Run Filtration Projects. All intersections meet the level of service requirements of Multnomah and Clackamas counties, and delay times are minimal.

Farm supplies are delivered or picked up in commercial vehicles and farm vehicles that travel at or near posted roads speed limits. There is no reason to expect these farm trips will have any significant delay.

Comment - "Interference with common carrier over the road semi-trucks easily accessing our farm is a major concern. Is it extremely disruptive to reschedule these trucks, if it's even at all possible, due to detours and road closures. It is also dangerous for semi-trucks to navigate alternative routes when main roads are closed because these truck drivers are not from this area and are not familiar with our community's network of rural roads. Many of our rural roads cannot accommodate the size and turn radius of a semi-truck. It is not safe for other vehicle and pedestrian traffic to have semi-trucks attempting to navigate unfamiliar detour routes on our rural roads, with numerous hidden driveways,
multiple school bus stops, no lane striping, and no shoulders, and no safe areas to turn around."

Response - See Response to Traffic Impact for Product Shipment. See the Farm Traffic Report.

Mr. Marjama is concerned that irrigation wells could be seriously impacted due to deeper well drilling or new well drilling. Concern for vibration from construction activity at the filtration facility site is also a concern.

Comment - "A big concern regarding the new filtration plant is that some of PWB's wholesale customers, such as City of Gresham, City of Rockwood, and Tualatin Valley will not be renewing their contracts due to the rate increases and have opted to drill their own wells. When large-scale wells such as those for a municipality are drilled on the same aquifer, local area farmers including Don Marjama Nursery could see a decline in water availability. This will result in having to dig deeper or drill a new well altogether, an extremely costly endeavor of anywhere from $\$ 100,000$ to $\$ 300,000$ or more for a new well. Damage from construction vibrations at the adjacent site during the 4 to 5 -year period of construction is also a big concern. Sustained vibrations from drilling into and under the ground near a well can cause extensive damage, especially with horizontal drilling, and require repairs that can easily cost $\$ 60,000$ or more. A well belonging to a property adjacent to the PWB plant site was already damaged in test drilling and had to be replaced. If any of our wells are damaged during irrigation season, the impact would be disastrous and result in dead trees and cancelled orders."

Response - See response above to a similar argument made by Surface Nursery on pages 22-23.

Furthermore, my best estimate is the nearest irrigation well used by Marjama Nursery is located at least one-quarter mile from the filtration site. At this distance, any potential for vibration impact to a well is extremely minimal.

## Oral Testimony of David Shapiro

Mr. Shapiro states that he farms.
Comment - "I am very much a product of this landscape, and I will say we are doing well. The only billion dollar industry in Oregon agriculture is the tree farm industry. I grow pumpkins. I am in the DART program as a farmer. That's why I said my farm was not represented. I am a farmer. I grow, and we are doing the best that we can out there. I don't understand why this facility needs to be
plunked down in an area that is doing well and doing well by itself and doing well for Oregon."

Response - My previous analysis did not identify that Mr. Shapiro was a pumpkin farmer. I prepared accepted farm practices for winter squash which is included in the Operations Report. The accepted farm practices for winter squash and pumpkins are essentially the same. Mr. Shapiro lives on lower Lusted Road. Few construction vehicles will be driven on this section of Lusted Road. There is no pipeline construction in this area and Mr. Shapiro 's property is approximately $1 / 4$ mile from the filtration facility with forested cover and a change in elevation. There is no evidence that any activity of the proposed project will have an impact on Mr. Shapiro 's farm use of his property.

Therefore, there is no change in accepted farm practices and no significant increase in the cost of accepted farm practices.

## Agency Comments

## E. 24 Written Testimony of James Johnson, Oregon Department of Agriculture

Mr. Johnson claims the Surrounding Lands should be larger than was used and is not sufficiently large to delineate the cooperative nature of the nursery industry or the total area needed to support agriculture.

Comment - "Recognizing the dominate role that the nursery and greenhouse industry plays in the larger area, we believe that the study area used by the applicant is not adequate. The local nursery and greenhouse industry region, including the subject land, works together in many ways to support the needed critical mass required for the industry to remain viable.

For example, this industry is highly dependent on the movement (shipping and receiving) of their products by tractor-trailer trucks. Most area nursery and greenhouse products are moved to and from area farms towards Interstate Highway 84 and U.S. Highway 26. It is common practice for farmers to share loads with other operators."

Comment - "We would suggest that the 'cooperating nature' of the industry and the critical mass needed to support agricultural infrastructure needs requires analysis of a larger area. The study area used by the applicant extends only onemile to the north and south of the plant site, approximately one and one-half miles to the west and approximately 2-miles to the east. This study area does not recognize the character of nursery and greenhouse operations in the area and their dependance on each other. We believe that a larger area that recognizes the transportation requirements of the industry is needed. An area that includes lands
north to I-84, west to the Metro urban growth boundary and south to line the generally runs from Damascus to Sandy would better reflect the transportation needs of area nursery and greenhouse operations."

