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**APPENDIX R**

**Comments on the Draft EIS and Responses**

**(continued)**

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**Comments on Section 4.12 - "Air Quality and Noise" of the Draft Environmental Impact Statement prepared by the Federal Energy Regulatory Commission (FERC) regarding the Jordan Cove LNG Export Facility/Pacific Connector Pipeline Projects.**

As a professional with many years of experience in the effects of noise and the conservation of hearing, I have chosen to comment on the noise impact of the proposed LNG facility known as Jordan Cove. During my career I worked for five years as a Senior Scientist in the Office of Noise Abatement and Control of the U.S. Environmental Protection Agency and for four years as Manager of the Noise Standard at the U.S. Occupational Safety and Health Administration in Washington, DC. I write these comments as a concerned citizen without remuneration.

Analysis of the Human Impact is Completely Lacking in the Draft Environmental Impact Statement

While this draft Environmental Impact Statement (DEIS) alleges to be an "analysis of potential noise impacts on human receptors," there is actually no discussion of the impact on humans, only estimates of predicted noise levels without any mention of what these noise levels might do to humans. The only concern in this DEIS seems to be the extent to which the project complies with existing regulations and FERC guidelines.

Today's literature on the health effects of noise is replete with research studies on the adverse effects of noise on health. These effects include sleep disruption, communication interference, cardiovascular and endocrine effects, job performance decrements, and adverse educational effects. Extensive studies of the health impact of excessive noise reveal that these effects are often caused or exacerbated by stress.

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IND291-1 For the purposes of the Project acoustic analysis, our 55 dBA  $L_{dn}$  noise criterion and other applicable noise regulations at the state, county and/or local levels provide the framework for assessing Project compliance. Our noise criterion is derived from the 1974 EPA study titled "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety". The EPA determined that an day-night sound level ( $L_{dn}$ ) of 55 dBA protects the public from indoor and outdoor activity interference. An  $L_{dn}$  of 55 dBA is equivalent to a continuous noise level of 48.6 dBA, which when compared to examples of typical everyday sound sources given in Table 4.12.2-1, equates to a sound experienced in a quiet rural residential room and is generally lower than sound levels during a normal conversation. Lastly, section 4.12.2 was revised to include reference to a 2011 World Health Organization publication that summarizes the results of studies analyzing the relationship between environmental noise and potential health effects. It is beyond the scope of this EIS to infer specific health effects due to noise impacts from construction or operation of the project. However, compliance with our noise criterion and applicable noise regulations at the state, county and/or local levels, and our oversight of compliance with construction and operation noise requirements, would ensure that noise impacts on public health are minimized to be protective of public health.

IND291-1

**IND291 continued, page 2 of 8**

The adverse effects of community noise exposure are often stated in terms of the degree of annoyance or aversion experienced by a population, up to a point where communities will take action against the source of this disruption. Adverse effects are also described in terms of their effects on physical health, particularly the cardiovascular and endocrine effects. Future iterations of the EIS must include a discussion these effects along with an attempt at quantification in order to properly describe the impact of the proposed LNG terminal. Several references are provided at the end of these comments to facilitate this process.

IND291-1  
cont.

Oregon's Standards and Regulations for Noise are Inadequate

It is unfortunate that the State of Oregon exempts construction projects from its noise regulations, along with other major noise sources: vehicles, rail traffic, and airport operations.<sup>1</sup> In addition to construction noise, noise levels from all of these sources may be increased by this proposed project and exacerbate the impact on individuals and communities, although the DEIS has not addressed these additional sources. The DEIS points out that the Oregon regulations have established noise limits for "designated quiet areas" but that the State has designated no such areas. The DEIS does address construction noise with respect to the FERC guidelines, as well as the Oregon regulations covering noise from industrial and commercial activities. However, the DEIS reveals many instances in which the proposed project will not comply. In these cases, FERC recommends mitigation measures, which, as I will point out, are unlikely to be used.

IND291-2

This Project Will Produce Excessive Noise Levels and Durations

The DEIS states clearly that the Coos Bay community would be subjected to prolonged, high levels of noise from the construction of this project and possibly during its operation as well. According to the DEIS noise contours (Fig. M-3), a substantial part of the town

IND291-3

IND291-2 Comment noted.

IND291-3 Table 4.12.2.4-3 of the final EIS indicates that operation of the Klamath Compressor Station would result in predicted sound levels that are less than our noise requirement of 55 dBA L<sub>dn</sub>. Further, the recommendation (which would likely become a condition in the order, if approved) in section 4.12.2.4, would require Jordan Cove to file a noise survey confirming compliance with our noise requirement. If noise levels from the Klamath Compressor Station do not meet our noise requirement, then additional sound mitigation would be required to be installed in order to meet the requirement. As stated in the final EIS, construction noise levels near the Jordan Cove LNG facility and the Pacific Connector project workspaces would result in impacts on nearby residents for the duration of construction at that location. Some construction activities are expected to exceed our criterion (pile driving, HDD); however, in most cases existing ambient sound levels are such that the incremental increase in sound level resulting from those activities would be minimal. Even so, for HDD activities, we are requiring site-specific noise mitigation plans to further protect nearby NSAs. The commenter suggests that the applicant would not have to actually implement noise mitigation; however, we would provide the necessary oversight, coordinate monitoring, and enforce the implementation of noise mitigation measures to ensure compliance with our conditions during construction and operation of the project. While assessment of noise exposure on workers is not considered, Jordan Cove and Pacific Connector must comply with all applicable OSHA worker safety requirements, including implementing hearing conservation programs.

<sup>1</sup> OAR 340-035-0035.

would exceed the EPA maximum recommended day-night noise level ( $L_{dn}$ ) of 55 dBA<sup>2</sup> and portions would exceed an  $L_{dn}$  of 60 dBA during the four years of construction. Average noise levels in the recreational area are projected to be as high as 65 dBA and above. Maximum noise levels ( $L_{max}$ ) would range from 65 dBA in the town to 69 dBA in the recreational area. Once construction is completed, the DEIS predicts an increased noise level over the existing ambient that is not "significant," but will likely be audible. The DEIS recommends a full power load noise survey and mitigation measures should noise levels exceed an  $L_{dn}$  of 55 dBA.

The most disruptive and annoying source of noise would be pile driving in the Coos Bay area and rock blasting along the Pacific Connector Pipeline. Construction of the terminal is projected to occur 20 hours per day, six days per week with little relief for the community. Predicted maximum levels show an 8-dBA increase over the existing ambient  $L_{dn}$ , which will be very disturbing to the residents, a large number of whom live on the south and east end of the town. The incessant pounding will persist well into the evening and nighttime hours when people need to rely on rest and sleep.

Along the proposed pipeline, construction is planned to occur between 7 am and 7 pm for a period of 12 to 18 months, with any specific area impacted for several weeks to a few months. There are more than 100 structures within 150 feet of the right-of-way, and several within 50 feet. The DEIS estimates noise levels of rock blasting as an energy average ( $L_{eq}$ ) of 95 dBA at 50 feet, 87 dBA at 100 feet, and 74 dBA at 300 feet. These levels will guarantee that nearby residents will be subjected to noise levels exceeding the interiors of some of the noisiest manufacturing facilities in the U.S. In addition, low-flying helicopters involved in clearing the landscape will produce ear-splitting sound levels estimated at 115 dBA at a distance of 50 feet.

The DEIS fails to mention the effects of these noise levels on the hearing of workers, whose exposures are substantially greater because of proximity to the source. These

<sup>2</sup> Information on levels of environmental noise requisite to protect public health and welfare with an adequate margin of safety (EPA/ONAC Report 550/9-74-004). U.S. Environmental Protection Agency. Washington, DC, 1974. Available at: <http://www.nonoise.org/library/levels.htm>

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exposures undoubtedly exceed the 85-dBA time-weighted average limit required by OSHA for the initiation of hearing conservation programs.<sup>3</sup> Surveys of noise exposed construction workers show average exposures of 91-99 dBA for workers using loaders and dozers and an average of about 96 dBA for workers in industrial, commercial, and institutional construction.<sup>4</sup>

Because these activities will be pursued for 12 hours every day, they give community members little time for respite during the day, and they give workers insufficient opportunity to recover from temporary threshold shifts in hearing. As hearing loss criteria and standards are based on an 8-hour exposure day, five days per week, these long exposures greatly increase the likelihood of hearing damage and necessitate a more conservative approach.<sup>5</sup>

#### Unrealistic Reliance on Mitigation

Throughout the DEIS there is far too much reliance on recommended mitigation. Some of the analyses even *presume* mitigation in the estimated noise levels, for example the 98-dBA estimated level at 50 feet for rock blasting. This kind of presumption should not be allowed in an EIS. The DEIS assumes that the company will continuously monitor noise levels at all places. Whenever these levels are out of compliance, the company should stop the activity and implement mitigation measures, such as erecting a wall or ceasing nighttime activities, and then it should file a report to the Secretary. The DEIS assumes that when designing the compressor station, the company will incorporate "best practices applicable to noise reduction." The DEIS also assumes that mitigation measures would be implemented "to the extent feasible" during construction, but the company can easily claim that such measures would be either technically or economically infeasible. Without rigorous enforcement and substantial penalties, any

<sup>3</sup> [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_id=9735&p\\_table=STANDARDS](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=9735&p_table=STANDARDS)

<sup>4</sup> Suter, A.H. (2002). Construction noise: Exposure, effects, and the potential for remediation, a review and analysis. *Am. Ind. Hyg. Assoc. J.*, 63, 768-787.

<sup>5</sup> Suter, A.H. (2000). Standards and Regulations. In E.H. Berger, L.H. Royster, J.D. Royster, D.P. Driscoll, and M. Layne (Eds.) *The Noise Manual*, (5<sup>th</sup> ed.) American Industrial Hygiene Assoc., Fairfax, VA., 639-668.

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IND291-4 We disagree. The final EIS provides standard sound levels for some construction activities such as blasting that are provided by the equipment manufacturer and do not assume any additional mitigation provided by the applicant, unless otherwise stated. These sound levels are provided for context to provide the public with general information about typical noise levels they can expect to hear during construction. With regards to pile driving, HDD, and the Klamath Compressor Station, the noise surveys presented in tables 4.12.2.3-2, 4.12.2.4-2, and 4.12.2.4-3 are based on detailed noise surveys that incorporate equipment manufacturing sound data and measured ambient sound levels to estimate the project noise levels. The final EIS contains several recommendations that pertain to pile driving, HDD, and the Klamath Compressor Station that would ensure that noise levels during construction/operation meet FERC's noise requirement of 55 dBA  $L_{dn}$ , unless otherwise stated. If the Commission chooses to make the recommendations conditions of an Order, the applicant would be required to comply with these conditions and we would oversee the implementation of these conditions to ensure they are being met during construction/operation.

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profit driven company is unlikely for environmental reasons to cease operations or perform any mitigations with the associated costs and delays. Instead, the company will most likely plough ahead regardless of citizen impact or FERC guidelines.

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cont.

My experience working for two regulatory agencies is that in the real world mitigation almost never takes place unless it is mandatory, and even then usually not until it is enforced. Most of the mitigation efforts described in the DEIS are only recommendations, using the words "should" or "may," with absolutely no teeth behind them. There is no mention of mandatory requirements or of enforcement, and therefore any assumption of mitigation is misguided.

Inadequate Characterization of the Noise

The impact of noise exposure is based on several factors, the most obvious of which is noise level (perceived as loudness), but other variables, such as frequency (or pitch), complexity, temporal pattern, and meaning also affect the response of individuals and communities. In most instances the DEIS has used cumulative descriptors to measure the noise impact. These descriptors average the noise energy over a period of time, usually the energy average throughout the day, as in  $L_{eq}$ , or the average sound level over the day and night, as in  $L_{dn}$ , which assigns a 10-dB penalty to nighttime noise levels. Cumulative measures are useful and widely employed in the U.S. to assess community impact for sources such as road traffic noise. For sources like construction noise, however, which is highly intermittent and often impulsive, these metrics should be supplemented by single event measures, such as the  $L_{max}$  or maximum level.<sup>6</sup>

IND291-5

While the DEIS has estimated the impact with  $L_{max}$  in some instances, it relies too heavily on cumulative measures of noise exposure and too little on single event measures. This is especially true for construction noise involving sources like pile driving, pneumatic drilling and pounding, and impulsive sources like rock blasting. These types of noise are more disturbing than continuous noise, and they are much

<sup>6</sup> <https://www.nae.edu/35649/Technology-for-a-Quieter-America>

IND291-5 Comment noted. We have revised the noise sections (see section 4.12).

more likely to produce sleep disruption, stress, and aversive reactions. Moreover, the noise levels for both cumulative and single event estimates for pile driving exceed the FERC criteria at noise sensitive areas.

