



9311 SE Butte Avenue
Vancouver, WA 98664-3623

Telephone: (360) 696-3888
Mobile: (360) 904-3015
Facsimile: (360) 696-3888

marketing and economic services

Date: September 6, 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 Cumulative Farm Use Impacts in Multnomah County

This memorandum provides information related to Multnomah County land use review testimony received as of the date of this response that addresses cumulative impacts on accepted farm practices in the Surrounding Lands. This memorandum is submitted in response to the comment in I.13 Written Testimony from Jeff Stone, Oregon Association of Nurseries, that “There appears to be little if any consideration of the cumulative impacts of the various development and operation characteristics proposed development on area agricultural operations.”

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”). The Farm Traffic Report is also being resubmitted concurrently with this memorandum in order to better respond to comments that reference the maps in that document – which were poorly reproduced in Staff’s scanned version of Exhibit H.3. Exhibit H.3 also includes responses to particular farms in Attachment 6. The first and second open record period responses extend the analysis of the Operations Report and Farm Traffic Report. The first open record period response is at Exhibit I.80. The second open record

period response was submitted concurrently with this memorandum. The defined terms and other concepts from those reports are incorporated and referenced here.

Over the past three years I have considered the accepted farm practices in the Surrounding Lands. I have also considered the potential impacts of project externalities and sensitivities for individual farms from both construction and operation of the facilities and the pipelines, both individually and cumulatively. I have read and responded to the issues and concerns raised by individual farms in both their oral and written testimony. This memorandum includes additional details of this farm-by-farm analysis and in particular seeks to summarize the cumulative analysis of potential impacts on accepted farm practices in the Surrounding Lands.

Table of Contents

Principles for Evaluation of Cumulative Impacts on Accepted Farm Practices.....	4
Conditions for Additive Impacts.....	4
No-Impact Categories and Categories with Potential Additive Impacts.....	5
Farm by Farm Application of Principles.....	9
Table 1. Farm Operations Abutting Project.....	9
Carlson Farms	9
Ekstrom & Schmidt Nursery	10
R&H Nursery	11
Surface Nursery.....	12
Walters.....	14
West Slope Farm.....	14
Table 2. Farm Operations Not Abutting Project	15
Ayles.....	15
Culver Farm	15
FreeRein Stables	16
Hans Nelson & Sons	16
Hawk Haven Equine.....	17
Martin	18
Park's Nursery	19
TreeSource.....	19
Verna Jean Nursery.....	20
Table 3. Other Farms Who Did Not Testify Directly.....	22
J. Frank Schmidt.....	22
John Holmlund Nursery	22
Gallant Family Farm.....	23
T. H. Belcher Nursery Inc.....	24
Conclusion	25

Principles for Evaluation of Cumulative Impacts on Accepted Farm Practices

This memorandum summarizes farm-specific testimony in the record and provides information to “consider the *cumulative* impacts of the proposed non-farm use across all farm practices on a farm unit, that is, whether insignificant impacts to individual farm practices might, in the aggregate, significantly impact the farm unit.” *Van Dyke v. Yamhill County*, 80 Or LUBA 348 (2019). In considering cumulative impacts, different types of impacts are not necessarily additive. As LUBA has explained, rather than being “additive,” it is not the case that “an individual impact that is almost significant, when considered cumulatively with other insignificant impacts, is necessarily significant.” *Stop the Dump Coalition v. Yamhill County*, 74 Or LUBA 1, 54-5 (2016).

Following this guidance from LUBA, cumulative impacts result when multiple effects of the Water Bureau Project on accepted farm practices are added to or interact with one another in the Surrounding Lands. The combination of these effects, and any determination of whether there is any resulting in significant change of accepted farm practices or significant increase in cost of accepted farm practices, are the focus of this cumulative impact analysis.

Conditions for Additive Impacts

Previously in my responses to farmers’ concerns about impacts, I have detailed the consideration of each impact on its own, for significance of impact. For the reasons stated, I have determined that all individual impacts either cause no change or no significant change in accepted farm practices and cause no cost increase or no significant increase in the cost of accepted farm practices.

Cumulative impacts of the Water Bureau Project occur when the Water Bureau Project causes an impact that interacts with one or more other impacts in a particular place and time. In this case, the place is an individual farm unit, and the time is during occurrence of the impact, which would be during Project construction or thereafter when the facilities are in operation.

The vast majority of the impacts referenced by farmers are during the construction period, but I have also considered potential impacts during the operations period after construction. For impacts to be additive, they generally must each occur in physical proximity to each other, and within the same relevant time period.¹ If they occur either in physical or temporal isolation from each other, they are less likely to be additive.

Impacts are also likely to be disassociated if they affect a farm and its accepted farm practices in different ways. For example, the added travel time for a manager to reach a field (farm unit) to check on crop conditions has a distinct and different impact on the farm compared to disturbed soil restoration impact on that field’s productivity. In another example, the impact on travel time for a farmer’s trip to town for equipment parts for a tractor in the shop at headquarters is different than

¹ This is similar to the methodology used by the Environmental Protection Agency (EPA) in order to provide “accurate, realistic, and consistent comments on the assessment of cumulative impacts.” *Consideration of Cumulative Impacts in EPA Review of NEPA Documents*, by the U.S. Environmental Protection Agency, Office of Federal Activities, EPA 315-RR-99-002, May 1999. That document explains that, for purposes of its legal standard, “Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. ... [C]umulative impacts result in the compounding of the effects of all actions over time.” While this methodology was considered, it of course relates to a separate legal test and cannot be applied directly.

that same vendor's travel time when delivering supplies to the farm, especially when the vendor follows a delivery route that includes other farmers. These two travel times occur at different times and even if the routes are similar, they result in different impacts. In one, the farmer internalizes any added travel time and cost, and in the other the supplier internalizes any cost related to their added delivery time. Because these affect a farm in different ways, they are more likely to be insignificant when considered together. This points to the problem of associating all of the insignificant impacts together and finding that for one farm there may be 5 insignificant impacts while another farm has 4 insignificant impacts. It is not necessarily true that a farm with 5 such impacts is closer to the threshold of significance than a farm with 4.

