

## 4.15 CUMULATIVE EFFECTS

### 4.15.1 INTRODUCTION

Cumulative effects are defined as effects to the environment resulting from the incremental effect of the Proposed Action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

A cumulative effects analysis broadens the scope of analysis to include effects beyond those attributable solely to the implementation of the alternatives. The purpose of the cumulative effects analysis, as stated by the Council on Environmental Quality (CEQ) “is to ensure that federal decisions consider the full range of consequences” (CEQ, 1997:3). The process of analyzing cumulative effects, or impacts, requires consideration of cumulative effects issues in each of the traditional components of the Environmental Impact Statement (EIS), including scoping, describing the affected environment, and determining environmental consequences. The incorporation of cumulative effects analysis also aids in the development of alternatives and appropriate mitigation measures.

The cumulative effects analysis in this EIS expands, and in some cases reduces, the geographic and temporal borders to adequately analyze the effects of the project alternatives on specific resources, ecosystems, and human communities that occur incrementally in conjunction with other actions, projects and trends.

Growth and development trends drive the cumulative analysis and define the geographic borders and time frame of the analysis. The discussion of the cumulative environment includes a list of related actions and projects. Focus on specific actions or programs known or suspected to potentially result in significant impacts facilitates the cumulative impact analysis.

Resources identified as requiring specific attention within this EIS include traffic and the transportation network, land use, air quality, water resources, public facilities and services, and socio-economics. The cumulative environment is also relatively quantifiable for these primary resource areas, in both geographic and temporal terms, providing a general guide in establishing the affected environment for other resource areas, such as cultural resources or noise, that do not fall within specific jurisdictional or natural boundaries. As recommended by CEQ’s *Considering Cumulative Effects*, not all potential cumulative effects issues have been included in this EIS, only those that are considered to be relevant or consequential have been discussed in depth (CEQ, 1997:12).

The cumulative analysis begins with defining geographic borders and time frame of the analysis. Secondly, the cumulative environment is described in terms of expected growth as well as past,

present, and future actions and projects that may affect the status of the resources, ecosystems, and human communities in the project area. The discussion of the cumulative environment includes a summary of projected growth and a list of related actions and projects.

#### ***GEOGRAPHIC SCOPE OF ANALYSIS***

The geographic boundary for the cumulative analysis is generally defined as Clark County. This area is defined and utilized for the purpose of this cumulative effects analysis, in part due to the concerns voiced during the scoping process, the comments provided on the earlier Environmental Assessment, and the commitments made in the Memorandum of Understanding (MOU) between the Cowlitz Indian Tribe and Clark County (DEIS Vol. I, **Appendix C**) and the Tribe's Environment, Public Health and Safety (EPHS) Ordinance (**Appendix U** of the FEIS) requiring consistency with certain specified County development and environmental protection ordinances.

#### ***TEMPORAL EXTENT OF ANALYSIS***

The time frame for the cumulative effects analysis generally extends to 2030; the Washington Department of Transportation (WsDOT) planning horizon year (Parsons Brinckerhoff, 2006c). The temporal horizon of the Clark County Revised Comprehensive Growth Management Plan (GMP) is 2024. Beyond 2024, information on growth patterns and future activities becomes scarce and speculative. Additionally, the masking of significant impacts by extension of the temporal limits reduces the usefulness of a more extended analysis. For many resources, information is unavailable to extend meaningful analysis to 2024; however, attempts have been made to provide all relevant information.

#### ***CUMULATIVE ENVIRONMENT***

By the year 2024, substantial changes are expected to occur in Clark County as the result of population and employment growth, in conjunction with other projects that are planned or otherwise reasonably expected to occur in the region. Much of this growth is included within the Clark County Comprehensive GMP.

The analysis in this section expands the geographic and temporal borders to include the effects on specific resources, ecosystems, and human communities that occur incrementally in conjunction with other actions, projects, and trends. The purpose of cumulative effects analysis, as stated by the CEQ "is to ensure that Federal decisions consider the full range of consequences" (CEQ, 1997:3).

A list of related projects has been compiled from information made available by Clark County, the City of Ridgefield, the City of Vancouver, and WsDOT. The status of affected resources is based upon the information provided in **Section 3** of this document, from specific resource studies that have been undertaken for the alternatives, and additional review and analysis. Cumulative effects analysis

is based on the assumed implementation of the policies outlined in Clark County's Comprehensive GMP.

***LIST OF RELATED ACTIONS AND PROJECTS***

A list of actions and projects that could cause cumulative impacts when considered in conjunction with project alternatives was obtained from the communities in the study area. The analysis includes background based on a review of in-process developments from Clark County, Woodland, La Center, Ridgefield, and Battleground, as well as major projects in the City of Vancouver.

***Transportation Projects***

- A new interchange at Interstate 5 (I-5) and State Route (SR) 502/219<sup>th</sup> Street.
- Interchange modifications at the I-5/Ridgefield interchange.
- Minor widening of NE 10<sup>th</sup> Ave from Carty Road to NE 259<sup>th</sup> Street/S. 5<sup>th</sup> Street in Ridgefield.
- Roundabout at SR-501 at Pioneer Street in Ridgefield.
- Extension of Pioneer Street from 65<sup>th</sup> Avenue into Union Ridge as a two-lane minor arterial, with signalization at the Pioneer/65<sup>th</sup> Avenue intersection.
- A traffic signal at La Center Road/Pacific Highway in downtown La Center.

***Development Projects***

- Union Ridge development, a 360-acre mixed-use development that includes a distribution center for Dollar Tree Stores, and mixed uses consisting of light industrial, commercial and residential components.
- Other City of Ridgefield development, 1,355,000 square feet of general office space, and 831 dwelling units of single family residences.
- City of La Center development, 4,000 square feet of general office space, and 641 dwelling units of single family residences.
- City of Woodland development, 150,000 square feet of big box retail, 120,000 square feet of general office space, and 921 dwelling units of single family residences.
- City of Battleground development, 596,000 square feet of general office space, 197 dwelling units of single family residences, and 158 units of apartments.
- Specht Development, a multi-tract industrial/business park on the west side of I-5 south of Pioneer Street.
- Bellwood Heights, a 35-acre single-family residential subdivision, west of I-5 along Pioneer Street.
- The Vancouver Convention Center, an existing facility at 301 W 6<sup>th</sup> Street is used for convention and tourism events and contains 226 hotel rooms, banquet and reception space, meeting and breakout rooms.

- The Clark County Amphitheater at the Fairgrounds, an existing outdoor facility with seating for approximately 18,000 used to host special entertainment events from May to October.

***Local Government Projects***

- Expansion of the La Center Wastewater Treatment Plant.
- Expansion of the City of Ridgefield Wastewater Treatment Plant.
- Expansion of the La Center and Ridgefield urban growth areas (UGAs).

***SIGNIFICANCE OF CUMULATIVE IMPACTS***

Some actions, which result in individually insignificant impacts, may have significant impacts when cumulative, synergistic or additive effects are considered. The significance of these effects is particularly evident when impacts pass a threshold, such as causing a jeopardy opinion with regard to endangered species or a nonconformity determination under the Federal Clean Air Act (CAA).

Growth itself is very perceptible and tends to be regarded by the public as both adverse and an impact. Generally, growth is simply a part of the cumulative environment rather than an effect or result. However, a shift to unplanned and unregulated growth could be a significant impact. It should be noted that all the projects above are planned and within the jurisdiction of either Clark County or the affected municipalities.

***OTHER GAMING AND CASINO RESORT PROJECTS***

A common public misconception is that cumulative impact analysis should discuss or be confined to analysis of similar kinds of projects, and that the analysis should be directed towards the growth of the particular type of project that is proposed. For example, a cumulative discussion for a shopping mall should direct and confine the discussions to past, present, and proposed shopping malls, and provide an overview of the expansion of shopping malls and chain stores throughout the study area. This misconception is not illogical, and in the interest of providing both the public and decision-makers information on the growth of the gaming and resort industry in the greater Portland area, the following discussion is presented.

Current gaming operations include: four card rooms (Double Down Saloon and Casinos, Last Frontier, Palace Casino and New Phoenix – La Center, Washington), Chinook Winds (Lincoln City, Oregon), Kah-Nee-Ta (Warm Springs, Oregon), Lucky Eagle (Rochester, Washington), and Spirit Mountain (Grand Ronde, Oregon). These facilities comprise an estimated \$331 million in gaming revenues with 3,673 Video Lottery Tables (VLT), 169 table games, 75 Class II VLTs and 2,050 bingo hall seats. Associated with these operations are more than 800 hotel rooms and 128 RV sites.

Reasonably foreseeable proposed operations include Aurora/Wilsonville (Oregon), Cascade Locks (Oregon), and the Cowlitz Resort and Casino (La Center, Washington). If all three of these proposed facilities were to be constructed and operated at revenue levels per VLT comparable to current conditions, total gaming revenue from existing plus new facilities would increase to more than \$897 million per year with 10,173 VLTs and 374 table games. The hotel inventory associated with current and proposed facilities could increase to 1,292 rooms with a near doubling of RV sites to 253 RV spaces.

Assuming that current and new facilities generate revenues at current regional industry standards, the proposed Cowlitz Casino (Alternatives A-B) would generate annual gaming revenues estimated at just over \$261 million. Within the Southwest Washington/Northwest Oregon region, the Cowlitz Casino project could represent a 79% *addition to existing* regional gaming revenues, an 82% increase in the number of VLTs and an 80% increase in the number of table games at facilities. The project would also comprise a 31% increase in the number of casino-related hotel rooms and 98% increase in RV sites. If *all three casino properties* that have been proposed for this region were to be constructed, the Cowlitz Casino would represent 29% of the revenue potential (and VLTs) of all existing plus proposed facilities combined. The Cowlitz Casino would also constitute 36% of the table games, 19% of the hotel rooms and 49% of all RV sites for existing plus proposed gaming properties.

#### **4.15.2 ALTERNATIVES A AND B – PREFERRED CASINO-RESORT PROJECT AND PREFERRED PROJECT WITHOUT REROUTING NW 319<sup>TH</sup> STREET**

The effects of the above noted projects, analyzed in conjunction with the project alternatives, are presented below. Effects are described for each of the subject areas of the environment described in other portions of this EIS.

##### ***GEOLOGY AND SOILS***

While some cut-and-fill slopes would be needed on the La Center Interchange Site, the project design ensures that the major topographic features (i.e., hills and slopes) would be preserved. Therefore, no significant changes to the existing land-forms would result. Alternatives A and B would not contribute to cumulative impacts and there would be no significant cumulative effect to the topography of the area.

##### ***WATER RESOURCES***

Cumulative effects to water resources may occur as the result of future developments in combination with Alternative A or B. Examples of effects include increased sedimentation, increased pollution and increased stormwater runoff. Stormwater discharges from residential and industrial areas are of concern in managing surface water quality. Pollutants that accumulate in the dry summer months,

such as oil and grease, asbestos, pesticides, and herbicides, create water quality problems due to their presence in high concentrations during the first major storm event.

Regionally, the La Center Interchange Site is located within the western portion of the Lewis Water Resource Inventory Area watershed basin (WRIA 27) as identified by the Washington State Department of Ecology (DOE) (**Figure 3.3-1**). WRIA 27 is located within the counties of Clark, Cowlitz, Skamania, and Yakima.

The major surface water body in the project area is the East Fork Lewis River, which is located within the East Fork Lewis River Watershed, a sub-shed of the greater WRIA 27 (**Figure 3.3-2**). The East Fork Lewis River is the largest tributary of the Lewis River and is located north-northwest of the site. Major tributaries to the East Fork Lewis River in the vicinity of the La Center Interchange Site include Mason Creek, Jenny Creek, Breeze Creek, and McCormick Creek.