The intermittent booms occurring during rock blasting provide a good example of the failure of cumulative measures to describe the impact. Averaging the energy of these sources over a 12-hour period does not adequately describe their effects, nor even does the use of a single event measure like  $L_{max}$ , since their effects are dependent upon additional factors. The jarring quality of intermittent blasts coupled with the warlike associations of intense helicopter noise are likely to produce stress and behavioral responses<sup>7</sup> in the exposed community. The presence of negative overlay would be a factor in both cases. In addition, helicopter noise, which is predominantly low frequency, would be substantially underestimated using the A-weighted filter incorporated in the descriptors used here. The DEIS does give an estimated maximum level of blasting noise as 98 dBA at 50 feet (buried in Table M-16 but not discussed), but only *after* mitigation has been applied, and, consequently, its actual level will be much higher to an unknown extent.

The most salient example of the misuse of cumulative measures is the ridiculous Table 4.12.1.4.5, which uses a cumulative descriptor ( $L_{eq}$ ) for blowdown events, flattening out a single noise event into a number representing the "average" sound level over an 8-hour period. It would be like describing the daily average level of a bomb blast as the sound of a sewing machine. The ear does not operate that way, and neither does the human brain's response to sound. Again, the use of mitigation, in the form of a silencer, is already assumed, leaving the citizens to trust that the company will bother to use it.

#### Conclusions

<sup>7</sup> Suter, A.H. (1992). Communication and Job Performance in Noise: A Review, ASHA Monographs No. 28. American Speech-Language-Hearing Assoc., Rockville, MD.

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cont.

This DEIS would allow the construction and operation of a facility that would expose the surrounding community to high levels and prolonged durations of noise. The citizens of Coos Bay would be subjected to an ear-splitting din for the better part of four years and those living along the pipeline would experience noise as if they were working in factories. The workers themselves would be at serious risk of develop hearing loss. Whenever projected noise levels appear to reach or exceed the FERC guidelines, the Agency has allowed the company to fall back on non-mandatory mitigation procedures, for which there is little probability of compliance. Although the DEIS purports to be an "analysis of potential noise impacts on human receptors," there is actually no such analysis, only the degree to which certain standards are met, or in many cases, not met. If the company would prepare a report that did indeed analyze the effect on humans, it would show how disastrously noisy this project would be and it would be roundly rejected.

#### Suggested References for the Health Effects of Noise

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WHO. (1999) Guidelines for Community Noise.

WHO. (2011) Burden of disease from environmental noise. Quantification of healthy life years lost in Europe.

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Pacific Connector Gas Pipeline, L.P.  
Docket No. CP17-494-000  
Jordan Cove Energy Project, L.P.  
Docket No CP17-495-000  
PF17-4-000

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TONI WOOLSEY, ALISA ACOSTA, GERRIT BOSHUIZEN,  
CORNELIS BOSHUIZEN, AND JOHN CLARKE.

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COMMENTS ON THE  
FEDERAL ENERGY REGULATORY COMMISSION'S  
DRAFT ENVIRONMENTAL IMPACT STATEMENT  
FOR THE JORDAN COVE ENERGY PROJECT

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## INTRODUCTION

The Federal Energy Regulatory Commission's (FERC) Draft Environmental Impact Statement (DEIS) is an opportunity for the Commission to truly assess the potential effects and impacts of the construction of the Pacific Connector Pipeline (the "Pipeline") and the Jordan Cove LNG facility (the "LNG Facility") (together, the "Project"). Unfortunately, FERC has failed to provide a meaningful analysis of either the Project's alleged purpose and need, or of the adverse impacts of the Pipeline on landowners. This is the third time that a company has applied to FERC for the required Certificate of Public Convenience and Necessity (the "Certificate") for the Project (or variant of it) and FERC should deny the Certificate Application once again, but this time *with* prejudice. Enough is enough.

### Affected Landowners:

The individual landowners on these comments are: Bill Gow; Sharon Gow; Neal C. Brown Family LLC; Wilfred E. Brown; Elizabeth A. Hyde; Barbara L. Brown; Pamela Brown Ordway; Chet N. Brown; Evans SchAAF Family LLC; Deb Evans; Ron SchAAF; Stacy McLaughlin; Craig McLaughlin; Richard Brown; Twyla Brown; Clarence Adams; Stephany Adams; Lori Lester; Will McKinley; Wendy McKinley; Frank Adams; Lorraine Spurlock; Tom Woolsey; Alisa Acosta; Gerrit Boshuizen; Cornelis Boshuizen; and John Clarke (the "Landowners"). All of these individual Landowners are intervenors in the FERC process, and own property that will be crossed by the Pipeline and thus will be taken via eminent domain under Section 717f(b) of the Natural Gas Act if FERC grants the Pipeline a Certificate. As outlined further below by each individual landowner, the Pipeline will harm the Landowners' land, surrounding environment, safety, physical and mental health, and will decimate their property values, and impede economic growth in their affected areas.

The DEIS offers little or no insight as to how the Pipeline plans to address serious issues that may completely destroy landowners' capability of remaining in their homes and on their land,

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IND471-1 Impacts to potable groundwater is addressed in section 4.3. Impacts to agricultural and ranching practices are addressed in section 4.7. Impacts to timber lands are addressed in section 4.4 and 4.7. Impacts to socioeconomic conditions are addressed in section 4.9. Impacts to human safety and health are addressed in section 4.13.

including: destruction of access to potable groundwater; destruction of access to irrigation water; destruction of or adverse impacts on agriculture; destruction of or adverse impacts on timber or forest; adverse impacts on the landowners' overall health and well-being; impacts on cattle and ranchland; and impacts on landowners' income and sources of revenue from their land. The DEIS fails to sufficiently address the significant, adverse impacts on landowners and their properties.

IND471-1  
cont.

**i. Frank Adams:**

Frank Adams is a Vietnam Veteran and 72-year-old landowner. Mr. Adams did 3 tours in Vietnam, from November, 1966 to March of 1969, where he was exposed to Agent Orange. He and his family have owned the land at 1731 Ireland Road, Ten Mile, Winston, OR 97496 for over 38 years. He originally purchased the land to raise his family, raise livestock, and garden with his wife and children. He is divorced, and now has frequent visits from his sons and grandchildren.

The Pipeline would cut straight through his land in an east-west direction, and it would take approximately an acre of his land. See attached *Exhibit 1*, Pipeline's planned route through Mr. Adams' property. It will be about 200 feet from his home with a 50-foot permanent easement. He also uses 8 acres of his affected neighbor's (Rebeca Edwards) land, to graze cattle and for fire suppression. The proposed route cuts through the middle of Ms. Edwards' land as well. The grazing of cattle on his and his neighbor's land provides from half to one full beef (approximately 600 lbs.) a year for him, his sons, and his sons' families. The cattle grazing area will be completely unusable during construction, and grass for cattle will not exist for at least 2 years during the construction period, and for some time after.

Mr. Adams has grape vines and an orchard that will be adversely impacted or destroyed by the Pipeline. His grapes, including Thompson seedless and Concord, provide at least 25 gallons of juice a year. Assuming they survive the construction of the Pipeline, the grape vines and orchard will be in continuous danger from herbicide spraying by the Pipeline, which is planned for several times

a year. Mr. Adams has a well on the property that produces his water. In the 38 years that he has lived there, he has never run out of water. Any digging, blasting, or trenching activities will severely jeopardize his water supply for his home and cattle. The proposed route will also channel water away from his well source. The runoff from the Pipeline will silt up the seasonal creek, and empty into Tenmile Creek, which is a Steelhead and Coho salmon creek. It is clear that the Pipeline will negatively impact the value of his land.

Being that this is now the 3<sup>rd</sup> time this project has been proposed over a 15-year period, he has felt hostage to the impending threat of eminent domain for that length of time, and the continuous threat of a foreign company seizing his land has taken a toll on his mental and physical health. The fact that he served his country, gave this country his all, only to have the government consider giving his land to a foreign corporation, is a great source of stress and anger for him.

**ii. Lorraine Spurlock:**

Lorraine Spurlock is a widow who lives alone in her home, and has owned her land for 44 years, at 1127 Kirkendall Road, Camas Valley, OR 99416. Her property is 31.23 acres in total, with about 5-6 acres developed with homes (including hers) on it, and the remainder with forest, which includes old fir trees. She bought the land for its sheer beauty. She worked very hard to make her land resemble a park, which will be destroyed by the Pipeline cutting right across her property for approximately .22 miles. The Pipeline would remove a 95' swath of timber from the middle of the forested section of her property, with a permanent 50' clear cut over the Pipeline right-of-way. *See* attached *Exhibit 2*, the Pipeline's planned route through Ms. Spurlock's property. Ms. Spurlock is concerned that the reduction in timber coverage would affect the classification for tax purposes of a wood lot, as well as remove her valuable timber, which will deplete her income. It will also reduce the value of her property.

Ms. Spurlock does not have internet or access to a computer, and only was made aware of



the opportunity to intervene in the FERC proceedings, as well as file comments on the DEIS, after being contacted by third parties who are representing and assisting landowners with this process.

The land will be handed down to her daughter, and she very much wants the land to remain as pristine as it currently is. The potential for the Pipeline to take her land over the years has taken a toll on Ms. Spurlock, and inflicted her with much unneeded stress.

**iii. Gerrit and Cornelis Boshuizen:**

Gerrit Boshuizen and his brother Cornelis have owned the land at 18191 Highway 39 in Klamath Falls, OR, 97603 since May of 1981. The land includes over 35 acres of pastureland. They bought their home and land because of their love of farming and to move out of town for a nice quiet, rural setting. Gerrit still lives on the property in his home, and Cornelis lives nearby.

The proposed Pipeline would take their land out of the business of grazing cattle for 3-5 years. See attached *Exhibit 3*, the Pipeline's planned route through the Boshuizens' property. They will not be able to run cattle on the land due to the Pipeline construction. They flood-irrigate their land, and the Pipeline would destroy this irrigation system, and the grass for the cattle will die. It will also destroy their hay crop. They also have to pay nearly \$3,000 a year to Klamath Irrigation District for the water needed to irrigate the land and, even if they can't irrigate or use the water, they will still have to pay Klamath Irrigation District for the water in order to maintain their rights to it. During construction of the Pipeline, it will be noisy and dusty, which will ruin the Boshuizen's well-earned peace and quiet, and will significantly interfere with their quiet enjoyment of their home. The Pipeline will also be within 300 feet of their well and drinking water source, and they have no idea as of yet how the right-of-way would impact their access to potable water.

Once construction is complete, the Pipeline will block them from accessing their barn, where they process and store the hay they grow for sale. They will be unable to drive the required heavy-duty equipment in and out of the barn and over the Pipeline's right-of-way, effectively making

the barn useless. This will be a huge financial hit to their family. The Pipeline will impact the irrigation and water movement of their fields, which will adversely impact the growth of their pasture. It could also impact their fence line. The Pipeline will certainly make their property less valuable.

The Pipeline has put undue stress on the Boshuizens for over 15 years. They have had to deal with several land agents and Pipeline representatives trying to bully them into signing an easement. They tried to persuade the Boshuizen that all other landowners in the area 'had already signed.' Pipeline representatives have not respected the Boshuizens' wishes for them to stay off the property, and they keep coming back despite these requests to stay off the land. A Pipeline land agent has told them several times that they would bring their supervisor by the house, but he never has. There also is the possibility of a Pipeline explosion, and the Pipeline goes right in front of their home.

**iv. Toni Woolsey:**

Ms. Woolsey and her family have owned the property at 213 Ragsdale Road, Trail, OR 97541 for 69 years. Her parents purchased the property and lived on it until they died. Ms. Woolsey moved onto the property 15 years ago to take care of her ailing mother, and built her dream home on the property. She took care of her mother until she passed away. Ms. Woolsey barely had time to get settled in when Pembina came knocking and told her that they wanted to take significant parts of her land to build the Pipeline. The Pipeline would be less than 135 feet from her home, and instead of a beautiful view, she will have to look at a 100 ft. scar up the side of a mountain. See attached Exhibit 4, the Pipeline's planned route through Ms. Woolsey's property. It very well may affect her only source of water, as the private well on her property is within approximately 180 yards of the proposed route, down by the Rogue River, where the Pipeline wants to do Horizontal Directional Drilling ("HDD").