None of these principles provides a hard rule that can be applied to all situations. Instead, each impact on accepted farm practices or the costs of those practices must be evaluated against each other impact to determine if it is additive (entirely additive or only to some extent), and, if so, whether the sum total of all impacts on a farm unit exceeds the threshold of significant change or significant cost increase.

The initial step is to consider all of the potential impacts on accepted farm practices from the externalities or sensitivities of the Project and determine which may cause any impact that needs to be considered in a cumulative analysis. For those externalities or sensitivities of the Project that may cause any impact, the next step is to consider how they potentially interact with one another, such as in time, place, or mode of impact, as described above, for each farm unit (farm by farm, and farm practice by farm practice).

No-Impact Categories and Categories with Potential Additive Impacts

As noted above, the initial step is to consider all of the potential impacts on farmers and determine which may cause any impact that needs to be considered in a cumulative analysis. Fundamentally, there are categories of potential impacts that my various analyses of the Project conclude are “zeros” in terms of the potential to force a significant change in accepted farm practices or a significant increase in cost of those accepted farm practices. Zero impact categories are, inherently, not additive or relevant for a cumulative impacts analysis. The additive property of zero means that adding zero to any amount does not change the amount.

While my prior analyses have looked more broadly at the potential for “impacts”, it is important to note that the legal test is focused on whether the Project will “force a significant change in accepted ... farm practices” or “significantly increase the cost of accepted farm ... practices”. That is, the only category of impacts to be considered are those that force an impact on accepted farm practices or the cost of those practices – in other words, that would force a farmer to do something differently, or to increase the cost of what they do, in a significant way. Regardless, I have examined whether, more broadly, there are impacts on farmers caused by externalities or sensitivities of the project.

The potential for any “impact” to these practices has been extensively covered in my various reports. For that reason, the review here is abbreviated.

There is no credible evidence of impacts to accepted farm practices in the following categories:

- Irrigation Well or Watering Practices
- Farm Security Practices

- Fuel / Oil / Chemicals from Construction or Operations Impact on Practices
- Roadway Safety Practices
- Crop Chemical Application Practices
- Cropland Loss from Project Use (Not part of the Surrounding Lands, nor a practice)
- Respiratory Health or Air Quality Practices
- Dust / Air Particulate / Mud Mitigation Practices
- Stormwater Management Practices
- Vibration, Odor, Light / Glare, or Litter Impacts on Practices
- Vector Control Practices
- Radio Transmission Impacts on Practices
- Pipeline Appurtenances Impacts on Practices
- Water Discharge from Pipelines Impacts on Practices

As explained in the Operations Report, the operation of the filtration facility and pipelines will not force any change in or increased cost of accepted farm practices. This is why the majority of testimony is focused on construction. Other than the very small amount of traffic increase from a maximum of 26 full-time employees, with 10 on the largest (morning) shift, and 25 truck trips per week, the filtration facility and pipelines will produce essentially no externalities and have no sensitivities that would impact accepted farm practices. See Exhibit A.33, Section 12 (externalities of filtration facility) and 13 (sensitivities of filtration facility). None of the potential externalities of the filtration facility (noise, vibration, odor, light and glare, dust, mud, litter, vectors, air quality, water quality/quantity, radio transmissions, security, operations traffic, chemical use) will force any change in accepted farm practices or the cost of those practices. Nor will the potential sensitivities of the filtration facility (to farm chemical applications or farm traffic) force any change in accepted farm practices or the cost of those practices. Table 20 of the Operations Report looks at each farm practice considering the externalities and sensitivities of the filtration facility and indicates each is not affected. The same is true of the pipelines externalities and sensitivities, and each farm and accepted farm practices along those pipeline routes, as discussed in Sections 17-19 of the Operations Report. These are all “zeros” for consideration of cumulative impacts.

Categories with some potential for a change in or increased cost of accepted farm practices:

- **Noise Protection Practices** (from filtration facility construction, pipelines construction, or construction vehicles – no meaningful noise from operations) – While noise from construction may be annoying, farmers will not significantly change any practices or have significantly increased costs because of it. Farmers assert that they will have to buy expensive Bluetooth, noise canceling headsets because of construction noise. This is not credible. In general, farming is not sensitive to noise, since tractors, pumps, and other farm equipment often generate significant noise. During field operations, tractors generate noise in the range of 80 to 100 decibels or more. Farmers already must provide hearing protection for workers because of the noise generated by this farm equipment. The hearing protection can come in the form of earplugs or earmuffs, for example, that are worn when in proximity to those farm noise sources. It is possible that workers would need to use earplugs or earmuffs more of the time. This would be limited to the time when those workers are in very close proximity to the boundary of an active construction area. However, there is not a significant change in practices to use existing hearing protection slightly more often for the small amount of

time when working in fields that are directly adjacent to construction noise during the temporary construction period.

- **Travel on Public Roads Practices (Impacts from Traffic)** – Farmers assert various potential impacts because of the increased traffic that will accompany the temporary construction period (and to a very minor extent, operations). These include the time for farm travel (delay or detour), time for employee or supervisor travel, time for services or supply delivery to farm, time for shipping (delay or detour), and the time for customer travel to farm (u-pick). An increase in time using public roads is not inherently a forced change in accepted farm practices. Farmers argue that the use of detours is an increase in the use of an accepted farm practice to detour around road work that is inherent to use of the public road system. There will be marginally higher costs resulting from the additional time spent on the road, but fundamentally spending time on the roads is already a characteristic of accepted farm practices that involve using public roads. Delay on the roads is also fundamentally part of the use of the public road network, due to various activities such as when farmers move through a school zone around the time of pick-up or drop-off. This is due to the existing land use patterns of farmland interspersed with the semi-urban population in the Surrounding Lands. The Project TIA and the Construction TIA show that the increase in time spent on the roads and the associated cost of that increase in time will be minimal, as intersections in the Surrounding Lands will not exceed the County’s standards for levels of service, and because the construction period is temporary.
- **Practices Related to Safe Access to Farm Properties** – Farmers assert that their practices related to how they safely access farm properties will be impeded by construction of the Project, particularly by traffic or construction of the pipelines in the public right-of-way. However, any delay in access is slight and the Water Bureau is requiring its contractors to provide access for farmers through otherwise closed work zones in order to allow farmers to use any driveway or route needed for safety. Therefore, the measurement of the potential change or increase in cost of significant farm practices related to safely accessing farm properties is related to delay during the temporary construction period, not actual inaccessibility.
- **Soil Restoration Practices** – First, soil restoration is not relevant under the legal test, because it is related to the installation of the use on the subject property, not the Surrounding Lands. Additionally, soil restoration work to be performed by the Water Bureau’s contractors would not force farmers to change any of their practices on that land. Soil restoration is an accepted farm practice – as is done when drain tiles or other infrastructure are installed under a farm field. The potential change to that practice is the “two lift” method to be used by the contractor, which will better prevent any decrease in the productivity of the land after completion of construction. Use of the “two lift” method is not an adverse change.

