

ATTACHMENT A Compliance with Applicable Substantive Criteria from the Affected Local Governments’ Comprehensive Plan

The applicant has elected to address the Council’s Land Use Standard, OAR 345-022-0030, by requesting Council determination of compliance with statewide planning goals, in accordance with ORS 469.504(1)(b). In this attachment we consider whether the proposed facility complies with applicable substantive criteria from the comprehensive plans for Washington, Marion and Clackamas counties, and with the comprehensive plans of cities along the proposed corridor.

a. Washington County: Applicable Substantive Land Use Regulations

The proposed South Mist Pipeline Extension crosses eight separate land use districts in Washington County, and must comply with applicable requirements for the following districts:

- (1) Generally Applicable standards
- (2) Exclusive Forest and Conservation (“EFC”)
- (3) Exclusive Farm Use (“EFU”),
- (4) Agriculture and Forest-20 (“AF-20”)
- (5) Agriculture and Forest-10 (“AF-10”)
- (6) Agriculture and Forest-5 (“AF-5”)
- (7) Rural Residential (“RR-5”)
- (8) Rural Industrial (“R-IND”), and
- (9) Rural Commercial (“RC”)

The proposed pipeline also crosses or runs parallel to several areas that contain “significant natural resources,” including (1) wildlife habitat (sensitive habitats identified by ODFW and forested areas, coincident with water areas and wetlands), (2) water areas and wetlands (100 year floodplain, drainage hazard areas and ponds, except those already developed), (3) water areas and wetlands and fish and wildlife habitat (water areas and wetlands that are also fish and wildlife habitat), and (4) historic and cultural resources (includes historic resources as described in the Washington County Cultural Resources Inventory (“WCCRI”).

The following discussion first reviews the generally applicable standards and then the permitting requirements for each applicable land use district and overlay zone.

(1) Generally Applicable Standards

(a) WCC § 416-1

Washington County Code (“WCC”) §416-1 contains general provisions for utility design. The only provision potentially applicable to NWN’s proposed pipeline is WCC § 416-1.4, which states:

“The location, design, installation and maintenance of all utility lines and facilities shall be carried out with minimum feasible disturbance of soil and site.”

NWN meets this standard because adverse impacts to soils will be minimized and mitigated in accordance with Section (5) of ORS 215.275 and in accordance with the EFSC Soil Standard, OAR 345-022-0022. The proposed corridor utilizes the current right of way for the existing 16-inch South Mist Feeder Pipeline for approximately the northernmost 9 miles. South of Mountindale Road, new right of way is required. However, the majority of the proposed corridor is centered on public roads, except where NWN determined that it could not use public right of way due to one of the six factors listed in section (2) of ORS 215.275. In areas where the proposed pipeline must be sited on EFU land due to one of these six factors, NWN has committed to detailed steps to minimize and mitigate soil impacts. These steps are discussed in detail under the EFSC Soil standard, and are recommended as conditions to the site certificate. NWN has submitted an agricultural mitigation plan, which requires that any construction on farm land be performed after working with and in consultation with the farmer who farms the property. As conditioned, the proposed pipeline will be constructed with minimal feasible disturbance to soils and site.

(b) WCC § 430-105

WCC § 430-105 contains the special use standards specific to public utilities and is cross-referenced in several of the district-specific permitting requirements. For purposes of WCC 430-105, a “public utility” includes:

“Any corporation, including municipal or semi-municipal corporation, service district, company, individual, or association that owns or operates any plant or equipment...for the transportation of water, gas, or petroleum products by pipeline...”

NWN fits within this definition of a “public utility”. However, WCC § 430-105.6(a) exempts underground pipes and conduits “...except where such pipes or conduits would introduce an urban service outside the Urban Growth Boundary.”

The pipeline will not introduce any service outside the UGB in Washington County. There may be a limited number of connections to properties as part of negotiated settlements, however, the proposed pipeline will not generally include individual service lines outside the UGB.

Regarding individual hook-ups that may be provided as part of negotiated settlements, DLCD has commented that:

“Natural gas service is like electric and phone services that freely crosses over urban growth boundaries in order to provide their respective services. Nothing in statewide goals 11 or 14 restricts these hook-ups. Additionally, both goals 3 and 4 specifically provide for such hook-ups.

For farm areas zoned for exclusive farm use (EFU), ORS 215.283.(1)(y) specifically allows "utility facility service lines" subject to certain conditions (HB 2865).

For forest lands zoned for forest use, OAR 660-006-0025(3)(c) allows for

"local distribution lines" with a specific reference to "natural gas."

My (Ron Eber's) only caution is that the provision of natural gas hook-ups would not increase an area's "development" or "commitment" to nonfarm or nonforest use under LCDC rules regarding "built or committed exceptions" (OAR 666, Division 4)."

In short, the negotiated hook-ups do not create an urban service outside the UGB. Accordingly, the above exemption applies

(2) Washington County Permitting Requirements in the EFC District

From its northernmost point at the Bacona Blowdown station, the proposed corridor is in the EFC district until the intersection of Dairy Creek and Meacham roads. The WCC allows utility facilities to be sited in the EFC district. WCC § 342 governs uses in the EFC district, subject to the following applicable requirements.

(a) WCC § 342-3.

"Uses Permitted Through a Type II Procedure

"The uses listed in Section 342-3.1 are permitted subject to the specific standards for the use set forth below and in applicable Special Use Sections of Section 430, as well as the general standards for the District, the Development Standards of Article IV and all other applicable standards of the Code. Approval may be further conditioned by the Review Authority pursuant to Section 207-5. Unless the use is specifically exempted, the Review Authority shall make specific findings with respect to the standards in Section 342-3.3.

"The uses listed below are subject to the applicable siting and fire safety criteria of Section 428."

NWN's pipeline meets the requirements of WCC § 430 (see discussion of special use standards contained in WCC § 430-105 above), the general standards for the EFC district, the development standards of Article IV and all other applicable standards of WCC. WCC § 428 addresses forest structure siting and fire safety standards and is discussed below. The general standards for this district include prohibited uses, requirements for creation of lots or parcels, dimensional requirements for lots or parcels and access requirements, which do not apply to an underground pipeline. Therefore the pipeline meets the general standards for this district.

(b) WCC § 342-3.2

WCC 342.3-1 lists permitted uses within the EFC district and includes "...new distribution lines (e.g., gas, oil, geothermal) with rights-of-way fifty (50) feet or less in width."

The proposed pipeline expansion is a permitted use because it is a new gas distribution line and because the permanent right-of-way will not exceed 50 feet. Unlike the EFU and

AF-20 zones, neither OAR 660-006-0025 nor the Washington County Code require findings that a pipeline in the EFC zone be “necessary for public service”. However, unlike the EFU and AF-20 zones, the requirements for EFC zone do require findings in accordance with WCC§ 342-3.3 regarding significant changes in farm and forest practices and costs.

(c) WCC § 342-3.3.

“Required Findings:

“The proposed use will not:

“A. Force a significant change in, or significantly increase the cost of, accepted farm or forest practices on agriculture or forest lands; and

B. Significantly increase fire hazard or significantly increase fire suppression costs, or significantly increase risks to fire suppression personnel.”

A. Farm and Forest Practices:

The portion of the pipeline proposed within Washington County's EFC zone will be installed within and adjacent to NW Natural's existing 16- inch pipeline easement. The section of the pipeline within the EFC zone begins at the northern end of the proposed corridor, located at NWN’s existing Bacona station. It will follow NWN’s existing 16- inch right of way until it intersects with an existing public road right-of-way (Dairy Creek Road). This portion of the Preferred Corridor will be located within a narrow valley, near Dairy Creek. As the corridor approaches Meacham Road, it deviates from the road right of way for Dairy Creek Road but continues to follow the existing right-of-way for the 16- inch pipeline. The current easement for the 16-inch line is 40 feet wide, and NWN proposes to add 10 feet, so that the final easement would be 50 feet wide. Due to the location within and adjacent to NWN’s existing right-of-way, and due to the fact that the corridor follows road right-of-way for much of its length, the pipeline will not impact existing farm and forest practices on surrounding lands, and will not increase the cost of farm and forest practices on surrounding lands devoted to farm or forest use. Any potential impacts during the construction phase will be temporary, and NW Natural will restore all surrounding properties and compensate property owners for any impacts. However, temporary, construction-phase impacts likewise will not affect existing farm and forest practices on surrounding lands, and will not increase the cost of farm and forest practices on surrounding lands devoted to farm or forest use.

B. Fire Hazard: WCC § 342-4.3 also requires that the proposed pipeline will not “[s]ignificantly increase fire suppression costs, or significantly increase risks to fire suppression personnel.” NW Natural has operated the existing South Mist Feeder pipeline since 1989 without any fire or other incident requiring action by local fire districts. As confirmed by the Oregon Public Utility Commission, NW Natural maintains its pipeline system in full compliance with pipeline safety regulations and practices. (*See* OPUC Letter (Feb. 9, 2001), ASC Appendix U-9.) In connection with this Application,

NW Natural has obtained letters from fire districts that will serve the Preferred Corridor. These fire districts have confirmed that the proposed pipeline is not expected to increase fire hazards, fire suppression costs, or risks to fire suppression personnel. (See ASC, Appendix U-5, U-6.) None have expressed any reservations about the proposed pipeline expansion. In addition, NWN will conduct continuous monitoring of the pipeline from both its local stations and Portland gas control centers. Supervisors and trained emergency response crews are on call at all times to respond to emergency situations.

From the corridor's northernmost point at Bacona to its intersection with Dairy Creek Road, the proposed corridor is largely in second growth forest used primarily for timber production. The terrain and current use are very similar to the timber land where NWN placed the Phase III South Mist Feeder pipeline loop in 1999. OOE's recommendation for a Council finding that the proposed pipeline will not force a significant change, significantly affect the cost of accepted forest practice, or increase fire hazard or fire suppression cost is based largely on observation that the 1999 project did not significantly increase these impacts.

(3) Washington County Permitting Requirements in the EFU District.

The specific requirements for utility facilities in the EFU district are as follows:

(a) WCC § 340-4: Uses Permitted Through a Type II¹ Procedure

“The uses listed in Section 340-4.1 are permitted subject to the specific standards for the use set forth below and in applicable Special Use Sections of Section 430, as well as the general standards for the District, the Development Standards of Article IV and all other applicable standards of the Code. Approval may be further conditioned by the Review Authority pursuant to Section 207-6. Unless that use is specifically exempted, the Review Authority shall make specific findings with respect to the standards in Section 340-4.2.”

NWN's proposed pipeline meets the special use standards of WCC 430, as discussed above. The general standards for the EFU district include prohibited uses, standards for creation of lots or parcels, dimensional requirements, and access requirements, which do not apply to an underground pipeline. Therefore the proposed pipeline meets the general standards of the EFU district. The development standards of Article IV are discussed below.²

¹Type II actions are described at WCC § 204-3.1. They include specific requirements for notice, comment period, and hearing opportunities. They are not substantive criteria, and the Council's process includes notice, comment periods and hearing procedures as set forth in ORS 469.

² The Article IV Development Standards that may be applicable for the SMPE include WCC § 410 (Slopes and Grading), WCC § 412 (Drainage), WCC § 416 (Utilities), WCC § 421 (Flood Plain and Drainage Hazard Area Development), WCC § 422 (Significant Natural Resources), WCC § 428 (Forest Structure Siting and Fire Safety Standards) and WCC § 430-105 (Public Utility). For the discussion of compliance with WCC § 416 and WCC § 430-105, see above; each of the other potentially applicable Article IV Development Standards are discussed in further depth below.

(b) WCC § 340-4-1

WCC 340-4-1 lists permitted uses within the EFU district. Review of the proposed facility in the EFU district is governed directly by ORS 215.213, as set forth in more detail in Attachment B to this proposed order.

(4) Washington County Permitting Requirements in the AF-20 District

The AF-20 District is an exclusive farm use zone for purposes of ORS chapter 215. As a result, review of the proposed facility in the EFU district is governed directly by ORS 215, as set forth in more detail in Attachment B to this proposed order.

(5) Washington County Requirements in the AF- 10 District

The WCC allows public utilities utility facilities to be sited in the AF-10 district. WCC § 346 governs uses in the EFC district, subject to the following applicable requirements.

(a) WCC § 346-3.

“Uses Permitted Through a Type II Procedure

*“The following uses are permitted subject to the specific standards for the use set forth below and in applicable Special Use Sections of Section 430, as well as the general standards for the District, the Development Standards of Article IV and all other applicable standards of the Code. Approval may be further conditioned by the Review Authority pursuant to Section 207-5. A waiver of the right to remonstrate against commonly accepted farm or forest practices shall be recorded for each permitted use. * * * ”*

NWN’s proposed facility meets the special use standards of WCC 430, as discussed above, and the general standards of the AF-10 district. The general standards for the AF-10 district include prohibited uses, standards for creation of lots or parcels, dimensional requirements, and access requirements, which do not apply to an underground pipeline. Therefore the proposed facility meets the general standards of this district.

(b) WCC § 346-3.4

WCC § 346-3.4 lists as a permitted uses within the AF-10 district:

“Public Utility (except for facilities for the purpose of generating power for public use by sale) – Section 430-105.3 through 430-105.7.”

Response: Unlike the utility facility standard set forth for the EFU district, which requires that the facility be “necessary for public service” if it is not located along public road or highway rights-of-way, the code governing the AF-10 district does not require a demonstration that the facility “must be sited in an agricultural zone in order for the

service to be provided.” This results from the fact that the AF-10 zone was not acknowledged as an exclusive farm use zone. The Washington County zoning code and comprehensive-plan provisions do not incorporate EFU standards. Therefore NWN asserts, and OOE concurs, that the necessity analysis requirement under ORS 215.275 does not apply in the AF-10 zone.

As in other Washington County zoning districts, in the AF-10 zone the applicant must demonstrate that the facility meets the factors set forth in WCC §§ 430-105.3 through 430-105.7. As discussed above, as an underground utility facility that will not introduce an urban service outside a UGB, the pipeline is exempt from these criteria.

(6) Washington County Requirements in the AF-5 District

The Washington County Code allows utility facilities to be sited in the AF-5 district. The specific requirements are as follows:

WCC § 348-3.

"Uses Permitted Through a Type II Procedure

*The following uses are permitted subject to the specific standards for the use set forth below and in applicable Special Use Sections of Section 430, as well as the general standards for the District, the Development Standards of Article IV and all other applicable standards of the Code. Approval may be further conditioned by the Review Authority pursuant to Section 207-5. A waiver of the right to remonstrate against commonly accepted farm or forest practices shall be recorded for each permitted use. * * **

WCC § 348-3.4 Public Utility—Facilities necessary for public service (except for commercial facilities for the purpose of generating power for public use by sale)—Section 430-105.3 through 430-105.7."

Similar to the AF-10 zoning district, and unlike the utility facility standard set forth for EFU districts, the pipeline in the AF-5 zone is not required to meet the definition of “necessary for public service” set forth in ORS 215.275. As with the AF-10 zone, the AF-5 zone was not acknowledged as an exclusive farm use zone.

As in other Washington County zoning districts, in the AF-5 zone the applicant must demonstrate compliance with WCC §§ 430-105.3 through 430-105.7. As provided above, as an underground facility that will not introduce an urban service outside a UGB, the pipeline is exempt from these criteria.

(7) Washington County Requirements in the RR - 5 District

The Washington County Code allows utility facilities to be sited in the RR-5 district. The specific requirements are as follows:

WCC § 350-3.

"Uses Permitted Through a Type II Procedure

"The following uses are permitted subject to the specific standards for the use set forth below and in applicable Special Use Sections of Section 430, as well as the general standards for the District, the Development Standards of Article IV and all other applicable standards of the Code. Approval may be further conditioned by the Review Authority pursuant to Section 207-5. A waiver of the right to remonstrate against commonly accepted farm or forest practices shall be recorded for each permitted use.

"WCC § 350-3.4 Public Utility (except commercial facilities for the purpose of generating power for public use by sale)–Section 430-105.3 through 430-105.7."

The proposed facility may encounter the RR-5 zoning district in two areas of Washington County. South of North Plains, the land adjacent to the Gordon Road alternate corridor segment, the pipeline would pass through a populated area zoned RR-5. West of Hillsboro, there is property zoned RR-5 that is within the analysis area for this standard, as defined in the Project Order. If the Preferred Corridor is used throughout Washington County, there may be no RR-5 land used. However, NWN has submitted an analysis of compliance with the requirements in this zone.