A watershed's runoff characteristics are altered when impervious surfaces replace natural vegetation. Changes in runoff characteristics may increase stream volumes, increase stream velocities, increase peak discharges, shorten the time to peak flows, and lessen groundwater contributions to stream base-flows during non-precipitation periods. Urban areas, such as the City of La Center and the City of Ridgefield also have sources of non-point source pollution that can affect regional water quality. Construction and implementation of the proposed transportation and development projects may likewise affect water quality by increasing sedimentation and pollution, and increasing stormwater runoff. However, it is expected that the proposed transportation and development projects would include erosion control measures in compliance with the National Pollutant Discharge Elimination System (NPDES) permit program and DOE regulations.

Alternatives A and B could contribute to changes in runoff characteristics (volume, velocity, and hydrograph) and water quality of the tributaries located near the La Center Interchange Site as a result of the conversion of open space to developed land. The Tribe has made appropriate design allowances which will reduce cumulative effects to a less than significant level. These include:

- Surface water detention basins and vegetative swales to limit post-construction runoff peak volumes to pre-construction levels.
- Storm filter vaults to filter Total Suspended Solids (TSS) and other potentially environmentally polluting mineral or materials such as oils and greases, nutrients and metals.
- Where feasible, all areas outside of buildings, roads, and parking areas will be kept as permeable surfaces, either as vegetation or high infiltration cover such as mulch, gravel, or turf block.
- Rooftops will drain to either embedded cisterns or vegetated drip lines to maximize infiltration prior to surface water discharge.

- Pedestrian pathways will use a permeable surface where possible, such as crushed aggregate or stone with sufficient permeable joints.
- In accordance with the requirements of the NPDES Phase II General Permit for Storm Water Discharges from Construction Activities, the Tribe will prepare a Stormwater Pollution Prevention Plan (SWPPP) to control discharge of pollutants in stormwater.

The most significant effects of wastewater discharge are changes to the general character of the Type Ns unnamed stream into which water would be discharged. These changes include increased temperature, turbidity, and erosion, as well as possible conversion of this intermittent stream into a perennial stream. As none of the other projects considered in the cumulative impacts analysis are expected to discharge into the unnamed stream, no cumulative effects of this type would occur.

As noted above, it is expected that the proposed transportation and development projects would include erosion control measures in compliance with the NPDES permit program, and would include Best Management Practices (BMPs) to protect water quality. While urban areas may adversely effect surface water quality due to non-point source pollution, the design of Alternatives A and B incorporates water quality protection features including using Wetland Cs as a natural detention basin, sediment/grease traps, and minimization of impervious surfaces to protect water quality. Therefore, the development of Alternative A or B would not result in or contribute to a significant cumulative water resource effect.

#### ***AIR QUALITY***

##### ***Ozone Precursor and PM<sub>10</sub> Emissions Generated by Operation of Alternatives A and B – Long-Term 2030 Conditions***

Operation of Alternative A or B during long-term 2030 conditions would result in the generation of volatile organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), and inhalable particulate matter (PM<sub>10</sub>). **Table 4.15-1** presents an estimate of these operational emissions for Alternative A and B at 2030 conditions. It is important to note that project implementation would also result in emissions of CO. However, because CO disperses rapidly with increased distance from the source, emissions of CO are considered localized pollutants of concern rather than of regional concern and are analyzed separately under Hot Spot Analysis. Operation of Alternative A or B are estimated to result in 101 tons per year (tpy) of VOC, 94 tpy of NO<sub>x</sub>, and 5 tpy of PM<sub>10</sub> emissions.

In addition, **Table 4.15-1** shows ozone precursor and PM<sub>10</sub> emissions as a percentage of countywide total emissions. Since no projections are available for what the Clark County 2030 emissions would be, 2003 emissions were used for comparison. **Table 4.15-1** shows that emissions associated with Alternative A or B would represent less than 0.66% of the countywide total emissions for VOC; 0.81% of the total countywide emissions for NO<sub>x</sub>; and only 0.05% for the total countywide emissions for PM<sub>10</sub>. Because the incremental effect of Alternative A or B, when considered in conjunction with

existing and other proposed projects, is a small portion of the countywide total, this effect is considered less than significant.

**TABLE 4.15-1**  
OZONE PRECURSOR AND PM<sub>10</sub> EMISSIONS  
LONG-TERM 2030 CONDITIONS – ALTERNATIVES A AND B

Emission Category	Emissions in Tons Per Year		
	VOC	NO <sub>x</sub>	PM <sub>10</sub>
Vehicular Emissions	100	79	4
Stationary Source Combustion	1	15	1
<b>Project Total</b>	101	94	5
Clark County 2003 Emissions	15,319	11,573	11,673
<b>Project's percentage of Countywide Total</b>	0.66%	0.81%	0.05%

Note: Emission values include traffic mitigation.

Source: CH2MHill, 2006a.

#### ***Carbon Monoxide Hot Spots Generated by Operation of Alternatives A and B – Long-Term 2030 Conditions***

Operation of Alternative A or B during long-term 2030 conditions would result in the generation of CO emissions. **Table 4.4-4** presents an estimate of CO concentrations at sensitive receptors with operation of Alternatives A and B in 2030. These estimates were modeled using projected traffic from Alternative A or B plus traffic growth that would occur without the project. The highest 1-hour average CO concentration would be 2.0 parts per million (ppm) at La Center Road and the I-5 northbound on-ramps. The highest 8-hour average CO concentration would be 4.4 ppm at the same receptor.

Both the 1-hour average and 8 hour average CO concentrations would be below Federal and State CO air quality standards. As 2030 conditions include concentrations from other planned developments and growth, the cumulative effects of this project would be less than significant.

#### ***Climate Change***

##### *Methodology*

Specific guidelines for assessing the impact level of Greenhouse gas (GHG) emissions have not been issued by the Washington State Department of Ecology (WSDE) or USEPA. As noted in **Section 3.4**, global warming is a global issue that is not being caused by any one-development project, but by global increases in atmospheric GHG concentrations. Thus, proposed solutions to the global warming problem have tended to be on the global or regional level. Washington's global warming policies and legislation (most notably Executive Order 07-02 and SB 6001) are intended to be regional solutions to ensure that statewide emissions are reduced substantially in the future (to levels much lower than

existing levels), doing Washington's part to ensure that future global emissions are reduced and ultimately to reverse the global warming trend. Washington's policies are also expected to encourage other states, countries and regions to adopt similar policies, which would further the global effort to reduce emissions (WCAT, 2007).

WSDE and the Washington Climate Advisory Team (WCAT) have recently proposed a number of strategies and measures that will be utilized for the state to meet its emissions reduction targets in 2010, 2020, and 2050 (WCAT, 2007). These proposed strategies are outlined in the draft document entitled *A Comprehensive Climate Approach for Washington* (WCAT, 2007), released for public review in December 2007. Most of the identified measures focus on statewide action meant to curb emissions by changes in statewide planning or policies rather than changes to individual development projects. However, some of the measures may be directly applicable to individual commercial developments. Should a development alternative comply with all directly applicable measures, the alternative will be supporting the state's efforts to significantly reduce its cumulative contribution to global climate change (to levels recommended by the IPCC) and the associated impacts. Thus, for the purposes of this analysis, cumulative contributions associated with a development alternative are considered less than significant if the project complies with all strategies currently identified by WCAT to comply with Executive Order 07-02 or SB 6001 that directly apply to an individual commercial project similar to that proposed by the development alternative.

#### *Carbon Dioxide Equivalent*

Carbon dioxide equivalent (CO<sub>2</sub>e) is a method by which GHGs values other than CO<sub>2</sub> are converted to a CO<sub>2</sub>-like emissions value based on a heat-capturing ratio. As shown in **Table 4.15-2**, CO<sub>2</sub> is used as the base and is given a value of one. CH<sub>4</sub> has the ability to capture 21 times more heat than CO<sub>2</sub>; therefore, CH<sub>4</sub> is given a CO<sub>2</sub>e value of 21. Emissions are multiplied by the CO<sub>2</sub>e value to achieve one GHG emission value. By providing a common measurement, CO<sub>2</sub>e provides a means for presenting the relative overall effectiveness of emission reduction measures for various GHGs in reducing project contributions to global climate change.

**TABLE 4.15-2**  
GREENHOUSE GAS CO<sub>2</sub> EQUIVALENT

Gas	CO <sub>2</sub> e Value
CO <sub>2</sub>	1
CH <sub>4</sub>	21
N <sub>2</sub> O	310
HFCs/PFCs	6,500
SF <sub>6</sub>	23,900

Source: ICPP, 2007.

*Strategies and Emissions Estimation*

The EPA approved Mobile6.2 emissions modeling software was used to estimate project emissions from mobile sources. Mobile and area source emission from the Proposed Project are 98,734 tons per year (tpy) of CO<sub>2</sub>e. **Table 4.15-3** shows project emissions estimates based on emission factors from the Climate Change Action Registry. As shown in the table, the project would result in emissions of CH<sub>4</sub> and N<sub>2</sub>O equivalent to 3,275 tpy of CO<sub>2</sub>e. Indirect emissions of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O are estimated at 22 tpy of CO<sub>2</sub>e. Total annual emissions during operation of the project would be equivalent to 102,031 tpy of CO<sub>2</sub>e. Annual project GHG emissions would be approximately 0.11 percent of Washington's predicted contribution to global GHG emissions in 2020 (see **Table 3.4-1**). Project contributions to the annual global GHG emissions in 2020 would be approximately 0.000012 percent.

**TABLE 4.15-3**  
ALTERNATIVE A AND B GHG EMISSIONS

<b>CO<sub>2</sub> Emissions</b>					
<b>Mobile Sources</b>		<b>Area Sources</b>		<b>Total CO<sub>2</sub>e</b>	
<b>tons per year</b>		<b>tons per year</b>		<b>tons per year</b>	
97,612 <sup>1</sup>		1,122 <sup>2</sup>		98,734	
<b>CH<sub>4</sub> and N<sub>2</sub>O Emission from Mobile Sources</b>					
<b>Emission Factor CH<sub>4</sub> and N<sub>2</sub>O<sup>1</sup></b>	<b>Miles Traveled</b>	<b>CH<sub>4</sub></b>	<b>N<sub>2</sub>O</b>	<b>Total CO<sub>2</sub>e</b>	
<b>g/mile</b>	<b>miles/day</b>	<b>tons per year</b>		<b>tons per year</b>	
0.05	491,791	208	3,067	3,275	
<b>Indirect GHG emissions</b>					
<b>Emission Factor (Kg of CO<sub>2</sub>/CH<sub>4</sub>/N<sub>2</sub>O)<sup>1</sup></b>	<b>Estimated kW-h Usage<sup>3</sup></b>	<b>CO<sub>2</sub></b>	<b>CH<sub>4</sub></b>	<b>N<sub>2</sub>O</b>	<b>Indirect CO<sub>2</sub>e</b>
<b>lb/MW-h</b>	<b>MW-h/year</b>		<b>tons per year</b>		
804.54/0.006/0.0037	54	10	0.00007	0.00005	22
<b>Total Operation CO<sub>2</sub>e tons per year</b>					<b>102,031</b>

<sup>1</sup> Emission factors from Climate Change Action Registry

<sup>2</sup> Estimated from like facilities

<sup>3</sup> Estimated using 4,500 kilowatts-hours/month of power used.

Source: Climate Change Action Registry, 2007.