Essentially, the potential for adverse impacts from the Project on accepted farm practices – either from construction or operations – comes down to changes or costs caused by construction traffic, and the potential delay of farm-related travel or access because of that traffic, and a small increase in the use of ear protection by workers. Other than these categories, there is no credible evidence that farms in the Surrounding Lands will actually be forced to change accepted farm practices or see an increase in the cost of those practices because of the Project. As noted above, a change or increase in cost of accepted farm practices is not the same thing as there being a broadly defined “impact” or an “inconvenience” for a farmer.

Farm by Farm Application of Principles

Although clearly there is no way to assign a precise numeric value to potential changes or increased costs of accepted farm practices, the tables and narrative below identify each farm and any categories where there is an asserted or studied potential change or increase in cost of accepted farm practices, and evaluates whether, cumulatively, there is a significant impact on accepted farm practices for that farm. This table includes both asserted impacts and any other studied impacts that were not in the no-impact category discussed above. For farms where traffic is the only potential impact is delay from traffic (the vast majority of farms in the Surrounding Lands) and no additional impacts were asserted, no cumulative analysis is needed. For this reason, the tables below primarily focus on farmers who asserted additional impacts in the land use process and then also includes those referenced by others in testimony.

Table 1. Farm Operations Abutting Project

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
Carlson Farms (Farm Operator G)	Exhibit I.52 Ken Carlson, Carlson Farms Written Testimony rec 8.7.23	Exhibit A.33 Operations Report —p135 (Field F7) Exhibit H.3, Pre-Hearing Statement by the Applicant Attachment 5, Farm Traffic Report—p21 (pdf p90) Response to Public Comments Related to Farm Use (September 6, 2023) (Second Open Record Period)—p23-25	A. Delays to Outbound Shipping/Inbound Deliveries due to Increased Traffic B. Increased Traffic Resulting in Workers Seeking other Employment C. Time Delays to Customer Commute Resulting in Financial Impacts D. Unreliable Farm Access Resulting in Financial Impacts (on-demand digging/shipping) E. Lack of Farm Access due to Increased Traffic/Road Condition Impacts (impassable driveways during inclement weather) F. Loss of Leased Land Revenue due to Lack of Farm Access
<p>Construction - Cumulative Impacts Summary: Delays are insubstantial for all forms of farm practices associated with entry or exit on Dodge Park Boulevard from pipeline construction for farm employees/manager, customers, or shippers. Further, there are limited and insignificant limitations for farming of leased land. Reduced farm travel safety is not expected. <u>Conclusion:</u> The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations - Cumulative Impacts Summary: Neither the operation of the filtration facility nor the pipelines have any impact on this farm. <u>Conclusion:</u> There are no cumulative impacts on accepted farm practices to evaluate.</p>			

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
<p>Ekstrom & Schmidt Nursery</p> <p>(Farm Operator D)</p>	<p>Exhibit D.5 Ekstrom Comment dated 3.14.23 rec 3.21.23</p> <p>Exhibit H.5 Memorandum to the Hearings Officer from Shelley Ekstrom</p> <p>Jim and Steve Ekstrom Oral Testimony at Hearing</p> <p>Exhibit I.11 Ekstrom Rebuttal to PWB Treatment Plant rec 8.3.23</p> <p>Exhibit I.11.a Pipeline Installation Effects on Soils and Plants A Review and Quantitative Synthesis rec 8.3.23</p> <p>Exhibit I.11.b FY-2019-20-Water-Demand-and-Sales rec 8.3.23</p> <p>Exhibit I.11.c Pipeline Study Shows Soil Compaction and Crop Yield Impact in Construction Right-of-Ways rec 8.3.23</p> <p>Exhibit I.11.d Pipelines keep robbing the land long after the bulldozers leave Grist rec 8.3.23</p> <p>Exhibit I.13 Oregon Association of Nurseries testimony, page 6.</p>	<p>Exhibit A.33 Operations Report —p134 (Field F6), p139-144 (Field F11), p145 (Field F12), p146 (Field F14)</p> <p>Exhibit H.3 Pre-Hearing Statement by the Applicant Attachment 5, Farm Traffic Report—p19 (pdf p88), p23-24 (pdf p92-93), p27-28 (pdf p96-97), p32 (pdf p101); Attachment 6—pdf p111-114</p> <p>Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty rec 8.7.23—p39-44</p> <p>Response to Public Comments Related to Farm Use (September 6, 2023) (Second Open Record Period) —p3-5</p>	<ul style="list-style-type: none"> A. Soil Damage with Productivity Loss and Weed Reinfestation; Expected Longer-Term Loss B. Increase in Construction Truck Traffic and Road Damage C. Farm Vehicle Safety on Roads D. Changes in Farm Practices – Planting/Harvesting/Spraying & Watering E. Greater Travel Time for Farm Equipment F. Farm Access May be Restricted from Dodge Park Boulevard G. Noise from Pipeline Construction

