

2. Description of the Proposed Action and Alternatives

2.1 Purpose and Objectives of the Proposal

Thurston Highlands L.L.C. has applied to the City of Yelm for Conceptual Master Site Plan approval for a 1,240-acre mixed-use development known as Thurston Highlands. The objectives of the proposal are to develop the southwest area of Yelm in a manner that would:

- ◆ Be consistent with the Washington State Growth Management Act and the City of Yelm *Comprehensive Plan* to provide for anticipated growth in the community.
- ◆ Implement sustainable development principles to the maximum extent practicable within an urban area: Develop a community that thoughtfully provides for the needs of its residents with efficiency and stewardship for the future.
- ◆ Implement characteristics the citizens of Yelm would like to see in their community.
- ◆ Minimize impacts to environmentally sensitive areas and preserve natural areas for public enjoyment.
- ◆ Provide for efficient growth in public services and utilities required to serve phased development of the master planned community.

The City of Yelm, through the EIS Scoping process, has provided the applicant with direction regarding environmental review and community input to the Conceptual Master Site Plan. This direction has been to hold true to the basic tenets of the Washington State Growth Management Act, the goals of which are to implement “smart growth.” Many of these principles attempt to lower the cost and optimize the efficiency of providing public services concurrent with new development. Many smart growth principles require and encourage high-density urbanization while protecting sensitive areas. Most of these goals are already codified in the City of Yelm *Comprehensive Plan* and development regulations. Smart growth principles include:

- ◆ Create a range of housing opportunities and choices
- ◆ Create walkable neighborhoods
- ◆ Encourage community and stakeholder collaboration (public participation)
- ◆ Foster distinctive, attractive communities with a strong sense of place
- ◆ Make development decisions predictable, fair and cost-effective
- ◆ Mix land uses
- ◆ Provide a variety of transportation choices
- ◆ Strengthen and direct development toward existing communities
- ◆ Take advantage of compact building design.

The City of Yelm will review and respond to the Thurston Highlands Conceptual Master Site Plan proposal with these principles in mind.

Other sustainable development practices include “Low Impact Development,” and “built green.” Low Impact Development is a stormwater management strategy that emphasizes conservation and use of existing natural site features integrated with distributed, small-scale stormwater controls to more closely mimic natural hydrologic patterns in residential, commercial, and industrial settings. “Green” building refers to both the practice and product of creating buildings that are better for our health, environment, and economy. Definitions of green building vary, but the green building movement has three main goals:

- ◆ Ensure a healthy, productive indoor environment for occupants to work and live
- ◆ Prevent negative impacts to our environment and improve its health
- ◆ Reduce operating costs and increase profitability for building owners through energy and resource conservation.

2.2 Location

The project site is located within the City of Yelm, west of State Routes 507 and 510, between Fort Lewis and the City's central business district. The site encompasses all of Section 27, the eastern portion of Section 26, and the southern portion of Section 23, Township 17 North, Range 1 East, Willamette Meridian, Thurston County, Washington (see Figure 2.2-1).

2.3 History and Background of Environmental Review, Land Use Regulations, and Development Proposals for the Site

2.3.1 1993-1993 Annexation and Environmental Impact Statement (EIS)

The Thurston Highlands property was annexed into the City of Yelm in 1993, as part of the larger Southwest Yelm Annexation, which included the subject property and the Dragt Farm, approximately 220 acres in size (currently being developed as the Tahoma Terra Master Planned Community), the Nisqually Valley Golf Course, and approximately 150 acres of parcels 40 acres or less in size surrounding these larger parcels. That annexation contemplated Master Planned Community development of the Thurston Highlands property.

An Environmental Impact Statement was prepared for the programmatic action of the annexation. The Southwest Yelm Annexation EIS reviewed the impacts of up to 5,000 dwelling units within the annexation area.

2.3.2 1994 Original Master Plan Proposal and Supplemental EIS

In 1994, the then-owners of Thurston Highlands applied for and received Conceptual Master Site Plan approval for a Master Planned Development that included the Thurston Highlands property and the Dragt Farm. A Supplemental Environmental Impact Statement was prepared for this application. The 1994 Conceptual Plan was a proposal for between 3,500 and 4,000 dwelling units, primarily single-family detached homes on large suburban lots, within approximately 1,460 acres that comprise Thurston Highlands and the Dragt Farm properties. The recreational component of this Conceptual Plan included several golf courses.