As discussed above and in **Section 3.4**, Washington's policies would result in a reduction of statewide emissions, including emissions resulting from the proposed project, to levels below current background levels. Of the 46 policy strategies that would ensure a statewide reduction in GFG emissions, only five were determined to apply to Alternative A. The other policy strategies do not

apply to Alternative A because they either apply to state entitlements, planning-level strategies, or industry specific incentives. Inconsistency with applicable WCAT GHG emission reduction strategies could result in a potentially significant cumulative impact. As presented in **Table 4.15-4**, recommended mitigation measures in **Section 5.0** would ensure compliance with all applicable strategies, resulting in a less than significant cumulative impact.

**TABLE 4.15-4**  
CONSISTENCY WITH STATE EMISSIONS REDUCTION STRATEGIES

WCAT Number	WCAT Strategy	Project Consistency
RCI-10	More Stringent Appliance/Equipment/Lighting Efficiency Standards, and Appliance and Lighting Product Recycling and Design	The Proposed Project would be consistent with this strategy after implementation of mitigation recommended in Section 5.2.3.
RCI-11	Policies and/or Programs Specifically Targeting Non-energy GHG Emissions	The Proposed Project would be consistent with this strategy after implementation of mitigation recommended in Section 5.2.3.
T-5	Quantification of GHG impacts of Transportation Plans, Programs, and Projects	Although the Proposed Project is not a "Transportation Project" there is a large transportation element involved; therefore this analysis has quantified mobile emissions and is in compliance with strategy T-5.
T-11	Low Carbon Fuel Standard	85 percent of GHG emissions are emitted from mobile sources. Vehicles visiting the casino would be required to comply with this policy strategy. Therefore the Proposed Project is in compliance with this strategy.
AW-3	Significant Expansion of Source Reduction, Reuse, Recycling, and Composting	The Proposed Project would be consistent with this strategy after implementation of mitigation recommended in Section 5.2.3.

Source: State of Washington, Climate Advisory Team, 2007.

### ***BIOLOGICAL RESOURCES***

Cumulative biological resources effects would occur if Alternatives A or B, in conjunction with other projects, would result in an adverse effect to State or Federally listed species; contribute to a reduction in the number of a listed species, affecting the species long term sustainability; cause development that permanently disturbs a wildlife corridor; results in an effect to sensitive habitat that is of regional significance; or results in a conflict with regional conservation goals.

### ***Wildlife and Habitats***

As identified in **Section 4.5**, the majority of the impacts from Alternatives A and B are on pasture habitat, primarily grazing land. This habitat provides limited resources for wildlife and is primarily inhabited by animal species accustomed to human disturbances. Cumulatively, it is anticipated that the design of other projects in the area will be in accordance with habitat conservation ordinances for Clark County and will take into account Priority Fish and Wildlife Habitats designated by the Washington Department of Fish and Wildlife. As disruption of a small amount of low quality habitat would not result in a significant effect to biological resources, no significant cumulative effects would occur from Alternatives A and B.

### ***Federally Listed Species***

Alternatives A and B would not involve direct effects to any Federally listed species. Provisions of permits issued under the Clean Water Act (CWA) would ensure that impacts to aquatic species are adequately mitigated. It is assumed that the other projects considered in the cumulative analysis will comply with Section 7 or 10 of the Endangered Species Act and applicable State laws to pose less than significant effects on Federally listed species. Therefore, Alternatives A and B would not result in significant cumulative effects to Federally listed species.

### ***Migratory Birds***

Alternatives A and B would not result in significant cumulative effects to nesting migratory birds. Night-time lighting impacts can be avoided through avoidance of strobe and pulsing lights, utilization of low pressure sodium bulbs for outdoor lighting, and other measures included in project design. It is assumed that the development of other projects considered in the cumulative analysis will comply with the Migratory Bird Treaty Act of 1918, and as such would have no adverse effects on migratory birds. Given the existing degraded condition of habitats adjacent to proposed development areas, and the level of human activity currently existing within the project vicinity, Alternatives A and B would not result in significant cumulative effects to nesting migratory birds.

### ***Waters of the U.S.***

Project design ensures that Alternatives A and B would have only minimal direct effects on any “waters of the U.S.” Adverse indirect effects to “waters of the U.S.” would be avoided by the implementation of project features designed to minimize impacts and provide buffers to wetlands, control stormwater and wastewater discharges, and protect the quality of runoff water through conditions of the NPDES permit. All unavoidable impacts to wetlands have been fully described in **Section 5.0** and will be addressed through the U.S. Army Corps of Engineers (USACE) permitting process. Under both alternatives, tertiary treated effluent outflow from the wastewater treatment plant would be discharged into the Type Ns unnamed stream on site. Fisheries are not present on site due to a downstream barrier as described in **Section 3.5** Biological Resources. Additional flows from the

treated wastewater discharge could convert the stream to perennial conditions downstream from the point of discharge. This discharge may ultimately be beneficial to fisheries within the East Fork Lewis River by being of a higher water quality. It is assumed that any other projects will follow the “no net loss policy of wetlands,” as adopted by the U.S. Environmental Protection Agency (USEPA) and USACE in 1989 and comply with any USACE permit requirements. Therefore, Alternatives A and B would not result in significant cumulative effects to “waters of the U.S.”

#### ***CULTURAL RESOURCES***

No significant cultural resources have been identified within or adjacent to the La Center Interchange Site. However, the records search and archival research indicate that the study area is in a region sensitive for prehistoric/pre-contact resources and historical resources. Prehistoric archaeological sites recorded in the general vicinity of the project area include rock alignments, habitation areas, trails, and lithic scatters. Known historic archaeological sites in the region include wagon roads, trails, and homesteads. Based on this sensitivity, Alternatives A and B could impact unknown buried archaeological resources, with no surface evidence indicating their presence. Significant cumulative impacts to cultural resources could occur if such sites were destroyed without appropriate mitigation. These procedures are specified in **Section 5.0** where Federal funding licensing or permitting requires compliance with the National Historic Preservation Act of 1966 (NHPA), and as appropriate, the State Environmental Policy Act (SEPA) and county historic preservation guidance.

As consultation with Tribes is on-going, if any additional cultural sites or uses are reported in or adjacent to the project boundaries, Section 106 SHPO consultation will be expanded to include that/those resources and uses in the record of decision (ROD). Accordingly, no significant cumulative impacts to cultural resources are expected.

#### ***SOCIOECONOMIC CONDITIONS***

Cumulative socioeconomic effects that affect the lifestyle and economic well being of residents could occur in the project area as the result of various developments. Alternatives A and B would introduce new economic activity in Clark County, which is a beneficial effect to the region. When considered with other growth in Clark County through 2024 there may be cumulative socioeconomic effects including impacts to the local labor market, housing availability, increased problem gambling costs, and impacts to government. These effects would occur as the region’s economic and demographic characteristics change, as the population grows, and as specific industries expand or contract. Planning documents for Clark County and the cities of La Center and Ridgefield would continue to designate land uses for businesses, industry, and housing, as well as plan public services which would anticipate growth in the region.

### ***Future Conditions***

Clark County recently updated its Comprehensive GMP, including UGAs to accommodate homes and jobs through 2024. The planning assumptions include a total County population of 584,310 people by 2024. Both alternatives assume population growth of 192,635 people, with 90 percent of the population in urban areas and 10 percent in rural. By 2024, 66,939 dwelling units would be needed for households in urban areas and 138,312 new jobs. Redevelopment within existing areas would accommodate five percent of population and job growth. On average, the County assumes 2.59 persons per household, 20 employees per commercial acre, 9 employees per industrial acre, and 20 employees per business park acre (Clark County, 2007b).

### ***Incremental Cumulative Effect***

#### *Economy*

The development of the casino-resort employing approximately 3,151 people, in conjunction with the existing Vancouver Convention Center and Clark County Amphitheater, would significantly increase the area's economic reliance on the travel, tourism, leisure and convention business while simultaneously increasing the area's draw and market share of this industry segment. Substitution effects to revenues from the card rooms in La Center are expected to result in as much as a 66% decline in gambling tax revenues received by the City of La Center (EcoNorthwest, 2006). The City of La Center's reliance on these businesses for taxes and fees would decrease over time. As a result of the recently approved UGA expansion, the City of La Center's economic development will likely shift to the I-5 corridor where industrial and commercial development in the vicinity of the project site is planned. As Clark County ranks last in per capita tourism spending statewide, improvement in this market segment would be a positive impact (E.D. Hovee, 2006b). Development associated with cumulative growth assumptions and Alternatives A and B would result in beneficial economic effects in the region.

#### *Population and Housing*

As the La Center Interchange site is scheduled for industrial development, the development of Alternative A or B would increase the estimated number of employees and resulting in-migrating housing needs beyond that planned in the County's GMP. On the 151-acre project site, an industrial development would create approximately 1,359 new jobs compared to the 3,151 jobs proposed under Alternatives A and B. This amounts to an additional 1,792 employees or approximately 12 additional employees per acre over the County's planned growth.

As discussed in **Section 4.14**, approximately 315 households would migrate into the County as a result of the project. Due to the distribution among the secondary area, a housing shortage within Clark County is not anticipated in any one jurisdiction. Table 45 of the Socioeconomic Assessment (DEIS Vol. II, **Appendix S**) provides a breakdown of where in-migrating households may be located

based on current availability of housing. With Clark County's recent adoption of expanded UGAs within the GMP, it is highly likely that the number of in-migrating households located in urban areas, including the cities of La Center and Ridgefield, would increase due to the annexation of previously unincorporated areas with available housing. Due to the distribution of in-migrating households throughout the secondary area and currently adequate housing stock (see **Section 4.14**), no adverse cumulative impacts are anticipated. The housing needs of the project would become proportionally smaller if more growth is anticipated for Clark County.

#### *Local Jurisdictions*

As population growth occurs in the region, fiscal demands on local governments will increase for necessary services. UGA expansions will increase the demands on public services while simultaneously increasing the property tax base and area for collecting development fees for incorporated cities. As discussed above, gaming revenue from card rooms would be reduced by as much as 66% for the City of La Center. Mitigation for lost revenue is proposed in **Section 5.2.6**. Mitigation is recommended for 10 years at which time the City could transition to funding of capital improvement projects through increased taxes or development fees, local bond measures, and/or state or federal funding. No adverse cumulative impacts are anticipated.

#### **TRANSPORTATION**

Analysis of baseline conditions has been expanded to include an expanded list of proposed developments including 2,590 new single-family dwelling units, 2,075,000 square feet of general office space, and 150,000 square feet of big box retail space. Trips to and from these pending development proposals were added to the study area roadway network as part of the 2010 baseline.

Year 2030 traffic analyses for baseline conditions (without project) for the NW 319<sup>th</sup> Street/La Center Road and I-5 Interchange indicates that without significant improvements, the off-ramp traffic in both directions will queue onto the I-5 mainline during typical weekday PM peak hours (Parsons Brinckerhoff, 2006d). This will affect I-5 traffic operations and exacerbate the current High Accident Corridor condition in which this interchange is located. A Draft Interchange Justification Report (IJR), formerly entitled a Modified Access Decision Report (MADR), has been prepared by Parsons Brinckerhoff (2006d) in coordination with this EIS and the Supplemental Traffic Impact Study (**Appendix O** of the FEIS) prepared for the project alternatives, and is included as **Appendix P** of the FEIS. The purpose of the Draft IJR is to provide documentation of the assessment and results of long-term traffic growth and potential solutions at the I-5 Interchange with NW 319<sup>th</sup> Street/La Center Road. The Draft IJR was prepared in consultation with the Washington State Department of Transportation (WSDOT) and the Federal Highway Administration (FHWA); however, to date there have been no formal approval of the IJR.