Since the RR-5 district is not zoned for exclusive farm use, it is not required to show that the pipeline meets definition of "necessary for public service" as set forth in ORS 215.275. As in other Washington County zoning districts, in the RR-5 zone, the applicant must demonstrate that the facility complies with the factors set forth in WCC §§ 430-105.3 through 430-105.7. As provided above, as an underground facility that will not introduce an urban service outside a UGB, the pipeline is exempt from these criteria.

(8) Washington County Requirements in the Rural - Industrial District

The Washington County Code does not appear to allow a natural gas pipeline to be sited in the Rural-Industrial district. The specific requirements are as follows:

WCC § 354-3.

"Uses Permitted Through a Type II Procedure

"The uses listed in Section 354-3.1 are permitted subject to the specific standards for the use set forth below and in applicable Special Use Sections of Section 430, as well as the general standards for the District, the Development Standards of Article IV and all other applicable standards of the Code. Approval may be further conditioned by the Review Authority pursuant to Section 207-5. Unless the use is specifically

exempted, the Review Authority shall make specific findings with respect to the standards in Section 354-3.2. A waiver of the right to remonstrate against commonly accepted farm or forest practices shall be recorded for each permitted use.

"WCC § 354-3.1(F) Public Utility – Facilities necessary for public service (except for facilities for the purpose of generating power for public use by sale) – Section 430-105.3 through 430-105.7."

Public utility facilities necessary for public service are not exempt from WCC § 354-3.2. This section requires the following findings:

"A. That the proposed use will support the needs of the rural residents, and agricultural and forest uses;

"B. That the proposed use meets the criteria of being small in size, rural in character, and that it does not require urban services; and

"C. That the proposed use is limited to basic convenience and service needs of the rural and natural resource community and will not cause adverse impacts on surrounding farm and forest activities." (WCC § 354-3.2.)

The analysis area for this application, as defined in the Project Order, includes two parcels with the R-IND zoning to the south of the HDD bore under Dairy Creek, at or near the intersection of Mountindale Road and Highway 26. One parcel is north of Highway 26. The Preferred Corridor is proposed to run adjacent to this parcel, although the final construction easement and pipeline easement areas will avoid this parcel entirely. The second parcel zoned R-IND is situated south of Highway 26.

The pipeline is not exempt from the requirement that it conform with WCC § 354-3.2. NWN has not asserted that the pipeline will be "small in size" or "rural in character." Nor has NWN asserted that the pipeline will be "limited to basic convenience and service needs of the rural and natural resource community and will not cause adverse impacts on surrounding farm and forest activities." NWN proposes to avoid this zone in the final pipeline installation process. The R-IND zoned parcels are entirely surrounded by land zoned EFU and the parcel to the south of highway 26 is bordered by a public road right of way that is not developed. OOE recommends that in this location the pipeline be located within the Milne Road public right of way, thus avoiding both EFU land and R-IND zoned land.

(9) Washington County Requirements in the Rural - Commercial District

The pipeline does not appear to be a permitted use in the Rural-Commercial district. The specific requirements are as follows:

WCC § 352-3.

"Uses Permitted Through a Type II Procedure

"The uses listed in Section 352-3.1 are permitted subject to the specific standards for the use set forth below and in applicable Special Use Sections of Section 430, as well as the general standards for the District, the Development Standards of Article IV and all other applicable standards of the Code. Approval may be further conditioned by the Review Authority pursuant to Section 207-5. Unless the use is specifically exempted, the Review Authority shall make specific findings with respect to the standards in Section 352-3.2. A waiver of the right to remonstrate against commonly accepted farm or forest practices shall be recorded for each permitted use.

"WCC § 352-3.1(P) Public Utility – Facilities necessary for public services (except for facilities for the purpose of generating power for public use by sale) – Section 430-105.3 through 430-105.7."

Public utility facilities necessary for public service are not exempt from WCC § 352-3.2. This section requires the following findings:

"A. That the proposed use will support the needs of the rural residents and agricultural and forest uses;

"B. That the proposed use meets the criteria of being small in size, rural in character, and that it does not require urban services; and

"C. That the proposed use is limited to basic convenience and service needs of the rural and natural resource community and will not cause adverse impacts on surrounding farm and forest activities."

The pipeline is proposed to be located through one parcel within Washington County zoned R-C. This parcel is located at the intersection of Farmington Road and River Road. The property is the location of the Twin Oaks Bar & Grill. (See Figure K-2, Orthophoto Panel 18.) The pipeline must be installed under this property in order to complete an HDD bore under the Tualatin River and associated wildlife habitat areas. The HDD bore will complete at the south edge of this property and will be installed underground through this property, avoiding any construction-phase disturbance to this property. NW Natural will negotiate with the property owner to secure a pipeline easement under the property.

Similar to the R-IND zone, utility facilities are not exempt from the requirement to demonstrate compliance with WCC § 352-3.2. NWN states, and OOE concurs, that it is not possible to reasonably argue that the pipeline is "small in size" and "rural in character," or that the use is "limited to basic convenience and service needs of the rural and natural resource community and will not cause adverse impacts on surrounding farm and forest activities." (WCC § 352-3.2 B, C.)

ORS 469.504(1)(b)(B) provides that a utility facility "shall be found in compliance with the statewide planning goals under ORS 469.503 (4)" if the facility does not comply with "one or more of the applicable substantive criteria but does otherwise comply with the applicable statewide planning goals." See also OAR 345-021-0010(1)(k)(C)(iv). WCC

§ 352-3.2 constitutes an "applicable substantive criteria" for the approval of the proposed pipeline. The proposed pipeline cannot satisfy this provision of Washington County's Code. NWN has therefore requested that the Council find that the proposed facility complies with the applicable statewide planning goals in this district, as shown below.

Goal 1, Citizen Involvement:

"To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process."

This goal is met because the Council's siting process under OAR 345 Divisions 15, 20, 21 and 22 provides for public notice, comment, hearings and other opportunities for both formal and informal participation in both the planning phase and the review phase of this project. As described in detail in Section II of this proposed order, the review process for this project exceeded the Council's requirements. Affected members of the public had ample opportunity not only to comment on the application but to actually influence the NWN application. The Council's rules provide sufficient notice and comment periods to satisfy Goal 1 as it applies to the applicant's proposal.

Goal 2, Land Use Planning:

"To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions."

This Goal governs the land-use planning process. Goal 2 is not applicable to the proposed facility because the applicant is proceeding under a specific, statutorily created land-use option, ORS 469.504(1)(b)(B).

Goal 3, Agricultural Lands:

"To preserve and maintain agricultural lands."

This Goal is designed for the protection of agricultural lands. With respect to the R-C zone, NWN is seeking a Council determination of Goal compliance not for such lands per se, but rather for a small portion of the proposed facility that crosses one parcel in Washington County that is zoned R-C. The R-C zone is intended to allow limited commercial uses in rural areas, so long as such uses support the needs of rural residents and agricultural and forest uses. The proposed facility is proposed to cross this parcel in order to enable the most direct route between public rights-of-way, to minimize impacts on lands zoned EFU, and to enable the proposed facility to avoid native habitat areas and the Tualatin River. These objectives are accomplished in part by installation through HDD boring. The underground installation through the parcel zoned R-C is necessary to implement the requirements of ORS 215.275, to avoid, mitigate, and minimize impacts to EFU-zoned lands

Goal 4, Forest Lands:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

This Goal is designed for the protection of forest lands. With respect to the R-C zone, NW Natural is seeking a determination of Goal compliance not for forest land, but rather for a small portion of the Project that crosses land zoned R-C. The R-C zone is intended to enable limited rural commercial activities, compatible with use of the land for farm and forest purposes. The pipeline, by necessity, crosses forest lands within Washington County. However, the R-C-zoned parcel is not in forest use or production and has no bearing on the implementation of Goal 4, except to the extent that the uses allowed within this zone must be compatible with the surrounding area, which is zoned for agricultural and forest uses. The proposed pipeline will not disturb any forest lands in this vicinity of the Project.

Goal 5, Open Spaces, Scenic, Historic and Natural Resources:

"To conserve open space and protect natural and scenic resources."

The portion of the Project subject to this Goal compliance request is the R-C zone, consisting of a single developed parcel. This parcel does not include any county-identified open spaces, historic areas or natural resources. The pipeline will be installed through this property via HDD boring and thus will have no impact on the scenic values in the R-C zoning district. The route through this zone will enable the conservation of open spaces and scenic and natural resources through an HDD bore intended to protect these resources. Routing through this zone will also enable the most direct route possible for connecting pipeline placement between public rights-of-way. The project as a whole is consistent with this goal because it must meet the Council's Habitat and Scenic Resource standards.

Goal 6, Air, Water and Land Resources:

"To maintain and improve the quality of the air, water and land resources of the state."

The portion of the proposed pipeline crossing the R-C zone will consist of buried pipeline and will not involve any discharge to air or water. More broadly, this portion of the Project will not degrade any air, water or land resources. In addition, Goal 6 requires that land-use approval should require compliance with state environmental-quality statutes and regulations. The applicant has acquired or will acquire all necessary permits for the proposed Project.

Goal 7, Areas Subject to Natural Disasters and Hazards:

"To protect life and property from natural disasters and hazards."

This Goal is intended to ensure that developments which could be damaged by natural disasters with the potential for resultant injury to persons or property are approved only where appropriate safeguards are in place. The portion of the proposed pipeline crossing the R-C zone is not located in a county-identified natural hazard area, except for possible location within a floodplain area (Figure K-13; Appendix K-10, Figure 1). However, NWN proposes to cross this property by using an HDD bore, which will have no effect on drainage or potential for flood hazard. In addition, the applicant has surveyed the proposed Preferred Corridor and has discovered no such hazard areas within this zone. NW Natural has proposed adequate safeguards for those portions of the pipeline crossing hazard areas, including flood hazard impact mitigation measures. The proposed pipeline generally is designed in compliance with Washington County Code requirements for floodplain WCC § 421 and erosion control WCC § 410 and §412.

Goal 8, Recreational Needs:

"To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts."

The applicant's proposal does not involve the siting of a recreational facility. The pipeline will not have adverse impact on any important recreational opportunities because it must meet the Council Recreational Standard OAR 345-022-0100.

Goal 9, Economic Development:

"To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare and prosperity of Oregon's citizens."

This Goal provides certain guidelines for local governments to follow to stimulate orderly economic growth. In particular, the planning guidelines in the Goal emphasize the use of "geographically appropriate" sites for major facilities and also the expansion and increased productivity of existing facilities. NW Natural's proposal meets these Goals because it involves the addition of much-needed capacity to serve existing and projected natural gas customers. Those operations are geographically appropriate in that they are sited where they must be: along the most direct route possible to address physical Constraints as well as locational criteria set forth in HB 2865, adopted as a matter of statewide policy. The applicant's proposal will result in the orderly and effective economic development and expansion of one of Oregon's important natural resources. In addition, the Project will ensure that NW Natural will be able to provide reliable gas service to its commercial and industrial customers in the Portland metropolitan area, thereby providing a service necessary for NW Natural's customers to maintain their

economic productivity and for NW Natural to serve the growing energy needs of Oregon's citizens.

Goal 10, Housing:

"To provide for the housing needs of citizens of the state."

This Goal is intended to assist local governments in developing plans to provide adequate housing. In particular, Goal 10 requires local governments to inventory their buildable lands and to decide which lands must be used for residential development to meet projected housing needs. With respect to the R-C zone, the proposed pipeline will have no impact on the provision of housing needs. The applicant's proposal will not prevent residential development on these lands and will not result in any land being removed from the county's inventory of buildable land. The Project will not interfere with the county's ability to provide needed housing for its citizens.

Goal 11, Public Facilities and Services:

"To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development."

The proposed pipeline will not have any effect on the need for new public facilities or services or on the county's ability to provide them. The pipeline will not require public water or sewer facilities. Impacts on public roads will be temporary, and all construction in public roads will be closely coordinated with State and County road departments and in compliance with permitting requirements of those departments. Also, in the R-C zone NWN proposes to cross the property using HDD boring, which will not affect roads or any other public services. Generally, the pipeline will not affect the county's ability to provide public services because it must meet the Council's Public Services standard, OAR 345-022-0110.

Goal 12, Transportation:

"To provide and encourage a safe, convenient and economic transportation system."

The pipeline will not require the construction of any new roads or other transportation facilities, nor will it create any long-term conflicts with such facilities in the county. Construction of the Project will involve certain short-term impacts on several roads and highways in the county. However, these impacts are temporary and are similar to the impacts of road construction in general. Both ODOT and the Washington County road department have stated no objection to the proposed corridor, and NWN has committed to cooperating with both departments in the final design and construction phase. All construction in road right of way will be conducted in accordance with permits from those agencies.

Goal 13, Energy Conservation:

"To conserve energy."

The proposed pipeline is consistent with this goal because its purpose is to enable efficient storage of natural gas during the summer when the demand is low. This enables the company to meet peak demands without being subject to a fluctuating spot market in the winter. The project's purpose is also to increase the efficiency of NWN's distribution system to rapidly growing suburbs in the western Metro area. In reviewing the Integrated Resource Plan, the Oregon Public Utility Commission required NWN to consider alternatives to the proposed pipeline, including demand-side management. NWN proposed, and the OPUC concurred, that demand side management options would be implemented to the extent that they are cost-effective. Therefore the pipeline is consistent with the Energy Conservation Goal.

Goal 14, Urbanization:

"To provide for an orderly and efficient transition from rural to urban land use."

This Goal governs the transition from rural to urban land use in areas outside of established Urban Growth Boundaries. The applicant's proposal does not involve any developments that will alter the existing character of the rural residential and rural commercial areas it crosses. Therefore the Project will not have any impacts addressed under Goal 14.

Goals 15 through 19:

These Goals are not applicable to the proposed pipeline in this district because it is not located in any of the geographical areas covered by these Goals. The proposed corridor crosses the Willamette Greenway, which is governed by Goal 15. However, the R-C zone in Washington County is not near the Greenway, and the pipeline's compliance with this Goal in general is addressed under the Council's Recreational Standard OAR 345-022-0100.

Statewide Planning Goals: Conclusion:

OOE recommends that the Council find that the proposed facility does not comply with WCC § 352-3.2, but does otherwise comply with the applicable Statewide Planning Goals.

Finally, as in other Washington County zoning districts, in the R-C zone the applicant must demonstrate that the facility is "necessary," based on the factors set forth in WCC §§ 430-105.3 through 430-105.7. As discussed above, as an underground utility facility

that will not introduce an urban service outside a UGB, the pipeline is exempt from these criteria.

(10) Washington County's Regulation of Significant Natural Resources

WCC § 422 addresses significant natural resources and governs development or uses within such resources. The proposed pipeline crosses or runs parallel to three separate Significant Natural Resources categories: water areas and wetlands,³ which include the 100-year floodplain;⁴ wildlife habitat; and water areas and wetlands and fish and wildlife habitat⁵.

The following discussion addresses the specific requirements in WCC § 422 applicable to the proposed pipeline.

(a) WCC § 422-1.

“Development within riparian areas, Water Areas and Wetlands, or Water Areas and Wetlands and Fish and Wildlife Habitat shall comply with applicable state and federal regulatory guidelines.”

The proposed pipeline will cross approximately 50 wetland areas subject to the jurisdiction of the Oregon Division of State Lands (the “DSL”)⁶. DSL has reviewed wetland delineations performed by NWN and has recommended that the project meets DSL requirements for issuance of a removal/fill permit. NWN has also applied for and must secure Army Corps of Engineers’ approval of its Project activities in wetlands under section 404 of the Clean Water Act.

As discussed below, the proposed pipeline must comply with the Council’s Fish and Wildlife Habitat Standard, OAR 345-022-0060. This standard requires consistency with ODFW Habitat Mitigation Goals at OAR 635-415-0025. In defining these goals, ODFW has defined six categories of habitat, with category 1 being the most valuable and category 6 being the least. In support of compliance with this standard, NWN has categorized the analysis area for the pipeline corridor in terms of these six categories. In section IV.A.7 of this order, we have reviewed the mitigation plans proposed by NWN and has recommended conditions needed to ensure compliance with the Council’s Fish and Wildlife Habitat Standard, OAR 345-022-0060. OOE has recommended a Council finding that the project, taking into account the mitigation imposed by these conditions, is consistent with ODFW’s fish and wildlife habitat mitigation goals. Development of the

³ “Wetlands” are defined as “[t]hose areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” WCC § 106-215.