A final Master Site Plan was never submitted for this proposal, which expired in 1997.

Insert Figure 2.2-1: Vicinity Map

2.3.3 1999 Prairie View Master Plan and Supplemental EIS

In 1999, an application was submitted for a new Master Planned Development known as Prairie View for the Dragt Farm property. This proposal included between 480 and 750 dwelling units, primarily mobile homes, within the Dragt Farm property (approximately 220 acres in size). A Supplemental EIS was prepared to accompany this application. The Prairie View Master Planned Community was recommended for approval by the City of Yelm Planning Commission, with the condition that prior to approval of the conceptual plan by the City Council, the applicant should preserve the right-of-way required for the Boulevard designed to serve the proposal. This requirement was not met, and the City eventually determined that the application had been withdrawn for lack of progress in 2004.

2.3.4 NASCAR

In 2004, the International Speedway Corporation was looking for a location in Washington State to construct a race track. A group of local citizens and business people formed the Finish Line Committee to promote Yelm as a potential location for a NASCAR race facility. The group promoted the Thurston Highlands and Dragt Farm properties as a potential race track site. The proposal was not accepted by International Speedway, and the proposal was abandoned.

2.3.5 2005 Tahoma Terra Master Plan

In 2005, another application was submitted for a Master Planned Development on the Dragt Farm property. This proposal, now known as Tahoma Terra, included between 880 and 1,200 dwelling units with a mix of single-family homes and multi-family units. The previous environmental review documents were adopted, and a Mitigated Determination of Non-Significance was issued for this proposal. The Conceptual Master Site Plan for the entire 220 acres and two Final Master Site Plans for Phases I and II were approved by the Yelm City Council. Development within Tahoma Terra is proceeding pursuant to these approvals.

2.4 The Master Site Plan Review Process

Approval of the Thurston Highlands Master Planned Development is a three-step, 4- to 6-month process.

Step 1. The City will review a Conceptual Master Site Plan (further described below). The purpose of conceptual review and approval is to establish general land use policies to guide detailed planning for and development of the Master Plan area. The conceptual plan will identify the generalized land uses, transportation circulation routes, and services proposed for the site.

Review of a Conceptual Master Site Plan will be performed initially by the City of Yelm Hearing Examiner. The Examiner will review the application for consistency with the City's Comprehensive Plan and other City plans and policies. The Examiner will make a recommendation regarding the Conceptual Master Site Plan to the City Council for final action.

Upon conceptual approval by the City Council, the proposed Master Plan boundaries, proposed land use districts and transportation routes will be identified on the City's official zoning map.

Step 2. The City will review a Final Master Site Plan that will consist of maps and text indicating major development features and services for the entire site encompassed by the Final Master Site Plan (which may not be the entire site).

A complete Final Master Site Plan for the entire Conceptual Master Site Plan area must be submitted within 10 years of conceptual approval. The Master Plan will be reviewed by the Hearing Examiner, who will make a recommendation to the City Council. The Examiner will conduct a public hearing and determine whether or not the Master Plan is consistent with the conceptual approval and complies with the policies of the Comprehensive Plan.

A Development Agreement (or similar instrument) will be executed between the City and Thurston Highlands, L.L.C. This agreement may provide for vesting in certain City development regulations, may detail mitigation measures that will be required in the future, and/or may establish specific thresholds for the circumstances under which additional environmental review must be conducted or when new codes will be applied. A Development Agreement cannot be used to avoid or reduce current code requirements, but it can provide a higher degree of certainty regarding future actions and outcomes.

Step 3. Finally, development applications within the Maser Plan development will be reviewed through normal review processes like subdivision and site plan reviews. Each development application will be reviewed for consistency with the provisions of the Conceptual and Final Master Site Plan approvals.