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
<p>Construction - Cumulative Impacts Summary Soil productivity on disturbed land will be promptly and comprehensively improved by the Water Bureau after pipeline construction. The impact on soils after restoration is not significant, regardless of the fact that the land is not in the Surrounding Lands for the impacts test. Any damaged farm infrastructure will be replaced or repaired by the Water Bureau. Weed issues will be monitored and promptly addressed by the Water Bureau. This farm unit will retain unrestricted field access to Dodge Park Boulevard so field access is maintained from two roads. This farm unit has multiple field access points. Farm vehicle road travel time is not impacted for every trip and detour routes are commonly taken with multiple fields nearby. Noise protection for workers is an accepted farm practice at the farm. Any need for added noise protection for workers would be limited as explained above and is not related to other impacts. There are no reasons for changing any other accepted farm practices as construction is held to the edge of the field. Public roads will be repaired. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations – Cumulative Impacts Summary The Water Bureau will travel infrequently on both the pipeline access road and the access to the Intertie building near Lusted Road. If pipeline water is discharged, a very rare occurrence, it will first be dechlorinated and slowly released to drainage ways in order to have no impact on the farm. Pipeline appurtenances will be underground or in the permanent access right-of-way and away from the crop growing area. The Water Bureau will not block farm use of the farm use road to conduct any accepted farm practices. Noise protection for workers will only be needed when Intertie equipment repair or replacement occurs decades in the future. The farmer will benefit from an all-weather gravel road to improve access for accepted farm practices in inclement weather. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>R&H Nursery (Farm Operator Q)</p>	<p>Exhibit H.22.a Written Testimony from R&H Nursery Inc Owner Patrick Holt rec 6.30.23 Pat Holt Oral Testimony at Hearing Exhibit I.53 R&H Nursery Written Testimony regarding PWB Construction rec 8.7.23</p>	<p>Exhibit A.33 Operations Report —p131 (Field F1), p132 (Field F3) Exhibit H.3, Pre-Hearing Statement by the Applicant Attachment 5, Farm Traffic Report—p18 (pdf p87), p36 (pdf p105) Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty rec 8.7.23—p28-36 Response to Public Comments Related to Farm Use (September 6, 2023) (Second Open Record Period) —p25-33</p>	<ul style="list-style-type: none"> A. Employee, Supervisor, & Equipment Travel Need Multiple Routes to Minimize Time and Protect Worker Safety. B. Timely Movement Needed for both Harvested Tree Transport to Headquarters and Outbound Shipping Without Delay. C. Potential Loss of Reputation from Unreliable Shipping to Customers D. Time Delays Expected for Farm Travel for Parts and Supplies as Well as Vendor Deliveries. E. Congestion at Carpenter Lane with Periodic Inaccessible Dock & Driveway Access for Farm Equipment, Outbound Shipping, and Employees. F. Noise Impact on Employee Health.

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
<p>Construction - Cumulative Impacts Summary The added travel time on roads is insubstantial for employees, supervisors, equipment movement, vendors, outbound shipping, and farm-to-town runs for supplies as shown in the various traffic expert studies. 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 the loading dock. For this reason, the Water Bureau will provide an accommodation to ensure that driveway access to R&H’s loading dock on Carpenter Lane is not unreasonably delayed, 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. The impact on all travel time is therefore additively insignificant. Impacts of reputation due to lack of headquarters access is speculative and unlikely given the short delays anticipated. Noise protection for workers is an accepted farm practice at the farm, and the filtration facility site construction noise is managed with mitigation measures. Any need for added noise protection for workers would be limited, as explained above, and is not related to other impacts. Public roads will be repaired. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations – Cumulative Impacts Summary Noise protection will not be needed during filtration facility operations. The multiple access points for this farm, both on Carpenter Lane and Cottrell Road, will be fully accessible for all accepted farm practices. All farm movement to external fields as well as trucks for outbound shipping will not be impeded. Conclusion: There are no cumulative impacts on accepted farm practices to evaluate.</p>			
<p>Surface Nursery (Farm Operator F)</p>	<p>Exhibit D.6 Surface Nursery - Farm Impacts Letter 4.4.23</p> <p>Exhibit E.36 Shawn Nerison Testimony rec 6.29.23</p> <p>Shawn Nerison Oral Testimony at Hearing</p> <p>Exhibit I.31 Surface Nursery Farmer Impact Statement - Shawn Nerison with Maps rec 8.6.23.</p> <p>Exhibit I.51 Surface Nursery Written Testimony regarding Exhibit H.3 rec 8.7.23</p> <p>Exhibit I.29 Black Gold Springs - J Hart Farm</p>	<p>Exhibit A.33 Operations Report —p136 (Field F9), p136-137 (Field F10), p158 (Field F24), p159 (Field F25)</p> <p>Exhibit H.3 Pre-Hearing Statement by the Applicant—Attachment 5, Farm Traffic Report—p17 (pdf p86), p19 (pdf p88), p28-29 (pdf p97-98); Attachment 6—pdf p115-119</p> <p>Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty rec 8.7.23—p13-28</p> <p>Response to Public Comments Related to Farm Use (September 6, 2023) (Second Open Record Period)—p 5-23, p34-35</p>	<ul style="list-style-type: none"> A. Roads will be Closed/Blocked for Farm Travel Routes, Causing Delays, Detours (Reduced Mobility). B. Public Road Travel is Year-Round. C. Alternate Routes are Unworkable. D. Supply Delivery and Trips for Supplies will be Disrupted. E. Shipping Products will be Disrupted with Impacts on Orders and Loss of Customers. F. Loud Noise from Construction Vehicles & Noise from Facility Construction Site Impairs Workers. G. Cropland Loss & Soil Restoration Result in Major Farm Impacts. H. Farm Road Loss Due to New Emergency Access Road. I. Field Access Will Be Blocked Due to Emergency Road.