⁴ “Floodplain” is defined as “[t]he flood-hazard area adjoining a stream or drainageway feature that is subject to inundation by a regional flood including the floodway and floodway fringe.” WCC § 106-83.

⁵ Although the pipeline will cross riparian areas as defined at WCC § 106, a separate analysis for riparian areas is not required because WCC 422 does not have a separate set of criteria for riparian zones.

⁶ The exact number of wetlands will vary, depending on the final alignment.

proposed pipeline therefore will comply with applicable state and federal regulatory guidelines.

WCC § 422-3 contains the criteria for development in significant natural resource areas. The criteria applicable to this Project are addressed immediately below.

(b) WCC § 422-3.1.

“The required master plan and site analysis for a site which includes an identified natural resource shall:

A. Identify the location of the natural resource(s), except in areas where a Goal 5 analysis has been completed and a program decision adopted pursuant to OAR 660, Division 23 (effective September 1, 1996);

B. Describe the treatment or proposed alteration, if any. Any alteration proposed pursuant to Section 422-3.1B shall be consistent with the program decision for the subject natural resource.

C. Apply the design elements of the applicable Community Plan; or the applicable implementing strategies of the Rural/Natural Resource Plan Element, Policy 10, Implementing Strategy E which states:

‘Implement the recommendations of the Oregon Department of Fish and Wildlife Habitat Protection Plan for Washington County to mitigate the effects of development in the Big Game Range within the EFU, EFC and AF-20 land use designations.’ ”

Part A of this ordinance requires NWN to identify the location of natural resources. NWN has met this by providing a detailed inventory of all significant natural resources in the proposed corridor in Exhibit P of the Application for Site Certificate, and by describing potentially affected wetlands and habitat in detail as part of its demonstration of compliance with the Council’s Fish and Wildlife Habitat standard. Exhibit P identifies all wetlands and water areas and fish and wildlife habitat and categorizes those areas according to species of concern. The habitat areas are categorized for importance in according to the six habitat categories that ODFW has defined at OAR 625-415-0025. In a series of 171 detailed aerial surveys, Exhibit P identifies all stream crossings and water areas. For those crossings that are considered Category 1 habitat (most significant) NWN has committed to avoid alteration by boring under the stream.

Part B of this ordinance requires NWN to describe the treatment or proposed alteration. Because this is an underground facility, NWN is not proposing permanent alteration and will be required by conditions under the EFSC Soil standard and Fish and Wildlife habitat standard to implement habitat restoration and revegetation plans approved by EFSC in consultation with ODFW. Exhibits P and O of the application for site certificate describe in detail the anticipated impacts to water areas, wetlands, and fish and wildlife habitat; and describe the proposed mitigation required by EFSC’s Fish and Wildlife Habitat Standard and by the requirements for a Department of State Lands (DSL) Removal/Fill permit. The proposed pipeline will cross 50 stream and/or wetland areas. NWN will avoid all impacts to as many of these resources as possible by boring under the resource areas. Where directional drilling is not practical due to physical constraints, the site certificate will include conditions under EFSC’s Fish and Wildlife Habitat standard

and the DSL Removal/Fill permit to avoid impacts to resource areas. The directional drilling method involves injecting bentonite (a clay-like slurry that acts as lubricant) into the bore hole, and there is some risk of bentonite traveling through natural cracks in the stream bed and reaching the stream, increasing turbidity. OOE observed several HDD bores during the construction of the Mist-to-Bacona pipeline in 1999 and observed that these occurrences were highly localized. In all cases, bentonite injection was quickly stopped, the bentonite in the stream was isolated and stream clarity was restored promptly.

Part C of this ordinance requires implementation of ODFW recommendations to mitigate the effects of development in Big Game Range. The northerly portion of the Preferred Corridor (the Dairy Creek Valley area) also falls within big-game range designations in Washington County. (See Exhibit K-14.) Plan Policy 10, Implementing Strategy E, which applies to both fish and wildlife resources requires Washington County to implement the recommendations of ODFW's "Habitat Protection Plan." ODFW's Habitat Protection Plan provides recommendations for five wildlife categories, including big game, upland game, waterfowl, fur-bearers, and nongame wildlife. Most of the recommendations in the ODFW Habitat Protection Plan refer to dwellings, residential developments, and surface structures such as roads or bridges. The proposed pipeline will have less impact on big game than these types of developments. The recommendations largely address density, new roads, off-road vehicle use, etc. and therefore would not apply to an underground pipeline. However, the general goal of the recommendations is to maintain soil stability and riparian vegetation along streams and ensure compliance with fish habitat management policies established by state and federal agencies. As discussed in detail in Exhibit P, mitigation goals vary with each wildlife-resource category. Exhibit P documents the measures NWN proposes to avoid impacts on fish resources, pursuant to the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025. Based on the conditions recommended in section IV.A.7 of this order, OOE recommends the Council find that NWN's application satisfactorily addresses the requirement to implement ODFW Habitat Protection recommendations.

(c) WCC § 422-3.3.

“Development within a Riparian Zone, Water Areas and Wetlands, and Water Areas and Wetlands and Fish and Wildlife Habitat:

“A. No new or expanded alteration of the vegetation or terrain of the Riparian Zone (as defined in Section 106)^[7] or a significant water area or wetland (as identified in the applicable Community Plan or the Rural/Natural Resource Plan Element) shall be allowed except for the following:

⁷ “Riparian zone” is defined as “[t]he area, adjacent to a water area, which is characterized by moisture-dependent vegetation, compared with vegetation on the surrounding upland, as determined by a qualified botanist or plant ecologist, or in no case less than a ground distance of twenty-five (25) feet on either side of the channel. Where, in its existing condition, a wetland or watercourse has no discernible channel which conveys surface water runoff, the riparian zone shall be measured from the center of the topographic trough, depression or canyon in which it is located.” WCC § 106-185.

“* * * * *

“(3) Installation or construction of the following utilities: sewer and water lines, electric, communication and signal lines; and gas distribution and transmission lines.

“* * * * *

“B. Where development or alteration of the riparian zone is permitted under the above exceptions, the flood plain and drainage hazard development criteria shall be followed.”

This section allows NWN to alter the vegetation or terrain of a riparian zone, a significant water area or a wetland for the proposed pipeline. The floodplain and drainage hazard development criteria are set forth in WCC § 421, which is discussed below.

(d) WCC § 422-3.5

“Any development requiring a permit from Washington County which is proposed in a Significant Natural Area, as identified by the applicable Community Plan or the Rural/Natural Resource Plan Element, shall reduce its impact, to the maximum extent feasible, on the unique and fragile character or features of the Significant Natural Area. Appropriate impact reducing measures shall include:

A. Provision of additional landscaping or open space; and

B. Relocation of the proposed site of a building, structure or use on the lot.

The proposed corridor is not located in any Significant Natural Area as identified in the code.

(e) WCC § 422-3.6.

“For any proposed use in a Significant Natural Resource Area, there shall be a finding that the proposed use will not seriously interfere with the preservation of fish and wildlife areas and habitat identified in the Washington County Comprehensive Plan, or how the interference can be mitigated. This section shall not apply in areas where a Goal 5 analysis has been completed and a program decision has been adopted that allows a ‘conflicting use’ to occur pursuant to OAR 660-23-040(5)(c) (effective September 1, 1996).”

The proposed corridor is located in areas designated as Water Areas and Wetlands, Fish and Wildlife Habitat, and Water Areas and Fish and Wildlife Habitat in the code. The proposed pipeline will not seriously interfere with the preservation of fish and wildlife habitat because NWN must construct the pipeline in accordance with conditions under Council’s Fish and Wildlife Habitat Standard, OAR 345-022-0060, which requires that the project, taking into account mitigation, is consistent with ODFW’s fish and wildlife habitat mitigation goals. OOE recommendations on findings and conditions under OAR 345-022-0060 are provided in detail in section IV.A.7 of this Order. Mitigation offered by NWN and required by conditions in section IV.A.7 will ensure that the Project will not seriously interfere with the preservation of fish and wildlife areas and habitat identified in the Washington County Comprehensive Plan.

(f) WCC § 422-5.

“Development within a riparian area, Water Areas and Wetlands, or Water Areas and Wetlands and Fish and Wildlife Habitat, shall obtain all required local, state and federal permits.”

NWN has applied for and must obtain removal/fill permits from DSL , wetlands permits from the U.S. Army Corps of Engineers, a limited water right from the Water Resources Department and a WPCF permit for water discharge from DEQ. OOE recommends that the site certificate be conditioned to require that all such permits be obtained prior to start of construction.

(11) Floodplain and Drainage Hazard Development

WCC § 421 addresses floodplain and drainage hazard area development.

(a) WCC 421-1

The lands subject to this standard are set forth at WCC § 421-1.

421-1.1 *The maps entitled “Flood Plain Series, Washington County, Oregon” Revision 5/01/74, 1/03/78, 1/81 and 5/25/83 and 12/12/83 based upon data from the U.S. Army Corps of Engineers; U.S.G.S.; U.S.B.; S.C.S.; and Washington County, together with the Flood Insurance Rate Maps, with amendments, and the “Flood Insurance Study for Washington County,” with amendments, including the Flood Boundary and Floodway Map, as provided for in the regulations of the Federal Emergency Management Agency (FEMA) (44 CFR part 59-60) hereby are adopted by reference as setting forth the flood plain, floodway and drainage hazard areas of Washington County. But where the maps are not available, the Director may use any base flood elevation and floodway data available from a federal or state source, or any other authoritative source, to determine the boundaries of the flood plain, floodway and drainage hazard areas of Washington County.*

421-1.2 *Recognizing that the scale may be such that the true and accurate flood plain or drainage hazard area cannot be determined from the maps referenced in Section 421-1.1 alone, all persons seeking a Development Permit for lands within said areas and two-hundred-fifty (250) feet of the map boundary of a flood plain or drainage hazard area identified in Section 421-1.1 except as noted below for land divisions and property line adjustments, shall submit with the Development Permit application:*

A. *A delineation of the flood plain and the floodway boundaries, established by a registered engineer or a registered surveyor from the surface elevations prepared by the County for the flood plain based upon maps referenced in Section 421-1.1, and upon any other available authoritative flood data approved by the Director, including but not limited to high water marks, photographs of past flooding or historical flood data; and*

B. A delineation of the drainage hazard area and drainageway by a registered surveyor or a registered engineer from surface elevations prepared by a registered engineer. Such delineation shall be based on mean sea level datum and be field located from recognized landmarks.

C. Land divisions and property line adjustments outside the UGB may provide only generalized flood plain information, such as contour maps and aerial photos, which need not be prepared by an engineer. Notwithstanding this provision, for the purpose of implementing the requirements of Section 421-14.7, applicants may be required to submit detailed delineations as specified in 421-1.2 A. and B.

NWN has applied for a 200-foot wide corridor. The detailed delineations described in WCC 421-1.2A and B will depend on the actual pipeline alignment. Therefore NWN has committed to providing the County with these detailed delineations as part of the engineering design. OOE recommends that the site certificate include this commitment as a condition.

(b) WCC § 421-3.

Section 421-3.1 requires that topographic information within the boundaries of the flood area be submitted by a registered civil engineer, and specifies the content and format of the information.

As noted above, NWN has requested a 200 foot-wide corridor. Detailed contour information regarding the area on which construction would occur depends on the exact alignment within the corridor. Therefore this information requirement can only be met by a condition requiring submittal of detailed contour maps meeting the specifications of WCC 421-3.1, to be prepared by a registered civil engineer, prior to start of construction.

Section 421-3.2 requires a demonstration of compliance with “***applicable review standards of section 421-7 through 421-14.”

The discussion of Sections 421-7 through 421-14 is provided below.

Section 421-3.3 states that: “Erosion plan as required by Section 410-1.6B. or Section 426, whichever is applicable.”

The discussion of NWN’s erosion plan under Sections 410 and 426 is provided below.

Section 421-3.4 requires : “Drainage plan as required by Section 412.”

The requirements of Section 412 are described below.

(c) WCC 421-5.

“Uses and Activities Allowed Through a Type II Procedure

“Unless specifically prohibited in the applicable Community Plan, the Rural/Natural Resource Plan Element or Section 422, a development permit may be approved in a flood area through a Type II procedure for the following:

“ * * * **

“421-5.11 Construction or major improvement or alteration of underground pipes and conduits, including sewer, water and gas lines, transmission and distribution lines for geothermal resources, gas and oil, underground electrical, telephone and television transmission and distribution lines, including necessary accessory structures and drainage systems.”

NWN’s proposed pipeline is not specifically prohibited in the applicable Community Plan, the Rural/Natural Resource Plan Element or WCC § 422, which governs significant natural resources (discussed above). This subsection therefore allows for the approval of NWN’s proposed pipeline in a flood area.

(d) WCC 421-7.

WCC § 421-7 contains the development standards for all Type II and Type III Floodplain and Drainage Hazard Area uses and activities. Generally, NWN has provided a “Flood Hazard Impact Mitigation Plan” which includes pipeline construction measures within flood areas and drainage hazard areas to assure that the installed pipeline does not change drainage patterns. The following 11 mitigation measures are set forth in the Flood Hazard Impact Mitigation Plan. NWN has committed to using these measures in flood and drainage hazard areas, singly or in combination, based on specific conditions that exist along the pipeline:

- (1) **Trench Surface Restoration.** The backfill crown height will be limited to six inches above previous grades. It is the geotechnical engineer's opinion that a six-inch-high by 48-inch-wide berm that exists for one season has little to negligible potential for modifying flood patterns. It is possible that the trench backfill could settle more than six inches, resulting in a linear depression over the pipe, in which case releveling will be required in the second year to reestablish surface grades.
- (2) **Balanced Grading.** Earthwork for permanent facilities will be balanced so that there is no net change to drainage patterns or flood velocities.
- (3) **Stockpile Site Selection.** Excess trench spoils generated within the flood hazard and drainage hazard areas will be stockpiled at approved sites that are outside the hazard areas. Erosion control measures will be provided at the stockpile sites.
- (4) **Culvert Protection/Repair.** Roadway culverts will be identified and protected during trenching. Those that are damaged during trenching will be reestablished after the

pipe is placed and the road ditch restored. Culvert adjustment may also be necessary if road ditches are improved and grades are slightly different.

(5) **Drain Tile Protection/Repair.** The pipeline contractor will coordinate with landowners to identify and protect existing drain tile systems. Drain tiles that are disturbed by trenching will be repaired or replaced. A qualified drain tile specialist with significant local experience will make drain tile repairs or replacements. The Agricultural Assessment (Appendix K-9) provides additional details regarding the preservation and restoration of subsurface drainage systems.

(6) **Field Drainage Restoration.** A qualified and experienced agricultural specialist with significant local knowledge will restore surface drainage in fine-graded agricultural fields. Surface drainage restoration is part of the Agricultural Assessment.

(7) **Valve Site Selection.** Valve sites are typically located outside of the flood hazard areas. The valves located within flood hazard areas will be buried, and the aboveground controllers will be covered by six-foot and nine-foot boxes. The above-grade controller boxes that are located inside the hazard area will not be large enough to trap substantial debris or redirect floodwaters. Grading for valve sites in the flood hazard areas will be balanced as discussed in Mitigation Measure 2 above. All four aboveground valve sites will be outside the flood hazard areas.

(8) **Bore Facility Demolition.** In HDD areas, bore pads will be demolished and drilling-fluid reservoirs will be backfilled to restore surface grades.

(9) **Access Road Demolition.** Access roads along the alignment and other temporary facilities will be completely removed to restore surface grades. Soil restoration will be performed following grade restoration as described in the Agricultural Assessment. Temporary access roads that cross drainage hazard areas during the wet season will be depressed or culverted as needed to maintain surface drainage during the construction period.

(10) **Wetland Drainage Protection.** Water breaks will be installed at wetland boundaries where there is a potential for seepage out of the riparian area along the backfilled trench. Water breaks typically consist of a wall of sandbags placed across the trench from the bottom to within 12 inches of the surface. The sandbags are placed manually in direct contact with the pipe and the trench sidewalls to provide a low-permeability seal against seepage parallel to the pipe.