The Pipeline has been hanging over her head for over 15 years, and it is never very far from her thoughts. She has spent a significant amount of time and money trying to stop the Pipeline for good, but now it is on its third round of seeking approval for the same route. The money that she has spent is nothing compared with the significant emotional toll that this ordeal has taken on her.

**v. Clarence and Stephany Adams:**

Clarence Adams and Stephany Adams<sup>1</sup> have owned their property at 2039 Ireland Rd, Winston, OR 97496 for 28 years. Mr. Adams bought the land because it was in a quiet, rural setting, and with 8.5 acres, it was enough to raise some livestock, and for privacy for him and his family. Mr. Adams and his wife Stephany raised two children on their property. Currently, their daughter and son-in-law live on the property as well.

The Pipeline will split the Adams' property in half, cutting directly through pastureland for their horses, and limiting their access to their land. See attached *Exhibit 5*, the Pipeline's planned route through the Adams' property. The Pipeline will climb a hill through the pastureland at 30-45% slopes, with fractured basalt lying very close to the surface. If the Pipeline is built, their land will never be restored to its original condition, mostly due to the depth of the Pipeline trench, and the Pipeline workers leveling a significant portion of their land for an approximate ¾ acre "temporary" working area to store Pipeline construction equipment for years.

The Pipeline will kill a stand of mixed hardwood and conifer trees, which along with providing firewood for the Adams and shade for the horses, also provides a privacy shield and noise barrier from the traffic on the County Road that goes past their house and leads up to a popular reservoir.

The Adams family have 3 wells on their property. One is below the proposed right-of-way, which they hoped to develop to use for irrigation. They obviously cannot do this until they know

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<sup>1</sup> Clarence and Stephany Adams are not related to their neighbor Frank Adams.

with certainty that the Pipeline will not be built. The other is their only source of water and is currently used for household consumption, as well as irrigation for the yard, garden, and their orchard. This well will be within 400 feet of the Pipeline, and their water holding tank is within 130 feet of the Pipeline. The third is not currently in use, as it had very limited water when it was drilled. There is a real possibility that the digging and blasting for Pipeline construction will permanently and adversely affect the water that is available.

The proposed Pipeline easement would run approximately 136 feet from the Adams' home. Based on similar Pipeline construction activity close to dwellings, there is a real concern that it will cause damage to the foundation of their home. As noted above, the concrete holding tank for the house water supply is even closer to the proposed Pipeline corridor, and it would cost thousands of dollars to replace it. They also have a horse barn within 50 feet of the temporary work area, which is highly likely to be damaged. Even if it remains intact, at best, the horse barn will probably be unusable during construction.

The Pipeline will cross the seasonal creek running through the property via the 'open trench' method. The creek bed is not composed of round cobbles and gravel over a bed rock base like many other creeks in the area. Instead, their creek bed is composed of about 6 inches of very angular, fractured basalt rock on top of a clay base, which Mr. Adams has measured down to a depth of approximately 5 feet. The angular gravel is more prone to washing out than the round cobbles, so when the existing trees are removed for the 95-foot construction easement, it is a distinct possibility that the disturbed gravel will wash out; this greatly increases the chances of the erosion of the creek bed to below its current depth, which will bring the Pipeline closer and closer to the surface.

The Pipeline's maintenance of the proposed right-of-way could also have detrimental effects on the Adams, their animals, and their lifestyle. Mr. Adams has honey bee apiaries within 100 feet of the proposed right-of-way. The oldest hive has been established for over 9 years. The construction

and placement of the Pipeline will surely destroy the bees' delicate environment. If the bees somehow survive the construction, the Adams will have no control or say on how vegetation will be controlled over the easement, or what herbicides they will use over the right of way that could negatively impact their bees. The herbicide may also have a negative impact on their horses, and increase the cost of feeding them. The spray could also kill the parakeets and finches that they have in a small aviary, as small birds are especially susceptible to toxins. The herbicides could also have an effect on the Adams family's health, especially when one takes long-term exposure into consideration. Further, the Adams' property – their largest investment- will obviously be devalued as a result of the Pipeline running through it, which will affect their financial stability for years to come.

The emotional cost of having this project hanging over the Adams' heads for over 15 years is incalculable. Their home and property are their refuge, and a source of great pride. The constant worry that a foreign corporation could come in and take their land has been horrible. The Pipeline will be using the lowest possible construction and safety standards, which increases the risk of a leak and possible explosion. With the Pipeline being so close to their home, the Adams face the very real possibility of being caught in a gas leak, fire, or explosion.

**vi. John Clarke:**

John Clarke is a Korean Conflict Marine War veteran and has owned his land at 1102 and 1363 Twin Oaks Lane, Winston, OR 97496 since 1984. Mr. Clarke is now Trustee of the John Clarke Family Trust and John Clarke Oregon Trust, which are the owners of the affected properties that he plans to pass down to his children. His land consists of 140 acres and developed structures. He bought the land for a quiet place to live. It consists of two parcels, a family home for himself, and a home for his son and daughter. His property includes mature conifer, oak, and madrone trees.

The Pipeline will lessen the value of his property, and have severely negative impacts on the quality of his land. The current proposed route of the Pipeline cuts diagonally across 140 of his

timbered acres. *See* attached *Exhibit 6*, the Pipeline's planned route through Mr. Clarke's properties. The only source of water on his property is a well on the property. The Pipeline could adversely affect and permanently disrupt his family's only source of water on the property. This over 15-year battle with the Pipeline has also exacerbated Mr. Clarke's health problems.

**vii. Bill and Sharon Gow:**

Bill Gow and his wife Sharon Gow have owned their property for 29 years. They started with 1,365 acres in 1990, and they've incrementally added more land, which now amounts to approximately 2,400 acres. The Gows have one of the very few large, family-owned cattle ranches in the southern Oregon region. They have worked incredibly hard to create and maintain their ranch.

The Gows bought the land to develop a legacy cattle ranching business that would give their family a stable, long-term home, and a place for their children and grandchildren to be raised in the country. This ranch has always been the Gows' dream. Their whole family lives on the property: Bill and Sharon Gow; their daughter, her husband and their 2 children; their son, his wife, and their 2 children. The fact that they have a ranch to live and work together, as well as the ability to raise their families together with shared values is invaluable.

The Pipeline will interrupt and potentially destroy all that they've built. The proposed route will bisect a 3-parcel section of the ranch. *See* attached *Exhibit 7*, the Pipeline's planned route through the Gows' property. The Gows considered their ranch a refuge, which has now been under threat of foreign invasion for over 15 years. They value the quiet, remote, and rural lifestyle immensely. Having a scar across their properties from the proposed right-of-way, having to deal with continuous, inevitable problems that arise from the Pipeline's placement, and dealing with Pipeline's maintenance crews are not at all what they wanted for their ranch or for their descendants. The Pipeline defeats their dream.

On the 2017 proposed alignment, the Gows had planned to build a small venue to host

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weddings. However, because the planned site was 350 feet from where the Pipeline may potentially be built (and the route keeps changing), they have abandoned these plans indefinitely. Additionally, the Pipeline route would force the Gows to change the long-term timber cut plan that they've developed over the course of many years.<sup>2</sup>

The Pipeline will cross the Gow's property at a slope. This is a concern due to potential landslides and changes in the area's drainage with the introduction of differentials in soil compaction. Since the riparian buffers are clear-cut permanently, the agency should seriously consider whether there will be long-term introductions of sediments into the waterways as a result.

The clear cuts planned along the right-of-way will have an especially strong impact in drought season. First, clear-cuts are going to be an eyesore, especially in riparian areas on their property and around the region. Second, and more importantly, in the intense drought season the trees at the edge of the forest are suffering due to exposure to the hot sun and drier soils. By logging the right-of-way strip, the Pipeline will create more forest 'edges' that will threaten the health of the forests and riparian areas. The clear-cuts along the right of way could also have a significant impact on the water retention of soils along waterways and on the rest of the property. When the soil can't hold as much water, the Gows have to pipe it in from the springs. As discussed further below, the Gows ability to lay pipe becomes severely restricted, or at the very least much more complicated, if the Pipeline is built.

The Pipeline will also have severely negative impacts on water retention, quality, and use. There are 5-6 creeks whose headwaters start on various locations on their property, including

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<sup>2</sup> The Gows also use the property on the 2015 proposed route for a private hunting and recreation business, where people come from all over the world to hunt deer, turkey, and elk. During construction, this business would not be able to function at all because of the noise and construction disturbance. After construction is complete, there are serious liability concerns about maintenance workers walking through the hunting grounds.

Roberts Creek, the Richardson Road Creek that feeds into to South Umpqua, and a number of others. Any adverse impact because of the Pipeline to these headwaters, whether warming, sedimentation, turbidity, introduction of herbicides or chemicals, or geological changes to the flow structure would have dramatic impacts downstream. This significant problem also exists in the Pipeline's crossing of any creek, including the tribute to the South Umpqua, which the Pipeline is proposed to cross in the current 2017 route, very close to its intersection point with the South Umpqua River.

A major concern is the Pipeline may destroy the method by which the Gows currently irrigate drinking water to the cattle and water to the grazing areas. The Gows currently irrigate water directly across the proposed Pipeline right-of-way. This problem will be severely exacerbated because of the increasing frequency of severe drought conditions in southern Oregon. As a result, the Gows will need to move the water pipes more frequently to ensure that the cattle and their fields are watered. This could prove impossible with the Pipeline right-of-way cutting through the property.

There is a big spring located just below the ridge of the 2015 route, which provides water to an indoor horse area and 2 of the family homes on the ranch. Any impact on this source of water because of Pipeline construction on the ridge would have devastating impacts on their family's wellbeing. There is no evidence in the DFIS that the Pipeline is taking proper precautions to ensure that this spring and other waters will be protected from fissures in the bedrock from construction or other potential damage.

There are also wetlands on the Gows' property, including a large marsh, where a creek feeds from below a trout pond spreading out to an area between 0.5 and 2 acres, depending on the flow. The marsh is partially sub-irrigated, and it is a critical spot for retaining moisture into the dry months.



The hydrostatic testing proposed is also a concern, as it remains uncertain where the discharge location is in the area. The Gows have deep concerns about the water from the Klamath Basin being discharged into the South Umpqua and the adverse impact that this would have on the ecology of the region.

Over the course of 15 years, this proposed Pipeline taken up countless hours of Mr. Gow's time and resources. Mr. Gow is on the phone every day about the Pipeline, as he is not computer literate and he works extra hard to keep up with what Jordan Cove is planning.<sup>3</sup> The project has put significant stress on Mr. Gow's family and their relationships. Mr. Gow worked from nothing to earn and build their ranch, and the thought that the United States government will give a foreign corporation the power to take what he's built from scratch can be (understandably) all-consuming. There also is the great uncertainty of how their family will cope with the devastation to the land and their way of life if construction should ever start.

Plans for the ranch are currently on hold, as they are not sure whether or not to make any improvements on their land with the Pipeline continuing to hang over their heads.

**viii. Pamela Brown Ordway, Wilfred E. Brown, Elizabeth A. Hyde, Barbara L. Brown, Chet N. Brown, and Neal C. Brown LLC:**

The Brown family property has been in the family since 1937, when the six Brown siblings' father purchased it from an insurance company who had repossessed the land during the Great Depression from one of their relatives. Their father was a tank commander in WWII who earned a Bronze Star and the Purple Heart. The Brown siblings grew up in the farmhouse on the property, where their sibling Richard Brown and his wife Twyla Brown now reside. When their father passed away, Twyla Brown and her husband bought the 100 acres in the front to live and work from the farmhouse, and back 153 acres went to the other above 5 Brown siblings, or Parcel #: R10266;

<sup>3</sup> It's of note that the Gows never received formal notice about the 2017 realignment going over their land. They also have never received a purchase offer.

R11298; R11338, all in Douglas County. See attached *Exhibit 8*, the Pipeline's planned route through the Browns' property.

Their land is made up of roughly 80 acres of farmland, 65 acres of second-growth timber, and approximately 10 acres of timber that they excluded from harvesting when they logged in 2005. The 10 acres of unharvested timber is predominately a mix of Douglas Fir and White Fir, and is well over 100 years old. They left that particular stand because it provided a visual barrier from their neighbor's logging, and it was one of the areas where the Fairy Slipper Orchid<sup>1</sup> thrived. The purpose of the current unharvested timber is for it to continue to grow, and it is the only stand of timber they could harvest if they needed the revenue.