Based on traffic operations and the safety analysis summarized in the Draft IJR, the proposed interchange improvement would provide the following elements (Parsons Brinckerhoff, 2006d):

- Lengthen/widen the interchange ramps to add capacity and queue storage to ease future queues extending onto the I-5 mainline during peak periods;
- Add acceleration and deceleration lanes and tapers to improve traffic operations and reduce speed differential between ramp and mainline traffic;
- Widen the NW 319<sup>th</sup> Street overpass over I-5 from its current two-lane configuration, to a two-lane structure with a center turn-lane, and add traffic signals at the ramp termini to accommodate not only traffic volumes with the Proposed Project in 2010, but also 2030 peak hour traffic volumes as well;
- Realign the frontage roads on both sides of the interchange (NW 31<sup>st</sup> Avenue and NW Paradise Park Road) away from the ramp termini to increase the intersection spacing and improve traffic operations at the interchange; and
- Ultimately, add an additional through lane in each direction from the La Center Interchange southward to the Ridgefield Interchange; the northbound additional lane would become an exit-only lane at the La Center Interchange (using the auxiliary lane described above), while the southbound additional lane would be added from the southbound on-ramp from the La Center Interchange. This improvement is considered a regional improvement and would be needed after 2010 but before 2030 to maintain the I-5 mainline level-of-service.

With implementation of the *Recommended Operational Alternative* for interchange improvements pursuant to the Draft IJR, as well as mitigation measures provided in **Section 5.0**, cumulative impacts from traffic under Alternatives A and B would be less than significant.

#### **LAND USE**

Cumulative land use impacts within Clark County are expected to be minimal because of Clark County's general planning obligations under the State Growth Management Act (GMA), which require the preservation of surrounding rural and resource (agricultural) lands and the limitation of urban development to designated urban growth areas. The County's general planning obligations under the GMA would prevent the conversion of surrounding rural lands to more intense uses. However, because the La Center Interchange Site and surrounding areas have been included within the La Center UGA, it is possible that the site may be annexed into the City's boundaries, removing constraints to growth.

Cumulative land use effects may occur as the result of unexpected growth and disruption of orderly development. The development of Alternative A or B in conjunction with the other transportation and development projects is expected to increase the demand for housing within Clark County. While the Union Ridge Development and the Bellwood Heights development would include the

construction of residential housing units, it is assumed that this new construction is being planned to meet current housing demands. In the short term the increased demand may increase the housing and housing rental prices as more people seek to locate in the region. Over time, the cumulative demand may increase development interest in Clark County. As noted by the 2007 Clark County Comprehensive GMP Housing Element, the population of Clark County is expected to grow by approximately 192,635 people or 73,376 households over the next twenty years (Clark County, 2007). However, typical of most communities in the United States, the primary influences on housing production are generally constrained by the following factors:

- Land use controls affecting the areas and density of housing development;
- Building code requirements that may influence construction costs and housing prices;
- Development impact fees and permitting requirements;
- Off-site improvements and mitigation requirements;
- Finance costs such as interest rates and loans;
- Materials and construction costs; and
- In-migration and mismatches in housing supply and demand.

These constraints substantially increase the cost of developing affordable housing in the County and make it more difficult for those seeking a home to purchase or build a home. Clark County has identified the need to remove these constraints and provide incentives to promote the provision of affordable housing in the County. Programs identified in the Housing Element include encouraging the use of infill parcels to achieve target densities and reduce sprawl, increasing the availability of land for residential development through re-designating lands near existing cities such as La Center, increasing the housing density, and providing incentives for the construction of affordable housing by relaxing development restrictions and the reduction or waiver of permit fees (Clark County, 2007).

The La Center Interchange Site is currently in a rural location and designated for light industrial uses within the City of La Center's UGA. Surrounding properties to the south and east also within La Center's UGA are likewise designated for light industrial and community commercial uses, while areas to the west and north are designated for agricultural and rural residential uses.

Additional commercial development that could theoretically follow a casino project (i.e. convenience retail, hotels, etc.) is not permitted under most area parcels' current zoning, which is agricultural, large parcel rural residential, and light industrial.

The decision whether to urbanize the interchange is a policy matter. The County's planning and growth management plan will control the future urban development of the interchange area until and unless the City of La Center annexes the area into their City limits. There is no cause and effect relationship between the Tribe's development and additional urban development. Future urban

development in the area will be limited to lands included within the City's UGA. Furthermore, the urban development will be controlled by the land use regulations of Clark County or the relevant city, and mitigation of impacts will be provided under both the land use regulations and project-level review under SEPA. For the La Center Interchange Site, under either Alternatives A or B, the urbanization of the area around the site will be controlled by La Center's decision to annex and extend public services such as water and wastewater treatment to the area. The lack of zoning constraints to development and availability of public services creates an incentive for growth. Alternatives A and B would also create an additional incentive for surrounding lands to be developed with commercial uses to complement the proposed development.

### ***PUBLIC SERVICES***

The Washington State GMA mandates that each planning jurisdiction prepare a Capital Facilities Element as a part of its Comprehensive Plan. The project alternatives are located in Clark County, which has described how services would be provided to support growth for the next 20 years in the Capital Facilities and Utility Element of the Clark County Comprehensive Plan (Clark County, 2007). The other planned developments contributing to the cumulative impact are within the limits of the City of Ridgefield. For the City of Ridgefield, growth and planned improvements to support this growth are described in the 2005 Capital Facilities Plan (Ridgefield, City of, 2005b).

### ***Water Supply***

Clark Public Utilities (CPU) has capacity to provide water to the La Center Interchange Site (DEIS Vol. II, **Appendix G**) and has provided a Service Agreement letter to enter into negotiations and to contract with the Tribe (DEIS Vol. III, **Appendix BB**). CPU has the capacity to serve both Alternative A or B and the other projects considered in the cumulative effects analysis, therefore, the cumulative effect to municipal water suppliers would be less than significant.

### ***Wastewater***

Alternatives A and B would be served through an on-site wastewater treatment plant with discharge to the Type Ns unnamed stream on-site. The other cumulative developments would be served through the City of La Center wastewater system with discharge directly to the Lewis River. Development of Alternative A or B would not affect the municipal wastewater supplier, thus there would be no cumulative effects associated with these alternatives. However, if the decision is made to have wastewater treated by a publicly owned treatment plant, wastewater would most likely be treated by the City of La Center's system and cumulative impacts would result. Cumulative effects include the obvious use of existing capacity within the City of La Center system, by this project and others, as well as increased pressure to expand and upgrade the City of La Center system. This combination of factors pushing for expansion and upgrading of the La Center system, in conjunction with the responsibility of new developments to pay for needed improvements, is likely to result in the

conversion of the City's Sequencing Batch Reactors to a Membrane Bio Reactor (MBR) system. The end result is that more effluent, although of significantly higher quality, would be discharged to the Lewis River. This is not expected to be a significant cumulative impact.

### ***Solid Waste***

To plan for development, the Finley Buttes Landfill calculates future waste generation based on population growth and large volume projects that dispose over 20,000 tons per year. The landfill currently receives 600,000 tons per year of solid waste and has a life expectancy of at least 200 years with the cumulative developments and Alternative A or B (Large, pers. communication, 2005). The cumulative impacts to solid waste services would be less than significant.

### ***Electricity, Natural Gas, and Telecommunications***

Electrical, natural gas, and telecommunications lines run extensively throughout Clark County. CPU has surplus electrical capacity in Clark County (Morris, pers. communication, 2005). To service Alternative A or B, new facilities including a new substation, would be needed. CPU routinely projects future demand and compares it to the existing supply. CPU believes that they have capacity to provide for anticipated customer demands (Clark County, 2007b). As a result of planning, a new substation was built in Ridgefield and one is projected for the La Center area (Morris, pers. communication, 2005). NW Natural Gas owns and operates over 7,000 miles of line and additional lines are constructed on an as-needed basis. Qwest telephone has a fiber optic cable network at the La Center Interchange Site and near the related cumulative developments. Since the cumulative developments would occur in consultation with these service providers and occur according to planned land uses, it is anticipated that there would be capacity for the projects. While these providers may have the capacity to provide service there is often new infrastructure needed in undeveloped areas. Individual projects would be responsible for paying development or user fees to receive electrical, natural gas, cable, and telephone services. Thus, the cumulative effects would be less than significant.

### ***Law Enforcement***

Clark County Sheriff's Office would provide service for Alternatives A and B. The Tribe has committed in Section 3.0 of the MOU (DEIS Vol. I, **Appendix C**) and Section 3(A) of the Tribe's EPHS Ordinance (**Appendix U** of the FEIS), to enter into an agreement to reimburse the Clark County Sheriff's Office for reasonable direct and indirect costs incurred in conjunction with providing law enforcement services. The Tribe has also committed in the MOU and EPHS Ordinance to reimburse Clark County for court and jail services through direct payment or through an impact mitigation fund. The City of Ridgefield Police Department would provide service to some of the other cumulative developments identified previously. The City of Ridgefield Police Department is currently staffed above the goal of 1.2 officers per 1,000 persons (Parametrix, 2005). While the

cumulative projects may increase demands to law enforcement services, resources to service Alternatives A or B would be provided through the MOU and/or EPHS Ordinance. Thus development of Alternative A or B would not create incremental significant effects when combined with the cumulative projects. The cumulative effect is less than significant.

***Fire Protection and Emergency Medical Services***

Fire protection and emergency medical services, for the previously identified cumulative projects, would be provided primarily by Clark County Fire District (CCFD) 12. For Alternative A and B, the Tribe has committed, in Section 6.0 of the MOU (DEIS Vol. I, **Appendix C**) and Section 3(B) of the Tribe's EPHS Ordinance (**Appendix U** of the FEIS), to compensate CCFD 12 for costs relating to the provision of fire and emergency medical services to Tribal lands and facilities. Thus development of Alternative A or B would not create incremental significant effects when combined with the cumulative projects. Cumulative effects would be less than significant.

***NOISE***

Construction activities conducted during nighttime hours (10 p.m. to 7 a.m.) may exceed the Washington Administrative Code (WAC) Noise Abatement Criteria (NAC) level of 47 A-weighted decibels (dBA) for nighttime noise. However, mitigation measures in **Section 5.0** ensure that construction activities requiring heavy equipment would not be conducted during nighttime hours; therefore, there would be no cumulative noise impacts associated with Alternatives A or B.

Operational noise associated with Alternatives A and B would be in compliance with the daytime and nighttime WAC Average Sound Level ( $L_{eq}$ ) limits. Therefore, no cumulative noise impacts would occur from the on-site operations of Alternatives A or B.

***HAZARDOUS MATERIALS***

There are no existing hazardous materials on the La Center Interchange Site. Operation of the on-site wastewater treatment plant under Alternatives A and B would require the delivery, storage, and use of hazardous materials, particularly the use of sodium hypochlorite (bleach) and citric acid. Mitigation measures presented in **Section 5.0** would decrease the impacts from any incidental spills that may occur at the wastewater treatment plant to a less than significant level. The other cumulative developments would be required to adhere to State and municipal regulations in the delivery, handling, and storage of hazardous materials, thereby reducing the risk of accidental exposure to the public's health and welfare. Therefore, there are no significant cumulative hazardous materials issues associated with Alternatives A and B.

### ***AESTHETICS***

The La Center Interchange Site is currently used for residential and grazing purposes. Development of Alternative A or B would encompass most of the site. While screening features would be integrated into the design of the alternatives and landscaping would be used to enhance the visual character of the facilities and integrate natural elements, visually the development represents a shift from rural landscapes to views of a developed area. However, views of the facilities are generally restricted by trees along the I-5 corridor. Other developments would occur according to planned land use designations. While development on the outskirts of Ridgefield and at the La Center Interchange Site would represent a shift from agricultural to commercial development, it is consistent with the planned urbanization of the site and surrounding area as a result of the La Center UGA expansion, and would follow applicable design, landscaping, sign, and lighting ordinances. This cumulative effect would be less than significant.