(11) **Anchorage.** Areas susceptible to flooding will be provided with concrete anchor blocks to resist buoyancy forces. These blocks will be the same as those used in stream

and wetland crossings. Anchor block spacing will be designed considering the depth of soil cover and the anchor block mass.⁸

OOE recommends that these measures be adopted as conditions in the site certificate. The specific criteria contained in WCC § 421-7 that are applicable to this Project are addressed below. WCC § 421-7 provides:

“The applicant for a proposed flood plain or drainage hazard area development shall demonstrate compliance with the following applicable standards[.]”

WCC § 421-7.1.

“Development proposed to encroach into a regulatory floodway adopted and designated pursuant to FEMA regulations shall demonstrate through hydrologic and hydraulic analysis, performed in accordance with standard engineering practice by a registered civil engineer, that the cumulative effect of the proposal, when combined with all other existing and anticipated development within the basin based upon full development of the basin as envisioned in the applicable Community Plan or the Rural/Natural Resource Plan, will not result in any increase in flood levels within the community during the occurrence of the base (regional) flood discharge. Notwithstanding this provision, development that would result in such an increase may be approved if the County, at the sole expense of the applicant, first obtains FEMA approval in accordance with 44 CFR Ch. 1, Part 65 (October 1, 1990, edition, or its successor). No increase to the flood plain elevation shall be permitted unless the area in which the rise will occur contains no structures and the owner of such property signs a written acceptance of any increase in the flood plain elevation. These properties are not required to be part of the application for the proposed development.”

Within the Federal Emergency Management Act (“FEMA”) 100-year regulatory floodway, excess soils generated by trench excavation and backfill will be hauled off of the pipeline alignment and disposed of in an approved area outside the floodway. Surface conditions will be restored to preconstruction slopes and grades and will be revegetated. Consequently, the installation of the pipeline will not change the volume, grading or vegetation of the floodway and therefore will not increase flood levels.

WCC § 421-7.2.

⁸ To avoid repetition, the proposed "Mitigation Measures" discussed in the Flood Hazard Impact Mitigation Plan, Appendix K-10, are referenced by number in responding to all of Washington County's substantive flood and drainage hazard area regulations. The proposed mitigation measures are similarly referenced in the responses to substantive criteria applicable in Marion and Clackamas counties.

“Development proposed on a flood plain site where the development does not encroach into an adopted FEMA regulatory floodway shall demonstrate through hydrologic and hydraulic analysis, performed in accordance with standard engineering practice by a registered civil engineer, that the cumulative effect of the proposal, when combined with all other existing and anticipated development within the basin based upon full development of the basin as envisioned in the applicable Community Plan or the Rural/Natural Resource Plan, will not increase the flood plain elevation more than one (1) foot at any point in the community. Notwithstanding this provision, an increase in excess of one (1) foot may be approved if the County, at the sole expense of the applicant, first obtains FEMA approval in accordance with 44 CFR Ch. 1, Part 65 (October 1, 1990, edition, or its successor). No increase in the flood plain elevation shall be permitted unless the area in which the rise will occur contains no structures and the owner of such property signs a written acceptance of any increase in the flood plain elevation.”

The cumulative effect of pipeline segments not inside the adopted FEMA regulatory floodway will not increase the floodplain elevation by more than one foot. The most likely way that development outside the floodway could affect drainage patterns is through surfacing changes (*e.g.*, paving) that significantly reduce infiltration and increase runoff into the floodway. Surface infiltration rates will not change because changes in surfacing are not planned. Without increased runoff, the pipeline segments outside the floodplain will not increase floodwater volume or flow rate.

WCC § 421-7.3.

“Development proposed on a drainage hazard area site shall demonstrate through hydrologic and hydraulic analysis, performed in accordance with standard engineering practice by a registered civil engineer, that the cumulative effect of the proposal, when combined with all other existing and anticipated development within the basin based upon full development of the basin as envisioned in the applicable Community Plan or the Rural/Natural Resource Plan, will not result in any increase to the drainage hazard area elevation at any point in the community. Notwithstanding this provision, an increase may be approved if the area in which the rise will occur contains no structures and the owner of such property signs a written acceptance of any increase in the drainage hazard area elevation.”

If the pipeline crosses a stream or drainage hazard area, it will be installed under the channel and the channel will be returned to its original condition. The cumulative effect of pipeline segments through drainage hazard areas will not result in any increase to the drainage hazard area elevation. Drainage hazard areas are treated the same way as FEMA regulatory floodways. Maintaining existing grades and surfaces as described in

mitigation measures 1, 2, and 3 above will not change the drainage patterns of the drainage hazard areas.

WCC § 421-7.4.

“Encroachments into a floodway shall be designed so as to minimize the risk that the encroachment will catch substantial debris or otherwise significantly impede flood water flows. Designs may include, but are not limited to, adequate sizing of openings, secured break-away bridges, diverters or spacing of supports.”

The entire pipeline will be buried. The aboveground controller boxes will not be large enough to catch debris or impede floodwater flow. Pipeline segments through the floodway will be designed so as to minimize the risk of catching substantial debris or otherwise significantly impeding floodwater flows. Measure 7 above states that the aboveground valve stations will be outside the hazard areas.

WCC 421-7.5.

“The proposal will not increase the existing velocity of flood flows so as to exceed the erosive velocity limits of soils in the flood area.”

The existing grades and dimensions of the floodway will not be changed. Therefore, flow velocities will not be increased. Trench excavations that have disturbed vegetation will be revegetated. Therefore, erosive velocities will not be exceeded due to absence of vegetation. The pipeline will not increase the existing velocity of flood flows so as to exceed the erosive velocity limits of soils in the flood area. Surface material changes are not planned, so flood flow velocity will not change.

WCC § 421-7.6.

“All cut and fill shall be structurally sound and designed to minimize erosion. All fill below the flood surface elevation shall be accompanied by an equal amount of cut or storage within the boundary of the development site unless:

“A. The proposed cut and fill is found to be in compliance with an adopted Drainage Master Plan; or

“B. Off-site excavation will be utilized to balance a fill, provided:

“(1) The off-site excavation area will be part of the application for the development proposing to place the fill;

“(2) The off-site excavation area will be located in the same drainage basin as the proposed fill area;

“(3) The off-site excavation area will be located within points of constriction on the drainage system, if any, and as close to the fill site as practicable. The applicant’s registered civil engineer shall conduct a storage routing analysis to determine the location of the fill;

“(4) The off-site excavation area will be constructed as part of the development placing the fill;

“(5) Any use or future development of the excavated area shall comply with the standards of Section 421 and Section 422 if the area is designated as a Significant Natural Resource; and

“(6) Ownership of the excavated area shall be by one of the following mechanisms:

“(a) Dedication of the area to an appropriate public agency when a public agency is willing to accept the dedication;

“(b) Ownership of the area by the applicant of the proposed development;

“(c) Dedication of the development rights of the area to an appropriate public agency with ownership remaining with the property owner. Maintenance of the area shall be the responsibility of the applicant or property owner; and

“(d) Deed or easement-restricted private ownership which prevents any use or future development of the area as specified in Section 421-7.6B.(5). Maintenance of the area shall be the responsibility of the applicant or property owner. A contract for conditions shall be required as specified by Section 207-6.3. The contract for conditions shall be recorded in the Washington County Deed Records.”

The Project will not result in fill below the flood surface elevation. All cut and fill shall be structurally sound and designed to minimize erosion. Measure 1 above describes how fills within the flood and drainage hazard areas will be less than six inches high at the maximum. In addition, NWN has submitted erosion control plans in support of compliance with Washington County Erosion Control requirements and the EFSC Soil Standard, and revegetation measures required under the EFSC Soil Standard. These will control erosion of the modest temporary fills that are planned. As described in measure 4, stockpiled soil will be located outside of the flood hazard areas and will not be susceptible to flood-related erosion.

WCC § 421-7.8.

“That the environmental impact of the disturbance or alteration of riparian wildlife and vegetation has been minimized to the extent practicable as required by Section 422. Enhancement of riparian habitats through planting or other such improvements may be required to mitigate adverse effects.

Significant features such as natural ponds, large trees and endangered vegetation within the flood area shall be protected when practicable.”

The proposed pipeline will comply with WCC section 422, as discussed above. OOE, in consultation with ODFW, has recommended site certificate conditions assuring mitigation of adverse impacts on riparian habitat consistent with ODFW Habitat Mitigation Goals at OAR 635-415. Measure 10, above, describes how the planned construction will maintain the existing water balance in wetland and riparian areas.

WCC § 421-7.9.

“Drainage systems shall be designed and constructed according to the adopted Drainage Master Plan for the area, if one exists.”

There is no drainage master plan for the area. However, NW Natural is in compliance with Washington County's grading and drainage control standards (WCC § 412), as discussed below. The pipeline is a buried facility and does not make use of drainage systems. Measures 1, 2, and 3 above describe how surface gradients and surfacing materials will remain unchanged, eliminating the need for specific drainage measures.

(e) WCC § 421-10 Criteria for Non-Dwelling Structures

“New construction or substantial improvement of non-dwelling structures shall have the lowest floor, including any basement, elevated to or above the flood surface elevation or, the structure together with attendant utility and sanitary facilities, shall:

“421-10.1 Be floodproofed so that below the flood surface elevation the structure is watertight with walls substantially impermeable to the passage of water;

Welded steel pipe is inherently watertight and impermeable to the passage of water. One or more aboveground valve stations may be located in a flood hazard or drainage hazard area. However, pipeline components will be watertight and impermeable to passage of water.

“421-10.2 Be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or must meet or exceed the following minimum criteria:

(a) A minimum of two openings having a total area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;

(b) The bottom of all openings shall be no higher than one foot above grade; and

(c) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

The proposed pipeline will be secured at least four feet underground. There will be no enclosed areas subject to flooding. In sum, given the need to keep the pipeline watertight, it cannot be designed to allow the entry and exit of floodwaters through the pipeline walls, and there is no need to equip any openings with screens, louvers, or other coverings or devices to permit the automatic entry and exit of floodwaters.

Aboveground facilities at valve sites consist of six-foot by nine-foot box-shaped covers that will withstand flood forces, surrounded by chain-link fence. There are no other enclosed structures, so floodwaters are able to flow through the site.

“421-10.3 Be constructed with approved materials and utility equipment resistant to flood damage, using approved construction methods and practices that minimize such damage;

The proposed pipeline will be buried at least four feet underground and will be constructed of welded steel, which is resistant to flood damage. The pipeline valve sites are constructed of welded steel capable of resisting high internal pressures. The construction materials and procedures used to provide safe pipeline operation, as described in other parts of this application, are more than adequate to resist flood forces.

“421-10.4 Be anchored to prevent flotation, collapse or lateral movement;

“421-10.5 Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyance; and

With respect to WCC 421-10.4 and WCC 421-10.5, the pipeline will be buried at least four feet underground. Its placement is designed to prevent flotation, collapse, or lateral movement. The cylindrical construction is designed to resist hydrostatic and hydrodynamic loads and the effects of buoyance. Buoyancy forces on the exposed pipe and valves will be resisted by the dead weight of the valves and supplemented by anchors, as described in mitigation measure 11. Collapse is not a credible hazard because of the stiffness of the exposed piping. Lateral movement is resisted by passive earth pressures on the buried pipeline on both sides of the valve station.

“421-10.6 Be certified by a registered professional engineer that the standards of Section 421-10 are satisfied”

The site certificate will be conditioned to require that NWN provide a statement by a registered professional engineer that the applicable standards of section 421-10 are satisfied as required by WCC 421-10.6

(f) WCC § 421-11.

WCC § 421-11 sets forth specific requirements for utilities. The only applicable requirement is contained in WCC § 421-11.6, which provides that

“Construction of utilities shall be done in a way which minimizes the impact on the flood area. The site shall be restored, as far as practicable, to its original state.”

NWN will minimize the impact on the flood area by burying the entire pipeline underground (except for isolation valves required to meet federal safety codes), by constructing the pipeline so that existing grades and dimensions are maintained, by placing the pipeline under the channel so as not to increase drainage hazard elevation, and by hauling off excess soil to an approved area outside the floodplain as described above. The site will be restored, as far as practicable, to its original state by filling the trench with stockpiled topsoil and then replanting. Measures 1 through 10 above describe how the pipeline will be constructed to minimize impact on the flood area and how the alignment segments within the flood hazard and drainage hazard areas will be restored at the end of construction.

(g) WCC § 421-14.1.

“Property owners shall maintain the flood area in such a manner as to prevent reduction of the natural carrying capacity. Maintenance outside of the public right-of-way shall be done by means of hand implements unless a Development Permit for an alteration is first obtained (lawn mowers are considered hand implements).”

The proposed pipeline will not reduce the natural carrying capacity of any flood area because the grades and dimensions will not be altered and because NWN will restore the site by filling the trench with stockpiled topsoil and then replanting. OOE recommends a site certificate condition requiring NWN to comply with the County’s maintenance requirement.

WCC § 421-14.4.

“Section 421 is in addition to any and all Federal, State or special district laws and regulations in force at the time of approval of the Development Permit. Any permits required from a local, state or federal agency shall be obtained prior to any development within the flood area.”

NWN’s proposed pipeline will comply with all applicable state, federal and special district laws and regulations. NWN must secure all required permits before any

development within the flood area. These include a removal/fill permit from DSL, federal wetlands permits which require approval by the U.S. Army Corps of Engineers, limited water rights from the Water Resources Department for water needed for hydrostatic testing, NPDES General Permit 1200-C from DEQ and a WPCF permit from DEQ for discharge of the water used for testing. before commencing any activity requiring a state removal/fill permit.

WCC § 421-14.8.

“There shall be no dumping of fill in a flood area without a floodplain or drainage hazard area alteration permit.”

NWN has committed not to dump fill in a flood area. OOE recommends a site certificate condition incorporating this commitment.

(12) Washington County’s Erosion Control Regulations - WCC § 426

WCC § 426 address erosion control. The purpose of this section of the code is to implement DEQ rules mandating erosion control measures in the Tualatin River and Lake Oswego sub-basins. The standards apply during construction.

This section of the code applies because portions of the proposed corridor are within the Tualatin River sub-basin. NWN has committed to erosion control measures through all areas of the proposed corridor within Washington County. The substantive requirements are listed at §426-3, 426-4 and 426-5, below.

(a) WCC § 426-3 — Definitions

“Erosion Control Plan’ shall be a plan containing a list of best management practices to be applied during construction to control and limit soil erosion. Erosion control plans shall be prepared in conformance with the Washington County Erosion Control Plans Technical Guidance Book, January 1991, or its successor.”

NWN has submitted an “Erosion and Sediment Control Plan” as Appendix K-11 of the ASC. The plan meets this definition because it lists the best management practices that NWN will use during and after construction. Best Management Practices are listed in NWN’s “Agricultural Assessment” (ASC, Appendix K-9) and in the “Flood Hazard Impact Mitigation Plan” (ASC, Appendix K-10) which NWN submitted in compliance with WCC § 421. Each of these documents describes the best management practices for erosion control in various areas of the Project and under varying conditions, including agricultural lands, flood hazard areas, and other areas. The Erosion and Sediment Control Plan, Appendix K-11, includes an overall erosion control strategy applicable throughout the Project, including preventative measures. The Erosion and Sediment Control Plan states best management practices NW Natural will implement, and enables a flexible approach for implementing site-specific plans to control soil erosion as construction proceeds.

Washington County no longer uses the Washington County Erosion Control Plans Technical Guidance Book. The Unified Sewage Agency, Washington County, Clackamas County, and the city of West Linn have jointly developed an Erosion Prevention and Sediment Control Manual (December 2000) which supercedes (*i.e.* is the "successor" to) the Washington County Erosion Control Plans Technical Guidance Book. The best management practices and other measures proposed in NW Natural's Erosion and Sediment Control Plan, Appendix K-11, comply with the current manual, adopted by Washington County.

The Erosion and Sediment Control Plan is also intended to meet the requirements for an NPDES 1200-C permit, which is a federally delegated permit administered by DEQ. The site certificate will be conditioned to require NWN to obtain the 1200-C permit prior to construction.