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
	Impacts Emergency Road Testimony rec 8.6.23 Exhibit I.13 Oregon Association of Nurseries testimony, page 7.		
<p>Construction - Cumulative Impacts Summary Testimony that assumes construction traffic will be on the emergency access road is no longer relevant since no construction traffic will be on that road. This farm will not need to build a new farm road next to the emergency access road because they will be allowed to use the road where on their property during (portions) and after (all) construction, and a crossing to their fields east of the new road will be accommodated during and after construction. Soil restoration will be promptly completed to return productivity to any cropland temporarily lost by the farmer. This farm will have continuous access to field F9 (in Farm Traffic Report) in lower Lusted Road that they claim is blocked if pipeline construction is ongoing in Dodge Park Blvd, as farmers will be flagged through otherwise closed or single lane passage work zones. The added time on road is insubstantial for travel by employees, equipment movement, vendors, farm-to-town runs for supplies, and outbound shipping. The route for outbound shipping for this farm during its shipping season is not impacted by pipeline construction. Only negligible shipping delays can be expected from the volume of construction traffic. Impacts of reputation due to lack of headquarters access is speculative and unlikely given the short delays anticipated. Detour routes are taken at the discretion of the farmer to minimize travel time and the added travel distances are not significant or regularly needed. Noise protection for workers is an accepted farm practice at the farm, and the filtration facility site construction noise is managed with mitigation measures. Any need for added noise protection for workers would be limited as explained above and is not related to other impacts. Public roads will be repaired. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations – Cumulative Impacts Summary Noise protection will not be needed during filtration facility operations. This farm will have access to its adjoining and nearby fields from public roads without being impeded. The Water Bureau will allow the farm to use the emergency access road where on farm property for all accepted farm practices and will allow the farm to cross the emergency access road to access fields to the east of the new road. The Water Bureau will perform all needed maintenance of the road as detailed in my Response to Public Comments Open Record 2 (September 6, 2023) report. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
Walters	Exhibit H.41 Written Testimony from Patricia Walter rec 6.30.23	Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty rec 8.7.23 (identified as H.28a)—p68	<p>A. Noise from the Facility Construction Site Will be An Annoyance.</p> <p>B. Travel on Nearby Roads May be Delayed.</p>
<p>Construction - Cumulative Impacts Summary Noise may be an annoyance and any minor delay in public road travel will be insubstantial. There are no other impacts to evaluate. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations – Cumulative Impacts Summary Noise protection will not be needed during filtration facility operations. There are no other impacts to evaluate. Conclusion: There are no cumulative impacts.</p>			
West Slope Farm	<p>Exhibit E.17 Lauren Courter Land Use Testimony 6.29.2023 (5.49 MB)</p> <p>Exhibit E.19 Ian Courter Land Use Statement 6.29.2023</p> <p>Lauren Courter Oral Testimony at Hearing</p>	Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty rec 8.7.23—p44-48	<p>A. Noise from Construction Vehicles & Noise from Facility Construction Site Impact on Farm Animals.</p> <p>B. Travel on Public Roads May be Delayed.</p>
<p>Construction - Cumulative Impacts Summary Testimony that assumes construction traffic will be on the emergency access road is no longer relevant since no construction traffic will be on that road. If needed, and it is not clear that it would be, the Water Bureau will mitigate noise sensitivity for the animals using accepted farm practices. Any minor delay in public road travel will be insubstantial. Public roads will be repaired. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations – Cumulative Impacts Summary Chemicals designed as hazardous materials hauled and delivered to the filtration facility will be properly conveyed in trucks designed, licensed, regulated, and permitted for this purpose. Drivers also will be trained, licensed, and certified to haul these materials. All Water Bureau personnel who unload and handle these materials at the filtration facility will also be trained, licensed, and certified. The facility is designed to handle and contain any hazardous materials to eliminate the possibility of materials contaminating any farm use property in the Surrounding Lands. This farm will have unimpeded public road and driveway access to its adjoining field and farm buildings. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in accepted farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			

Table 2. Farm Operations Not Abutting Project

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
<p>Ayles</p>	<p>H.22d Written Testimony from Jeff and Mona Ayles rec 6.30.23</p> <p>Exhibit I.47 Mona & Jeff Ayles Supplemental Testimony rec 8.7.23</p>	<p>Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty rec 8.7.23—p63</p> <p>Response to Public Comments Related to Farm Use (September 6, 2023) (Second Open Record Period)—p50</p>	<p>A. Construction Noise Impacting Farm Animals B. Travel on Roads</p>
<p>Construction - Cumulative Impacts Summary Noise from the filtration facility and construction vehicle traffic will be minimal and managed, especially given the distance this farm is from the facility construction site. No pipeline construction is near this farm. Any minor delay in public road travel will be insubstantial. Conclusion: Cumulative impacts do not exceed the threshold of significance.</p>			
<p>Operations – Cumulative Impacts Summary Neither the operation of the filtration facility nor the pipelines have any impact on this farm. Conclusion: There are no cumulative impacts to evaluate.</p>			
<p>Culver Farm</p>	<p>Exhibit H.7 Written Testimony by Andrea Culver</p> <p>Andrea Culver Oral Testimony at Hearing</p>	<p>Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty rec 8.7.23—p55-56</p>	<p>A. Noise from Increased Traffic Impacting Farm Animals</p>
<p>Construction - Cumulative Impacts Summary Noise for livestock is the only potential impact from construction. Although potentially annoying, noise will not result in a change in accepted farm practices for livestock or increase the cost of accepted farm practices for livestock. Conclusion: There are no cumulative impacts for this farm.</p>			
<p>Operations – Cumulative Impacts Summary Noise is the only impact and has forces no change in accepted farm practices and no significant increase in the cost of accepted farm practices. Conclusion: There are no cumulative impacts.</p>			

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
FreeRein Stables	Exhibit I.43 Brittney & Aaron Cory, Free Rein Stables Written Testimony rec 8.7.23	Response to Public Comments Related to Farm Use (September 6, 2023) (Second Open Record Period)—p43-45	<ul style="list-style-type: none"> A. Unsafe Road Conditions for Equestrians due to Construction Traffic B. Time Delays from Construction Traffic Resulting in Financial Impacts C. Construction Noise from Truck Traffic Resulting in Unsafe Riding Conditions/Loss of Customers (horses spooked, unable to train new riders) D. Time Delays to Customer Travel Resulting in Financial Impacts
<p>Construction - Cumulative Impacts Summary</p> <p>This farm’s customers who chose to ride on public roads already encounter safety risks from vehicle travel and noise. There will be no construction vehicles on this section of Lusted Road near the farm since it is not a construction haul route nor a pipeline construction route. The closest temporary pipeline construction will be at Cottrell Road and riders will have many alternative roads for riding while construction is underway. Noise from the Corrosion Control Improvement Project, which was closer to the farm than the filtration facility, had over a year of construction and apparently did not affect customer retention at this farm. Filtration facility construction is ½ mile from this farm and the noise is not likely to reach this stable, particularly because of the steep slopes dividing the farm from the facility site. Customers traveling to the stables can take short detours or may at times experience short delays which are not a deterrence to their patronage of the farm. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations – Cumulative Impacts Summary</p> <p>Neither noise nor added road danger for riders is an impact during facility and pipelines operation. Conclusion: There are no impacts to evaluate, so there are no cumulative impacts.</p>			
Hans Nelson & Sons (Farm Operator X)	<p>Exhibit H.26.d Written Testimony from Jesse Nelson rec 6.30.23</p> <p>Oral Testimony at Hearing Exhibit I.38 Hans Nelson & Sons Nursery Written Testimony rec 8.7.23</p> <p>Exhibit I.13 Oregon Association of Nurseries testimony, page 6.</p>	<p>Exhibit H.3, Pre-Hearing Statement by the Applicant Attachment 5, Farm Traffic Report—p18 (pdf p87)</p> <p>Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty rec 8.7.23—p65-67</p> <p>Response to Public Comments Related to Farm Use (September 6, 2023) (Second Open Record Period) —p40-43</p>	<ul style="list-style-type: none"> A. Time Delays for Farm Access Resulting in Loss of Crop/Revenue (missed planting or harvesting window) B. Lack of Farm Access Resulting in Inability to Perform Operations (irrigation, crop monitoring, harvest) C. Time Delays for Common Carriers Providing Outbound Shipping due to Construction Traffic D. Damage to Crops from Traffic Delays (bare root trees in a refrigerated truck) E. Unsafe Alternate Routes for Outbound Shipping Vehicles (semis, etc.)