Conceptual Master Site Plan Process. The applicant will most likely make modifications to the Conceptual Master Site Plan in response to the conclusions of the Final Environmental Impact Statement and comments received during the EIS process. After a revised conceptual plan is prepared, the City will schedule a hearing before the Hearing Examiner (Step 1, above). Adjacent property owners within 1,000 feet and any person requesting notice through the Environmental Impact Statement process will receive notice by mail. In addition, the notice will be published in the *Nisqually Valley News*. It is anticipated that there will be public open houses prior to the official hearing to answer questions and receive comments on the revised proposal. After the hearing, the Examiner will make a recommendation to the City Council. The Council will also hold a public hearing on the proposed development (Step 2, above). Only after this considerable review by the public, regulatory agencies, City staff and decision makers will site development applications be accepted and processed for construction to proceed (Step 3, above). At the earliest, construction may begin in late 2008, and full build-out is projected to occur over a period of 10 to 30 years.

2.5 Description of the Preferred Alternative

The Conceptual Master Site Plan is a development scenario for approximately 5,000 homes to be provided in a mix of housing types and densities; approximately 825,000 square feet (sf) of commercial development; approximately 135,000 sf of office space; approximately 400 acres of permanent open space; a Regional Sports Complex; school sites and onsite provisions for other public services (e.g., water supply, wastewater collection and treatment, stormwater management facilities, electrical power and communications; transit facilities; churches; and a possible fire station); and extension of Tahoma Boulevard through the site to SR 507. For the purpose of developing a Preferred Alternative, the applicant considered a range of development densities that would meet the objectives of the proposal. The Preferred Alternative blends characteristics of traditional development and an urban village concept, described below as the range of land use alternatives. The size and configuration of the Thurston Highlands site are

well-suited to the creation of multiple development patterns within a single project. The conceptual plan envisions that the eastern portion of the property (nearest to the City center) may be appropriate for an urban village development pattern, while the western portion may be appropriate for more traditional development (see Figure 2.5-1).

2.5.1 Principal Features of Proposed Development

2.5.1.1 Residential Neighborhoods. While a variety of residential neighborhoods are envisioned with the Conceptual Master Site Plan, the majority of the site under any master planned community alternative is intended to be low-density, single-family home neighborhoods, similar to Tahoma Terra that adjoins the northeast portion of the Thurston Highlands site. Some areas would have traditional single-family homes with densities of 4 dwelling units per acre. Other areas would have higher residential densities with single-family attached dwelling units (townhomes), multi-family apartment buildings, and condominiums that could range from 6 to 8 dwelling units per acre. Village Square units could be provided on upper floors over commercial uses at densities up to 12 dwelling units per acre. In order to assist reviewers with envisioning this mixed-use development concept, a “zoom-in” site plan was prepared for a representative area of the site, in the northeastern portion of the curve of the boulevard through the property (see Figure 2.5-2).

The City and developer recognize that it would be infeasible for the entire site to be developed as traditional single-family neighborhoods. There is a need to also provide some land area for moderate- to high-density residential uses. The high ground in the northwest portion of the site with territorial views appears to be a desirable location for high-density development. Higher density in this location would also buffer single-family neighborhoods from the Fort Lewis Military Reservation. Illustrations of various possible neighborhood types are provided in the text below.

Single-Family Detached Homes. Single-family detached home neighborhoods are envisioned to be similar in character to Tahoma Terra: one- and two-story houses with garages in front, or with garages at the rear of lots accessed by an alley. Typical lot widths may range from 30 to 60 feet.

Single-Family Attached Dwelling Units. Several different single-family attached dwelling unit (townhome) style options are possible. Two-unit structures with front or alley garages, similar in appearance to a large, 3-car, single-family detached home were very popular in the Olympia-Lacey area at the time of this writing. Figure 2.5-3 provides an illustration of a conceptual streetscape for two-unit townhomes. Other townhome styles may include 4-plex or 6-plex configurations. These would typically be constructed two to three stories high, on lots 18 to 25 feet wide. These types of structures would typically be accessed from an alley with a single-car garage, with additional onsite parking in paved, landscaped lots, and on-street parking in front for overflow.

Insert Figure 2.5-1: Preferred Alternative: Conceptual Land Use Plan

Insert Figure 2.5-2: Preferred Alternative: "Zoom-In" Site Plan.

Figure 2.5-3. Conceptual Streetscape: Two-Unit Townhomes.



Source: BCRA Design.

Multi-Family Dwelling Units (Apartments or Condominiums). The trend in multi-family dwelling unit design is for the front of the buildings to be constructed with little or no front-yard setback, close to the street, with convenient pedestrian access and inviting front entries. Parking would be provided in paved, landscaped lots behind the buildings, screened from public view. In established urban areas, these units are typically built within existing standard blocks. In a newly-developing area like Thurston Highlands, multi-family dwelling units could be built as a complex on larger parcels, with the buildings oriented toward public streets in the front, or toward an open space tract. A conceptual streetscape of multi-family residential development is provided in Figure 2.5-4.