### **4.15.3 ALTERNATIVE C – REDUCED INTENSITY**

#### ***GEOLOGY AND SOILS***

Some cut-and-fill slopes would be needed on the La Center Interchange Site. However, the project design ensures that the major topographic features (i.e., hills and slopes) would be preserved. Therefore, no significant changes to the existing land-forms would result and there would be no significant cumulative effect to the topography of the area under Alternative C.

#### ***WATER RESOURCES***

As with Alternatives A and B, cumulative effects to water resources may occur as the result of future developments in combination with Alternative C. Examples of effects include increased sedimentation, increased pollution and increased stormwater flows. However, as with Alternatives A and B, Alternative C would not have significant effects on the water quality and characteristics (volume, velocity, and hydrograph) of the Type Ns unnamed stream on site when combined with cumulative conditions in the project area. The treated wastewater and storm water runoff would meet the water quality objectives and regulations of the DOE, Clark County, and the USEPA. As none of the projects considered in the cumulative impacts analysis are expected to discharge to the Type Ns unnamed stream, no significant hydrologic changes would occur.

#### ***AIR QUALITY***

##### ***Ozone Precursor and PM<sub>10</sub> Emissions Generated by Operation of Alternative C – Long-Term 2030 Conditions***

Operation of Alternative C during long-term 2030 conditions would result in the generation of VOC, NO<sub>x</sub>, and PM<sub>10</sub> emissions. Since no projections are available for 2030 emissions for Clark County, 2003 emissions were used for comparison. **Table 4.15-2** presents an estimate of these operational emissions at 2030 conditions. It is important to note that project implementation would also result in

emissions of CO. However, because CO disperses rapidly with increased distance from the source, emissions of CO are considered localized pollutants of concern rather than of regional concern and are analyzed separately under Hot Spot Analysis. Operation of Alternative C is estimated to result in 75 tpy of VOC, 73 tpy of NO<sub>x</sub>, and 4 tpy of PM<sub>10</sub> emissions.

In addition, **Table 4.15-5** shows ozone precursor and PM<sub>10</sub> emissions as a percentage of countywide total emissions. **Table 4.15-2** shows that emissions associated with Alternative C would represent less than 0.49% of the countywide total emissions for VOC; 0.63% of the total countywide emissions for NO<sub>x</sub>; and only 0.04% for the total countywide emissions for PM<sub>10</sub>. Because the incremental effect of this alternative in conjunction with other planned projects is a small portion of the countywide total, this cumulative effect is considered less than significant.

**TABLE 4.15-5**  
OZONE PRECURSOR AND PM<sub>10</sub> EMISSIONS  
LONG-TERM 2030 CONDITIONS – ALTERNATIVE C

Emission Category	Emissions in tons per year		
	VOC	NO <sub>x</sub>	PM <sub>10</sub>
Vehicular Emissions	74	58	3
Stationary Source Combustion	1	15	1
<b>Project Total</b>	75	73	4
Clark County 2003 Emissions	15,319	11,573	11,673
<b>Project's percentage of Countywide Total</b>	0.49%	0.63%	0.04%

Note: Emission values include traffic mitigation.

Source: CH2MHill, 2006a.

#### ***Carbon Monoxide Emissions Generated by Operation of Alternative C – Long-Term 2030 Conditions***

Operation of Alternative C during long-term 2030 conditions would result in the generation of CO emissions. **Table 4.4-8** presents an estimate of CO concentrations at sensitive receptors with operation of Alternative C in 2030. These estimates were modeled using projected traffic from Alternative C plus traffic growth that would occur without the project. The highest 1-hour average CO concentration would be 2.2 ppm at La Center Road and the I-5 northbound on-ramps. The highest 8-hour average CO concentration would be 4.5 ppm at the same receptor.

Both the 1-hour average and 8-hour average CO concentrations would be below both Federal and state CO air quality standards. As 2030 conditions include concentrations from other planned developments and growth, the cumulative effects of this project would be less than significant.

*Climate Change*

**Table 4.15-6** shows project emissions estimates from Alternative C, based on emission factors from the Climate Change Action Registry and the EPA approved Mobile6.2 emissions modeling software. As shown in the table, the project would emit 73,881 tpy of CO<sub>2</sub>e from mobile sources and 6 tpy of CO<sub>2</sub>e from indirect mobile sources. Total annual emissions during operation of the Proposed Project would be equivalent to 74,120 tpy of CO<sub>2</sub>e. Annual project GHG emissions would be approximately 0.081 percent of Washington's predicted contribution to global GHG emissions in 2020 (see **Table 3.4-7**). Project contributions to the annual global GHG emissions in 2020 would be approximately 0.000084 percent.

**TABLE 4.15-6**  
ALTERNATIVE C OPERATIONAL GHG EMISSIONS

CO <sub>2</sub> Emissions <sup>1</sup>					
Mobile Sources		Area Sources		Total CO <sub>2</sub> e	
tons per year		tons per year		tons per year	
71,730		233		71,963	
CH <sub>4</sub> and N <sub>2</sub> O Emission from Mobile Sources <sup>2</sup>					
Emission Factor (CO <sub>2</sub> /CH <sub>4</sub> /N <sub>2</sub> O)	Miles Traveled	CH <sub>4</sub>	N <sub>2</sub> O	Total CO <sub>2</sub> e	
g/mile	miles/day	tons per year		tons per year	
552.08/0.05/0.05	322970	136	2,014	2,151	
Indirect GHG emissions <sup>2</sup>					
Emission Factor (Kg of CO <sub>2</sub> /CH <sub>4</sub> /N <sub>2</sub> O)	Estimated kW-h Usage <sup>3</sup>	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Indirect CO <sub>2</sub> e
lb/MW-h	MW-h/year		tons per year		
804.54/0.006/0.0037	35	6	0	0	6
Total Operation CO <sub>2</sub> e tons per year					74,120

<sup>1</sup> Estimated from EPA and CARB approved URBEMIS air quality program (**Appendix W**)

<sup>2</sup> Emission factors from Climate Change Action Registry

<sup>3</sup> Estimated using 4,500 kilowatts-hours/month of power used.

Source: URBEMIS, 2007; Climate Change Action Registry, 2007.

Inconsistency with applicable WCAT GHG emission reduction strategies could result in a potentially significant cumulative impact. Emission reduction strategies applicable to Alternative C are the same as those that apply to Alternative A. As presented in **Table 4.15-4**, recommended mitigation measures in **Section 5.0** would ensure compliance with all applicable strategies, resulting in a less than significant cumulative impact.

## **BIOLOGICAL RESOURCES**

### ***Wildlife and Habitats***

As with Alternatives A and B, the majority of the impacts are on pasture habitat, primarily grazing land. This habitat provides limited resources for wildlife and is primarily inhabited by animal species accustomed to human disturbances. Cumulatively, it is anticipated that the design of other projects in the area will be in accordance with habitat conservation ordinances for Clark County and will take into account Priority Fish and Wildlife Habitats designated by the Washington Department of Fish and Wildlife. As disruption of a small amount of low quality habitat would not result in a significant effect to biological resources, no significant cumulative effect would occur from Alternative C.

### ***Federally Listed Species***

Appropriate mitigation, incorporated as conditions of discharge permits issued under the CWA, would ensure that Alternative C would not adversely affect any Federally listed aquatic species. It is assumed that other projects will be required to comply with Section 7 or 10 of the Endangered Species Act and other applicable State laws to pose less than significant effects on Federally listed species, Alternative C would not result in significant cumulative effects.

### ***Migratory Birds***

Alternative C would not result in significant effects to nesting migratory birds. It is assumed that the development of other projects in the vicinity will comply with the Migratory Bird Treaty Act of 1918, and as such will have no adverse effects on migratory birds. Given the existing degraded condition of habitats adjacent to proposed development areas and the level of human activity currently existing within the project vicinity, Alternative C would not result in significant cumulative effects to nesting migratory birds.

### ***Waters of the U.S.***

Project design ensures that Alternative C would have only minimal direct effects on any “waters of the U.S.” Adverse indirect effects to “waters of the U.S.” would be avoided by the implementation of project features designed to minimize impacts and provide buffers to wetlands, control stormwater and wastewater discharges, and protect the quality of runoff water through conditions of the NPDES permit. It is assumed that other projects will follow the same “no net loss policy of wetlands,” as adopted by the USEPA and USACE in 1989. Therefore, Alternative C would not result in significant cumulative effects to “waters of the U.S.”

## **CULTURAL RESOURCES**

Significant cumulative impacts to cultural resources could occur if sites were lost, damaged, or destroyed without appropriate recordation or data recovery. Potential cumulative impacts for cultural resources issues would be the same as described for Alternatives A and B. Mitigation for potential

impacts to unknown cultural resources consist of following procedures specified in **Section 5.0** in instances where Federal funding licensing or permitting requires compliance with the NHPA. Other instances would require compliance with the SEPA or County regulations and requirements to consult with and/or notify the SHPO. Accordingly, there would be no significant cumulative impacts to cultural resources as a result of Alternative C.

#### ***SOCIOECONOMIC CONDITIONS***

Alternative C would introduce increased economic activity in Clark County. The creation of jobs and increased sales tax revenue that would result from the project, and other growth and development in the area through 2024 are beneficial effects. Public services that could potentially be affected include law enforcement and fire protection. Potential effects to these services will be offset by the Tribe's financial reimbursement for the services in accordance with the MOU with Clark County and EPHS Ordinance.

La Center Card Room revenues would decline from anticipated substitution effect, although to a lesser extent than with Alternatives A or B, as competition would be reduced. The effects of the decrease on tax revenues and fees would be offset through compensatory mitigation recommended in **Section 5.0**. The recently approved expansion of the City of La Center's UGA, the increased provisions of public services to this area, improvements to the I-5 Interchange, and continued growth will enhance growth along the I-5 corridor. Effects to schools, libraries, and parks are expected to be minor. The contribution of Alternative C to this growth is likely to be minimal. No significant adverse cumulative socioeconomic effects would occur.

#### ***TRANSPORTATION/CIRCULATION***

Alternative C would have less traffic than Alternatives A and B. Therefore, with implementation of the *Recommended Operational Alternative* for interchange improvements pursuant to the Draft MADR, as well as mitigation measures provided in **Section 5.0**, cumulative impacts from traffic under Alternative C would be less than significant.

#### ***LAND USE***

Cumulative impacts to land use are similar to those described for Alternatives A and B. The recent inclusion of the La Center Interchange Site into the La Center UGA in conjunction with the construction and operation of Alternative C will provide a significant incentive for urban growth in the interchange area including convenience retail and other infrastructure supporting the travel, tourist, and service economy. However, the primary new development activity may be expected to be construction of higher density residential properties. Because the La Center Interchange Site and surrounding areas have been included within the La Center UGA, it is possible that the site may be

annexed into the City's boundaries, removing constraints to growth. The cumulative effect would be less than significant.

#### ***PUBLIC SERVICES***

Cumulative impacts to public services are similar to those described for Alternatives A and B. While some facilities in Alternative C are smaller, the same public services would be utilized. This also applies to the cumulative effects of possible mitigation including connection to the City of La Center wastewater system. Commitments in the MOU (DEIS Vol. I, **Appendix C**) and the Tribe's EPHS Ordinance (**Appendix U** of the FEIS) would also apply to Alternative C. The cumulative effect would be less than significant.