(b) WCC § 426-4 — Erosion Control Plan

"No preliminary plat, site plan, development permit, building permit or public works project shall be approved unless the conditions of the plat, permit, or plan approval include an erosion control plan containing methods and/or interim facilities to be constructed or used concurrently with land development and to be operated during construction to control the discharge of sediment in the stormwater runoff. The erosion control plan shall be prepared in conformance with the Washington County Erosion Control Plans Technical Guidance Book, January 1991, or its successor."

The Erosion and Sediment Control Plan described above was prepared using the guidance in the Erosion Prevention and Sediment Control Manual (December 2000), successor to the Technical Guidance Book described in the Washington County Code. OOE recommends that the best management practices listed in the plan and its attached figures be adopted as conditions to the site certificate.

(c) WCC § 426-5.1 — Review

"The erosion control plan shall be reviewed in conjunction with the requested development approval. If the development necessitating an erosion control plan is exempted by Section 201-2 from the requirement to obtain a development permit, the approval of the erosion control plan shall be a Type I approval."

In written comments of November 20, 2001, Washington County Land Use and Transportation Department noted that a development permit issued by the County would normally consider the impacts on a specific location rather than a 200-foot wide corridor. To address this concern, NWN has committed to produce a detailed Erosion Control Plan

that will be administered by a Certified Professional Erosion and Sediment Control Specialist (CPESC), once the final alignment is selected. OOE recommends a condition requiring NWN to demonstrate final County review of this plan prior to construction.

(13) Washington County Grading and Drainage Regulations - WCC § 410

This section of the code requires detailed grading plans and a grading permit. The code includes general provisions at §410-1 and requirements for the contents and format of a detailed grading plan at § 410-2. The substantive acceptance criteria are set forth at § 410-3.

(a) WCC § 410-1 — General Provisions

"410-1.1 All grading and drainage activities are to occur pursuant to the provisions of Appendix Chapter 33 of the 1994 Uniform Building Code and the applicable State of Oregon Plumbing Code, or their successors and this Code. All grading and drainage activities on lands located within the Unified Sewerage Agency boundary shall also occur pursuant to the provisions of the "Design and Construction Standards for Sanitary Sewer and Surface Water Management" or its successor. In the event of any conflict between the provisions of this Code, the Community Plan, the Rural/Natural Resource Plan, and Appendix Chapter 33 of the 1994 Uniform Building Code, or its successor, the more restrictive standard shall prevail.

"Grading applications may be processed through a two-step procedure consisting of a preliminary review (grading plan) and a final review (grading permit), unless the Director consolidates the applications into one review. No grading and drainage activities that are subject to Section 410 shall be undertaken without a grading permit.

" * * For development reviewed through the Type II and III procedure, preliminary grading plans are to be submitted with the development application.*

"The purpose of a preliminary grading plan (conceptual) is to determine whether or not it is feasible to comply with the grading permit review standards of Section 410-3. Full engineering drawings are not required prior to receiving approval of a requested use. However, grading plans shall be accurate enough to provide a basis for determining whether or not the grading plan, as designed and to be implemented, will meet the applicable Code requirements.

"All grading permit applications (the second step) shall include detailed rather than preliminary grading plans."

Washington County's grading and drainage regulations establish a two-step process. The code requires a preliminary grading plan to be submitted with the development

application, followed by a detailed plan prior to construction. The preliminary grading plan must demonstrate that it is feasible to comply with the acceptance criteria of Section 410-3. NWN has provided a "Grading and Drainage Standard Evaluation" (ASC, Appendix K-12), which addresses those criteria and demonstrates that compliance is feasible for the 200-foot corridor. In this evaluation, NWN's civil engineering consultant points out that the UBC is primarily intended for above ground structures. For an underground pipeline, the evaluation points out that NWN will restore the topography to its original state, particularly in the flood hazard zone, so that drainage characteristics are unchanged. OOE recommends that EFSC find that the evaluation in Appendix K-12, together with the Erosion Control Plan of Appendix K-11, satisfies the preliminary plan requirement for this element of the code.

(b) WCC § 410-1.2 — Grading Plan

"The grading plan shall include:

"A. A vicinity map.

"B. A site plan which includes the following:

"(1) A graphic representation drawn to a scale which is noted on the drawing. In all cases the scale used shall be standard, being ten (10), twenty (20), thirty (30), forty (40), fifty (50), or sixty (60) feet to the inch or multiples of ten (10) of any one of these scales;

"(2) Except as required by Section 421, applications for land inside the UGB shall show existing and proposed topography using the following contour intervals:

"(a) For slopes of five (5) percent or less, contour intervals not more than one (1) foot; or

"(b) For slopes greater than five (5) percent and up to and including ten (10) percent, contour intervals not more than two (2) feet; or

"(c) For slopes greater than ten (10) percent, contour intervals not more than five (5) feet.

"(3) Except as required by Section 421, applications for land outside the UGB shall show existing and proposed topography using the following contour intervals:

"(a) For slopes of ten (10) percent or less, generalized existing contours and drainage channels, including areas of the subject site and adjoining properties that will be affected by the disturbance either directly or through drainage alterations; or

"(b) For slopes greater than ten (10) percent, contour intervals not more than five (5) feet.

"(4) Proposed elevations after grading is completed, including any modifications to drainage channels;

"(5) Any required retaining walls or other means of retaining cuts or fills including typical cross sections;

"(6) Typical cross sections showing existing and proposed elevations. Cross sections are to be taken through the areas that will show the most detail of the grading project;

"(7) The site plan shall show the area of the site where construction, grading, cut or fill is proposed, plus a minimum of fifty (50) feet surrounding the area;

"(8) Flow lines of surface waters onto and off the site;

"(9) Proposed building pad, areas with an impervious surface and existing and proposed finished floor and street elevations if building or parking construction is proposed;

"(10) Existing and proposed water quality sensitive areas, vegetated corridors, and drainage channels including drainage swales, wetlands, ditches and berms;

"(11) Location and design of any proposed facilities for storage or for conveyance of runoff into indicated drainage channels, including sumps, basins, channels, culverts, ponds, storm drains and drop inlets;

"(12) Location of any buildings or structures, parking areas or accessways existing or proposed on the site within fifty (50) feet of the area that may be affected by the proposed grading operations; and

(13) Location of any proposed streets.

C. Written narrative and/or supplemental information including all of the following:

"(1) Explanation of the reason for the proposed grading, which must be an allowed use in the district;

"(2) Estimates of surface area disturbed by proposed grading and total parcel size;

"(3) Estimates of cut/fill volume in cubic yards; and

"(4) Estimates of existing and increased runoff resulting from the proposed improvements.

"(5) Soil Map, including a soil survey legend, range of percent slopes (e.g., three [3] to seven [7] percent slopes), and soil description if no limitations exist from the USDA, Soil Conservation Service, Soil Survey Report, Washington County, July 1982. Soil limiting features must address depth to bedrock from pages 120-123 from the report, and other features which may be restrictive to construction, drainage and revegetation of property;

"(6) Provision for saving the site topsoil (surface 12") for later revegetation and landscaping;

"(7) Provisions for the disposal of excavated material, including the location of disposal;

"(8) Written statement demonstrating the feasibility of complying with Section 410-3. Demonstrating feasibility does not require detailed solutions, but there must be enough information for

the review authority to find that solutions to problems are possible and likely.

"D. Erosion Control Plan:

"(1) For areas inside the Tualatin River and Oswego Lake sub-basins, an erosion control plan as required by Section 426 shall be submitted.

"(2) For areas outside the Tualatin River and Oswego Lake sub-basins, an erosion control plan that complies with the requirements of the "Washington County Erosion Control Plans Technical Guidance Book," January 1991, or its successor, is required when:

"(a) Grading requiring a permit is proposed to be conducted or left in an unfinished state during the period from October 1 through May 1; or

"(b) Land disturbance activities are conducted in geologically unstable areas, on slopes in excess of twenty (20) percent, or there is disturbance of more than six-thousand (6,000) square feet of development area, or within fifty (50) feet of any drainage hazard area or flood plain area."

The Grading Plan Evaluation (Appendix K-12), prepared by a licensed Oregon engineer with GeoEngineers, documents NW Natural's ability to comply with WCC § 410. Part of the proposed corridor is within the Tualatin sub-basin. Outside the Tualatin sub basin, there will be more than 6,000 square feet of development area. Therefore the proposed pipeline must meet WCC Section 426. OOE has recommended that EFSC find compliance with Section 426 based on NWN's proposed Erosion Control Plan, Appendix K-11 of the ASC.

NWN states that the detailed grading plan described in this section of WCC 410 is not meaningful for a 200 foot corridor, but will be produced once the final alignment is determined. OOE therefore recommends a condition that NWN submit a detailed grading plan and obtain a grading permit from the County prior to construction. OOE further recommends that the grading permit required by WCC Section 410-1 be issued by the county pursuant to ORS 469.401(4).

(c) WCC § 410-2 — Grading Permit — Application Content
*"410-2.1 The grading permit plans shall be detailed (final drawings) rather than preliminary drawings (conceptual). * * *."*

NWN states that until the final construction easement area is determined, it is not possible to produce final drawings. NWN has committed to produce final engineering design information and drawings during the final engineering phase.

(d) WCC § 410-3 — Criteria for Approval

This subsection contains the substantive criteria for grading and drainage, as follows:

"410-3.1 The extent and nature of proposed grading is appropriate to the use proposed, and will not create site disturbance to an extent greater than that required for the use;

EFSC will condition the site certificate to require that the construction corridor be no wider than 80 feet, and narrower in certain sensitive locations.

*"410-3.2 Proposed grading will not cause erosion to any greater extent than would occur in the absence of development or result in erosion, stream sedimentation, or other adverse off-site effects or hazards to life or property; * * *."*

The pipeline will not increase erosion because it must meet EFSC standards for soil protection and because NWN will be required to follow the Erosion Control Plan described in Appendix K-11 of the ASC. NWN has committed to establishing permanent revegetation before removing temporary erosion control measures

410-3.3 Appropriate siting and design safeguards shall ensure structural stability and proper drainage of foundation and crawl space areas for development with any of the following soil conditions:

- A. Seasonal, perched, high or apparent water table;*
- B. High shrink-swell capability;*
- C. Low bearing strength such as compressible organic; or*
- D. Shallow depth-to-bedrock.*

The pipeline does not have foundation or crawl space areas. Moreover, the buried steel pipeline is not susceptible to the unfavorable soil conditions listed.

WCC § 410-3.4 — Revegetation

"Where natural vegetation has been removed through grading in areas not affected by the landscaping requirements and that are not to be occupied by structures, such areas are to be replanted as set forth in this subsection to prevent erosion after construction activities are completed.

"A. Preparation for Revegetation:

"In preparation for grading and construction, top soil removed from the surface twelve (12) inches shall be stored on or near the sites and protected from erosion while grading operations are underway. Such storage may not be located where it would cause suffocation of root systems of trees intended to be preserved. After completion of such grading, topsoil is to be restored to

exposed cut and fill embankments or building pads to provide a suitable base for seeding and planting.

"B. Methods of Revegetation:

"Acceptable permanent or temporary vegetation measures appropriate for the site and soil drainage conditions shall be seeded and fertilized by September 1st of each year. Establishment or green growth should take place by October 1st of each year, but is dependent upon suitable fall moisture. Where lawn or turf grass is to be established, lawn grass seed or other appropriate landscape cover is to be sown at not less than four (4) pounds to each one thousand (1,000) square feet of land area. Other revegetation methods offering equivalent protection may be approved by the Review Authority. Plant materials are to be watered at intervals sufficient to assure survival and growth. Native plant materials are encouraged to be used to reduce irrigation demands."

The proposed corridor includes forest land, farm land, some habitat resource land, and some land zoned rural residential. Much of the construction corridor will be in or adjacent to the road right-of-way in areas zoned EFU. The appropriate revegetation will depend on the location. Within farm zones and other zones that are currently farmed, NWN has committed to revegetation in consultation with the farmer and with the Department of Agriculture. Within habitat resource land, NWN will be required to implement site specific revegetation plans approved by EFSC in consultation with ODFW, pursuant to the EFSC Habitat and T&E species standards. In wetlands, revegetation plans must be approved by EFSC in consultation with ODFW and DSL. In the Agricultural Mitigation plan that NWN submitted to meet ORS 215.275(5), NWN committed to revegetation measures that meet or exceed the requirements of this section of the code.

"410-3.5 — Final Contours

"Contours, elevations and shapes of finished surfaces are to be blended with adjacent terrain consistent with land use and surface water management requirements to achieve a consistent grade and transition to the adjacent properties. Tops of cut slopes and bottoms of fills are to be rounded off to a minimum radius of five (5) feet to blend with the natural terrain.

The practices NWN has committed to under the EFSC Soils standard, WCC § 421 and § 426 assure that final contours will meet these requirements.

"410-3.6 Except for permitted piping and culverting, the proposed grading protects and preserves existing natural drainage channels;

The Flood Hazard Mitigation Plan submitted by NWN under WCC § 421 ensures that existing drainage channels will be preserved.

"410-3.7 The proposed grading will preserve the functioning of off-site drainage courses or bodies of water;

The Flood Hazard Mitigation Plan submitted by NWN under WCC § 421 ensures that the functioning of off-site drainage courses and bodies of water will be preserved.

"410-3.8 Comply with the applicable standards for permanent storm water quality control facilities adopted by the Oregon State Department of Environmental Quality, as set forth in OAR 340-041-0455(3)(d)–(h). This standard is satisfied by submittal of a service provider letter from the Unified Sewerage Agency indicating the proposed development is in compliance with DEQ requirements or will be in compliance when the requirements set forth in the service provider letter are met."

The pipeline is a buried facility and will not have permanent storm water facilities. As a buried facility, the pipeline does not substantially modify surface elevations on top of the facility and does not change surface drainage patterns. During construction DEQ stormwater requirements will be met because NWN must obtain a 1200-C permit from DEQ. OOE has recommended a condition requiring NWN to obtain any necessary grading permits from Washington county prior to construction. OOE does not recommend other conditions under this section because the construction measures required to comply are already described in plans submitted under WCC § 421 and 426.

(14) Washington County's Historic and Cultural Resource Overlay Zone.

WCC § 373 addresses the historic and cultural resource overlay district. A very small segment of the proposed 24-inch pipeline crosses through this overlay zone. The relevant provisions are discussed below.

(a) WCC § 373-6.1.

"No development permit shall be issued for exterior alteration, relocation or demolition of any designated resource or any potential resource which is under consideration for designation while a public hearing or any appeal thereof is pending."

The proposed pipeline does not involve the exterior alteration, relocation or demolition of any designated resource or any potential resource under consideration for designation. In Appendix K-13 of the application, NWN listed historic and cultural resource locations identified by the county that are within the analysis area. All but ten are outside the proposed corridor. For those sites that are within the proposed corridor, NWN states that the actual alignment will be on the opposite side of the road from the historic site. OOE recommends that this statement be considered a commitment and adopted as a site certificate condition.

(b) WCC § 373-10.

“Uses Allowed

“Allowed uses of an Historic and Cultural Resource within a designated Historic and Cultural Resource Overlay District shall be the same as those allowed in the primary district.”

The underlying district here is the EFU district. The above discussion addresses requirements for the EFU district in detail. Given the location of the proposed pipeline in relation to the existing designated resource, the existence of this overlay zone does not impose any additional requirements on the proposed pipeline..

(15) Washington County Forest Structure Siting and Fire Safety Standards

WCC § 428 applies to “all new dwellings and structures in the EFC District.” WCC § 428-1. “Structure” is defined in WCC § 106-205 as “[a]nything which is built, erected or constructed and located on or under the ground, or attached to something fixed to the ground. Structures include but are not limited to * * * utilities.” Thus NWN’s pipeline falls within the scope of WCC § 428. WCC § 428 contains siting standards that are intended to “ensure that structures are sited in a manner compatible with forest operations and agriculture, to minimize wildfire hazards and risks, and to conserve values found on forest lands.” WCC § 428-1. The Project is consistent with this purpose.

WCC § 428 mostly applies to dwellings, accessory structures and roads and driveways. The only standard that potentially applies to the Project is contained in WCC § 428-4, which provides:

“428-4 Standards for Dwellings and Structures Reviewed Through a Type II Procedure

“Dwellings and structures, including replacement dwellings and accessory structures, that do not comply with the standards in Section 428-3 shall be reviewed through a Type II procedure and shall comply with the following standards.