The current route of the Pipeline, as well as the temporary easement Pembina states it needs for construction, will cut through the trees they excluded in the 2005 harvest. The Pipeline would severely and negatively impact their farming and logging practices. As the proposed Pipeline route cuts diagonally across their property, access to almost every part of the land is affected. If they wanted to log a portion of their timberland, they would be unable to bring in log trucks or the necessary heavy equipment over the Pipeline right-of-way. The cut area through the right-of-way would be kept free of tree and vegetation by Pembina, and the adjacent timber would thus grow inward towards the clear space, making it grow less straight, and consequently less valuable.

The portion of the Pipeline that goes through their farmland would adversely impact their farming practices as they could not bring in tractors and farm equipment over the Pipeline to harvest hay. It would limit their options for future crops, and they would not be able to grow wine grapes, fruit trees, or Christmas trees in the Pipeline easement areas. They also have the additional risk of unknown persons accessing their property via the Pipeline easement. The Browns have also

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<sup>1</sup> The Fairy Slipper Orchid is a wildflower that they were taught as children to take special care of. While it is considered 'threatened' or 'endangered' in other states, it currently is not in Oregon.

kept their farm free from herbicides for over 10 years. Pembina's use of herbicides over their easement would obviously directly conflict with how they manage their crops.

The Browns have put their family legacy plans for the land on hold, pending a final decision on the Pipeline. For example, they would like to plant a cash crop that would allow the next generation to continue to be able to keep the land in the family. All of the best options, from planting wine grapes, to Christmas trees, to nut trees, all require a substantial financial investment (upwards of approximately \$10,000 to \$15,000 per acre). The Browns are 100% willing to make this investment, but with the possibility of a Canadian company coming through and ripping open a 95-foot swath through what they just planted, they can't make a commitment to this. They also want to drill a well on their portion of the land for irrigation use, but if the Pipeline were built, it would limit their options on where they can drill.

**ix. Richard and Twyla Brown:**

When the Brown siblings' father passed away, Richard and Twyla Brown bought the front 100 acres of farm to live and work from the farmhouse, at 2381 Upper Camas Road, Camas Valley, OR 97416.

They purchased the land to honor Mr. Brown's father's legacy, farm the land, and to pass it onto their descendants. Their grandsons currently live on the farm and are heavily involved in the day-to-day operations. They raise beef cattle, sheep, and process hay each summer. They irrigate their fields and are the only farm in the Valley that has consistently done so since 1953. Their land has also been used to grow other crops including oats, barley, and grass seed. This type of farming uses heavy equipment.

The Browns have always been good stewards of their land. For example, they worked with the Coquille watershed office early in their ownership to protect the river by fencing it off from their livestock, and to plant trees along it to preserve the river banks and provide shade and habitat for

the wildlife in and around the river. The Pipeline will cut a 75-foot swath through those trees and disrupt what they've been building now for generations.

The effects of the proposed Pipeline of their land and the river running through it would be devastating. The Pipeline would restrict access to some of their fields and take away part of the land from farming. See attached *Exhibit 8*, the Pipeline's planned route through the Browns' property.

The Pipeline would detrimentally affect the Brown's water use. For irrigation, the Browns still rely on the drainage tile in that Mr. Brown's father put in the fields. The Pipeline would cut right through their drainage tiles, destroying their ability to irrigate water, and any investment in those affected fields would be worthless. The Pipeline will also cut through grazing/pasture fields, which they also cut hay on. The Pipeline would prevent them from using those fields. The Pipeline is also cutting close to their well, their only source of potable water for their home on the land.

It is also of note that archeologists from the state of Oregon also visited the Brown's property in approximately 2010. They found numerous Native American sites on their land with relics, which is yet another reason not to permit a huge ditch to cut through their land.

Richard and Twyla are retired, and too old to sell and find another place to start all over. Their property was supposed to be their security in old age. If this Pipeline is approved, they will lose one of their central retirement incomes, and this will be an almost impossible financial blow to surmount. The Browns have wanted to plant nut trees on their land, and put money into a new irrigation system, but they realized they can't do this until it's a guarantee that the U.S. government will not permit a Canadian company to come and take their land. They can't develop anything until this is over, as anything they do could be a complete waste of their hard-earned money and resources.

**x. Deb Evans, Ron Schaaf, and Evans Schaaf Family LLC:**

Deb Evans and Ron Schaaf purchased their property on Parcel Number: R71040 Tract: KII-

569,000 in Klamath County on June 2, 2005. They purchased the 157-acre property to build a home, drill a well, and to enjoy being within one mile of mountains, lakes, and the wilderness. They specifically chose the property for a number of reasons, including the viewshed, the location between two beautiful stands of Winema National Forest old growth, being within hiking distance of the Mountain Lakes Wilderness, and having direct access on Clover Creek Road which has been designated a 'utility free corridor'. They also purchased it as an investment to manage and sell timber, and to have about 5 acres of organic food production. Deb and Ron have long been gardeners, hikers, and enjoy managing forest property. They wanted to invest in the timber as an asset to use in the future for other projects and productions.

Within two months of purchasing the property, there suddenly was survey flagging across the portion of the property that they had intended to build their home on. They shortly found out that the survey markers were for a proposed 36" import natural gas pipeline from Coos Bay to Malin, which would bring regasified LNG to the California market. They never would have bought their property had they known a pipeline was trying to build right through it. They have now put off their planned development of the property for over 15 years.

Clover Creek Road bisects their 157 acres on the southern part of the property leaving approximately 9 acres located on the south side of the road, and around 144 acres of timber to the north of the road. The proposed route of the Pipeline is located north of Clover Creek Road, but does not follow the road Right-of-Way. See attached *Exhibit 9*, the Pipeline's planned route through Deb and Ron's property. Instead, it intersects their property about 400 feet northeast of Clover Creek Road on the southern boundary of the property, and then comes up at an angle to within 75 feet of the Clover Creek Road, and finally turns back at a northwest angle and crosses off of their property 500 feet along their west property line, north of Clover Creek Road. This route results in far greater impacts to the property. They are restricted from crossing the proposed Pipeline right of

way using the normal heavy logging equipment, thus making the management and harvesting of timber far more expensive and time-consuming. Additionally, access to the bulk of their property would require crossing the Pipeline's right-of-way.

Five acres of their timber would be permanently taken out of production. Deb and Ron use organic growing methods, and they are opposed to the use of harmful, synthetic sprays and fertilizers. However, such harmful herbicide sprays are exactly what the company is proposing to use to maintain the right-of-way. The proposed right-of-way is within the flatter, more fertile soils of their property, where they planned to grow their own food, which they obviously will not be able to do if the Pipeline is built.

The increased risk of fire is also a concern. As a timber producer, they are seeing more drought and insect infestation with the increasingly hotter, drier summers in Oregon, and a shrinking snowpack, and with that, more and more forest fires. The construction and operation of a high-pressure 36" natural gas pipeline will introduce significant additional risks of fire and devastation of their land.

The viewshed will also be significantly affected and scarred. A part of the inherent value of the land is the surrounding viewshed and accessibility to pristine areas of Oregon. The compromising of the viewshed through construction a 95-foot swath through their property and the neighboring Winema National Forest properties (an area that is currently utility-free and protected) will have a significant impact on their property's value and very reason they purchased the property in the first place.

The fight to keep the Pipeline from being built across southern Oregon for over 15 years has taken a toll on Deb and Ron, mentally and financially. The proximity to the Pipeline and the continuous uncertainty of whether the project will ever be built has put their development plans since they bought the property on permanent hold. When the first bought the property in 2005, they

were 45 and 50 years old respectively. They are now 59 and 64 years old, and physically less able to implement the development plans that they had for the property themselves. Further, the money that they saved to improve the land has been spent in part on trying to protect their asset from the ongoing risk of a taking by the Pipeline. When they first bought their property, it was never disclosed to them that a company was proposing to build a Pipeline. Over \$5,000 and an attorney later, they had intervened in the first round of proceedings at FERC on this project, but with little idea as to what was happening and how to protect their property. They also had no idea that this Pipeline would continue to haunt them for over 15 years.

Deb and Ron firmly believe that no one should be forced to give or sell an easement for a project that has no public benefit or use. This is especially true when that the benefit goes to Canada, with this project uniquely utilizing primarily or solely Canadian gas, and with none of the gas benefiting U.S. consumers. They have long believed, and pointed out in earlier testimony in Round 2 (the 2012-2016 proposed project), and previously in the current Round 3, that there is a clear difference between this LNG project and every other proposal before FERC. FERC in 2016 heard and understood the landowners' arguments and denied the Section 7 and Section 3 applications. They believe the Commissioners should do the same this time.

**xi. Stacey and Craig McLaughlin:**

Stacey and Craig McLaughlin purchased their property at 727 Glory Lane, Myrtle Creek, Oregon in 2000. The property consists of 357 acres of farm and forest. They have merchantable timber and a developing woodland on the property. The property is also notable as an oak woodland, with old growth madrone areas. The vegetation is diverse and offers habitat for numerous species of insects and animals. There is also un-surveyed wetland on the property.

The McLaughlins bought the property to fulfill a lifelong dream of owning a ranch to grow their own organic food, and to live a sustainable and rural lifestyle. Their ultimate goal was to create

a sanctuary for themselves and their family. They wanted the solitude of an isolated area, but also to be relatively close to airports for work-related travel, and to have easy access to medical care for themselves and their aging parents. Their property met all of these criteria, and included two dwelling units that met their plan to move aging family members into one of the homes for caregiving. Stacey and Craig currently live on the property, with Craig's elder cousin living in the second residence.

The Pipeline will cut diagonally across two major parcels of their land. *See* attached *Exhibit 10*, the Pipeline's planned route through the McLaughlins' property. The proposed route would essentially divide the property in half, making the second or rear parcel inaccessible for heavy equipment, including for any future residential construction or fire suppression activities.

The Pipeline construction will also adversely impact and potentially eliminate old growth madrone and oak trees, home to many species of animals. The planned route will plough through an expensive logging restoration project, wherein they planted thousands of Douglas Fir trees to rehabilitate the land and serve as a future income source. The proposed route will require the removal of much of that newly-forested land. Removal will also increase the chances of a landslide, as many of the older trees that would be removed now stabilize the land.

There are numerous water sources throughout the property, including springs, seasonal creeks, and wetlands, which are likely to be adversely impacted by the Pipeline's construction. The greatest threat is to the McLaughlin's domestic water supply. Any disruption by the construction or permanent installation of the Pipeline would significantly reduce or eradicate their water supply, which is already threatened by drought. They also are wary of the significantly increased risk of wildfires due to Pipeline-related incidents.

The McLaughlins do not use herbicides or pesticides on their land for health and safety reasons. The Pipeline's potential construction is a grave concern, as both will be used indefinitely by



the company to maintain their easement as desired.

The construction of the Pipeline will destroy the very reasons why the McLaughlins purchased this property, including solitude. If Pembina gets permission from FERC to build the Pipeline, it will have 24/7 access to the McLaughlin land both during and after construction.

The proposed Pipeline has resulted in significant emotional and financial stress on the McLaughlin family. They have spent thousands of dollars both directly and in-kind, and countless hours of their time in trying to protect their home from a Canadian corporation.

**xii. Alisa Acosta, as Trustee of Acosta Living Trust:**

Alisa Acosta, is Trustee of the Acosta Living Trust, which is the owner of the affected property at 536 Ragsdale Road, Trail, OR 97541. The current proposed route and access road would run directly through the property, severely impacting the use and value of the property, which includes a licensed airport, a hanger building, a home with a pool, a smaller cottage and garage/utility building, a pole bar, fruit tree orchard, 80+ walnut trees, irrigation, and two pump houses. See attached Ex. 4, the Pipeline's planned route through the Acosta Living Trust's property.

The property was acquired in part for its value as a potential "fly-in" gateway to surrounding outdoor recreation for private guests, and currently serves as the base of operations for Outdoors in Oregon, LLC dba Rouge Recreation, a company that provides outdoor recreation opportunities, including concession services to the USDA Forest Service. The current proposed route will bisect and destroy the airport landing strip. The company is a significant contributor to the local economy, employing a seasonal work force of 15 people and support services from 9 local businesses. The property has served as a landing area for law enforcement and first responders, and based on its size, location, and airstrip, has public resource value as a potential staging area for emergency services, including fire suppression and search and rescue. The simple fact is that it does not make sense to bury a highly pressurized natural gas pipeline a few feet below an airport runway that is likely to be

the location of take-offs and landings by a variety of private and public aircraft.