#### ***NOISE***

Construction activities conducted during nighttime hours (10 p.m. to 7 a.m.) exceed the WAC NAC level of 47 dBA for nighttime noise. Mitigation measures in **Section 5.0** ensure that construction activities requiring heavy equipment would not be conducted during nighttime hours, therefore, there would be no cumulative noise impacts associated with Alternative C.

Operational noise associated with Alternative C would be in compliance with the daytime and nighttime WAC  $L_{eq}$  limits. Therefore, no cumulative noise impacts would occur from the on-site operations of Alternative C.

#### ***HAZARDOUS MATERIALS***

There are no existing hazardous materials on the La Center Interchange Site. Operation of the on-site wastewater treatment plant under Alternative C would require the delivery, storage, and use of hazardous materials, particularly the use of sodium hypochlorite (bleach) and citric acid. Mitigation measures presented in **Section 5.0** would decrease the impacts from any incidental spills that may occur at the wastewater treatment plant to a less than significant level. The other cumulative developments discussed previously would be required to adhere to State and municipal regulations in the delivery, handling, and storage of hazardous materials, thereby reducing the risk of accidental exposure to the public's health and welfare. Therefore, there are no significant cumulative hazardous materials issues associated with this alternative.

#### ***AESTHETICS***

Cumulative impacts to visual resources are similar to those described for Alternatives A and B. Some Alternative C facilities are reduced in square footage when compared to Alternatives A and B, but the same building materials, fixtures, lights, and signs would be used. Other developments would occur according to planned land use designations. While development on the outskirts of the City of La Center would represent a shift from agricultural to industrial and commercial development, it is

consistent with planned urbanization of the site and surrounding area as a result of the La Center UGA expansion, and would follow applicable design, landscaping, sign, and lighting ordinances. As the effects to visual resources are minor, and other projects considered in the analysis of cumulative effects also have minimal visual effects, the cumulative visual effect would be less than significant.

#### **4.15.4 ALTERNATIVE D – BUSINESS PARK**

##### ***GEOLOGY AND SOILS***

Some cut-and-fill slopes would be needed on the La Center Interchange Site. However, the project design ensures that the major topographic features (i.e., hills and slopes) would be preserved. Therefore, no significant changes to the existing land-forms would result and there would be no significant cumulative effect to the topography of the area under Alternative D.

##### ***WATER RESOURCES***

Alternative D would not have significant cumulative effects on the water quality and characteristics (volume, velocity, and hydrograph) to the Type Ns unnamed stream on site when combined with cumulative conditions in the project area. The wastewater that will be sent to a publicly owned treatment facility, and storm water runoff, are expected to meet the groundwater quality objectives of the DOE and USEPA. Furthermore, the publicly owned wastewater disposal facilities would be required to comply with the NPDES permit program for surface water discharge. Cumulative effects to water resources would be less than significant.

##### ***AIR QUALITY***

##### ***Ozone Precursor and PM<sub>10</sub> Emissions Generated by Operation of Alternative D – Long-Term 2030 Conditions***

Operation of Alternative D during long-term 2030 conditions would result in the generation of VOC, NO<sub>x</sub>, and PM<sub>10</sub> emissions. **Table 4.15-7** presents an estimate of these operational emissions at 2030 conditions. CO emissions are analyzed separately under Hot Spot Analysis. Operation of Alternative D is estimated to result in 105 tpy of VOC, 97 tpy of NO<sub>x</sub>, and 6 tpy of PM<sub>10</sub> emissions.

In addition, **Table 4.15-7** shows ozone precursor and PM<sub>10</sub> emissions as a percentage of countywide total emissions. Since no projections are available for 2030 emissions for Clark County, 2003 emissions were used for comparison. **Table 4.15-7** shows that emissions associated with Alternative D would represent less than 0.69% of the countywide total emissions for VOC; 0.84% of the total countywide emissions for NO<sub>x</sub>; and only 0.05% for the total countywide emissions for PM<sub>10</sub>. Because the incremental effect of this alternative in conjunction with other planned projects is a small portion of the countywide total, this cumulative effect is considered less than significant.

**TABLE 4.15-7**  
OZONE PRECURSOR AND PM<sub>10</sub> EMISSIONS  
LONG-TERM 2030 CONDITIONS – ALTERNATIVE D

Emission Category	Emissions in Tons Per Year		
	VOC	NOx	PM <sub>10</sub>
Vehicular Emissions	104	82	5
Stationary Source Combustion	1	15	1
<b>Project Total</b>	105	97	6
Clark County 2003 Emissions	15,319	11,573	11,673
<b>Project's percentage of Countywide Total</b>	0.69%	0.84%	0.05%

Note: Emission values include traffic mitigation.

Source: CH2MHill, 2006a.

### ***Carbon Monoxide Emissions Generated by Operation of Alternative D – Long-Term 2030 Conditions***

Operation of Alternative D during long-term 2030 conditions would result in the generation of CO emissions. **Table 4.4-9** presents an estimate of CO concentrations at sensitive receptors with operation of Alternative D in 2030. These estimates were modeled using projected traffic from Alternative D plus traffic growth that would occur without the project. The highest 1-hour average CO concentration would be 3.2 ppm at NW 319<sup>th</sup> Street and NW La Center Road at the I-5 southbound on-ramps. The highest 8-hour average CO concentration would be 5.2 ppm at the same receptor. Both the 1-hour average and 8 hour average CO concentrations would be below both Federal and State CO air quality standards. As 2030 conditions include concentrations from other planned developments and growth, the cumulative effects from Alternative D would be less than significant.

### ***Climate Change***

**Table 4.15-8** shows projected emissions for Alternative D, based on emission factors from the Climate Change Action Registry and the EPA approved Mobile6.2 emissions modeling software. As shown in the table, the project would emit 105,172 tpy of CO<sub>2</sub>e from mobile sources and 10 tpy of CO<sub>2</sub>e from indirect mobile sources. Total annual emissions during operation of the project would be equivalent to 105,182 tpy of CO<sub>2</sub>e. Annual project GHG emissions would be approximately 0.11 percent of Washington's predicted contribution to global GHG emissions in 2020 (see **Table 3.4-7**). Project contributions to the annual global GHG emissions in 2020 would be approximately 0.000012 percent.

Inconsistency with applicable WCAT GHG emission reduction strategies could result in a potentially significant cumulative impact. Emission reduction strategies applicable to Alternative D are the same as those that apply to Alternative A. As presented in **Table 4.15-4**, recommended mitigation

measures in **Section 5.0** would ensure compliance with all applicable strategies, resulting in a less than significant cumulative impact.

**TABLE 4.15-8**  
ALTERNATIVE D OPERATIONAL GHG EMISSIONS

<b>CO<sub>2</sub> Emissions<sup>1</sup></b>					
<b>Mobile Sources</b>		<b>Area Sources</b>		<b>Total CO<sub>2</sub>e</b>	
<b>tons per year</b>		<b>tons per year</b>		<b>tons per year</b>	
101,852		266		102,118	
<b>CH<sub>4</sub> and N<sub>2</sub>O Emission from Mobile Sources<sup>2</sup></b>					
<b>Emission Factor (CO<sub>2</sub>/CH<sub>4</sub>/N<sub>2</sub>O)</b>	<b>Miles Traveled</b>	<b>CH<sub>4</sub></b>	<b>N<sub>2</sub>O</b>	<b>Total CO<sub>2</sub>e</b>	
<b>g/mile</b>	<b>miles/day</b>	<b>tons per year</b>		<b>tons per year</b>	
552.08/0.05/0.05	458,599	194	2,860	3,054	
<b>Indirect GHG emissions<sup>2</sup></b>					
<b>Emission Factor (Kg of CO<sub>2</sub>/CH<sub>4</sub>/N<sub>2</sub>O)</b>	<b>Estimated kW-h Usage<sup>3</sup></b>	<b>CO<sub>2</sub></b>	<b>CH<sub>4</sub></b>	<b>N<sub>2</sub>O</b>	<b>Indirect CO<sub>2</sub>e</b>
<b>lb/MW-h</b>	<b>MW-h/year</b>		<b>tons per year</b>		
804.54/0.006/0.0037	56	10	0	0	10
<b>Total Operation CO<sub>2</sub>e tons per year</b>					<b>105182</b>

<sup>1</sup> Estimated from EPA and CARB approved URBEMIS air quality program (**Appendix W**)

<sup>2</sup> Emission factors from Climate Change Action Registry

<sup>3</sup> Estimated using 4,500 kilowatts-hours/month of power used.

Source: URBEMIS, 2007; Climate Change Action Registry, 2007.

### ***BIOLOGICAL RESOURCES***

Standards of significance for cumulative impacts resulting from Alternative D are the same as those for Alternatives A, B, and C.

### ***Wildlife and Habitats***

All proposed construction would take place within areas previously converted to agricultural and residential use. This reduces direct impacts to sensitive wildlife and habitats. Cumulatively, it is anticipated that the design of other projects in the area will be in accordance with habitat conservation ordinances for Clark County and will take into account Priority Fish and Wildlife Habitats designated by the Washington Department of Fish and Wildlife. As disruption of a small amount of low quality habitat would not result in a significant effect to biological resources, no significant cumulative effect would occur from Alternative D.

### ***Federally Listed Species***

Alternative D will not involve direct effects to any Federally listed species. Provisions of permits issued under the Clean Water Act would ensure that impacts to aquatic species are adequately mitigated. It is assumed that the other projects considered in the cumulative analysis will comply with Section 7 or 10 of the Endangered Species Act and applicable State laws to pose less than significant effects on Federally listed species. Therefore, Alternative D would not result in significant cumulative effects to Federally listed species.

### ***Migratory Birds***

Alternative D would not result in significant effects to nesting migratory birds. It is assumed that the development of other projects in the vicinity will comply with the Migratory Bird Treaty Act of 1918, and as such will have no adverse effects on migratory birds. Alternative D would not result in significant cumulative effects to nesting migratory birds.

### ***Waters of the U.S.***

Unlike Alternatives A, B, and C, Alternative D does not involve the construction of a wastewater treatment plant. Under this alternative the business park would connect with the City of La Center sewer system. Discharges to the Type Ns on-site stream would only result from stormwater runoff. Adverse indirect effects to “waters of the U.S.” would be avoided by the implementation of project features designed to minimize impacts and provide buffers to wetlands, control stormwater discharges, and protect the quality of runoff water through conditions of the NPDES permit. It is assumed that other projects will follow the “no net loss policy of wetlands,” as adopted by the USEPA and USACE in 1989. Therefore, Alternative D would not result in significant cumulative effects to “waters of the U.S.”

### ***CULTURAL RESOURCES***

Significant cumulative impacts to cultural resources could occur if sites were lost, damaged, or destroyed without appropriate recordation or data recovery. Potential cumulative impacts for cultural resources issues would be the same as Alternative A, B and C. Mitigation for potential impacts to unknown cultural resources consist of following procedures specified in **Section 5.0** in instances where Federal funding licensing or permitting requires compliance with the NHPA. Other instances would require compliance with SEPA or County regulations and requirements to consult with and/or notify the SHPO. Accordingly, there would be no significant cumulative impacts to cultural resources as a result of Alternative D.

### ***SOCIOECONOMIC CONDITIONS***

Alternative D would introduce a new source of economic activity in Clark County. The creation of jobs and increased sales tax revenue that would result from the project and other developments

planned through 2024 are beneficial effects. The proposed business park would be within the recently expanded City of La Center UGA. La Center's provision of public services to this area and improvements to the interchange will result in further development in the vicinity of the interchange and along the I-5 corridor. Effects to schools, libraries, and parks are expected to be minor. Other public services that could potentially be affected include law enforcement and fire protection. Under Alternative D the Tribe would provide reimbursement for these services as specified in the MOU with Clark County (DEIS Vol. I, **Appendix C**) and the Tribe's EPHS Ordinance (**Appendix U** of the FEIS).