“428-4.1 Forest Structure Siting Standards

“A. Dwellings and structures shall be sited on the parcel so that:

“(1) They have the least impact on nearby or adjoining forest or agricultural lands;

“(2) The siting ensures that forest operations and accepted farming practices will not be curtailed or impeded;

“(3) The siting ensures that adverse impact on forest operations and accepted farming practices on the tract will be minimized;

“(4) The amount of forest lands used to site access roads, service corridors, the dwelling and structures is minimized; and

“(5) The risks associated with wildfire are minimized.

“B. Siting considerations satisfying Section 428-4.1 may include setbacks from adjoining properties, clustering near or among existing structures, siting close to existing roads and siting on that portion of the parcel least suited for growing trees.”

Within the forest (EFC) zone, the proposed pipeline will run parallel to the existing 16-inch South Mist Feeder pipeline. In the discussion of compliance with WCC § 342, above, this order has addressed the requirement not to adversely impact forest practices or to significantly increase the cost of forest practices. Moreover, construction of the new pipeline within the existing pipeline corridor minimizes the amount of forest lands used to site the Project. Regarding the requirement to minimize fire hazard, the current pipeline has operated in forest lands in Washington and Columbia Counties for over ten years in heavily forested areas without fire incident. Fire district personnel from the Mist-Birkenfeld and Vernonia fire districts have commented that the existing pipeline has caused no concern. The standards set forth in WCC § 428-4.1 are therefore satisfied.

(16) Comments of Washington County Land Use Services

OOE makes this recommendation regarding compliance with Washington County substantive land use requirements after consultation with Washington County’s Department of Land Use and Transportation. The County provided written comments on November 20, 2001. The county indicated its support for the agricultural impact concerns raised by the Farm Bureau, and recommended that EFSC consider the long-range costs associated with the loss of agriculture.

The county asked that the mitigation measures described in the application be included as site certificate conditions. OOE has recommended this as well.

The county recommended that NWN should require a bond from its contractor to ensure restoration of agricultural land its former condition. In a letter from Ron Gullberg (NWN) to Adam Bless (OOE) dated January 18, 2002 regarding site restoration costs, NWN committed to provide such a performance bond as part of the easement agreement with individual property owners.

The county recommended that any site certificate specify a construction corridor that is more definitive than the 200 feet NWN has requested. OOE considered this comment and has recommended conditions requiring NWN to utilize public right of way within the proposed corridor or, for each departure from public right of way, demonstrate why the use of farm land is necessary under ORS 215.275.

Washington County recommended nine conditions, as follows:

- a) Construction plans shall show the delineated flood hazard areas and delineated significant natural resource areas and identify the appropriate alternative construction method.
- b) All excess spoils from construction shall be placed in a permanent fill site.
- c) Prior to construction, obtain a utility permit from the Operations division to work in the right-of-way

- d) At creek crossings, place the pipeline a minimum of six feet below the bottom of the natural channel. Assume all culverted creek crossings are on fisheries streams.
- e) Proper erosion control measures shall be in place during all construction activities. Disturbed area shall be revegetated as soon as growing conditions permit.
- f) Many rural Washington County roads are not built to a standard that can sustain heavy hauling or construction activities, especially in the winter months. Restoration will be required on completion of construction activities if damaged. All roads shall be restored to pre-existing or better conditions.
- g) If a road is damaged, the repaired road shall be built to a standard that is capable of withstanding normal traffic loading for a 20 year life.
- h) Many bridges in Washington County are load restricted and may not be capable of carrying heavy construction traffic. Information about load capacities is available for review by contacting Greg Clemmons, operations Engineer at (503)-846-7653
- i) All road closures need to be coordinated through Massoud Saberian, Traffic Engineer at (503)-846-7953.

OOE recommends the adoption of the above conditions, except for those that are either covered in more detail in the ASC, or are superceded by conditions recommended under other EFSC standards

b. Clackamas County Land Use Regulations

The proposed corridor is located in three separate districts in Clackamas County, including the EFU, EFU-Historic Overlay (EFU/HL), Rural Residential (RRFF-5), and Rural Industrial (RI) districts. The proposed corridor also crosses or runs parallel to areas subject to overlay zone requirements, such as wildlife habitat, wetlands, floodplain and flood hazard areas, and the Willamette Greenway. Applicable sections of the Clackamas County Development code include:

- (1) EFU District (ZD0-401)
- (2) EFU/HL District (ZDO-
- (3) Rural Residential RRFF-5 District
- (4) Rural Industrial (RI) District
- (5) Open Space Management Regulations
- (6) Floodplain Regulations
- (7) River and Stream Conservation Area
- (8) Willamette River Greenway
- (9) Conservation Wetland and Seasonal Bird districts

- (1) Clackamas County Requirements for the Exclusive Farm Use Zone

"401.04 PRIMARY USES, USES SUBJECT TO REVIEW BY THE PLANNING DIRECTOR, CONDITIONAL USES: *The Table of Uses in paragraph C of this Section lists the specific development and uses which are permitted; not permitted; may be permitted subject to review by the Planning Director; or may be permitted by the Hearings Officer through the conditional use process. * * * **

Where the proposed facility is located within land use districts that have been acknowledged as exclusive farm use zones, ORS 215.283(1) governs the uses allowed within such zones. Findings concerning the application of ORS 215.283(1) to the proposed facility within Clackamas County are contained in Attachment B to this proposed order.

OOE has recommended conditions to mitigate and minimize agricultural impacts in accordance with Section (5) of ORS 215.275 and the EFSC Soil Standard.

(2) Clackamas County Requirements for the EFU/HL District

The analysis area includes an EFU-zoned area designated by a "historic landmark" overlay. The ZDO allows the pipeline within this overlay district, provided that the pipeline will have no negative impact upon designated historic resources.

The requirements for the EFU/HL (EFU, Located in Historic Landmark Overlay District) are listed at ZDO Section 707. The Historic Landmark designation is limited to small geographic areas, is distinct from a historic district overlay, and occurs to protect existing sites, structures, or objects that are listed on the National Register of Historic Places. The proposed pipeline analysis area includes two Historic Landmark locations, one on SW Bell Road and the other on South Barlow Road. Both of these sites are outside the 200-foot Preferred Corridor. (ASC, Appendix K-13.)

The pipeline will not have any impact upon the sites and structures within this zoning district. No construction activities will occur on these properties. Moreover, the pipeline must comply with the Council's Historic and Cultural Resource standard, which also protects site eligible for listing on the National Register of Historic Places. Specific conditions regarding protection of historic and cultural resources are recommended in the discussion of that standard. No other conditions are recommended here. OOE recommends the Council find that the pipeline meets the requirements for this district.

(3) Clackamas County Requirements for Rural Residential Farm/Forest –5 Acres district

A small portion of the proposed corridor crosses the RRFF-5 zone in the area between Sherwood and the Willamette River. The applicable section of the code is ZDO §309. ZDO §309 does not list utility or gas pipeline facilities as a permitted or conditional use. However, NWN proposes to use the RRFF-5 zone in order to avoid EFU land in compliance with ORS 215.275. NWN asserts, and OOE concurs, that the choice of

RRFF-5 zoned land rather than EFU land is consistent with the intent of the statute. Therefore NWN requests that the Council find compliance with the Statewide Planning Goals pursuant to ORS 469.504(1)(b)(B).

A small portion of the proposed corridor in Clackamas County also crosses the Rural Industrial Zone (R-I). In subsection (4) of this order, immediately below, we discuss compliance with the Clackamas County requirements in that zone. NWN has requested that the Council find compliance with the Statewide Planning goals for the portion of the pipeline in the R-I zone. Because of the similarities between these two zones, OOE recommends, in subsection (4) of this attachment immediately below, that the Council make goal findings that are jointly applicable in the RRFF-5 and R-I zones.

(4) Clackamas County Requirements for Rural Industrial (R-I) district

The requirements for this district are listed at ZDO § 604. A short section of the proposed corridor crosses this zone at Anderson Road near Highway 99. The area zoned R-I is essentially surrounded by land zoned EFU. Moreover, NWN has proposed the corridor in this zone to avoid a Goal 5 aggregate site.

The code at ZDO § 604.05(B)(6) permits at a conditional use:

“(6) Petroleum, petroleum products, and natural gas storage and wholesale distribution [subject to conditional use criteria ZDO § 1203]”

NWN has not asserted that the pipeline can be characterized as meeting this criterion. Therefore, NWN requests that the Council find that the pipeline meets the statewide planning goals in the R-I zone.

Because NWN has requested goal findings in the RRFF-5 and R-I zones, OOE proposes the following findings, applicable to both zones:

Statewide Planning Goal Findings:

Goal 1, Citizen Involvement:

"To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process."

Response: This Goal governs public participation in the land-use process. NW Natural does not propose any changes to the public-participation requirements of either local or state law. The Council's site-certificate rules provide sufficient notice and comment periods to satisfy Goal 1 as it applies to the applicant's proposal. Under the Council's process, there has been ample opportunity for public review, discussion and comment on the Notice of Intent and Application for Site Certificate. A complete description of the opportunity for the public to participate in the review of this project is provided in section II of this Order. NW Natural has complied with the Council's public-notice requirements.

Goal 2, Land Use Planning:

"To establish a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual base for such decisions and actions."

Response: This Goal governs the land-use planning process. Goal 2 is not applicable to the Project because the applicant is proceeding under a specific, statutorily created land-use option, ORS 469.504(1)(b)(B).

Goal 3, Agricultural Lands:

"To preserve and maintain agricultural lands."

Response: This Goal is designed for the protection of agricultural lands. With respect to the RRFF-5 and R-I zones, NW Natural is seeking a Council determination of Goal compliance not for such lands per se, but rather for those portions of the Project that cross lands zoned RRFF-5 and R-I. The RRFF-5 zone is intended to enable rural living, compatible with continued use of land for farm and forest purposes. The proposed use of RRFF-5 zoned land is consistent with this goal because it was proposed specifically to avoid increasing the amount of EFU zoned land. The pipeline will not result in any long-term impacts to the lands zoned RRFF-5. The R-I zone is intended to enable rural industrial land uses compatible with continued use of the surrounding land for rural uses. Siting the pipeline on RRFF-5 and R-I zoned lands is consistent with the goal to preserve and maintain agricultural lands.

Goal 4, Forest Lands:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

Response: This Goal is designed for the protection of forest lands. With respect to the RRFF-5 zone, NW Natural is seeking a determination of Goal compliance not for forest land per se, but rather for those portions of the Project that cross lands zoned RRFF-5. The RRFF-5 zone is intended to enable rural living, compatible with use of the land for farm and forest purposes. The pipeline will not cross any forest lands within Clackamas County, and will not cross RRFF-5-zoned lands that demonstrate any material forest attributes in the context of Goal 4. Further, in this area of Clackamas County, the pipeline will be located primarily within and adjacent to public rights-of-way, and should not disturb any RRFF-5 resource lands. Regarding the portion of the proposed corridor in the R-I zone, this portion does not cross any lands that demonstrate any forest attributes in the context of goal 4.

Goal 5, Open Spaces, Scenic, Historic and Natural Resources:

"To conserve open space and protect natural and scenic resources."

Response: The portions of the Project subject to this Goal compliance request are those crossing the RRFF-5 and R-I zoning districts. There are no county-identified open spaces, historic areas or natural resources in the vicinity of those portions of the Project crossing the RRFF-5 and R-I zones. (ASC, Figure K-16.) The pipeline will be buried underground and thus will have no impact on scenic values in these zoning districts. The fact that the Project will have no scenic or aesthetic impacts is discussed in more detail in OOE's analysis of compliance with the Council's Scenic and Aesthetic Standard. NWN modified the proposed corridor to avoid a designated Goal 5 aggregate site adjacent to the property zoned R-I. Further, in this area of Clackamas County, the pipeline will be located primarily within or adjacent to public rights-of-way, and should not permanently disturb any RRFF-5 or R-I resource lands.

Goal 6, Air, Water and Land Resources:

"To maintain and improve the quality of the air, water and land resources of the state."

Response: This Goal is primarily concerned with waste and process discharges to the land, water, and air of the state. The facility is a buried steel pipeline and will not involve any such discharges. More broadly, these portions of the Project will not degrade any air, water, or land resources. In addition, the Goal requires that land-use approval should require compliance with state environmental-quality statutes and regulations. The applicant has acquired or will acquire all necessary permits for the Project.

Goal 7, Areas Subject to Natural Disasters and Hazards:

"To protect life and property from natural disasters and hazards."

Response: This Goal is intended to ensure that developments that could be damaged by natural disasters with the potential for resultant injury to persons or property are approved only where appropriate safeguards are in place. Portions of the Preferred Corridor crossing the RRFF-5 zones are located in floodplain areas, which are identified natural-hazard areas. (See Figure K-13.) These areas, including mitigation measures, are discussed in the Flood Hazard Impact Mitigation Plan, Appendix K-10. The Preferred Corridor is proposed in this location in part to avoid geotechnically unstable areas to the west, as shown in the discussion of locational constraints in the section of this Order addressing compliance with ORS 215.275. The portion of the proposed corridor in the R-I zone is not in a floodplain area. Moreover, the proposed pipeline must meet the Council's Structural standard, which requires a detailed assessment of potential seismic and non-seismic soil related hazards and a finding that the facility will be designed and constructed to avoid danger to human safety from those hazards.

Goal 8, Recreational Needs:

"To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts."

Response: This proposal does not involve the siting of a recreational facility. In the section of this Order addressing the Council's Recreational standard, OOE has recommended a Council finding that the facility, including those portions crossing RRFF-5 and R-I zoned land, will not have an adverse impact on any recreational opportunities.

Goal 9, Economic Development:

"To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens."

Response: This Goal provides certain guidelines for local governments to follow to stimulate orderly economic growth. In particular, the planning guidelines in the Goal emphasize the use of "geographically appropriate" sites for major facilities and also the expansion and increased productivity of existing facilities. NW Natural's proposal meets these Goals because it involves the addition of much needed capacity to serve existing and projected customers. Those operations are geographically appropriate in that they are sited where they must be: along the most direct route possible to address physical constraints as well as locational criteria set forth in HB 2865 — adopted as a matter of statewide policy. The pipeline will result in the orderly and effective economic development and expansion of one of Oregon's important natural resources, providing needed energy services to Oregon's citizens. In addition, the Project will ensure that NW Natural will be able to provide reliable gas service to its commercial and industrial customers in the Portland metropolitan area, thereby providing a service necessary for NW Natural's customers to maintain their economic productivity.

Goal 10, Housing:

"To provide for the housing needs of citizens of the state."

Response: This Goal is intended to assist local governments in developing plans to provide adequate housing. In particular, the Goal requires local governments to inventory their buildable lands and to decide which lands must be used for residential development to meet projected housing needs. The proposed pipeline will cross certain lands that have been designated "rural residential" and "rural industrial" by Clackamas County. In these cases, the applicant will secure pipeline easements from residential property owners. The SMPE will not prevent residential development on these lands and will not result in any land being removed from the county's inventory of buildable land. The Project will not interfere with the county's ability to provide needed housing for its citizens.

Goal 11, Public Facilities and Services:

"To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development."

Response: This Goal requires local governments to coordinate their land-use planning with an analysis of the availability of public facilities and services such as water, sewer, and roads. The SMPE will not require any new public facilities or services from the county. The Project will not require public water or sewer facilities. OOE has recommended a finding that the Council find compliance with its Public Services Standard, which addresses the same public facilities and services.

Goal 12, Transportation:

"To provide and encourage a safe, convenient and economic transportation system."

Response: This Goal governs local government decisions regarding transportation facilities. The Project will not require the construction of any new roads or other transportation facilities, nor will it create any long-term conflicts with such facilities in the county. Construction of the Project will involve certain short-term impacts on several roads and highways in the county. However, such short-term impacts are similar to those frequently associated with road construction, and NWN has committed to coordination and traffic management with all applicable road and police authorities.

Goal 13, Energy Conservation:

"To conserve energy."

Response: The proposed pipeline is consistent with this goal because its purpose is to enable efficient storage of natural gas during the summer when the demand is low. This enables the company to meet peak demands without being subject to a fluctuating spot market in the winter. The project's purpose is also to increase the efficiency of NWN's distribution system to rapidly growing suburbs in the western Metro area. In reviewing the Integrated Resource Plan, the Oregon Public Utility Commission required NWN to consider alternatives to the proposed pipeline, including demand-side management. NWN stated, and the OPUC concurred, that demand side management options had been considered to the extent that they are cost-effective. Therefore the pipeline is consistent with the Energy Conservation Goal.