Response - The Surrounding Lands as presented in the Operations Report was selected after extensive study of agriculture around the filtration facility and the pipelines route. The criteria used by Globalwise to define the Surrounding Lands uses six factors to determine the Surrounding Lands (page 20 of Exhibit A.33). The Surrounding Lands were mapped after six months of study. The criteria were selected after discussions with farmers to understand what types of nurseries and other farms are in the area. The first criterion is including an area covered predominantly by current, active "farm use". The other five criteria are: 1) zoning, 2) agriculture in character, 3) consideration of natural barriers, 4) transportation, and 5) other impacts which includes lands close to the Pipelines to include both externalities and sensitivities.

The potential area of impact to transportation for nurseries and other farm uses was a factor in the selection of the Surrounding Lands and was evaluated based on operational and, later, construction traffic evaluations from Global Transportation Engineering.

The proposed Surrounding Lands were also proposed to Multnomah County Land Use Planning in the pre-application process for their input before finalization.

It is impractical and unworkable to use the two criteria Mr. Johnson suggests for defining Surrounding Lands. With regard to the "cooperating nature" of the nursery industry, the example used is nurseries sharing truckloads for customer shipments. Not only do several larger nurseries in close proximity to the filtration facility and pipelines rarely follow that load-sharing practice, an effort to define the study area based on nursery load sharing would be amorphous with hard to specify boundaries because there are many different combinations of nurseries who could share loads, the roads traveled will vary due to the order for loading, and so the nature of the area is constantly changing with each unique truck load. It is understandable that Mr. Johnson provides no clear transportation rationale for his suggested study area.

It is also impractical and fraught with impossible line drawing to use the second basis offered - "critical mass to support agriculture" - for defining the suitable surrounding lands for study. For example, what area size is satisfactory for the purchase of tractors? What about the appropriate area necessary for two to four fertilizer distributors or several suppliers of greenhouse suppliers?

Most importantly, both of these vague proposed criteria are based on the fundamental argument that there will be impacts to the transportation network that impact farmers' ability to move on the public road network in the area. However, both for operations and construction traffic, Global Transportation Engineering evaluated key intersections in the Surrounding Lands and concluded that, with TDM strategies, impacts to intersection and roadway operations due to construction or operations traffic from the Project will be minimal even under conservative analysis assumptions that take into consideration roadway closures due to pipeline construction. In preparing this response,
the transportation engineer confirmed via email that there are no significant impacts shown by his analysis in the Surrounding Lands study area and that traffic will tend to disperse and have less impact as it moves further away from the filtration facility and pipelines. Given that response, the Surrounding Lands as selected and analyzed is fully adequate.

Mr. Johnson states that increased traffic on area roads from the proposed Water Bureau Project has a large impact that is not addressed.

Comment - "Perhaps the single largest impact to area agricultural operations will result from the impacts of increased traffic on area roads related to the proposed development. The analysis provided by the applicant focuses on "after construction" impacts."

Response - Refer to the Response to Traffic Impact for Farm Travel and Response to Traffic Impacts for Outbound Shipments. See the Farm Traffic Report.

Mr. Johnson states that reference to the Oregon Right to Farm laws does not apply to regulation of pesticides, as stated in Exhibit A. 33 report, on page 113.

Comment - "In response to area farmers stated concerns about potential impacts to their ability to use farm chemicals, the applicant responds that they will "comply with right to farm laws" and allow farmers to continue to use farm chemicals. It is important to note that Oregon "Right to Farm" (RTF) laws relate to nuisance and trespass situations and the ability of local government to regulate farming practices. RTF does not regulate the lawful application of pesticides. Any analysis of potential impacts to the utilization of chemicals would need to evaluate the common chemicals and application practices utilized by area farmers and the requirements for the use of the identified pesticides established on the label of the subject pesticides. Moreover, putting the burden on farmers to show that RTF laws have been violated creates conflicts among neighbors and creates costs on farmers that the farm impacts test is designed to prevent. The appropriate question should be would the location and operation of the proposed nonfarm land use impose limitations or impact area farm operations related to lawful pesticide use?"

Response - The quotation related to the Right to Farm laws is taken out of its context (in the Operations Report, Exhibit A.33, page 113) which has a number of other responses to this concern, including a reference to Dr. Felsot's pesticides report. The Water Bureau has done precisely what Mr. Johnson states is needed for this evaluation. In Dr. Felsot's 70-page report (staff's Exhibit A.39), "the common chemicals and application practices utilized by area farmers and the requirements for the use of the identified pesticides established on the label of the subject pesticides" is evaluated. Moreover, while not needed to prevent a significant change in accepted farm practices or a significant increase in the cost of those practices as demonstrated by Dr. Felsot's report, right to farm laws do protect the lawful application of pesticides, according to
the Oregon Department of Agriculture fact sheet apparently written by Mr. Johnson. ${ }^{8}$ These laws and the recorded covenants in the deed records provide additional protections against any impact on accepted farm practices related to pesticide use in the Surrounding Lands.

8 "The lawful and proper use of pesticides is considered a protected farming or forest practice." https://www.oregon.gov/oda/shared/Documents/Publications/NaturalResources/RightToFarm.pdf


[^0]:    1 Surface Nursery statement in June 29, 2023 email to Multnomah County. 2 Ibid.

[^1]:    4 Table 9, Land in Farms, Harvested Cropland, and Irrigated Land by Size of Farm: 2017 and 2012, page 18, 2017 Census of Agriculture - State Data for Oregon.

[^2]:    5 The background image is taken from Google Maps, which shows the imagery as having been captured in 2023.