#### ***TRANSPORTATION***

Year 2030 baseline peak hour simulations provided in the Draft MADR show that the I-5 northbound off-ramp will queue near or onto the I-5 mainline during the PM peak hour in 2030 without the addition of project traffic (Parsons Brinckerhoff, 2006d). As Alternative D is the most trip-intensive of the Proposed Project and Alternatives, this alternative in addition to the cumulative projects would exacerbate the queuing, causing backups onto the I-5 mainline and near gridlock conditions at the interchange.

However, with implementation of the *Recommended Operational Alternative* for interchange improvements pursuant to the Draft MADR, as well as mitigation measures provided in **Section 5.0**, cumulative impacts from traffic under Alternative D would be less than significant.

#### ***LAND USE***

Cumulative impacts to land use under Alternative D are similar to those described for Alternatives A, B, and C. The recently approved expansion of the La Center UGA and provision of public services to the area are expected to provide an incentive to growth, mostly directed towards higher density residential in response to the expected increase in housing demand. The proposed business center may provide additional employment for new residents to the area but is not likely to provide significant services to residential customers. The addition of the business center is unlikely to provide a significant incentive for additional growth. The cumulative effect would be less than significant.

#### ***PUBLIC SERVICES***

Cumulative impacts to public services as a result of Alternative D are similar to those described for Alternatives A and B. While facilities differ in Alternative D, the same public services would be utilized. This also applies to the cumulative effects of possible mitigation including connection to the City of La Center wastewater system. Commitments in the MOU (DEIS Vol. I, **Appendix C**) and the Tribe's EPHS Ordinance (**Appendix U** of the FEIS) would also apply to Alternative D. Therefore cumulative effects would be less than significant.

### ***Water Supply***

Water supply effects for Alternative D are the same as those described under Alternatives A and B. CPU has the capacity to meet the demands of Alternative D, and the City of Ridgefield would fund necessary improvements through development charges and developer funded improvements. Thus, the cumulative effect to municipal water suppliers would be less than significant.

### ***Wastewater***

Alternative D would be served through connection to the La Center sewer system. The Tribe would contract with the City of La Center to provide service to the site. The other cumulative developments would be served through the City of La Center or City of Ridgefield wastewater systems. To receive wastewater service from either the City of La Center or the City of Ridgefield, new developments would be responsible for their share of needed improvements. Thus, the cumulative effect to municipal wastewater suppliers would be less than significant.

### ***Solid Waste***

Solid waste services for Alternative D and the cumulative projects are the same as those described under Alternatives A and B. The Finley Buttes Landfill currently receives 600,000 tons per year of solid waste and has a life expectancy of at least 200 years with the cumulative developments and Alternative D (Large, pers. communication, 2005). The cumulative effects to solid waste services would be less than significant.

### ***Electricity, Natural Gas, and Telecommunications***

Electrical, natural gas, and telecommunications lines run extensively throughout Clark County. Alternative D would contract with CPU for service and pay for the necessary improvements to service the site. CPU routinely projects future demand and compares it to the existing supply (Clark County, 2003). Gas, cable, and phone line impacts are the same as those described under Alternatives A and B. Since the cumulative developments would occur in consultation with these service providers and occur according to planned land uses, it is anticipated that there would be capacity for the projects. While these providers may have the capacity to provide service there is often new infrastructure needed in undeveloped areas. Individual projects would be responsible for paying development or user fees to receive electrical, natural gas, cable, and telephone services. Thus, the cumulative effects would be less than significant.

### ***Law Enforcement***

Effects to law enforcement services are similar to those discussed under Alternatives A and B. The MOU with Clark County (DEIS Vol. I, **Appendix C**) and the Tribe's EPHS Ordinance (**Appendix U** of the FEIS) applies to Alternative D and would fund needed resources and personnel. Some of the

other cumulative development projects are under the jurisdiction of the City or Ridgefield, which is currently staffed above the goal of 1.2 officers per 1,000 persons (Parametrix, 2005). While the cumulative projects may increase demands to law enforcement services, through the MOU/EPHS Ordinance, resources to service Alternatives D would be provided. Thus Alternative D would not create incremental significant effects when combined with the cumulative projects. The cumulative effect is less than significant.

#### ***Fire Protection and Emergency Medical Services***

Effects to fire protection and emergency medical services are similar to those discussed under Alternatives A and B. The commitments in the MOU/EPHS Ordinance would fund improvements necessary to service Alternative D. Other improvements may potentially be funded through a Local Improvement District paid for by new development. Emergency room facilities have the capacity for the projects as discussed under Alternatives A and B. While the cumulative projects may increase demands to fire protection and emergency medical services, through the MOU/ with Clark County and EPHS Ordinance resources to service Alternative D would be provided. Thus Alternative D would not create incremental significant effects when combined with the cumulative projects. This cumulative effect would be less than significant.

#### ***NOISE***

Construction activities conducted during nighttime hours (10 p.m. to 7 a.m.) exceed the WAC NAC level of 47 dBA for nighttime noise. However, mitigation measures in **Section 5.0** ensure that construction activities requiring heavy equipment would not be conducted during nighttime hours, therefore, there would be no cumulative noise impacts associated with Alternative D.

Operational noise associated with Alternative D would be in compliance with the daytime and nighttime WAC  $L_{eq}$  limits. Therefore, no cumulative noise impacts would occur from the on-site operations of Alternative D.

#### ***HAZARDOUS MATERIALS***

There are no existing hazardous materials on the La Center Interchange Site. This alternative would not use significant quantities of hazardous materials and mitigation is presented in **Section 5.0** to decrease the impacts from any incidental spills that may occur during construction activities to a less than significant level. Therefore, there are no significant cumulative hazardous materials issues associated with this alternative.

#### ***AESTHETICS***

The effects from Alternative D are similar in that they represent a shift from rural landscapes to views of a developed area. Developments would encompass most of the site. Most of the buildings would

be single story with the exception of a three-story office building in the center of the site. Screening features would be integrated into the design of Alternative D, and landscaping would be used to enhance the visual character of the facilities and integrate natural elements. Views from I-5 are generally restricted by trees. However, residents to the west and northwest would have views of the project. Other developments would occur according to planned land use designations. While development on the outskirts of La Center would represent a shift from agricultural to industrial and commercial development it is consistent with planned urbanization of the site and surrounding area as a result of the La Center UGA expansion, and would follow applicable design, landscaping, sign, and lighting ordinances. This cumulative effect would be less than significant.

#### **4.15.5 ALTERNATIVE E – RIDGEFIELD INTERCHANGE SITE**

##### ***GEOLOGY AND SOILS***

Some cut-and-fill slopes would be needed on the Ridgefield Interchange Site. However, the project design ensures that the major topographic features (i.e., hills and slopes) would be preserved. Therefore, no significant changes to the existing land-forms would result and there would be no significant cumulative effect to the topography of the area under Alternative E.

##### ***WATER RESOURCES***

Alternative E would not have significant cumulative effects on water quality when combined with cumulative conditions in the project area. The wastewater sent to a publicly owned treatment facility, and storm water runoff, are expected to meet the groundwater quality objectives of the DOE and USEPA. The publicly owned wastewater disposal facilities would be required to comply with the NPDES permit program for surface water discharge. Accordingly, development of Alternative E would not contribute to cumulative effects to water resources. Cumulative effects to water resources would be less than significant.

##### ***AIR QUALITY***

##### ***Ozone Precursor and PM<sub>10</sub> Emissions Generated by Operation of Alternative E – Long-Term 2030 Conditions***

Operation of Alternative E during long-term 2030 conditions would result in the generation of VOC, NO<sub>x</sub>, and PM<sub>10</sub> emissions. **Table 4.15-9** presents an estimate of these operational emissions at 2030 conditions. CO emissions are analyzed separately under Hot Spot Analysis. Operation of Alternative E is estimated to result in 105 tpy of VOC, 97 tpy of NO<sub>x</sub>, and 6 tpy of PM<sub>10</sub> emissions.

In addition, **Table 4.15-9** shows ozone precursor and PM<sub>10</sub> emissions as a percentage of countywide total emissions. Since no projections for what the 2030 emissions would be for Clark County, 2003 emissions were used for comparison. **Table 4.15-9** shows that emissions associated with Alternative E would represent less than 0.68% of the countywide total emissions for VOC; 0.84% of the total

countywide emissions for NO<sub>x</sub>; and only 0.05% for the total countywide emissions for PM<sub>10</sub>. Because the incremental effect of this alternative in conjunction with other planned projects is a small portion of the existing countywide total, this cumulative effect is considered less than significant.

**TABLE 4.15-9**  
OZONE PRECURSOR AND PM<sub>10</sub> EMISSIONS  
LONG-TERM 2030 CONDITIONS – ALTERNATIVE E

Emission Category	Emissions in Tons Per Year		
	VOC	NO <sub>x</sub>	PM <sub>10</sub>
Vehicular Emissions	104	82	5
Stationary Source Combustion	1	15	1
<b>Project Total</b>	105	97	6
Clark County 2003 Emissions	15,319	11,573	11,673
<b>Project's percentage of Countywide Total</b>	0.68%	0.84%	0.05%

Note: Emission values include traffic mitigation.  
Source: CH2MHill, 2006a.

#### ***Carbon Monoxide Emissions Generated by Operation of Alternative E – Long-Term 2030 Conditions***

Operation of Alternative E during long-term 2030 conditions would result in the generation of CO emissions. **Table 4.4-10** presents an estimate of CO concentrations at sensitive receptors with operation of Alternative E in 2030. These estimates were modeled using projected traffic from Alternative E plus traffic growth that would occur without the project. The highest 1-hour average CO concentration would be 2.5 ppm at SR 501 and Pioneer Street at NW 65<sup>th</sup> Street. The highest 8-hour average CO concentration would be 4.8 ppm at the same receptor.

Both the 1-hour average and 8-hour average CO concentrations would be below Federal and State CO air quality standards. As 2030 conditions include concentrations from other planned developments and growth, the cumulative effects of this project would be less than significant.

#### ***Climate Change***

Given the similarity in estimated vehicle miles traveled, GHG emissions from Alternative E are estimated to be the same as Alternative D shown in **Table 4.15-8**.

Inconsistency with applicable WCAT GHG emission reduction strategies could result in a potentially significant cumulative impact. Emission reduction strategies applicable to Alternative E are the same as those that apply to Alternative A. As presented in **Table 4.15-4**, recommended mitigation measures in **Section 5.0** would ensure compliance with all applicable strategies, resulting in a less than significant cumulative impact.

### ***BIOLOGICAL RESOURCES***

The cumulative effects of Alternative E consist of impacts that would result from the project alternatives in combination with those impacts that would result from the cumulative projects listed above. Potential cumulative effects on biological resources include wildlife and habitats, Federally listed species, migratory birds, and jurisdictional “water of the U.S.” Review of the cumulative projects supports the conclusion that (with mitigation) they are unlikely to individually result in significant biological impacts; cumulative impacts are, therefore, unlikely.

#### ***Wildlife and Habitats***

Alternative E may result in significant effects to wildlife and habitats. Developing the Ridgefield Interchange Site would significantly affect riparian habitat on site (riparian woodland), as well as wetlands. However, mitigation measures specified in **Section 5.2.4** would reduce the impacts from Alternative E to less than significant. Additionally, it is anticipated that the design of other projects in the area will be in accordance with habitat conservation ordinances for Clark County and will take into account Priority Fish and Wildlife Habitats designated by the Washington Department of Fish and Wildlife. Therefore, cumulative impacts would be less than significant.