Goal 14, Urbanization:

"To provide for an orderly and efficient transition from rural to urban land use."

Response: This Goal governs the transition from rural to urban land use in areas outside of established Urban Growth Boundaries. The Project does not involve any developments that will alter the existing character of the rural residential and rural

commercial areas it crosses. Therefore the Project will not have any impacts addressed under Goal 14.

Goals 15 through 19:

Response: These Goals are not applicable to the SMPE because the pipeline is not located in any of the geographical areas covered by these Goals. Goal 15 addresses the Willamette Greenway, which is covered under a separate element of the Clackamas county code.

Statewide Planning Goals: Conclusion OOE recommends the Council find that the proposed facility does not meet the county's applicable substantive requirements for the RRF-5 and R-I zones but does otherwise comply with the statewide planning goals.

(5) Clackamas County Requirements for Open-Space Management Areas.

ZDO § 720 addresses open-space management within Clackamas County, adopting a special overlay zoning district to preserve and manage the county's "committed open space resources for the benefit, health, and welfare of the people." (ZDO § 702.01.) The analysis area will not pass through "areas of application" as identified by Clackamas County. (See Figure K-16.) This overlay district regulates and protects open spaces by designating uses which are permitted and conditionally allowed within the districts, and by imposing development standards.

(6) Clackamas County Requirements for Floodplain areas

ZDO § 703 constitutes Clackamas County's regulation of floodplain management districts. The floodplain management district regulations apply to all areas of Clackamas County "which are subject to periodic flooding from stream flows by a regulatory flood," as designated by Federal Insurance Administration maps, including "the flood insurance study for Clackamas County," dated September 30, 1988. (ZDO § 703.02.) Sections 703.06 and 703.07 require development permits for all uses and "developments" within the designated floodplain management districts. Regulated "development" is defined as follows:

"Section 703.03(C) Development: Any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations located within the area of special flood hazard. For purposes of section 703, development does not include those activities of a type and magnitude which have no potential effects on water surface elevations or on the level of insurable damages, as determined by the Planning Director or designate, based on documentation supplied by the applicant."

Response: The pipeline will cross areas of Clackamas County that are designated on the county's adopted flood-insurance study and federal flood-insurance maps. In particular,

the Willamette River crossing is designated as a flood hazard area, and the Pudding River is surrounded by flood hazard areas for a relatively large distance.

Arguably, the pipeline does not constitute "development" as defined in ZDO § 703.03, because it will have "no potential effects on water surface elevations or on the level of insurable damages." The proposed pipeline will be installed underground. For floodplain management purposes, the final surface elevation after installation will be the same elevation existing prior to pipeline installation, although NW Natural proposes to leave a six-inch "crown" over the pipeline trench during the first season, to enable settling. Further, in some flood hazard areas, the pipeline will be installed through subsurface boring (HDD) methods, thereby avoiding any impacts to regulated floodplain areas. While below ground valve stations will be installed in appropriate locations to meet NW Natural's needs and to satisfy regulatory requirements, these installations will not have any appreciable impact on the water surface elevations or on the level of insurable damages. NWN has committed that all aboveground valve stations will be installed outside flood hazard areas.

The property may still constitute a regulated "use" as defined in ZDO § 703.05. The Flood Hazard Impact Mitigation Plan submitted by NW Natural's licensed civil engineer (Appendix K-10) satisfies application submittal requirements in ZDO § 703.06. Figure 1 of the Plan shows the Preferred Corridor and Alternate Corridor Segments relative to the flood hazard areas. Specific elevations on the permitted alignment will be determined during final design and will be shown on the construction drawings. The pipeline does not have structures, streets, water supply, sanitary facilities, or other types of development that are regulated in 703.06A. The Mitigation Plan describes how the watercourses will not be altered, demonstrating compliance with 703.06(B)(4). The discussion below refers to the 11 recommended mitigation measures for Washington County described in Appendix K-10 and set forth in the discussion of Washington County's development code, section 421-7, above.

Because the pipeline does not meet the definition of "development" under ZDO 703.03, NWN asserts, and OOE concurs, that the development permit criteria of ZDO 708.07 do not apply. However, general acceptance criteria for floodplain mitigation are set forth at ZDO Section 708.08. The Flood Hazard Impact Mitigation Plan that NWN submitted as Appendix K-10 of the ASC shows how the proposed pipeline will comply with the "General Standards" of section 703.08:

ZDO § 703.08 — General Standards

"In the floodplain management district, the following standards are required:

"A. Anchoring.

"1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

" * * * **

Measure 11 of the Flood Hazard Mitigation Plan states that NWN will anchor the pipeline in the flood hazard area.

"B. Construction materials and methods/utilities.

"1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage, and using methods and practices that minimize flood damage.

" * * * **

*"5. A registered professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications, and plans. Such certification shall be provided to the County * * *."*

Measures 1, 2, and 3 of the Flood Hazard Mitigation Plan describe how the pipeline will be a buried structure and will not be susceptible to flood damage. Measures 8 and 9 describe how temporary facilities will be demolished at the end of construction.

Subsection (E) of ZDO 708.03 regulates the placement of fill in floodplain areas. The Floodplain Mitigation Plan addresses this subsection as follows:

"E. Fill

"1. Any fill or materials proposed must be shown to have a beneficial purpose and the amount thereof not greater than is necessary to achieve the purpose, as demonstrated by a plan submitted by the owner, showing the uses to which the filled land will be put and the final dimensions of the proposed fill or other materials.

The pipeline construction will not involve the import and placement of fill. Trenches will be excavated and backfilled with excavated soils. Flood Hazard Impact Mitigation Plan measures 1, 2, 6, 7, 8, and 9 describe surface restoration for various permanent and temporary parts of the pipeline.

"2. Such fill or other materials shall be protected against erosion by riprap, vegetative cover, or bulkheading.

" * * * **

The Erosion Control Plan that NWN submitted as Appendix K-11 and revegetation plans described under the EFSC Soils standard state that NWN will revegetate to prevent erosion. Locating the stockpile areas outside the floodway, as discussed in Measure 3 of the Flood Hazard Mitigation Plan, will eliminate significant sediment sources within the flood hazard area.

"4. All fill placed or below the base flood elevation shall be balanced with at least an equal amount of material removal either on-site, or from

a nearby area at or below the base flood elevation and in the same drainage basin.

"a. Excavation below the level of the seasonal groundwater table shall not be used in balancing fill volumes against excavation volumes; and

"b. The mean annual groundwater level shall be determined by soil morphology, or other available data on groundwater conditions; and

"c. Balancing of a fill shall occur at the same time as the fill is placed on the development site; and

"d. The site plan required in subsection 703.06 shall identify the area where material is removed from the floodplain to balance fill volumes, including pertinent evaluations and volume of fill removed; and

"e. A registered engineer or architect shall certify that the amount of material removed balances the amount of fill.

*** * * * **

Measure 2 of the Flood Hazard Mitigation Plan describes the balanced grading plan. Cuts may not be required because fills are not planned inside the floodways. The Plan was submitted by a registered engineer.

ZDO 703.08E6 addresses stream crossings. Most of the stream crossings will be completed by HDD or horizontal boring methods. Trenched stream crossings will be restored to previous grades. The specific requirements are:

"6. Stream crossings, including bridges and culverts, and transportation projects may be permitted if designed as balanced removal and fill projects, or are designed to not significantly raise the base flood elevation, provided that:

"a. Such projects shall be designed to minimize the area of fill in the area of Special Flood Hazard areas and to minimize erosive water velocities; and

"b. Stream crossings shall be as close to perpendicular to the stream as practicable; and

"c. Stream crossings shall be designed to allow fish passage; and

"d. Stream crossings are subject to review and approval pursuant to applicable Federal and State statutes and administrative rules."

Subsection (a) is met because fill is not planned at any of the stream crossings. NWN will be required to restore stream conditions as discussed in measure 1 of the Flood Hazard Mitigation Plan and in accordance with conditions proposed under the Council's Fish and Wildlife Habitat standard and DSL Removal/Fill permit requirements. These measures ensure that pipeline construction will not change the floodwater velocity.

Subsection (b) is met because NWN has committed to perpendicular crossing for a variety of habitat and technical reasons. As noted above, most of the stream crossings will be accomplished by boring underneath the stream bed.

Subsection (c) is met because trench crossings will be made using either dam-and-pump or flume methods. Fish passage around dam-and-pump crossings will be by capture, transportation, and release. OOE has recommended more detailed conditions regarding fish passage under the Council's Fish and Wildlife Habitat standard.

Subsection (d) is met because the pipeline must meet the Council's Fish and Wildlife Habitat standard, DSL removal/fill permitting requirements, and U.S. Army Corps 404 permitting requirements.

ZDO § 703.09 — Specific Standards

"2. Nonresidential Construction: New construction and substantial improvement of any commercial, industrial and other nonresidential structure shall either have the lowest floor, including basement, elevated one (1) foot above the base flood elevation and satisfy the provisions under 703.09A.1 or, together with attendant utility and sanitary facilities, shall:

*** * * * **

"b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

*** * * * **

"B. Flood Hazard (FH) Areas

"Where elevation data has been provided but floodways have not been established, development shall be subject to the provisions of 703.09A, above, and shall satisfy the following additional requirements:

*"1. The cumulative effect of any proposed development, when combined with all other anticipated and existing development, shall not increase the water surface elevation of the base flood more than (1) foot at any point * * *."*

ZDO § 703.09(A)(2).b requires that all above-grade valve sites in the flood fringe areas be designed to resist hydrostatic and hydrodynamic loads and the effects of buoyancy. Most valve stations will be located outside the flood hazard and flood fringe areas. The valve controller boxes are capable of resisting flood forces. The pipeline valve sites are constructed to comply with this section. (See Appendix K-10.) ZDO § 703.09(B)(1) requires that the cumulative effect of the pipeline through flood hazard areas will not

increase the water surface elevation of the base flood by more than one foot at any point. Measures 1, 2, and 3 of NWN's Flood Hazard Mitigation Plan describe how surface grades will not change substantially and how embankment fills will not be constructed in the flood areas. Measure 4 describes how culverts will be protected so that drainage will not be affected adversely.

(7) Clackamas County Requirements for Significant Natural Resources

(a) River and Stream Conservation Area — ZDO § 704

ZDO § 704 constitutes Clackamas County's regulation of river and stream areas. This regulation imposes setback and bank-stabilization measures for development near designated rivers and streams, with buffer areas of varying widths, depending on the characteristics and environmental sensitivity of the river or stream.

ZDO § 704.06 includes exceptions from the standards for this section. The following exception applies to the proposed pipeline:

"D. Uses such as roads, bridges, culverts, pipes and power lines that are necessary for crossing streams shall be allowed within the setbacks stated in subsection 704.04A, provided they do not create barriers to fish movement and that adverse impacts are mitigated."

The Project is exempt from ZDO § 704. However, NW Natural proposes to install the pipeline under the streams and rivers within Clackamas County via the HDD method. The HDD operations will commence outside the setback areas, will not affect the stream or river banks, and will avoid any associated habitat areas. OOE will recommend conditions under the Council's Fish and Wildlife Habitat standard and DSL removal/fill permitting requirements that ensure fish passage and mitigate stream and river impacts.

(b) Willamette River Greenway — ZDO § 705

ZDO § 705 regulates activities within the Willamette River Greenway, imposing special Conditional Use Permit requirements for "[a]ll intensification or change in use, or development" (ZDO § 705.03(B)). "Development" is defined as follows:

- "1. Development: The act, process or result of developing.*
- "2. Develop: To bring about growth or availability; to construct or alter a structure; to conduct a mining operation; to make a physical change in the use or appearance of land; to divide land into parcels; to create or terminate rights of access."*

The pipeline is proposed to cross the Willamette River southwest of Wilsonville, north of the Marion County boundary. NW Natural will install the pipeline under the Willamette River by underground HDD boring. The river in this location is approximately 660 feet across. The required depth of the bore under the river is 30 feet below the river bottom.

The installation under the river allows complete avoidance of the riparian area on both sides of the river, with the drilling operation commencing more than 1,300 feet from the water's edge on both banks, using publicly owned property for the horizontal drilling operation on the south bank. The total distance required from each drilling location to accommodate the 30-foot depth under the river, to ensure full avoidance of riparian (habitat) areas, and to avoid all impacts to the river is approximately 3,300 feet. (See Figure K-8.)

By installing the pipeline via the HDD method in this area, the pipeline will have no impact whatsoever upon the Willamette River Greenway. The pipeline in this area will wholly avoid any impacts on the Willamette River Greenway area. By definition, the installation does not constitute "development," and therefore does not fall within the regulatory scope of ZDO § 705. The applicable land-use (zoning) code provisions and other existing environmental regulations will address any siting criteria.

(c) ZDO § 709 — Conservation Wetland District

ZDO § 709 constitutes Clackamas County's regulation to conserve and protect wetland resources, including habitat values associated with wetlands. The regulation applies to "all development, alteration and vegetation removal" (ZDO § 709.02) and protects "significant wetland resource site[s] as determined by the Goal 5 ESEE analysis conducted pursuant to Goal 5 and Oregon Administrative Rule 660, Division 16" (ZDO § 709.03). The regulation lists permitted and prohibited uses, and imposes development standards and requirements, including buffer-area standards.

The proposed corridor will cross wetlands, including wetlands designated as Goal 5 resources. In locations of significant wetland areas, particularly those near streams and rivers, NW Natural proposes to install the pipeline via directional (HDD) drilling. In situations where the pipeline will be installed via standard trenching, wetland impacts will be temporary. NW Natural will reestablish original ground elevations, the ground will be revegetated, and precautions will be taken to maintain the site's original hydrology. Consequently, even where wetlands are directly affected by trenching, no net loss of wetland area will result, and the loss of wetland functions due to construction activity will be temporary. OOE has recommended specific wetland protection conditions under the Council's Fish and Wildlife Habitat Standard and under the discussion of DSL removal/fill permit requirements. NWN must also meet the requirements for the US Army Corps 404 wetlands permit.

(d) ZDO § 710 — Seasonal Bird Habitat District

ZDO § 710 is intended to conserve sensitive bird resources by protecting nesting and rearing habitat and providing buffer areas. NWN has characterized habitat areas in detail under the Council's Fish and Wildlife Habitat standard. OOE has recommended conditions under that standard that ensure the pipeline construction will be consistent with ODFW Habitat Mitigation goals.

(8) Clackamas County Regulation of Historic Resources

Section ZDO 707 sets forth Clackamas County's requirements for historic resources. OOE has recommended a finding that the pipeline complies with the code in the EFU/HL district. The pipeline meets the county's Historic Resource requirements because it meets the Council's Historic, Cultural and Archeological Resource standard. OOE has recommended conditions under that standard that ensure compliance with the County's requirements.

Summary – Clackamas County

The proposed pipeline meets the specific requirements for EFU and EFU/HL districts, and OOE has recommended that the Council find that the proposed pipeline meets the statewide planning goals where the pipeline would cross the RRFF-5 and R-I districts. In addition, NWN has proposed plans that bring the pipeline into compliance with Clackamas County requirements for Floodplain Hazard, Significant Natural Resources and Historic overlay zones. OOE has analyzed the proposed corridor for compliance with ORS chapter 215 and recommends a finding that, with conditions, the pipeline meets the criteria for utility facilities as set forth in that statute. OOE recommends the Council find that, with the recommended conditions, the proposed pipeline meets its Land Use standard in Clackamas County.

c. Marion County Land Use Regulations

The proposed corridor crosses three zones in Marion County: (1) EFU, (2) Rural Industrial ("I-R") and (3) Public ("P"). The majority of the proposed corridor in Marion County is located in the EFU district. The proposed pipeline must also comply with Marion County requirements for significant natural resources and floodplain hazard.

(1) Generally Applicable Standards

Each of the three zoning districts requires a finding that the utility facility is "necessary in order for the service to be provided." OOE has analyzed the proposed pipeline for compliance with ORS 215.275 and has recommended a Council finding that, with conditions, the pipeline is "necessary for public service" as defined in that statute. See Attachment B to this order. Moreover, OOE recommends the Council find that the pipeline meets its Need standard as discussed in section IV.B of this Order.