Figure 2.5-4. Conceptual Streetscape: Multi-Family Residential Development.



Source: BCRA Design.

2.5.1.2 Commercial Areas. The main commercial area in the Preferred Alternative would be focused around a Village Square concept, with neighborhood convenience commercial uses located in residential areas further from the Village Square. A mix and range of commercial activities could be accommodated in this development concept.

The conceptual site plan for the Preferred Alternative shows the Village Square located along Tahoma Boulevard, on the inside of the curve. The Boulevard would, in effect, frame the Village Square. Two- and three-story buildings are proposed around the Village Square, with a variety of retail tenants, restaurants, professional offices and services on the ground level of these structures, and upper floor residential units. The goal of the Village Square would be to create a year-around, day and evening gathering place for village residents, shoppers, and visitors. With the emphasis on a pedestrian environment in this area, vehicle traffic would be less important for commercial viability.

Retail commercial uses associated with the Regional Sports Complex would be components of any of the Thurston Highlands conceptual land use alternatives. A Village Square would be a component of the Preferred Alternative or the Urban Village Alternative. A key feature of the Village Square concept would be a Farmers Market (see Figure 2.5-5). The Thurston Highlands Farmers Market would be similar to the Olympia Farmers Market, though covering an area approximately 5 acres in size (compared to 2 acres in Olympia). Commercial uses associated with the Regional Sports Complex are anticipated to include a mix of visitor support facilities (such as lodging, restaurants, and other food and beverage services), and various entertainment/commercial recreation facilities, like a cinema, health club, and family entertainment center. Outdoor facilities may include miniature golf, batting cages, a go-kart track, and similar uses.

Figure 2.5-5. Conceptual Streetscape: Farmers Market.



Source: BCRA Design.

2.5.1.3 Parks, Recreation, Open Space and Trails. During development of the conceptual master site plan, Thurston Highlands, L.L.C. identified a goal to develop the master planned community around a recreational theme. Several concepts were considered, including a golf course, fishing lakes, and a regional sports complex. With input from City staff and the public, it became apparent that what is really needed, and what would have immediate benefits in the community, would be a Regional Sports Complex, oriented predominantly toward youth sports programs, with diverse activities for adults, as well. With this input, an 87-acre area was identified to accommodate a wide range of outdoor and indoor facilities, including baseball, softball, soccer, swimming and general fitness. This recreational theme is an element of all three land use alternatives being evaluated in the EIS.

The three primary locational criteria considered for placement of the Regional Sports Complex include: direct access from Tahoma Boulevard; proximity to other neighborhoods in Yelm, such as Tahoma Terra and the northwest and northeast quadrants of the City; and relatively level terrain suitable for constructing athletic fields. The northern portion of Thurston Highlands meets these criteria.

Open space would exceed 400 acres (approximately 34 percent of the site) in the Preferred Alternative. Critical areas (like wetlands, buffers, steep slopes) will be preserved in open space tracts suitable for passive or light active recreational activities, such as walking trails, wildlife viewing areas, and play toy areas.

2.5.1.4 Wetlands and Wildlife Habitat Proposal. The Master Plan proposal includes avoiding and preserving significant, high-value wetland systems on the property. These are identified and mapped in the *Wetlands Inventory, Wetland Impacts and Mitigation Recommendations for the Thurston Highlands Master Planned Community* (Coot Company 2008B). Summary information is included in Draft EIS Section 3.4. It is anticipated that a landscape approach to project layout would be used to protect areas where significant wetlands occur within close proximity to natural geographic boundaries and/or elements of proposed development. Protective buffers may go beyond the simple linear dimension recommended to incorporate distinctive upland features. In other areas, City decision makers may decide that it would be acceptable to fill small, isolated, low-value wetlands that occur in kettle basins on the property, with compensatory mitigation to be provided associated with the high-value wetland systems on the property. These decisions will be made during final Master Site Plan approval.