The proposed Pipeline work areas, which include an extended staging area that at some points is over a thousand feet from the proposed easement, will destroy two mature orchards. The Pipeline also seeks to appropriate the property's only current access road and provide the owner with a temporary access across land owned by neighbors to the south.

The effect of the current proposed route would be at the very least the temporary relocation of the business currently operated on the property, and the Pipeline's staging activities will be substituted for those of the owner's business. By some estimates, the period of occupation for construction activities may extend 7-10 years, and that the work area as currently defined will run the length of the property and effectively prevent any reasonable access to the airstrip, the hanger, and to the bulk of the property to the north. There will be substantial damage to, if not total destruction of, existing orchards and old growth trees. There is no public benefit to this Pipeline, and the project should be denied with prejudice.

**xiii. Will and Wendy McKinley:**

Will and Wendy McKinley purchased their property at 2579 Old Ferry Road from Wendy's mother in 2016. The property had been in their family since 2004. It consists of 19 acres with 600 feet of river frontage on the Rogue River. They purchased the property from Wendy's mother so that she no longer had to live with the burden of the potential Pipeline destroying her land. Her mother originally purchased the property for retirement, but once the Pipeline was announced, she no longer wanted to live there.

The Pipeline will destroy any value that the land currently has. *See* attached *Exc 4*, the Pipeline's planned route through the McKinleys' property. The McKinleys have been using the property as a vacation rental or income property, since they have not been able to sell it since the Pipeline project was first announced in 2005. If construction starts, they will no longer be able even

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to rent the house on the property.

**The Niskanen Center:**

Niskanen is a 501(c)(3) libertarian think tank with strong interests in free markets and in protecting Americans' property rights. It is a fundamental matter of justice – and a foundational belief among libertarians – that government should forcibly take private property only as a measure of last resort, when truly for public use, and must compensate the property owners sufficient to render them indifferent to the taking.<sup>3</sup> The Niskanen Center sees no public use in the proposed Pipeline project, and notes that FERC failed to establish the required Purpose and Need of the project in the DEIS. The Project should be denied with prejudice.

**I. THE DEIS FAILS TO ADDRESS THE PIPELINE'S SEVERELY NEGATIVE IMPACTS ON OWNERS' LAND USE AND WAY OF LIFE.**

This Pipeline would have a severely negative impact on the land and on the Landowners' use of their land. The DEIS fails to analyze or capture many of these adverse impacts on landowners, and offers no discernable mitigation plan or solution. Several of these analytical voids are discussed in further detail below.

**A. The DEIS Fails to Evaluate the Negative Impact on Valuation of Land.**

Private landowners with a 36-inch, 1600 PSI to 1950 PSI natural gas pipeline running through their property can be sure that the potential re-sale value of their property will be drastically reduced. Just ask the McKinleys, who have been trying to sell their land since 2005. *See supra* at 21.

In the DEIS, FERC cites to four studies, all cherry-picked by the Pipeline, in support of its conclusion that "the likelihood of the pipeline resulting in a long-term decline in property values and

<sup>3</sup> Niskanen notes in passing that the Commission's Policy Statement appears to acknowledge that court-determined "just compensation" is insufficient to make landowners indifferent to the taking of their property: "Even though the compensation received in such a proceeding is deemed legally adequate, the dollar amount received as a result of eminent domain may not provide a satisfactory result to the landowner and this is a valid factor to consider in balancing the adverse effects of a project against the public benefits." 90 FERC ¶ 61,128, p. 19.

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IND471-2 The cited section of the draft EIS (section 4.9.2.3) references six studies (not four as stated in the comment). The studies not mentioned in the comment are Diskin et al. (2011) and Wilde et al. (2014).

The comment references three reports prepared by Key-Log Economics on behalf of groups opposed to the Atlantic Sunrise Pipeline (2017), Atlantic Coast Pipeline (2016a), and Mountain Valley Pipeline (2016b) and pertain to the analyses prepared for these projects. FERC's responses to these comments are addressed in the final EIS documents for each project, as appropriate.

Methodological concerns related to the available studies on pipelines and property values are noted. As discussed in section 4.9.2.3 of the draft EIS, the cited studies "suggest that natural gas pipelines do not necessarily negatively affect the value of that property." Further discussion is provided section 4.9.2.3 of the draft EIS, which notes that "the effect a pipeline may have on a property's value depends on many factors." As noted in section 4.9.2.3, subjective valuation is generally not considered in appraisals, but may affect individual decisions when a property is offered for sale. This may include a potential homebuyer's concerns related to the presence of a pipeline.

There are no documented cases or verifiable information in the FERC administrative record for this Project supporting the assertion that insurance rates and access to home loans would be adversely affected by construction and operation of the Project. This information has been added to the final EIS.

OHV controls and measures to limit access to the pipeline right-of-way are discussed in section 4.8.1.2 of the EIS.

IND471-2

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a related decrease in property tax revenues is low.” DEIS at 4-608. The cited studies included two case studies by the Interstate Natural Gas Association of America (“INGAA”) (Allen, Williford & Seale, Inc. 2001; Integra Realty Resources 2016) and two case studies that “evaluated the effects of the South Mist Pipeline Extension in Clackamas and Washington Counties, Oregon (Fruits 2008; Palmer 2008); and studies from Arizona and Nevada (Diskin et al. 2011; Wilde et al. 2014).” DEIS at 4-607.

IND471-2  
cont.

None of the cited studies are informative in analyzing whether or not there will be an adverse impact on the Landowners’ land. The studies have been relied on by pipeline companies in the past and have been previously discounted. The natural gas industry-sponsored<sup>6</sup> studies “are similar in that they fail to take into account two factors that could completely invalidate their conclusions”:

First, the studies do not consider that the property price data employed in the studies do not reflect buyers’ true willingness to pay for properties closer to or farther from natural gas pipelines. For prices to reflect willingness to pay (and therefore true economic value), buyers would need full information about the subject properties, including whether the properties are near a pipeline. Second, and for the most part, the studies finding no difference in prices for properties closer to or farther away from pipelines are not actually comparing prices for properties that are “nearer” or “farther” by any meaningful measure. The studies compare similar properties and, not surprisingly, find that they have similar prices. **Their conclusions are neither interesting nor relevant to the important question of how large an economic effect the project would have.**

*See Exhibit 11, at 33-38, Atlantic Sunrise Project: FERC’s Approval Based on an Incomplete Picture of Economic Impacts, Spencer Phillips, PhD (March 2017) (emphasis added); See Exhibit 12, at 32-35, Economic Costs of the Atlantic Coast Pipeline: Effects of Property Value, Ecosystem Services, and Economic Development in Western and Central Virginia, Spencer Phillips, PhD (February 2016); Exhibit 13, Economic Costs of the Mountain Valley Pipeline, at 26-28, Spencer Phillips, PhD (May 2016). Each study is attached and incorporated by reference.*

<sup>6</sup> These studies were bought and paid for by the natural gas industry, which dramatically impact their credibility. For example, the INGAA “is a trade organization that advocates regulatory and legislative positions of importance to the natural gas pipeline industry in North America. INGAA is comprised of 25 members, representing the vast majority of the interstate natural gas transmission pipeline companies in the U.S. and comparable companies in Canada.” INGAA’s ‘About Us’, Available at: <https://commonwealthalliance.com/about-us/sponsors/interstate-natural-gas-association-america> (Last visited July 1, 2019).

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In addition, the DEIS conducts no examination of other effects of the devaluation of landowners' properties, such as a potential buyer's inability or increased difficulty to obtain a mortgage on land that is in close proximity to a pipeline. There are also a complete failure to consider the effect on homeowner's insurance of a high-pressure gas pipeline going through a landowners' property. The DEIS does not take into consideration at all how a home buyer's perception of associated risks could detract from home values, something that happens all the time.<sup>7</sup> The exposed corridor also will encourage off-road vehicle traffic and year-round public entry onto private lands. The Forensic Appraisal Group LTD, a Wisconsin firm that specializes in issues with the potential for litigation related to pipelines, conducted a number of "impact" studies, which found that the presence of a gas transmission pipeline decreased home values by about 12 to 14 percent on average in Ohio and about 16 percent on average in Wisconsin.<sup>8</sup>

All of the named landowners are concerned about the adverse effect that the Pipeline will have on their property values, and everything else that is tied into such a devaluation, and with good reason. The DEIS fails to address this adverse impact.

#### **B. The DEIS Fails to Evaluate the Negative Impact on Visual Resources.**

It is a simple fact that a beautiful view increases property value. It follows that an unwanted intrusion on that view by a permanent, 50-foot wide gas pipeline corridor would decrease property value. See, e.g. *Hieb*, 13, *Economic Costs of the MVP*, at 29 ("utility corridors from which power lines can be seen decrease property values (by 6.3% in one study)(Bolton & Sick, 1999).") The decrease in value could be simply because the corridor is ugly. See *id.*

Here, the DEIS notes that there is a pipeline viewshed of 5 miles on either side of the

<sup>7</sup> This is especially true in this case given that pipelines have received a lot of negative media coverage in recent years with pipeline explosions, sink holes, and leaks.

<sup>8</sup> See <https://www.gazettenet.com/Archives/2015/10/PIPELINEVALUES-HG-101415> (Last visited July 1, 2019).

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IND471-3 With respect to the question of views and property values referenced in the first paragraph, please refer to section 4.9.2.3 of the draft EIS and the final EIS. Based on a review of applicable property value studies, the conclusion noted in section 4.9.2.3 is that the likelihood of the pipeline resulting in a long-term decline in property values is low. Given that the comment provides no specific supporting evidence aside from a reference to a single study that addressed power lines and property values, we continue to believe that the conclusion stated in section 4.9.2.3 is accurate and valid.

The 5-mile viewshed extent identified for the visual assessment of the pipeline represents the potential viewing range within which visible aspects of the Project (primarily the cleared right-of-way) are most likely to be noticeable to the casual observer. Viewing distance is a key factor in determining the level of visual effect, with perceived contrast generally diminishing as distance between the viewer and the affected area increases. The EIS approach considers distance zones as they are used in the Bureau of Land Management (BLM) Visual Resource Management (VRM) system, which categorizes views into foreground/middleground, background, and seldom seen distance zones. These distance zones provide a frame of reference for classifying the degree to which details of the viewed Project would affect visual resources. The "foreground/middleground" zone is defined as occurring from zero to 5 miles from the Project. Details of Project elements would be visually clear in the foreground; viewers still have the potential to distinguish individual forms, and texture and color are still identifiable but become muted and less detailed in the middleground. In the "background," defined by BLM as the area 5 miles to 15 miles from the Project, texture has disappeared and color has flattened, making objects appear "washed out." Although the cleared pipeline right-of-way may be visible at a distance of greater than 5 miles (in the background distance zone), the visibility would be limited and the right-of-way would typically not appear as a prominent feature in the landscape setting, resulting in limited visual contrast. The text of section 4.8.2.2 has been revised for the EIS to clarify this point.

The draft EIS (and final EIS) conclusion that construction and operation of the pipeline would not significantly affect visual resources is based on impact analysis according to the methodology outlined in section 4.8.2.2, which included evaluation of expected visual contrast as seen by the casual observer across the set of representative KOPs selected for the analysis. We believe that conclusion was and is valid based on the KOP-specific evaluations and federal regulatory guidance regarding consideration of context and intensity in evaluation of impact significance. The analysis did not attempt, nor should it have considered, the locations and perspectives of all individuals who own property along or within view of the pipeline route. Section 4.8.2 has been edited for the final EIS to indicate that the FERC recognizes that some affected individuals may have a different perspective on the level of visual impact. In particular, people who live near the pipeline right-of-way or travel near it frequently may place a high value on the character of the existing landscape and may consider Project-related changes to that landscape to be significant visual impacts.

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pipeline. DEIS 4-567. While the DEIS shares the mechanisms used to define this 5-mile viewshed, including photography and computer modeling, it fails to share the numbers and the methodology of calculation of how it arrived at the 5-mile viewshed as the appropriate metric.<sup>9</sup> Intuitively, the effect on the viewshed will obviously be more than 5 miles in numerous places, including on properties overlooking mountains or slopes.