MCZO § 110.680 provides additional generally applicable criteria for the Planning Director's decision. Section 110.680 requires the Planning Director to determine "whether dwellings, structures or uses which are subject to standards or regulations are a permitted use or a permitted use subject to the limited use provisions in the applicable zone. The administrative review procedures, as provided below, shall be followed in making these determinations." Section 110.680(a) provides: "The determination shall be made on the basis of the Marion County Comprehensive Plan and applicable criteria in the Zoning Ordinance." Aside from the Planning Director criteria and the requirement for a finding of "necessity," the Marion County Code does not contain additional general criteria or requirements for the installation of utility facilities, including natural gas pipeline facilities.

(1) Marion County Requirements in the EFU District

Where the proposed facility is located within land use districts that have been acknowledged as exclusive farm use zones, ORS 215.283(1) governs the uses allowed within such zones. Findings concerning the application of ORS 215.283(1) to the proposed facility within Marion County are contained in Attachment B to this proposed order.

(2) Marion County Requirements in the Rural Industrial District

MCZO § 163.030(b) allows “utility facilities necessary for public service” as a permitted use within the I-R zoning district. MCZO § 163.030(b) does not state that use "must" be situated in the I-R zone for the service to be provided. Therefore, in this non-EFU zone, the locational necessity criteria in HB 2865 are not applicable. Accordingly, the pipeline is an outright permitted use, provided that NW Natural demonstrates that the facility is necessary, based on utility customer-service requirements. As discussed in section IV.B of this Order, NWN has shown that it meets the Council’s Need for Facility Standard. Therefore, the proposed pipeline meets the acceptance criteria in the I-R district.

(3) Marion County Requirements in the Public (“P”) district

The proposed facility crosses the Public district for a short distance, crossing the Aurora Airport. MCZO § 171.020(d) allows “utility facilities necessary for public service” as a permitted use within the Public zoning district. MCZO § 171.020(d) does not state that use "must" be situated in the Public zone for the service to be provided. Therefore, in this non-EFU zone, the locational necessity criteria in HB 2865 are not applicable. Accordingly, the pipeline is an outright permitted use, provided that NW Natural demonstrates that the facility is necessary, based on utility customer-service requirements. As discussed in section IV.B of this order, NWN has shown that it meets the Council’s Need for Facility Standard. Therefore, the proposed pipeline meets the acceptance criteria in the Public district.

(4) Marion County Regulation of Significant Natural Resources

The applicable requirements regarding natural resources in Marion County are set forth at MCZO § 110.835, which states:

"The impact of land use actions regulated by this Ordinance on fish and wildlife habitat identified in the Marion County Comprehensive Plan shall be evaluated and the proposal modified or conditioned as necessary to minimize potential impacts and to preserve the existing resource."

The only fish and wildlife habitat area designated in the Comprehensive Plan within the analysis area for the proposed pipeline is the Pudding River. NWN proposed to avoid impact to the Pudding River because it will use HDD boring, and because the bore entry and exit will be set back from the river by a sufficient distance to avoid the stream bank . The pipeline will be conditioned to minimize potential impacts to the resource because it

must comply with conditions recommended by OOE under the Council's Fish and Wildlife Habitat standard and DSL wetlands permitting requirements.

(5) Marion County Regulation of Floodplain Area Development

MCZO § 178 addresses floodplain area development. The lands subject to the standards are specified in MCZO § 178.030. The following discussion addresses the specific requirements in MCZO § 178 applicable to the Project.

(a) MCZO § 178.040 — Uses Regulated

"178.040 USES. Within a FP (Floodplain) Overlay zone no uses, structures, recreational vehicles and premises shall be used or established except as provided in the applicable underlying zone and the provisions of this overlay zone. Except as provided herein all uses and floodplain development shall be subject to issuance of a conditional use permit (Floodplain Development Permit) as provided in Section 178.050." [Exemptions omitted as not applicable.]

The proposed pipeline crosses the floodplain overlay zone at the Pudding River crossing. Marion County requires a conditional use permit as provided in MCZO § 178.050.

(b) MCZO § 178.050 — Conditional Use Requirements

"(D) Prior to obtaining a building permit, commencing development or placing fill in the floodplain the applicant shall submit a certification from a registered civil engineer demonstrating that a development or fill will not result in an increase in floodplain area on other properties and will not result in an increase in erosive velocity of the stream that may cause channel scouring or reduce slope stability downstream of the development or fill."

The pipeline construction will not result in an increase in floodplain area on other properties and will not result in an increase in erosive velocity of any stream. NWN has submitted a Floodplain Hazard Mitigation Plan in Appendix K-10 of the Application. The plan lists the measures NWN proposes to preclude floodplain hazard impacts. Measures 1, 2, and 3 of the plan discuss how surface restoration methods will be used to maintain drainage patterns and stream velocities. Measures 8 and 9 describe how temporary facilities will be removed from flood hazard areas at the end of construction.

MCZO § 178.050H requires topographic information, the base flood level, and the flood area boundaries with the application. OOE recommends that the site certificate be conditioned to require NWN to submit the information at MCZO § 178.05H and obtain the development permit from Marion County prior to construction. In its Flood Hazard Mitigation plan, NWN has met the substantive criteria, which are listed at MCZO § 178.060, below:

(c) MCZO § 178.060 — Protection Standards

*"178.060 Floodplain Protection Standards. In all areas of identified floodplain, the following requirements apply: * * **
"(C) Non-residential development.

"* * * * *

*"(b) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. * * **

"(D) Anchoring

"(1) All new construction and substantial improvements shall be anchored to prevent floatation, collapse or lateral movement of the structure.

"* * * * *

In the Flood Hazard Mitigation Plan, NWN states that it will place most valve stations outside the flood hazard area. The valve controller boxes are capable of resisting flood forces. The buried steel pipeline is resistant to hydrostatic and hydrodynamic forces. Buoyancy forces on the exposed valve controller boxes will be resisted by the dead weight of the valves and supplemented by anchors on the pipe. Lateral movements is resisted by passive earth pressures on the buried pipeline and on the buried part of the controller box.

"(E) Construction materials and methods

"(1) All new construction and substantial improvements below base flood level shall be constructed with materials and utility equipment resistant to flood damage, and the design and methods of construction are in accord with accepted standards of practice based on an engineer's or architect's review of the plans and specifications.

"(2) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damages.

"* * * * *

As noted above, the buried steel pipe is resistant to flood damage. The Flood Hazard Mitigation Plan was prepared by a registered engineer. Measure 11 of that plan describes how the pipeline will be protected from buoyancy damage in flood areas using concrete anchor blocks.

"(G) Developments, Generally – Residential developments involving more than one single family dwelling, including subdivisions, manufactured home parks, multiple family dwellings, and planned developments including development regulated under (A) and (C) shall meet the following requirements:

"* * * * *

"(2) Have public utilities and facilities such as sewer, gas electrical and water systems located and constructed to minimize flood damage.

"* * * * *

The proposed facility is not a residential development. However, measure 7 of the Flood Hazard Mitigation plan states that valves sites will typically be located outside flood hazard areas, and describes how they will be constructed to minimize potential for flood damage.

"(J) Floodways – Located within areas of floodplain established in Section 178.030 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and erosion potential the following provisions shall apply in addition to the requirement in (I):

"(1) Prohibit encroachments, including fill, new construction, substantial improvements and other development unless a certified technical evaluation is provided by a registered professional engineer or architect demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge. This evaluation may be submitted to the Federal Emergency Management Agency for technical review."

The pipeline is a buried facility and will not increase flood levels. Measures 1, 2 and 3 of the Flood Hazard Mitigation plan describe how NWN will ensure that grading in flood areas is restored to its original condition. In measure 4 of the plan, NWN commits to protecting and repairing roadway culverts. The plan was written by a registered engineer.

(2) Marion County Regulation of Historic Structures or Sites

The inventory of locally designated historic and cultural resources in Marion County shows two designated historic sites within the one-half mile analysis area for the pipeline. Both sites are outside the proposed corridor.

Summary – Marion County

OOE has analyzed the pipeline along its entire length for compliance with ORS chapter 215 and has recommended a finding that, with conditions, the pipeline meets the applicable criteria. Therefore the pipeline is a permitted use in the zones it will cross in Marion County. NWN has proposed plans that bring the pipeline into compliance with Marion County requirements for Floodplain Hazard, Significant Natural Resources and Historic overlay zones. OOE recommends the Council find that, with the recommended conditions, the proposed pipeline meets its Land Use standard in Marion County.

d. City of Hillsboro Permitting Requirements

The Preferred Corridor is proposed within or adjacent to the southwestern edge of the city of Hillsboro. This area of Hillsboro is undeveloped and forested. No existing industrial uses are located within the proposed 200-foot Preferred Corridor. Also in this area, the pipeline must cross two sets of railroad tracks, State Highway 8, the Tualatin Valley Highway, stream corridors, etc.

To avoid displacing existing buildings and uses, disrupting railroad service, cutting across busy highways, and disturbing stream corridors and habitat, NWN proposes to install this portion of the pipeline through subsurface HDD boring. The boring will commence from the south of Hillsboro on property owned by the Clean Water Agency, cross under and along the southwest edge of Hillsboro, and reemerge at the proposed bore pad location, north of the Tualatin Valley Highway, situated on property within

Washington County (zoned AF-20), to the west of Hillsboro. The crossing under the fringe of Hillsboro will have no appreciable land-use or environmental impact within Hillsboro.

The proposed facility will cross through an area of Hillsboro zoned Industrial Zone (M-2). The analysis area also includes property zoned General Commercial (C-1). However, the proposed facility will not impact any C-1-zoned property. Section 60 of the Hillsboro Zoning Code lists land uses permitted outright within the M-2 zone. Permitted uses include those permitted outright in the C-1 zone. Section 61 of the Hillsboro Zoning Code lists uses conditionally permitted. The proposed pipeline is not a use listed as permitted outright (§ 60) or conditionally permitted (§ 61).⁹ Therefore, NW Natural assumes that the Hillsboro code prohibits this use.

In the analysis of compliance with ORS chapter 215, NWN has asserted, and OOE has concurred, that the narrow corridor between the cities of Cornelius and Hillsboro is one of the constraint points along the corridor. NWN has shown that the corridor must cross the Tualatin Valley highway at this location for reasons based on one or more of the six factors of ORS 215.275(2). This portion of the Preferred Corridor poses some of the most significant siting constraints encountered along the entire Preferred Corridor. It is impossible to site the pipeline in any other location. Moreover, the proposed alignment within the Hillsboro city limits is necessary in order to avoid EFU land to the west and more densely populated residential and commercial areas to the east. Because the Hillsboro Zoning Code does not list utility facilities such as the proposed pipeline within the M-2 zoning district, NWN has requested that the Council find that the pipeline complies with the applicable Statewide Planning Goals in Hillsboro, under ORS 469.504(1)(b)(B).

OOE has previously addressed the statewide planning goals in this Order with respect to the Rural-Commercial Zone in Washington County and the RRFF-5 and R-I zones in Clackamas County. For the City of Hillsboro, the relevant points under goals 1,2, 3,and 6 through 19 are identical to the previous discussion for the R-I and RRFF-5 zones in Clackamas county, and those findings are incorporated herein.

For Goal 4, Forest Lands, NWN notes that the proposed corridor will not cross forest lands in Hillsboro.

For Goal 5, Open Spaces and Natural Resources, there is no evidence that there are inventoried Goal 5 resources in the City of Hillsboro that would be affected by the proposed facility.. The pipeline will be installed via directional drilling and buried underground, and thus will have no impact on scenic values in the M-2 zoning district.

⁹ Section 60 of the Hillsboro Zoning Code does not include a land use within which the pipeline might arguably "fit." In contrast to the omission of utility facilities or gas pipelines in the M-2 zone, the M-P (Industrial Park) zone includes "public service or utility use" as an outright permitted use.

In summary, OOE recommends that the Council find that the proposed siting in the M-2 district of Hillsboro is not a permitted use in that district but does otherwise meet the Statewide Planning Goals. NWN has committed that any spoils from boring will not be deposited in the M-2 district and will be managed in accordance with water quality regulations. The site certificate will be conditioned to incorporate this commitment.

e. City of North Plains Permitting requirements

Although the Preferred Corridor proposed by NWN is well outside the City of North Plain, NW Natural has proposed an Alternate Corridor Segment along Gordon Road that does encroach into North Plains. The Gordon Road alternate corridor segment does not reduce impact on EFU land compared with NWN's preferred corridor, but was proposed in response to property owner concerns. Both the preferred and alternate segments in this area are centered on public road right of way.

NW Natural does not foresee any circumstances in which the pipeline or the pipeline easement would actually be situated on the north side of Highway 26, within the city of North Plains. Although as a consequence of the Gordon Road Alternate Corridor Segment the analysis area is partly within North Plains, Highway 26 forms a "hard" separation from North Plains, thereby avoiding any conceivable land-use and environmental impacts on the city. Even if the pipeline were routed within the city of North Plains, the pipeline corridor would run through two industrial zoning districts (the M-1 and M-2 zones). "Private and public utilities," which include gas service facilities, are outright permitted land uses within these two industrial zones. (*See* North Plains Municipal Code § 2.107.02(8) (Light Industrial, M-1 district), § 2.108.02(9) (General Industrial, M-2 district).) Therefore, NW Natural anticipates, and OOE recommends that the Council concur, that the proposed pipeline will be fully consistent with all applicable substantive land-use criteria in the City of North Plains.

f. City of Barlow Requirements in the R-1 District

A portion of the proposed corridor in Clackamas county is centered along Anderson Road, within the city of Barlow. Barlow's comprehensive-plan maps designate this area as "residential". Section 3.020 of the city's zoning ordinance lists "utility lines" as conditional uses, requiring compliance with requirements in zoning ordinance section 6.010 through 6.060.

Sections 6.010 through 6.060 offer few guidelines or criteria for considering a gas pipeline as a conditional use. Section 6.010 defines conditional uses as uses *"***which may be appropriate, desirable, convenient or necessary in the district where they are allowed, but which by reason of their height or bulk or the creation of traffic hazards or parking problems or other adverse conditionals may be injurious to the public safety, welfare, comfort and convenience unless conditions are imposed."*

This section authorizes the City Council to grant conditional use permits, including the imposition of conditions as follows:

“any additional conditions which the City Council considers necessary to protect the best interest of the surrounding property of the town as a whole. These conditions may include increasing the required lot size, yard dimensions, limiting the height of buildings, controlling the location and number of vehicle access points, increasing the street width, limiting the number, size and location of signs and requiring screening and landscaping to protect adjacent property.”

The Barlow zoning ordinance does not provide substantive criteria that apply to siting a gas pipeline within the R-1 district. The general standard appears to enable the city to impose conditions upon all listed conditional uses to ensure that the proposed use will not have a negative impact upon the surrounding property or on the city as a whole. NWN asserts that siting the SMPE within or adjacent to Anderson Road public right-of-way will not negatively impact the public welfare.

The City of Barlow has made no comments and recommended no conditions. The site certificate will be conditioned to require that NWN implement its Flood Hazard and Erosion Control Plans along the length of the pipeline. Conditions recommended under the Council’s standards at OAR 345 Division 22 and 24 will preclude adverse impacts to the city or to public safety. Therefore OOE recommends the Council find that the proposed pipeline meets the applicable substantive requirements in the City of Barlow

Conclusion

The proposed pipeline meets the applicable substantive requirements from the counties’ comprehensive land use plans and land use regulations, as identified in consultation with the land use planning agencies for the respective counties. OOE has analyzed the pipeline along its entire length for compliance with ORS chapter 215 and recommends a finding that, with conditions, the pipeline meets the criteria for utility facilities.

Compliance with applicable land use criteria is based on many representations by NWN regarding construction practices, grading, and drainage control and erosion control. OOE will recommend conditions to include all such representations as commitments on the part of NWN, as required by OAR 345-027-020(11).

The NWN demonstration of compliance with county requirements for significant natural resources relies on habitat studies and mitigation plans proposed under the EFSC Fish and Wildlife Habitat Standard. Commitments proposed under the Fish and Wildlife Habitat Standard will be listed under that standard. The NWN application also relies in part on mitigation measures required for the DSL wetlands permit. NWN commitments proposed under that permitting requirement will be listed in the discussion of that permit.

With the conditions described above, OOE recommends the Council find that the proposed pipeline meets its Land Use standard.