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
<p>Construction - Cumulative Impacts Summary This farm will have continuous access to its field on lower Lusted Road with only minimal delay when there is pipeline construction in Dodge Park Boulevard. This construction zone is not a closure, farm traffic will be flagged through otherwise closed work zones, and all accepted farm practices related to field activities are not impacted, including harvest hauling to headquarters. Wide implements driven on Dodge Park Boulevard east of Cottrell Road will be accommodated through the pipeline construction zone. Outbound shipping from this farm’s headquarters is away from all road construction and will only be subject to minimal delay when loads are shared between nurseries. Even in this case, delays will be minimal as shown in the various transportation studies in the record. There are no unsafe routes for outbound shipping. Public roads will be upgraded or repaired. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations – Cumulative Impacts Summary Neither the operation of the filtration facility nor the pipelines have any impact on this farm. Conclusion: There are no cumulative impacts to evaluate.</p>			
<p>Hawk Haven Equine</p>	<p>Exhibit H.23.g Written Testimony from Angela Parker rec 6.30.23 Exhibit I.34 Angela Parker, Hawk Haven Equine Written Testimony rec 8.6.23 Exhibit I.35 Attorney Kleinman Written Testimony representing Pleasant Home Comm Assoc rec 8.7.23 – p2-3, p4-5, and p7</p>	<p>Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty rec 8.7.23—p63-64 Response to Public Comments Related to Farm Use (September 6, 2023) (Second Open Record Period)—p35-39</p>	<p>A. Loss of Customers due to Unsafe Riding Conditions from Construction Traffic B. Customer Commute Delays Resulting in Financial Impacts C. Construction Noise Impacting Horses (while riding or at stables) D. Inability to Perform Operations/Train Horses due to Loud Traffic (horses are skittish, react to diesel engine and braking noises)</p>
<p>Construction - Cumulative Impacts Summary This farm’s customers who chose to ride on public roads already encounter risks from vehicle travel and loud vehicle noise including large trucks from closely neighboring nurseries. There will be no construction vehicles on this section of Carpenter Lane near the farm (west of Cottrell) since it is not a construction haul route, it will have no pipeline construction, and commuters will be instructed to avoid the road with both training and Local Access Only signage. The closest temporary pipeline construction will be along Dodge Park Boulevard and riders will have many alternative roads for riding while construction is underway. Filtration facility construction is nearly one mile from this farm and the noise is not likely to reach this stable. Horses at this stable are already accustomed to farm equipment that currently travels on Carpenter Lane. Customers traveling to the stables can take short detours or may at times experience delays, but these impacts on customers will be insubstantial and not a deterrence for continued farm</p>			

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
<p>patronage. Roads will be repaired. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations – Cumulative Impacts Summary None of the temporary construction period impacts on this farm extend to the operation of the filtration facility or the pipelines. Conclusion: There are no impacts to evaluate, so there are no cumulative impacts.</p>			
<p>Marjama Nursery (Farm Operator N)</p>	<p>Exhibit H.38 Written Testimony from Ryan Marjama, Don Marjama Nursery</p>	<p>Exhibit H.3, Pre-Hearing Statement by the Applicant Attachment 5, Farm Traffic Report—p17 (pdf p86)</p> <p>Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty rec 8.7.23—p68-71</p>	<ul style="list-style-type: none"> A. Restricted Farm Field Mobility/Access B. Time Delays for Farm Traffic C. Time Delays for Customer Deliveries Resulting in Lost Revenue/Customers/Damaged Orders D. Unreliable Access for Outside Deliveries to Headquarters due to Traffic E. Loss of Workforce due to Commute Issues F. Lack of Access/Inability for Shipping Trucks to use Detour/Alternate Routes
<p>Construction - Cumulative Impacts Summary The added time on roads for travel is insubstantial for employees, supervisors, equipment movement, vendors, and farm-to-town runs for supplies. Farm mobility will be maintained through construction mitigation at the filtration facility and pipeline construction. This farm’s headquarters is not near any pipeline construction in roads. If this farm takes Dodge Park to its field along lower Lusted Road, there is negligible delay if pipeline construction is in Dodge Park Boulevard east of Cottrell Road. Minimal delays or detours for outbound shipping. There is no reason to expect orders to be canceled due to extended shipping delays. Public roads will be repaired. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations – Cumulative Impacts Summary Neither the operation of the filtration facility nor the pipelines have any impact on this farm. Conclusion: There are no cumulative impacts to evaluate.</p>			
<p>Martin</p>	<p>Exhibit H.16 Written Testimony from Holly H. Martin</p> <p>Exhibit H.34 Written Testimony from Holly Martin rec 6.30.23</p> <p>Exhibit I.8 Written Testimony from Holly Martin rec 8.1.23</p>	<p>Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty rec 8.7.23—p56-57</p> <p>Response to Public Comments Related to Farm Use (September 6, 2023) (Second Open Record Period)—p34</p>	<ul style="list-style-type: none"> A. Delays to Customer Travel due to Increased Construction Traffic (agritourism) B. Delays to Outbound Farm Travel due to Increased Construction Traffic (taking flowers to farmers markets for sale)