Extension of Tahoma Boulevard through the Thurston Highlands Master Planned Community would result in unavoidable wetland crossings at two locations (see Figure 3.4-2 in Draft EIS Section 3.4). This will be necessitated by perimeter access point limitations coupled with the long, linear configuration of wetlands that occur as connected drainages in the northeast and southeast areas of the site. The fixed access points severely restrict options for roadway realignment, and the linear wetland structure precludes the option to “go around” the systems and thereby avoid wetland fill.

2.5.1.5 Schools. The Thurston Highlands site is approximately bisected by the boundary between the Yelm Community Schools District and the Rainier School District (see Figure 3.18.3 in Draft EIS Section 3.18.4). Student population projections by District are presented in Draft EIS Section 3.18.4 and Appendix B. This situation presents some challenges and inefficiencies for the provision of school sites, school buildings, and school bus transportation, under any conceptual land use alternative for the proposed Master Planned Community. City decision makers will consider whether to make a recommendation to the two Districts to

consider a boundary line adjustment so that all Thurston Highlands students could be served within one District.

Based on student population projections for the Preferred Alternative (shown in Table 2.5.1-1), the Thurston Highlands Master Planned Community would generate a demand for at least two new elementary schools, approximately one-half the capacity of one new middle school, and approximately one-third the capacity of an existing high school (Table 2.5.1-2).

Table 2.5.1-1. Thurston Highlands projected student population with the Preferred Alternative (based on Michael J. McCormick 2006 and Yelm Community Schools 2007 *Capital Facilities Plan*).

	Number of Students per Household		Total Student Population Projections for the Preferred Alternative
	Single-Family	Multi-Family	
Elementary	0.388	0.161	1,486
Middle School	0.148	0.032	508
High School	0.115	0.161	667

Table 2.5.1-2. Thurston Highlands projected demand for new school facilities with the Preferred Alternative (based Table 2.5.1-1 and on Yelm Community Schools 2007 *Capital Facilities Plan*).

	New School Student Capacity	Demand for New Schools to Serve the Preferred Alternative
Elementary	450	2.18
Middle School	750	0.47
High School	1,300	0.29

School District planning information available at the time of this writing indicates that Thurston Highlands should anticipate and plan for the construction of a minimum of two elementary schools and potentially one middle school within the Master Planned Community. Generally, elementary schools need 8 to 10 acres each, while a middle school requires 15 to 20 acres. The selected land use alternative would provide school sites, coordinated with the District in which the student population would be generated. Elementary schools would be spread throughout the site, located along collector streets, to provide secondary opportunities to serve as a neighborhood focal point or community gathering place. The conceptual location for a middle school is along Tahoma Boulevard at the Y-1 (93rd Avenue SE) intersection to maximize accessibility, and adjacent to the Regional Sports Complex, where athletic facilities, parking facilities and other amenities could provide joint-use opportunities.

2.5.2 Infrastructure

Infrastructure planning requires projecting the needs of the Thurston Highlands Master Planned Community over the 10 to 30-year development timeframe. The infrastructure needs of phased development within the Highlands must be compared to City of Yelm comprehensive water, sewer, and reuse water plan models to coordinate capital improvements in each system, and to determine the development's proportionate-share responsibility for system improvements.

2.5.2.1 Stormwater Management Proposal. KPFF Consulting Engineers analyzed the topographic map of the site prepared by Butler Surveying, and delineated ten separate site-specific drainage basins. These areas are shown in Appendix C of the *Thurston Highlands Grading, Drainage, and Utilities Technical Engineering Report* (KPFF 2008), and on Figure 3.3.6 in this Draft EIS. KPFF then reviewed the Preferred Alternative and other conceptual land use plans, and calculated estimates of total impervious cover in the developed condition of the site. This analysis is presented in Section 3.19.4 of this Draft EIS. Calculations were based on approximate typical land cover and a conservative interpretation of soil infiltration capabilities. Final site design will occur at the time of each development application for phases and divisions within the Master Planned Community. Smaller drainage sub-basins will be identified to provide both stormwater quantity and quality control as close to the point of origin as possible. The stormwater management proposal for the Thurston Highlands Master Planned Community will be complex and carefully managed, incorporating mitigation strategies described below.