#### ***Federally Listed Species***

The Ridgefield Interchange Site boundaries encompass a palustrine emergent drainage that is tributary to McCormick Creek, thence the East Fork Lewis River. Although fish species have little to no potential to occupy the drainage, it is a tributary of the East Fork Lewis River. Consequently, any adverse impacts to the palustrine emergent drainage could directly affect fish populations within the East Fork Lewis River. Mitigation specified in **Section 5.0** will reduce the impacts to this drainage to less than significant. Additionally, it is assumed that the other projects considered in the cumulative analysis will comply with Section 7 or 10 of the Endangered Species Act and applicable State laws to pose less than significant effects on Federally listed species. Therefore, Alternative E would not result in significant cumulative effects to Federally listed species.

#### ***Migratory Birds***

The development of the site under Alternative E would mean the loss of approximately 24.56 acres of stopover/foraging habitat for the migrating Canada geese. However, the loss of foraging habitat on this small scale is considered less than significant. Additionally, it is assumed that the cumulative projects will comply with the Migratory Bird Treaty Act of 1918, and as such will have no adverse effects on migratory birds. Therefore, no significant cumulative effects would occur.

*Waters of the U.S.*

Alternative E would affect approximately 24.56 acres of jurisdictional waters of the U.S. This is a significant impact that would require an individual permit from the USACE. However, off-site mitigation and/or compensation would reduce the significance of this impact. Similarly, due to the implementation of protective measures mandated by the CWA, to which the other projects would have to comply, significant cumulative effects would not occur.

*CULTURAL RESOURCES*

No cultural resources were identified as a result of a study of the Ridgefield Interchange Site conducted by AES on March 10 and 11, 2005 (AES, 2005b) (DEIS Vol. II, **Appendix R**). However, the Ridgefield area is known to have been occupied by prehistoric Native Americans as well as Euro-American settlers, therefore, the casino on the Ridgefield Interchange Site, in combination with other development, could have a cumulative impact on previously unknown buried archaeological resources, as archaeological sites may be present with no surface manifestation. Significant cumulative impacts to cultural resources could occur if sites were lost, damaged, or destroyed without appropriate recordation or data recovery. Therefore, cumulative impacts for cultural resources issues would be the same as Alternative A, B, C, and D. Mitigation for potential impacts to unknown cultural resources consist of following procedures specified in **Section 5.0** in instances where Federal funding licensing or permitting requires compliance with the NHPA. Other instances would require compliance with the SEPA or County regulations and requirements to consult with and/or notify the SHPO. Accordingly, there would be no significant cumulative impacts to cultural resources as a result of Alternative E.

*SOCIOECONOMIC CONDITIONS*

Alternative E would introduce increased economic activity in Clark County and the City of Ridgefield. The creation of jobs and increased sales tax revenue that would result from the project and other developments proposed through 2024 are beneficial effects. The Tribe intends to enter into an agreement with the City of Ridgefield for the Ridgefield Interchange Site, similar in intent and scope to the MOU with Clark County for the La Center Interchange Site, to provide financial reimbursement to the City for lost revenue. Effects to schools, libraries, and parks are expected to be minor. No significant cumulative socioeconomic effects would occur as a result of Alternative E.

*TRANSPORTATION/CIRCULATION*

Alternative E was not included in the Draft MADR prepared by Parsons Brinckerhoff (2006d) because the Ridgefield Interchange is currently the subject of its own Modified Access Decision Report. Development of Alternative E would have a significant impact on transportation and circulation at the Ridgefield Interchange. Even with the recommended mitigation measures from **Section 5.0** in place, one intersection (NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB ramps),

would remain unacceptable at LOS F in the weekday AM and LOS E in the weekday PM peak hours (refer to **Section 4.8**, Transportation/Circulation for more detail). The addition of traffic from the cumulative projects would exacerbate the unacceptable LOS at this intersection. This alternative would have a significant cumulative impact for transportation and circulation.

#### ***LAND USE***

The Ridgefield Interchange Site and surrounding area is planned for intense development. The Ridgefield Interchange Site was added to the City of Ridgefield's urban growth area in 2004, and annexed into the city limits in July 2007. Currently, the project parcels are designated in the City of Ridgefield Comprehensive Land Use Plan as a Master Planned Business Park. Areas within the Master Planned Business Park designation are intended for a wide range of non-retail employment opportunities within a master-planned, park-like setting.

Because much of the area of the Ridgefield Interchange Site is already designated for urban development, cumulative land use impacts are limited. In other words, development of the Ridgefield Interchange Site with a casino-resort complex is not likely to alter the land use character of this area. Currently, the area is marked by both industrial/commercial and residential growth, primarily in urban growth areas. All proposed projects must meet applicable local land use regulations and mitigate their impacts under SEPA.

Substantial development near the Ridgefield Interchange includes the approximately 350 acre Union Ridge mixed-use development. This project is located on both sides of I-5, and is already home to a large (663,000 square-foot) Dollar Tree distribution center. The City has approved a master plan for the further development of Union Ridge, and planning is proceeding for as many as 180 townhomes and retail development, as well as four "industrial condominium" buildings. Also near the Ridgefield Interchange, the City approved an 11 lot, 39.92-acre industrial subdivision in 2003. The final plat for this project, the Ridgefield Commerce Center (a.k.a. Specht Development), was recorded in July 2005. Available lots are generally between 2 and 5 acres in size.

The City of Ridgefield is growing quickly, with various residential subdivisions (some preliminarily approved years earlier) being completed. The State's Office of Financial Management estimated in June 2005 that Ridgefield's population grew from 2,195 to 2,630 between April 2004 and April 2005. This is a change of approximately 20% in a 1-year period. County-wide the population grew by approximately 2% in the same period. Therefore, the cumulative effect would be less than significant.

#### ***PUBLIC SERVICES***

As described above, planning jurisdictions are required to prepare a Capital Facilities Element, which describes growth and plans to improve infrastructure to accommodate growth. For the City of

Ridgefield, growth and planned improvements to support this growth are described in the 2004 Capital Facilities Plan (Ridgefield, City of, 2004).

### ***Water Supply***

While the other planned developments in the City of Ridgefield would be served through the City of Ridgefield's existing network and planned improvements, Alternative E would be served by CPU. CPU has stated that it has the capacity to service the Ridgefield Interchange Site. The Tribe intends to contract for service with CPU through a services agreement similar in intent and scope to the agreement for services for the La Center Interchange Site (DEIS Vol. III, **Appendix BB**). Thus, the cumulative effect to municipal water suppliers would be less than significant.

### ***Wastewater***

Under Alternative E, the Tribe would contract with the City of Ridgefield to use their wastewater system and fund improvements necessary to service the site. The other cumulative developments would be served through the City of La Center or City of Ridgefield wastewater systems. To receive wastewater service from either the City of La Center or the City of Ridgefield, new developments would be responsible for their share of needed improvements. Thus, the cumulative effect to municipal wastewater suppliers would be less than significant.

### ***Solid Waste***

Solid waste services for Alternative E and the cumulative projects are the same as those described under Alternatives A and B. The Finley Buttes Landfill currently receives 600,000 tons per year of solid waste and has a life expectancy of at least 200 years with the cumulative developments and Alternative E (Large, pers. communication, 2005). The cumulative effects to solid waste services would be less than significant.

### ***Electricity, Natural Gas, and Telecommunications***

CPU has extra electrical capacity in Clark County (Morris, pers. communication, 2005). CPU routinely projects future demand and compares it to the existing supply (Clark County, 2003). Northwest Natural Gas owns and operates over 7,000 miles of line and additional lines are constructed on an as-needed basis. Qwest telephone has fiber optic cable networks throughout the area. Since the cumulative developments would occur in consultation with these service providers and occur according to planned land uses, it is anticipated that there would be capacity for the projects. While these providers may have the capacity to provide service there is often new infrastructure needed in undeveloped areas. Individual projects would be responsible for paying development or user fees to receive electrical, natural gas, cable, and telephone services. Thus, the cumulative effects would be less than significant.

### ***Law Enforcement***

Clark County Sheriff's Office would provide service to Alternative E. In order to receive law enforcement services the Tribe would contract with the Sheriff's Office and reimburse it for costs associated with providing service to the site. The City of Ridgefield Police Department would provide service to some of the other related cumulative developments. The City of Ridgefield Police Department is currently staffed above the goal of 1.2 officers per 1,000 persons (Parametrix, 2005). While the cumulative projects may increase demands to law enforcement services, resources to service Alternative E would be provided through an agreement with the Clark County Sheriff's Office. Alternatively, the Tribe could contract with the City of Ridgefield Police Department and provide financial compensation as discussed in **Section 5.2.8**. Thus Alternative E would not create incremental significant effects when combined with the cumulative projects. The cumulative effect is less than significant.

### ***Fire Protection and Emergency Medical Services***

Fire protection and emergency medical services for some of the cumulative projects would be provided by CCFD Number 12. Under Alternative E the Tribe would contract with CCFD 12 and fund improvements and personnel necessary to service the site. Other improvements may potentially be funded through a Local Improvement District paid for by new development. Emergency room facilities have the capacity for the projects as discussed under Alternatives A and B. While the cumulative projects may increase demands to fire protection and emergency medical services, through the MOU and EPHS Ordinance, resources to service Alternative E would be provided. Thus Alternative E would not create incremental significant effects when combined with the cumulative projects. This cumulative effect would be less than significant.

### ***NOISE***

Construction activities conducted during nighttime hours (10 p.m. to 7 a.m.) exceed the WAC NAC level of 47 dBA for nighttime noise. However, mitigation measures in **Section 5.0** ensure that construction activities requiring heavy equipment would not be conducted during nighttime hours, therefore, there would be no cumulative noise impacts associated with Alternative E.

Operational noise associated with Alternative E would be in compliance with the daytime and nighttime WAC  $L_{eq}$  limits. Therefore, no cumulative noise impacts would occur from the on-site operations of Alternative E.

### ***HAZARDOUS MATERIALS***

Hazardous materials on site are confined to household and automotive waste that would be removed prior to project approval and trust acquisition. This alternative would not use significant quantities of hazardous materials and mitigation is presented in **Section 5.0** to decrease the impacts from any

incidental spills that may occur during construction activities to a less than significant level. Therefore, there are no significant cumulative hazardous materials issues associated with this alternative.

#### ***AESTHETICS***

The Ridgefield Interchange Site has two residences and a small business located on site. Development of Alternative E would encompass most of the site. While screening features would be integrated into the design of Alternative E, and landscaping would be used to enhance the visual character of the facilities and integrate natural elements, visually the development represents a shift from rural landscapes to views of a developed area. Views of the facility are generally restricted by topography on the I-5 corridor but would be visible to nearby residences. Other developments would occur according to planned land use designations. While development within the recently annexed City of Ridgefield boundaries would represent a shift from agricultural to industrial and commercial development it is generally compatible with Master Planned Business Park planning designation and would follow applicable design, landscaping, sign, and lighting ordinances. Development on the outskirts of Ridgefield, beyond I-5, has begun with the Dollar Tree distribution center and CPU electrical substation. A new fire station is also planned east of I-5. This cumulative effect would be less than significant.

#### **4.15.6 ALTERNATIVE F – NO ACTION**

Under Alternative F, the proposed development would not take place, the trust acquisition and reservation proclamation would not occur, the gaming management contract would not be approved, and no project-related activities would occur in these areas. Therefore, the No Action Alternative would not result in adverse cumulative effects. However, under the No Action Alternative the Ridgefield Interchange area is likely to be intensely developed in the short-term and the La Center Interchange area is likely to be intensely developed within the 20-year planning horizon.