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
<p>Construction - Cumulative Impacts Summary Lusted Road and Dodge Park Boulevard will be passable with one lane of traffic when pipeline construction is ongoing. The added time on roads for travel by customers to reach this farm is insubstantial. Similarly, the added travel time for employees, supervisors, equipment movement, vendor deliveries, and farm-to-town runs for supplies is negligible. Any specialty product shipment or farm hauling of products to farmer markets is also subject to only short delays, if any. Public roads will be repaired. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations – Cumulative Impacts Summary Neither the operation of the filtration facility nor the pipelines have any impact on this farm. Conclusion: There are no cumulative impacts to evaluate.</p>			
<p>Park's Nursery</p>	<p>Exhibit E.16 Park Testimony 6.29.2023 Rod Park Oral Testimony at Hearing Exhibit I.13 Oregon Association of Nurseries testimony, page 6.</p>	<p>Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty rec 8.7.23—p52-53 Response to Public Comments Related to Farm Use (September 6, 2023) (Second Open Record Period)—p54-59</p>	<p>A. Restricted Field Access/Mobility due to Construction Traffic B. Time Delay for Employee Commute due to Construction Traffic C. Time Delay for Supply Deliveries due to Construction Traffic D. Time Delay for Outbound Shipping due to Construction Traffic</p>
<p>Construction - Cumulative Impacts Summary This farm's headquarters is more than 2 miles southwest of the filtration facility site and is farther from any pipeline construction. In testimony this farmer states "I am not directly impacted by the pipeline running through my property nor am I adjacent to the proposed facility so most of my concerns are around the traffic impacts on my farming operations, others, and the support facilities for us all." The added time on roads for travel by this farm is insubstantial for employees, supervisors, equipment movement, vendors, and farm-to-town runs for supplies. Farm mobility impact is negligible. Any outbound product shipment is also subject to only short delays, if any. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations – Cumulative Impacts Summary Neither the operation of the filtration facility nor the pipelines have any impact on this farm. Conclusion: There are no cumulative impacts to evaluate.</p>			
<p>TreeSource (Farm Operator U)</p>	<p>Exhibit I.50 TreeSource Response to Construction Farm Traffic Report rec 8.7.23</p>	<p>Exhibit H.3, Pre-Hearing Statement by the Applicant Attachment 5, Farm Traffic Report—p35-36 (pdf p104-105)</p>	<p>A. Time Delays to Employee Travel Resulting in Financial Impacts B. Time Delays to Customer Commutes Resulting in Financial Impacts</p>

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
		Response to Public Comments Related to Farm Use (September 6, 2023) (Second Open Record Period)—p50-54	<ul style="list-style-type: none"> C. Time Delays to Outbound Shipping Resulting in Loss of Revenue/Customers D. Time Delays to Inbound Deliveries Resulting in Financial Impacts E. Increased Operational Costs due to Construction Traffic (missed deliveries resulting in labor and other fees, etc.) F. Lack of Alternative Route for Outbound Shipping (no suitable options for 53 ft semis) G. Lack of Farm Access for Suppliers/Vendors resulting in Employee Health and Safety Concerns H. Lack of Farm Access for Suppliers/Vendors resulting in Increased Operational Costs (sending employees to Salem for supplies) I. Employee Health and Safety Impacts from Increased Truck Traffic (employees near road with diesel engine traffic)
<p>Construction - Cumulative Impacts Summary The added time on roads for travel by this farm is insubstantial for employees, supervisors, equipment movement, vendors, and farm-to-town runs for supplies. Cross-dock delivery and the single route outbound shipping of plant materials on Bluff Road are negligibly impacted due to the very short delay time. Damage to the Tree Source brand, and lost sales, is speculative and unlikely given the short delays anticipated. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p>			
<p>Operations – Cumulative Impacts Summary None of the temporary construction period impacts on this farm extend to the operation of the filtration facility or the pipelines. Conclusion: There are no impacts to evaluate, so there are no cumulative impacts.</p>			
Verna Jean Nursery	Exhibit H.21 Written Testimony from Larry Bailey Larry Bailey Oral Testimony at Hearing	Exhibit I.80 Response to Public Comments Related to Farm Use Impacts in Mult Cty—p57-62 Response to Public Comments Related to Farm Use (September 6, 2023) (Second Open Record Period)—p54	<ul style="list-style-type: none"> A. Time Delay for Employee Commute due to Construction Traffic B. Time Delay for Supply Deliveries due to Construction Traffic C. Time Delay for Outbound Shipping due to Construction Traffic

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
	Exhibit I.13 Oregon Association of Nurseries testimony, page 6.		
<p>Construction - Cumulative Impacts Summary Although this farmer testified on behalf of the Multnomah County Farm Bureau, this is analysis of potential cumulative impacts of the Project on his farm, which is located in the Surrounding Lands. The added time on roads for this farm’s travel is insubstantial for employees, supervisors, equipment movement, vendors, and farm-to-town runs for supplies. Any outbound product shipment is also subject to only short delays, if any. Conclusion: The cumulative impacts do not reach a threshold of forcing a significant change in farm practices or a significant increase in costs of accepted farm practices for this farm.</p> <p>Operations – Cumulative Impacts Summary None of the temporary construction period impacts on this farm do not extend to the operation of the filtration facility or the pipelines. Conclusion: There are no cumulative impacts to evaluate.</p>			