The proposal includes using the Washington Department of Ecology *2005 Stormwater Management Manual for Western Washington* for initial design guidance at the beginning of the proposed development, as it is based on the latest technology and science. Given the 10- to 30-year development horizon for the project, stormwater management technology is expected to change over time. Therefore, the proposal includes a commitment to apply the requirements of the most current local and/or State manual for guidance in stormwater management design. Ecology's 2005 methodology for stormwater quantity control and stormwater quality treatment are described in the *Thurston Highlands Grading, Drainage, and Utilities Technical Engineering Report* (KPFF 2008), and summarized in Draft EIS Section 3.19.4.

The infiltration capabilities of the site for 100 percent of stormwater that would be generated by the developed condition, as well as potential infiltration of reclaimed water from the City's wastewater treatment process, has been the subject of a year-long investigation by the consulting firms of Pacific Groundwater Group (PGG), Brown and Caldwell, and Anthony Burgess Consulting, Inc. These investigations and the analysis of results were still in-progress at the time of this writing. Preliminary findings are reported in Section 3.3 of this Draft EIS, with particular emphasis on modeling potential downgradient effects on Thompson Creek. Based on studies performed by PGG and others, the hydrology of Thompson Creek is strongly influenced by recharge over the upland areas west of the creek, including Thurston Highlands. The PGG study concludes that when stormwater is infiltrated on the Thurston Highlands site within the surface water basin in which it originates, approximately 30 percent of the infiltrated stormwater reports to Thompson Creek.

Given that seasonal occurrences of flooding occur in the Thompson Creek basin under existing conditions, the *Infiltration Effects Assessment* (PGG 2008) examines mitigation alternatives for the increased volume of stormwater and increased peak flows that would occur as a result of the Thurston Highlands Master Planned Community development. The mitigation approach is based on examining the following strategies:

- ◆ Reduce the quantity of stormwater that needs to be infiltrated.
- ◆ Infiltrate stormwater in an area where recharge does not report to Thompson Creek.
- ◆ Store stormwater during the wet season for use during the dry season and/or until the timing of recharge will have a minimal impact on Thompson Creek.
- ◆ Improve the conveyance capacity of Thompson Creek so that it can handle increased flows without an increase in flooding.
- ◆ Add storage to Thompson Creek.

The feasibility and potential effectiveness of these strategies is discussed in more detail in Draft EIS Section 3.3.

2.5.2.2 Water Supply Proposal. Domestic water supply to the project will be provided by the City of Yelm in accordance with the City's *Water System Plan*. New infrastructure will be required, but not limited to, additional wells and water rights,¹ new water distribution mains, and reservoirs currently in the planning stage for City-wide service. The City's *Water System Plan* is being updated concurrent with review of the Thurston Highlands Conceptual Master Plan proposal, and will more fully describe improvements required to serve development anticipated in the upcoming 6-year planning period, including development within the southwest area of Yelm in which the Thurston Highlands site is located. The Plan update will include a detailed hydraulic analysis of the City's existing water system, along with the demands of the new projects expected within the upcoming 6-year planning period using specific data on projected land uses and building types.

Based on the Thurston Highlands conceptual land use plan, several different water main sizes may be utilized for lateral water lines to serve residential neighborhoods. Due to changes in elevation within the development, several pressure zones may be created, thus requiring pressure-reducing valves. In order to accommodate fire flow demand and backup storage, several reservoirs may also be required throughout the Master Planned Community as it is developed. If flow equalization is required, the location of reservoirs would be based on well sites within the development (if any).

The Thurston Highlands project is anticipated to generate an average daily water supply demand of at least 1.61 million gallons per day (gpd) exclusive of fire flow demand. Several different sources of information were utilized to estimate the water usage requirements of the Thurston Highlands Master Planned Community. Assumptions and standards are described in Section 4 of the *Thurston Highlands Grading, Drainage and Utilities Technical Engineering Report* (KPF Consulting Engineers 2008).

The average daily water demand for the Preferred Alternative would be approximately 1.664 million gallons per day (MGD), with a fire flow demand of approximately 960,000 gallons for 4 hours. The single largest water usage group would be the single-family residences, with an average daily demand (ADD) of approximately 0.92 MGD. This value is based on 3,000 single-family residences with an average household population of 2.91. Overall water demand for residential usage, to serve single-family detached homes, duplexes and multi-family units, would be approximately 1.318 MGD.

¹ Additional information is provided in this Draft EIS in Section 3.3.3 Water Resources: Public and Private Water Supplies.