It is safe to say that in some areas, the Pipeline corridor will be visible for dozens of miles, if not more. For example, landowner Toni Woolsey's main view from her home will be completely ruined by the permanent scarring of the Pipeline corridor creeping up a mountain across from her home. The view of the river from her porch will also be adversely impacted. In fact, all of the named landowners will have their viewsheds ruined to varying extremes because of the Pipeline corridor. These properties' values will suffer as a result of the lost aesthetic value, a big reason why many people moved southern Oregon. The DEIS' conclusion that "construction and operation of the pipeline would not significantly affect visual resources" (DEIS 5-7) is simply incorrect, and the fact that this is a rural, visually beautiful area supports the contention that the corridor will indeed have a significant impact on the surrounding landscape, views, and landowners' property values.

**C. The DEIS Fails to Address the Detrimental Impact to Landowners' Water Sources, Agricultural Drainage, and Irrigation.**

It would be difficult to understate the detrimental impact (or complete destruction) that the Pipeline will have on landowners' water sources, yet the DEIS does exactly so. The DEIS fails to evaluate or even identify where landowners' water sources are or how they will be affected. In southern, rural Oregon, many landowners rely on wells drilled on their land for all of their household needs, as well as irrigation for water for their animals and crops. According to the DEIS,

<sup>9</sup> If each viewpoint represented a mile of the project, the DEIS only did approximately 4% representative viewpoints of a 229-mile project (it only did 10 such viewpoints). DEIS 4-566-4-572.0.

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IND471-4 Impacts on water sources are addressed in section 4.3. Impacts on agricultural areas are addressed in section 4.7.

IND471-3  
cont.

IND471-4

there are numerous unidentified wells, but only 7 were identified along the entire 229-mile pipeline. DEIS at 4-79. The DEIS places the burden on identifying sources of water on the landowners for the Pipeline's project, which is completely unacceptable. DEIS at 4-79. Thus, the conclusion that the Pipeline will not affect groundwater resources has no foundation, as the Pipeline hasn't even put the work in to identify almost all of the groundwater resources. See DEIS at 4-82 ("[W]e conclude that constructing and operating the Project would not significantly affect groundwater resources."); See 5-2.

The mere seven wells identified in the DEIS are identified as irrigation wells within 200 feet of construction "for which location information was available." DEIS at 4-79. The assertion that the Pipeline could only locate seven private wells along a 229-mile pipeline that has been pending for over 15 years is absurd. For example, there is a *public* database available on the State of Oregon Water Resource page that identifies the location and purpose of wells.<sup>10</sup>

The Pipeline should clearly be required to find each and every potentially affected well along the pipeline route, and the DEIS should address the impacts on each of them. The wells can be located by simply putting in the landowners' name, or by inserting other information, such as the tax lot information into the database referred to above. In some cases, the database has the exact latitude and longitude of the well. In order to demonstrate the absurdity of this lack of analysis, especially in a region that so heavily relies on well water, a quick search was conducted for the named landowners using only their names:

IND471-4  
cont

<sup>10</sup> Available at: [https://apps.wrd.state.or.us/apps/gw/well\\_log/](https://apps.wrd.state.or.us/apps/gw/well_log/)

| Landowner              | Well Log   | Primary Use | Location of Well (Township, Range, Section) |
|------------------------|------------|-------------|---|
| Bill Gow               | DOUG 54922 | Domestic    | T: 29S R: 5W S: 7                           |
| Neal Brown             | DOUG 52970 | Domestic    | T: 29S R: 8W S: 7                           |
| Deb Evans & Ron Schaaf | JACK 63503 | Domestic    | T: 39S R: 3E S: 32                          |
| Frank Adams            | DOUG 2772  | Domestic    | T: 22S R: 9W S: 8                           |
| Gerrit Boshuizen       | KLAM 52869 | Irrigation  | T: 40S R: 10E S: 28                         |
| John Clarke            | DOUG 1751  | Domestic    | T: 29S R: 7W S: 1                           |
| Richard Brown          | DOUG 54407 | Domestic    | T: 29S R: 8W S: 7                           |

IND471-4  
cont.

Almost all of the named landowners' water supplies will be negatively impacted by the Pipeline. For the McLaughlins, any disruption of their water by the construction or permanent installation of the Pipeline would significantly reduce or eradicate their water supply, which is already threatened by drought. Frank Adams has a well on the property that produces his water, and any digging, blasting, or trenching activities will severely jeopardize his water supply for his home and cattle. The proposed route will also channel water away from his well source. The Boshuizens flood irrigate their land, and the Pipeline would destroy this irrigation system, and their grass for their cattle will die, along with their hay crop. The Pipeline will also be within 300 feet of their well and drinking water source, and they have no idea as of yet how the right-of-way would impact their only access to potable water. Toni Woolsey has a private well on her property that's approximately within 180 yards of the proposed route, down by the Rogue River. There is no understanding of how the HDD under the river, and the drilling being so close to her well, will affect her only water source. Clarence and Stephany Adams' only source of water for themselves, their garden, and their orchard is within 400 feet of the Pipeline, and their water holding tank is within 130 feet. The Clarke family's only source of water on their property is a well, and the Pipeline could adversely affect and



permanently disrupt their only source of water. For the Gows, who are ranchers, their very way of life is threatened by the Pipeline. Their ability to irrigate water to their cattle and fields could prove impossible if the Pipeline is built. Richard and Twyla Brown rely on the drainage tile for irrigation, which the Pipeline would cut right through, destroying their ability to irrigate water, and any investment in those affected fields would be worthless.<sup>11</sup>

The Pipeline will also divert water all along the route. The following landowners are directly affected, or more than likely to be affected, by the Pipeline diverting water:

| No. | Landowner                 | Pipeline Milepost # | Pipeline's Point(s) of Water Diversion (Nearest Milepost) | Diversion Source(s)                    | County  |
|-----|---------------------------|---------------------|---|--|---------|
| 1   | Richard and Twyla Brown   | 50                  | 49.53   | Lang Creek                             | Douglas |
| 2   | Stacey & Craig McLaughlin | 68                  | 67.12; 67.19.   | Unnamed Stream; and South Umpqua River | Douglas |
| 3   | Bill & Sharon Gow         | 71.6                | 71.31   | South Umpqua River                     | Douglas |
| 4   | Toni Woolsey              | 122.5               | 122.67  | Rogue River                            | Jackson |
| 5   | Will & Wendy McKinley     | 123                 | 122.67  | Rogue River                            | Jackson |

DEIS at 4-97-99.

The DEIS fails to conduct an even surface-level analysis of the impact of the Pipeline on many landowners' water source in rural Oregon. The above descriptions are just a snapshot of how this Pipeline will adversely impact landowners' access to water, which will affect their ability to live on their land, to raise cattle, to grow food, and to generally maintain their way of life. The Pipeline will affect the environment in a significant way that is currently not considered in the DEIS.

**1. Pacific Connector's Proposed Groundwater Supply Monitoring and Mitigation Program is Inadequate.**

<sup>11</sup> The DEIS states on 2-56 that the Pipeline will check and repair drain tiles before backfilling, with no explanation as to how.

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IND471-4 cont.

IND471-5 Comment noted. As stated on page 4-81 of the draft EIS and in the Groundwater Supply Monitoring and Mitigation Plan, pre-construction surveys would be conducted to confirm the presence and locations of all groundwater supplies for landowners within and adjacent to the proposed pipeline right-of-way. This cannot be completed at this time because many landowners have not given permission for surveys on their land. If the Project is approved, the landowner can work with Pacific Connector during easement negotiations to siting the line within individual properties to increase the distance between the pipeline and any springs or wells. Private and public wells within 200 or 400 feet, respectively, are identified as avoidance areas for refueling and storage of hazardous materials.

IND471-5

Jordan Cove's proposed Groundwater Supply Monitoring and Mitigation Program ("the Plan") – all of 3 ½ pages -- is flawed in several different ways, as follows:

1. In section 1.1.1, the Plan notes that single-family homes do not have to get permits and thus are not found in any state database. This is not correct. As noted above in section 1. C., many such wells can be found via the State of Oregon Water Resource database. Jordan Cove should be required to search all available databases for wells on all properties that it has identified as "affected properties" under 18 CFR 157.6.

Jordan Cove says that it will "attempt to identify any unregistered wells in the vicinity of the construction right-of-way". Aside from the problem with not knowing what "in the vicinity of" means, Jordan Cove should be required to locate all wells on all properties that Jordan Cove wants easements – whether for construction, access, storage, or for any other purpose.

2. In section 1.2.1, the Plan states that landowners will be advised to allow pre-construction monitoring of groundwater supply sources for water quality and yield, "if applicable". It is completely unclear what "if applicable" means in this context.

This section also says that public groundwater supplies within 400 feet of the construction disturbance will be considered "potentially susceptible to impacts", but "all other groundwater wells, springs and seeps" will be so considered if they are within 200 feet of the construction disturbance. No rationale is given to explain why non-public water supplies within 200-400 feet of the disturbance are not considered equally "susceptible to impacts". The Plan then says that "during construction", landowners with water supplies located beyond 200 feet "may request pre- or post-construction water sampling." The Plan does not explain how "pre-construction" monitoring can be accomplished "during construction". Moreover, all such monitoring should include pre-construction, during construction, and post-construction monitoring. By the time a problem is detected via post-construction monitoring, it may (a) be too late to do anything about it, or (b) have

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cont.

already exposed people who have used that groundwater during construction to unsafe drinking water.

3. Section 1.3.1(a) provides that under the proposed “monitoring agreements” with landowners, the burden of proof to establish damage to the well is on the landowner. This places the landowner at a distinct disadvantage; in situations where construction or post-construction monitoring reveals a material change in water quality or yield, the burden of proof should shift to Jordan Cove to show that it was not responsible for that damage.

The Plan states that well owners will be asked to provide “preliminary well performance data”, without specifying what data that would be. The Plan also limits testing to temperature, pH, turbidity, specific conductance, TPH, fecal coliform and nitrate. Monitoring for the presence of all fuels, solvents, and lubricants (which Jordan Cove acknowledges in section 2.1 will be used in construction) is also necessary to ensure that they have not leaked into drinking water.

4. Section 1.3.1(b) addresses monitoring of springs and seeps, and the same protocols should be applied to those as to groundwater supply wells.

5. Section 1.3.3.3 establishes a completely inadequate monitoring schedule, consisting of one pre-construction sampling, no sampling during construction, and a post-construction sampling “only if requested by landowner or in disputed situations”. There should be at least two pre-construction samples taken, and at times far enough apart to account for any seasonal variation in water quality or yield; there should be periodic (at least every three months) sampling during construction, and there should be two post-construction samplings, one immediately upon the end of construction, and one at some point later to detect contaminants that did not immediately migrate into the groundwater supply. The time between the end of construction and the second post-construction sampling should be determined by the amount and composition of soil between the construction site and the groundwater supply to account for migration time. There should also be a requirement that all

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sampling results be provided to the landowner within 48 hours of Jordan Cove's receipt of those results, that Jordan Cove should maintain a publicly-available database of all such results, and that Jordan Cove report any violation of state or federal drinking water standards to the landowner and the Oregon Department of Water Resources within 24 hours.

6. Section 2.1 states that Jordan Cove has "prepared a Spill Prevention, Containment, and Countermeasures Plan", but gives no details as to what it contains or where it can be found. This section also does not say if and when landowners will be notified of spills on their land (or adjacent land), which should be mandatory within 24 hours of any spill.

7. Section 3.1 states that "Should it be determined after construction that there has been an impact on groundwater supply (either yield or quality), PCGP will work with the landowner to ensure a temporary supply of water, and if determined necessary, PCGP will replace a permanent water supply." This contemplates that such impacts will only be determined some unknown time "after construction", which could be years later, and potentially years after such an impact is detected by monitoring that takes place during construction.

Moreover, this section deliberately uses the passive voice in referring to the determinations of impact and the need for a permanent replacement water supply. It should be made clear who makes that determination, when it will be made, what information it will be based on, etc.

**2. The DEIS does not properly address the adverse effects of HDD.**

The Pipeline proposes to use the HDD method to cross under the Rogue River. As stated in the DEIS, "HDD requires the use of drilling mud (bentonite) as a lubricant which may leak (also referred to as a frac-out). This fluid is under pressure and there is a possibility of an inadvertent release of drilling mud through a substrate fracture, allowing it to rise to the surface." DEIS at 4-284. Landowners Toni Woolsey, the McKinleys, and Alisa Acosta all own land on or around the Rogue River, and the potential effects on their drinking and irrigation water because of the use of

IND471-5  
cont.