Table 3. Other Farms Who Did Not Testify Directly

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
J. Frank Schmidt (9500 SE 327 th Ave., Boring, OR)	None (Referenced in Oregon Association of Nurseries testimony, Exhibit I.13, page 6.)	Exhibit H.3, Pre-Hearing Statement by the Applicant Attachment 6, Farm Traffic Report —pdf p112-114 (See immediately below)	A. Travel on Roads B. Construction Noise
<p>Note: This farm is a diversified nursery with headquarters, its secondary shipping location, greenhouses, and all but one field south of Bluff Road. Most farm equipment travel is on internal farm roads. For outbound shipping this farm uses 327th Avenue to Bluff Road as well as direct access to Bluff Road west bound.</p>			
<p>Construction - Cumulative Impacts Summary The added time on roads for this farm’s travel is insubstantial for employees, supervisors, equipment movement, vendors, and farm-to-town runs for supplies. Any outbound product shipment is also subject to only short delays, if any. No pipeline construction is near this farm. Noise from the filtration facility, pipeline construction, and construction vehicle traffic will be a zero impact for this farm. <u>Conclusion:</u> There are no significant changes in farm practices and no significant increase in the cost of accepted farm practices for this farm due to the Project. There are no other impacts to evaluate, so there are no cumulative impacts.</p>			
<p>Operations – Cumulative Impacts Summary Neither the operation of the filtration facility nor the pipelines have any impact on this farm. <u>Conclusion:</u> There are no cumulative impacts to evaluate.</p>			
John Holmlund Nursery (29285 SE Highway 212, Boring, OR)	None (Referenced in Oregon Association of Nurseries testimony, Exhibit I.13, page 6.)	None (See immediately below)	A. Travel on Roads B. Construction Noise
<p>Note: This farm is a diversified nursery with its main operations south of Highway 26. All of its fields in the Surrounding Lands are west of Altman Road and are primarily accessed from either Pleasant Home Road or 302nd Avenue. None of its fields are on roads with pipeline construction and its closest field to the filtration facility is 1.5 miles west. All outbound shipments from its headquarters take Highway 26 and enter the Highway from the south.</p>			

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
Construction - Cumulative Impacts Summary			
<p>The travel from headquarters to farm fields for this farm is north-south on the western side of the Surrounding Lands. Added time on roads for this farm's travel from construction traffic is insubstantial for employees, supervisors, equipment movement, vendors, and farm-to-town runs for supplies due to distance from the Project and the minimal impact of traffic volume on the performance of area roadways as shown in the traffic studies in the record. All outbound product shipment will not be delayed by construction traffic because the route is via Highway 26. All farm activity is too far for any noise impacts from pipeline or filtration facility construction. <u>Conclusion:</u> There are no significant changes in farm practices and no significant increase in the cost of accepted farm practices for this farm due to the Project. There are no other impacts to evaluate, so there are no cumulative impacts.</p>			
Operations – Cumulative Impacts Summary			
<p>Neither the operation of the filtration facility nor the pipelines have any impact on this farm. <u>Conclusion:</u> There are no cumulative impacts to evaluate.</p>			
Gallant Family Farm (9380 SE 282 nd Ave., Boring, OR)	None (Referenced in Oregon Association of Nurseries testimony, Exhibit I.13, page 6.)	None (See immediately below)	A. Travel on Roads
<p>Note: This farm is a diversified hay, grain, and beef farm with its main operations slightly north of Highway 26 on Boring Road. It is outside the Surrounding Lands with its headquarters 3.5 miles southwest of the filtration facility site. None of the farm property is near to roads with pipeline construction.</p>			
Construction - Cumulative Impacts Summary			
<p>The farm appears to be consolidated in one location. Added time on roads for this farm's travel from construction traffic is insubstantial for employees, supervisors, equipment movement, vendors, and farm-to-town runs for supplies due to distance from the Project and the minimal impact of traffic volume on the performance of area roadways as shown in the traffic studies in the record. All farm activity is too far for any noise impacts from pipeline or filtration facility construction. <u>Conclusion:</u> There are no significant changes in farm practices and no significant increase in the cost of accepted farm practices for any farm or shipping for this farm due to the Project. There are no other impacts to evaluate, so there are no cumulative impacts.</p>			
Operations – Cumulative Impacts Summary			
<p>Neither the operation of the filtration facility nor the pipelines have any impact on this farm. <u>Conclusion:</u> There are no cumulative impacts to evaluate.</p>			

Farm	Testimony from Farm	Globalwise Evaluation of Farm	Asserted or Studied Impacts for Cumulative Evaluation
Northwest Nursery Sales	None (Referenced in Oregon Association of Nurseries testimony, Exhibit I.13, page 6.)	None (See immediately below)	A. Travel on Roads

Note: The business is a re-wholesaler and broker of nursery overstock and second quality plants. They are located in Gresham and are a member of the Oregon Nursery Association but are not a farm use. No impact on accepted farm practices on land devoted to farm use.

T. H. Belcher Nursery Inc. (Farm Operator P) (33755 SE Bluff Road, Boring, OR)	None (Referenced in Oregon Association of Nurseries testimony, Exhibit I.13, page 6.)	Exhibit H.3, Pre-Hearing Statement by the Applicant Attachment 5, Farm Traffic Report—p34 (pdf p103) (See immediately below)	A. Travel on Roads
---	--	---	--------------------

Note: This farm grows nursery plants in two main locations in the Surrounding Lands with headquarters on Bluff Road west of Cottrell Road. The farm headquarters is about 0.7 miles southwest of the filtration facility site. Farm travel is between the farm at the headquarters and fields located near Troutdale, plus one field south of Bluff Road on 362nd Avenue. Toward Troutdale, a comparable-distance alternate route for farm equipment travel is available to avoid Altman Road pipeline construction. To reach the field on 362nd Avenue, the route is east on Bluff and south on 362nd Avenue. No alternative to westbound on Bluff Road is needed for outbound product shipment.

Construction – Cumulative Impacts Summary

The alternate route toward Troutdale when Altman Road is temporarily closed for pipeline construction is to take a western route to reach 302nd Avenue. This will bypass Altman Road during its temporary construction. The added travel is a negligible addition to the mobility required for public road travel between its two main farm and field locations. No alternative travel route is needed for reaching the 362nd Avenue field. Added time on roads for this farm’s travel from construction traffic is insubstantial for employees, supervisors, equipment movement, vendors, and farm-to-town runs for supplies due to distance from the Project and the minimal impact of traffic volume on the performance of area roadways as shown in the traffic studies in the record. No outbound product shipment will be delayed from any construction traffic. There are no construction noise impacts. Conclusion: There are no significant changes in farm practices and no significant increase in the cost of accepted farm practices for any accepted farm practices for this farm due to the Project. There are no additional impacts to evaluate, so there are no cumulative impacts.

Operations – Cumulative Impacts Summary

Neither the operation of the filtration facility nor the pipelines have any impact on this farm. Conclusion: There are no cumulative impacts to evaluate.

Conclusion

I evaluated each farm for cumulative impacts. For every farm, the impacts did not cross the threshold of significance of impacts, for either significant change in accepted farm practices or significant increase in the cost of accepted farm practices.