The average daily water demand to serve total commercial (retail and office) development under the Preferred Alternative (approximately 960,000 square feet) would be approximately 0.221 MGD. Fire flow demand based on 4,000 gpm for the duration of 4 hours equates to a total of 960,000 gallons. This fire flow storage requirement, at a minimum, should be provided at the start of construction of any commercial project, to include any public facility. Fire flow demand is based on the required flow to a building in gallons per minute and for what duration in hours; number of buildings does not contribute to the calculation.

The combined ADD to serve schools within the Preferred Alternative is calculated to be 0.046 MGD. This value is based on the projection that this alternative would require three elementary schools and one middle school to be built within the Master Planned Community. For other public facilities, like the Regional Sports Complex, fire and/or police stations, an ADD of 0.082 MGD is projected. This is approximately 5 percent of the total ADD under any of the conceptual land use alternatives. For all public facilities, including schools, this value equates to approximately 0.125 MGD with the Preferred Alternative.

2.5.2.3 Sewage Collection, Treatment, and Reuse/Discharge Proposal. Thurston Highlands wastewater will be treated by an expansion of the City's existing sewage collection, treatment, and reuse/discharge system. The City retained the consulting firm of Parametrix to prepare a *Wastewater Technical Report* (September 2007) that evaluates several alternatives and sub-alternatives as feasible strategies for processing additional wastewater loads that will be generated from development of the Thurston Highlands Master Planned Community and other growth anticipated within the City's Urban Growth Area. Two of these alternatives were evaluated in detail, identified as best able to meet the City's goals and objectives for producing Class A reclaimed water and minimizing additional surface water discharges. City decision makers had not yet selected a preferred alternative for expanding the City's sewage collection, treatment and reuse/discharge system at the time of this writing. The City's *Comprehensive Sewer Plan* will be updated to reflect the expansion alternative selected by the City Council.

The two alternatives evaluated in detail by Parametrix both include expansion of the existing City wastewater treatment facilities rather than construction of new satellite facilities potentially located within Thurston Highlands. The alternatives differ in the type of collection system that would be used to convey wastewater from Thurston Highlands to the City's wastewater treatment plant. One alternative would be to use a STEP collection system similar to the existing City collection system. A gravity collection system could also be incorporated with the existing City system. The general characteristics of each type of collection system are summarized below:

- ◆ STEP – A STEP system consists of either individual septic tanks located at buildings or common septic tanks serving multiple residences or commercial structures. The larger solids in the wastewater settle in the septic tanks while the relatively clear effluent is pumped through smaller diameter pressure mains to the wastewater treatment plant. Solids accumulated in the septic tanks would need to be periodically removed by tanker truck and hauled away.
- ◆ Gravity – Individual residences and commercial properties would be connected to pipelines sloped to convey wastewater by gravity to a central location within several sub-basins determined based upon local topography. A subbasin pumping station would pump the wastewater to a main pumping station, which in turn would pump all of the wastewater to the City's wastewater treatment plant.

Chapter 6 of the Parametrix report discusses in detail the advantages and disadvantages of each collection system alternative. In general, a STEP collection system appears to be favorable for the short-term. A STEP collection system would take advantage of existing facilities, equipment, and operator experience while eliminating potential low-flow operational issues, such as odor and inefficient pump station operation. A gravity collection system becomes more favorable in the long term. Gravity collection systems have reliability advantages and are more manageable for the future projected collection system size. The City will make the final decision regarding the type of collection system (STEP or gravity) to serve Thurston Highlands during the update to its *Comprehensive Sewer Plan*. Regardless of the collection system alternative selected, it would be necessary to increase the size of the City's existing wastewater treatment plant to handle the additional volume of wastewater. If a gravity collection system were selected, new headworks equipment would be required to handle the addition of solids to the treatment process.

The City of Yelm will review the scenarios and make a determination based on economic and operational efficiencies through its 2008 Capital Facilities Planning effort. The chosen direction will be reflected in updated Sewer and Water Comprehensive Plans.