IND471-6

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IND471-6 The potential adverse effects of HDD crossings are addressed in the EIS (see section 4.3).

HDD have not been addressed in the DEIS.

It is a fact that HDD crossings, even when successful, have impacts in neighboring areas where staging and construction occur. HDD also requires the disposal of materials extracted from the drill hole. Many HDD attempts fail, resulting in “frac-outs,” situations in which large amounts of sediment and bentonite clay (used as a drilling lubricant) get released into the water.

**D. The DEIS Fails to Adequately Address the Adverse Impacts of the Pipeline Using Herbicides or Toxic Chemicals to help maintain its Right-of-Way.**

Many of the named landowners do not utilize herbicides or pesticides on their land, and with good reason. Stacey and Craig McLaughlin do not use herbicides or pesticides on their land for health and safety reasons. The use of harmful chemicals could kill Clarence & Stephany Adams’ bees. Toxic spray would also have a negative impact on the Adams’ horses, and increase the cost of feeding them, and could kill their birds that they keep in their aviary. The herbicides could also have an effect on the Adams family’s health, especially when one takes long-term exposure into consideration.

The Browns have kept their farm free from herbicides for over 10 years. Deb and Ron use organic growing methods, and they are opposed to the use of harmful, synthetic sprays and fertilizers. Frank Adams’ grape vines and orchard will be in continuous danger from spraying by the Pipeline, which they plan to do several times a year.

However, the harmful insecticides and herbicides that the landowners have been actively avoiding for years are exactly what the company is proposing to use to maintain the right-of-way, and both herbicides and insecticides will be used indefinitely by the company to maintain their easement as desired. See DEIS 4-167-170; and the Pipeline’s *Integrated Pest Management Plan* (“IPMP”), Appendix N of the Pipeline’s POD submitted to FERC January 23, 2018. The Pipeline’s use of herbicides over their easement would obviously directly conflict with how many landowners manage their land, animals, and family’s health.

IND471-6  
cont.

IND471-7

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IND471-7 The effect of herbicide use is addressed in sections 4.3; 4.4; 4.5; and 4.6 of the EIS. As discussed in the EIS, the applicant would be required to adhere to our Plan and Procedures, and all applicable federal, state, and local requirements related to herbicide use would be required and all applicable approvals would be obtained prior to their use including landowner approvals. As stated in the Integrated Pest Management Plan, hand and mechanical methods would be the first choice for noxious weed control, practicable. As further stated in the plan, herbicides would be applied by wicking, wiping, injection, or spot spraying as permitted by product labels and herbicides would not be applied via aerial application. Herbicides would not be used for general brush/tree control within the 30-foot maintained operational easement, only if noxious weed infestations occurs on the permanent easement, selective use of herbicides would be used to control these species. Additionally, herbicides would not be used within 100 feet of a wetland or waterbody, unless allowed by the appropriate agency. Herbicide treatments would also not be conducted during precipitation events or when precipitation is expected within 24 hours to minimize the risk of these chemicals moving beyond the treated areas or into waterbodies.

As stated in the Integrated Pest Management Plan, after construction and restoration, Pacific Connector would monitor all disturbed areas of the construction right-of-way including TEWAs, UCSAs, temporary access roads, and road improvement areas for infestation of noxious and invasive weeds, not just federal lands. If infestations occur in any of the disturbed areas of the construction right-of-way including TEWAs, UCSAs, temporary access roads, and road improvement areas, Pacific Connector would make an assessment of the source of the infestation, the potential of the infestation to spread to other adjacent areas, and develop a treatment plan to control the infestation.

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In addition, the Pipeline plans on having very minimal monitoring standards for invasive species and noxious weeds, with monitoring “will occur for a period of 3 to 5 years on federal lands”, and no specific monitoring plan for private lands where people actually live and work. In southern Oregon, there is quality growing capacity, and the Pipeline corridor will quickly become full of invasive species, which inevitably will spread beyond the corridor.<sup>12</sup> The Pipeline has no plan for this, other than if this occurs, it “*may* also fund local county weed control boards, soil and water conservation districts, Cooperative Weed Management Area, or watershed associations that are authorized to control weeds in the specific count”. IPMP at 7-8 (emphasis added). In other words, the Pipeline has no plan for the spread of invasive species on private land, and may chose, *if* it so desires, to give some money towards local organizations that may or may not be able to help landowners. In other words, the landowners are left to their own devices to figure out how to deal with the inevitable invasive species that will grow, and the poisonous spray that the Pipeline will drop on their land and its effects. This is not a “plan” in any sense of the word.

**E. The DEIS Fails to Measure the Negative Impact on Landowners’ Timber.**

The Pipeline will cut a 95-foot temporary right-of-way, as well as associated temporary work areas for an approximate 2-year period, and maintain a permanent 50-foot easement. The old growth forest that the Pipeline will be destroying is irreplaceable. Many of the Landowners will lose significant income, and irreplaceable sentimental value, if the Pipeline is permitted to cut the trees on their land.<sup>13</sup> The DEIS also fails to outline a proper plan for timber, timber removal, and the

<sup>12</sup> This will also increase the chances of forest fire during the dry season.

<sup>13</sup> If the Pipeline is permitted to be built, the DEIS should also make it abundantly clear that no tree felling activities are to begin until all required permits are obtained by the Pipeline company. Further, the DEIS should include a timeline where once the Pipeline commences tree felling on a piece of property, the Pipeline should be required to remove felled trees from private land within a certain period of time, so they don’t remain there indefinitely or lose their value rotting on the ground. The DEIS should also specify that the Pipeline is responsible for any cleanup of an area where the Pipeline has felled trees, so landowners are not left paying for the Pipeline’s mess.

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IND471-8 Potential impacts to forest land, including timber, are discussed in sections 4.7.2.2, 4.7.2.5, and 4.9.2.8 of the draft EIS. Mitigation measures related to timber harvest are discussed in section 4.7.2.5. As noted in section 4.9.2.8: "For both temporary and permanent effects, Pacific Connector would negotiate with landowners and provide compensation for timber/crop losses or land taken out of use as a result of pipeline construction."

IND471-7  
cont.

IND471-8

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effects on landowners' abilities to remove timber on their land in the future. *See* DEIS 4-422-428.

Even if landowners are properly compensated for their timber, the DEIS fails to address how the landowners are to continue logging and forest maintenance after the Pipeline is in the ground. As noted in Seneca Jones Timber Company's July 2017 letter to FERC, "Actual experience in requesting bids on a harvest area dissected by a gas pipeline, resulted in bids from independent contractors in excess of 300% higher than a typical logging bid for similar equipment and topography. Even in a good lumber market, the profit margin on this area of timber was significantly and detrimentally impacted as a result of a placement of a gas pipeline." *Exhibit 14*, at 3. If a big timber company like Seneca Jones can't figure out how to properly log and turn a profit after the pipeline is in the ground after over a decade of working with pipeline companies trying to figure it out, how could FERC possibly expect private landowners to do so? The DEIS must require the Pipeline company to complete an evaluation and draft a comprehensive plan on how all private landowners with timber will be able to continue logging and maintaining their forest after the Pipeline is in the ground. The Pipeline should obviously have to pay for any needed infrastructure or roads for each landowner to continue their logging activities.

**F. There is Insufficient Analysis of the Effects on Landowners' Planned Property Improvements.**

The DEIS is largely dismissive of the effects that the Pipeline will have on Landowners' plans for their land and for their future. The DEIS states: "Comments received from affected landowners and other interested parties during scoping, expressed concern that the pipeline would affect the ability of landowners to undertake small-scale developments, such as adding a home site, bar, or other structure, or subdividing a lot into two parcels for development. *In some cases*, Pacific Connector modified the route of the pipeline to avoid improvements on private parcels [...]" DEIS at 4-421. None of the above-named landowners were accorded any such leniency by the Pipeline in its plans for their land.

IND471-8  
cont.

IND471-9

**IND471 continued, page 39 of 75**

IND471-9 It is outside the scope of this EIS to evaluate individual impacts on each private parcel crossed or to require or establish landowner-specific mitigation plans. Mitigation measures to reduce impacts on residential properties are discussed in section 4.7.2.4 of the draft EIS. Pacific Connector would negotiate with landowners as part of the easement acquisition process.

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For example, the current proposed route goes straight through where Deb and Ron planned on building their home, and the very reason why they bought their property in the first place. The Pipeline route through the Gows' land will destroy their irrigation system for their ranch. The route currently cuts directly through the Acosta Trust's orchard and airstrip, where there had plans to continue growing their outdoor recreation business, and will destroy a valuable public resource of a potential staging area for emergency services, including fire suppression and search and rescue. The Browns will lose their future investment in old growth timber. The Pipeline cuts Clarence Adams' property in half, goes right by his home, and cuts directly over where they planned to drill another well for irrigation purposes. The Browns have put their family legacy plans of investing in cash crops for the land completely on hold because of the possibility of a Canadian company coming through and ripping open a 95-foot swath through what they just planted. Mrs. McKinley's mother originally purchased the land for retirement, and the Pipeline completely destroyed that dream.

IND471-9  
cont.

For the DEIS to brush off the future plans of landowners as insignificant is an insult to southern Oregonians and all of the blood, sweat, and tears that they have put into their land. The DEIS and the Pipeline should take a serious look at how the Pipeline is not only destroying the fruits of many years of labor of already existing development on people's properties, but also destroying future plans as well.

**G. The DEIS Fails to Analyze the Negative Psychological Effects on Landowners, especially the Elderly, with Physical Manifestations, for a Project that has been Pending for over 15 Years.**

IND471-10

Affected landowners along the Pipeline route have been distraught over this project for nearly 15 years. Rumors of an LNG import project began circulating around 2004, and concern grew among landowners about their health, safety, effect on their environment, and adverse impacts on their way of life and land. This concern and worry have grown exponentially ever since.

As captured by psychiatrist Landy Sparr, M.D., "The significantly protracted nature of the



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potential pipeline project going through their land hanging over their heads, and in combination with their advanced age, makes the landowners more vulnerable and subject to the adverse mental and emotional impacts of having an unwanted intrusion on their property. Further, most individuals become less flexible and adaptable as they age. This combined with an expected increase in medical problems, and now over 15-years of uncertainty about their property erodes each landowner's resilience, resulting in a climate of fear and powerlessness. [...] [T]he pipeline has significantly contributed in a negative way to each landowner's sense of a secure future." *Exhibit 15, Landy F. Sparr, M.D. F.A.P.A., The Psychological Effects of the proposed Pacific Connector Pipeline on Affected Individual Landowners*, June 2019, incorporated by reference. The DEIS fails to take into consideration the adverse effects of the protracted nature of this proposed Pipeline on landowners, their families, and their communities.

#### H. DEIS Reaches an Incorrect Conclusion on Resumption of Land Use.

The DEIS incorrectly concludes "that constructing and operating the Project would not significantly affect land use." DEIS at 5-6. There is little or no basis for this conclusion. For example, neither FERC nor the Pipeline company have given any indication to private companies or landowners on how to resume normal activities such as timber harvesting. As noted in Seneca Jones' Letter to FERC:

Gas pipeline installers are extremely reluctant to allow forest yarding operations, the hauling of heavy equipment, excavation, blasting, or use of vibratory equipment near or across underground gas lines. These are normal forest operations necessary for harvesting and road maintenance activities. PCP requests that landowners identify alternatives or determine in advance potential crossing locations in order to bolster these areas. In a search for alternative solutions, our timberland and access routes are significantly affected which come at an increased cost. Identifying advance potential crossing locations does not adequately address our needs, based on field meetings with PCP representatives, who agree these areas are difficult. Additionally, we have concerns that utilizing heavier walled pipe in areas where intensive forestry occurs may not be a viable solution, as FERC standards do not require this type of construction in less populated areas.

Ex: 14, Seneca Jones Timber Company Letter to FERC.

IND471-10  
cont.

IND471-11

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IND471-11 Comment noted. See also response to previous comments in letter 471.

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If a large company such as Seneca Jones has not been able to solve this significant land use issue with regards to timber, it is a mystery as to how FERC or the Pipeline expect private landowners to solve such complex issues on their own. This includes the Pipeline's interference or destruction of landowners' water sources, ability to irrigate water for animals and agriculture, invasive species on the pipeline route, insecticide and pesticide spraying (almost certainly to be done actually, with resultant (and unwelcome) drift onto Landowners' property, fire mitigation and prevention, unwanted intrusions by 3<sup>rd</sup> parties via the open Pipeline corridor, and so on. Land uses will clearly be significantly impacted by the Pipeline, and the DEIS should offer analysis on such impacts. The Pipeline clearly has no public benefit for Oregonian people, and the Certificate Application should be denied with prejudice, so landowners like those named above can finally live out their days in peace.

## II. THE DEIS DOES NOT SATISFY THE REQUIREMENTS OF NEPA.

### A. The DEIS violated NEPA Because it Explicitly States That the Stated Purpose and Need for the LNG Facility and the Pipeline Are Outside the Scope of the DEIS.

The DEIS states:

The purpose and need of the Jordan Cove LNG Project is to export natural gas supplies derived from existing interstate natural gas transmission systems to overseas markets. The purpose and need of the Pacific Connector Gas Pipeline Project is to connect the existing interstate natural gas transmission systems of Gas Transmission Northwest, LLC and Ruby Pipeline, LLC with the proposed LNG export terminal. DEIS ES-1.

Elsewhere, the DEIS states that Jordan Cove has explained more specifically that the purpose of the LNG Facility is to export gas from the "Rocky Mountain region and Western Canada" to overseas markets, "particularly in Asia." Moreover, this is "a market-driven response" to the increasing natural gas supplies those regions and the growth of Asian demand. DEIS 1-6. But the purpose of the Pipeline is somewhat more specific: "In its application, Pacific Connector states that the purpose of its project is to connect the existing interstate natural gas transmission systems of GTN and Ruby with proposed Jordan Cove LNG terminal."

IND471-11  
cont.

IND471-12

## IND471 continued, page 42 of 75

IND471-12 The CEQ's regulations for implementing NEPA, at 40 CFR 1502.13, only requires that an EIS briefly summarize the purpose and need for a project; which we have done. As described in section 1 of the draft EIS, FERC staff do not make a final determination regarding the Project's need. The decision regarding the Project's need is made by the Commission in the Project Order.

Thus, while the purpose of the LNG Facility is to export Canadian and U.S. gas to Asia, the purpose of the Pipeline is to supply those exports from two particular pipelines at one specific location. This intention is then repeated:

As described previously, the purpose and need of the Jordan Cove Project is to export natural gas supplies derived from existing interstate natural gas transmission systems to overseas markets; and the purpose and need of the Pacific Connector Project is to connect the existing interstate natural gas transmission systems of GTN and Ruby with the proposed Jordan Cove LNG terminal. DEIS 3-2.

The issue of the ultimate purpose of the Project being to export natural gas supplied from a single specific location is discussed further in section B, below. Relevant here is despite the fact that section 3 of the Natural Gas Act (“NGA”) requires FERC to decide whether the Facility is “consistent with the public interest”, and NGA § 7 requires it to decide whether the Pipeline is required “by the public convenience and necessity”, FERC states that comments about “the public benefit or need to export LNG” are “outside the scope of this EIS”, and that “[t]hese issues are not addressed in this EIS.” DEIS 1-18.

This can mean one of two things, *i.e.*, FERC means only that comments about a *generalized* “public benefit or need to export LNG” are outside the scope of the DEIS, or FERC means that comments about “the public benefit or need to export LNG” *from the LNG Facility* are outside the scope of the DEIS. The DEIS is deficient because it does not explain which of these two meanings applies. And, in any event, by saying that the DEIS will not discuss the purpose or need to export natural gas<sup>4</sup> – which is what FERC itself has said is the LNG Facility’s purpose – FERC has violated NEPA’s requirement that “The statement shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” 40 CFR 1502.13. While FERC may have stated the “underlying purpose and need”, certainly NEPA

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cont.

<sup>4</sup> The fact that the ultimate form of the natural gas being exported is in the form of LNG is irrelevant to this analysis.

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IND471-13 Comment noted.

could not be interpreted to mean that the agency is allowed to state what the ostensible purpose and need is and then simply refuse to discuss it any further.

IND471-12  
cont.

**B. The Alternatives Analysis in the DEIS is Fundamentally Flawed Because It is Based on the Unsupported Premise that there is a Market Demand for the Project.**

IND471-13

In addition to being flawed from the outset by FERC's position that the DEIS will not discuss what FERC says is the very purpose of the Facility, the alternatives analysis is then made completely useless by presenting absolutely no support for the primary justification for the Project and each of the alternatives, *viz.*:

Given that the Project is market-driven, it is reasonable to expect that if the Jordan Cove LNG Project is not constructed (the No Action Alternative), export of LNG from one or more other LNG export facilities could also be authorized by the DOE and eventually be constructed. Thus, although the environmental impacts associated with constructing and operating the Project would not occur under the No Action Alternative, equal or greater impacts could occur at other location(s) in the region as a result of another LNG export project seeking to meet the demand identified by Jordan Cove. DEIS 3-4.

There is absolutely no discussion or evidence of any kind anywhere in the DEIS supporting Jordan Cove's claim that the Project is "market driven". Nevertheless, FERC has accepted this claim – the foundation of the entire Project and each of the alternatives discussed – at face value, and then parrots it throughout. Because each of the alternatives FERC presents is expressly based on the completely unsubstantiated claim that there is a "market demand" for the project, FERC's entire alternatives analysis fails.

Nor should FERC be surprised at this. Only 3 years ago, FERC denied authorization for the previous iteration of the Project on the basis that there was no market demand for LNG from the LNG Facility. Order Denying Applications for Certificate and Section 3 Authorization, March 11, 2016 154 FERC ¶ 61,190. It then reaffirmed this conclusion in its decision in its Order Denying Rehearing, December 9, 2016, 157 FERC ¶ 61,194, p. 2 (citation footnote omitted):

The [original] order found that Pacific Connector presented little or no evidence of need for the Pacific Connector Pipeline. Pacific Connector had neither entered into any precedent

agreements for its project, nor had it conducted an open season, which might have resulted in “expressions of interest” the company could have claimed as indicia of demand. . . . The order found that the generalized allegations of need proffered by Pacific Connector did not outweigh the potential for adverse impact on landowners and communities.

In denying rehearing, FERC then reiterated its conclusion that, “Here, the Applicants failed to make any significant showing of demand.” *Id.* p. 10. And the reason, of course, why there was no demand for gas to be transported on the Pacific Connector was that there was no demand for LNG from the LNG Facility.

FERC acknowledges that under the permits issued by the Department of Energy (“DOE”) for the project, “Jordan Cove must also file with the DOE/FE copies of executed long-term contracts for both natural gas supply and the export of LNG.” DEIS I-11. This is correct; DOE/FE ORDER No. 3413, *Exhibit 16*, p. 154, requires that Jordan Cove must report to DOE “all executed long-term contracts associated with the long-term export of LNG on its own behalf or as agent for other entities from the Jordan Cove Terminal” and “all executed long-term contracts associated with the long-term supply of natural gas to the Jordan Cove Terminal.” More specifically, *id.* p. 156 (emphasis added):

M. Jordan Cove shall file with the Office of Oil and Gas Global Security and Supply, on a semi-annual basis, written reports describing the progress of the proposed liquefaction and pipeline project. The reports shall be filed on or by April 1 and October 1 of each year, and shall include information on the progress of the liquefaction and pipeline project, the date the liquefaction facility is expected to be operational, *and the status of the long-term contracts associated with the long-term export of LNG, and any long-term supply contracts.*

All Jordan Cove has reported as of April 1 of this year is that, “JCEP has also continued its negotiations with prospective customers for liquefaction services.” *Exhibit 17*, p. 1. In other words, *there is still no evidence of any demand for the Project’s LNG, and, consequently, no evidence of any demand for gas to be transported on the Pipeline which will provide 100% of its gas to the LNG Facility.*

None of this is surprising. As described in the report *Natural Gas Supplies for the Proposed Jordan Cove LNG Terminal* (McCullough Research, July 3, 2019, p. 5; footnotes omitted; attached as

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Exhibit 18):

On July 2, 2019, the JKM index [price of landed LNG in Japan] was \$4.625/MMBtu. The breakeven price (the price at which the project would earn zero profits and merely recover its costs) for Jordan Cove is \$4.27/MMBtu. The natural gas price at the Malin hub is \$1.99/MMBtu. When the cost of transportation to Japan is added in, the cost of Jordan Cove LNG is \$7.13/MMBtu. If today's prices would prevail into the future, Jordan Cove would lose \$2.50 for every MMBtu shipped.<sup>15</sup>

In short, there is no evidence that there is any market demand for LNG from the LNG Facility, and much evidence – including from Jordan Cove's own reporting – that there is no such demand.

**C. The Alternatives Analysis is Artificially Narrow Because it is Limited to Projects Exporting Natural Gas from the Malin Terminal.**

If the “purpose” of the Project is to “is to export natural gas supplies derived from existing interstate natural gas transmission systems to overseas markets”, or even more specifically export natural gas from the “Rocky Mountain region and Western Canada” through those systems, then the alternatives analysis should have considered any one of the myriad ways that could have been accomplished. But the DEIS then artificially narrows the purpose from exporting Canadian or Rocky Mountain natural gas “from existing interstate natural gas transmission systems” to exporting that natural gas *specifically from the Malin hub*. The DEIS does this by artificially breaking the Project into two components (the Facility and the Pipeline), and then letting the Malin hub pipeline tail wag the LNG Facility export dog. Every one of the alternatives was based on the gas being supplied from that one point in the entire interstate pipeline system which, according to the Bureau of Transportation statistics, in 2017 consisted of over 300,000 miles of pipelines (<https://www.bts.gov/content/us-oil-and-gas-pipeline-mileage>; last visited July 2, 2019). And nowhere does the DEIS ever explain *why* the gas that is to be exported has to come from the Malin

<sup>15</sup> For the sake of argument, this analysis uses the price of natural gas at Malin hub. As the report explains, Jordan Cove will almost certainly be using gas purchased upstream in Canada (id., pp. 1-3, 8-15); even using the lower AECO hub price (\$0.58/MMBtu cheaper than Malin Hub; p. 5), it still means that Jordan Cove would be losing \$1.92 for every MMBtu shipped.

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IND471-14 As stated in the EIS and as required by NEPA, the range of alternatives include those that would achieve the purpose of the Project.

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Hub, as opposed to anywhere else on those 300,00 miles of pipe that is accessible to gas from Canada and the Rocky Mountain Region. By defining the purpose of the project as “piping gas from Malin Hub to Jordan Cove”, FERC has made the DEIS alternatives analysis artificially narrow in order to arrive at a preordained conclusion.

A useful analogy might be a proposed project whose purpose was to build a road to allow people in cities A and B to travel directly between them. Presumably there would be some consideration in the alternatives analysis for that road of whether people in A and B actually had any need or interest in going back and forth, whether they already had an adequate road between them, whether a train might not be a better way to accomplish this, etc. But no alternatives analysis would say, “Well, the project is a road from A to B, and we’re not going to examine if there is actually any demand for it (the ‘market need’ for the Project’s LNG), or whether there is any better way to go between A and B (any other way of exporting Canadian and Rocky Mountain gas) than a new road between them” (the Pipeline). But that is *exactly* the scenario that FERC has laid out in the DEIS. By not examining whether it would be more feasible to meet the alleged need to export Canadian and Rocky Mountain gas *from any other pipeline or pipeline hub in Canada or the U.S.*, the DEIS has artificially constrained the chosen alternatives so as to predetermine its conclusion.

### III. EXPORTING DOMESTICALLY-PRODUCED NATURAL GAS IS NOT A VALID PURPOSE UNDER § 7 OF THE NGA.

#### A. The Purpose of the Natural Gas Act.

When Congress passed the Natural Gas Act (“NGA”) in 1938, its express goal was to protect U.S. gas consumers from predatory pricing that had resulted from a concentration of pipeline capacity into a small number of companies, and the inability of state regulators to reach interstate natural gas transactions. As the Supreme Court observed in *Federal Power Com. v. Hope Natural Gas Co.*, 320 U.S. 591, 610 (1944):

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cont.

IND471-15

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IND471-15 It is the Department of Energy, not the FERC, that regulates the U.S. Energy policy and determine if natural gas can be exported. This decision is outside of the scope of this EIS.