The Thurston Highlands Preferred Alternative would generate a total wastewater flow of approximately 1,164,505 gpd, based on 70 percent water usage. Residential use, based on approximately 12,551 residents, would generate an average daily wastewater flow of 922,470 gallons per day (gpd). The average daily wastewater demand to serve total commercial (retail and office) development under the Preferred Alternative (960,000 square feet) would be approximately 154,560 gpd. Combined average daily wastewater flow from schools is calculated to be 32,025 gpd, based on a total student population projection of 2,661. For other public facilities, like the Regional Sports Complex, fire and/or police stations, an average daily wastewater sewer flow is projected to be approximately 55,450 gpd (5 percent of the total average daily wastewater flow under any of the conceptual land use alternatives).

2.5.2.4 Reclaimed Water Proposal. Reclaimed water distribution pipelines will be installed in all phases of the Thurston Highlands Master Planned Community. The decision to utilize reclaimed water within the project area will be determined by the City of Yelm based on economical and operational feasibility. As part of a City-wide mitigation plan for the consumptive use of water, the Thurston Highlands site is being evaluated as a possible location for the infiltration of reclaimed water to recharge the regional aquifer.

2.5.2.5 Transportation/Circulation Proposal. Development of a Master Planned Community in the southwest quadrant of the City has been anticipated and in the City's planning process for some time. The City of Yelm has prepared comprehensive and project-specific documents over the past 15 years that address the traffic potential of a large-scale master planned community in this area. While it is expected that the Thurston Highlands project would have a measurable impact on the City's transportation system, local and regional transportation corridors have been identified to accommodate this significant development as well as other anticipated growth within the area not associated with Thurston Highlands. Even with these planned corridors and transportation improvements in place, project-specific impacts would be realized and mitigation measures will be necessary to accommodate new traffic from the Thurston Highlands development. The *Thurston Highlands Master Planned Community Transportation Impact Analysis* (TIA) prepared by Transportation Engineering Northwest (TENW 2008) has addressed the project-related impacts for two horizon years: 2012 (Phase 1) and 2015 (Phase 2), and identified specific mitigation measures for each development horizon. These are summarized in

the Mitigation Strategy section of the TIA, and in Draft EIS Section 3.17.7. The proposal includes a commitment to reevaluate project impacts from time to time in relation to actual background conditions by preparing supplemental Transportation Impact Analyses at the time approvals are sought for each development phase of the Thurston Highlands Master Planned Community.

As a result of transportation planning and analysis that has occurred since 1992, the City of Yelm has identified 13 projects in its 2001 *Comprehensive Transportation Plan* to meet the projected future transportation needs of the community. The loop highways known as Y2 (SR 507/Five Corners Connector) and Y3 (SR 510 North Loop) are critical components of this system, and are also listed in Washington State Department of Transportation *Route Development Plan* (RDP) documents. The Thurston Highlands TIA (TENW 2008) describes local and regional study areas, new corridors planned to serve the Yelm area with or without the Thurston Highlands development, trip generation and project impacts in relation to the existing roadway inventory, existing traffic conditions, and long-term context for transportation improvements within the local and regional study area. The TIA is summarized in Draft EIS Section 3.17.

The construction of roadways and access points to/from the Thurston Highlands Master Planned Community would occur in phases, approximately corresponding to phased development of the site. The most significant roadway improvement within the project would be the Tahoma Boulevard connection between SR 510 and SR 507. The TIA describes the proposal for phased construction of the Boulevard in relation to the anticipated timing for completion of an important regional transportation improvement, the SR 510 Yelm Loop.

- ◆ 2012 – Phase 1 Residential without SR 510 Yelm Loop – Site access would be provided from SR 510 at Killion Road, SR 510 at Berry Valley Road/Cullens Road, SR 510 at Longmire Street, and SR 507 at Mosman Avenue. Tahoma Boulevard would be constructed as a four-lane internal boulevard with Phase 1 from its eastern terminus to the Phase 1 boundary of Thurston Highlands.
- ◆ 2015 – Phase 2 Mixed-Use with SR 510 Yelm Loop – Same access points as 2012 Phase 1, plus additional access to the south via SR 507 at Tahoma Boulevard. Phase 2 would extend Tahoma Boulevard as a two-lane roadway to SR 507.
- ◆ 2025 – Full Build-Out with SR 510 North Loop – Same access points as 2012 and 2015. Tahoma Boulevard would be widened from two to four travel lanes with a center landscaped median.

Local and regional study area roadway improvements to be required of the Master Planned Community, and specific trigger points for timing, will be addressed in the Development Agreement to be prepared between the City and the applicant. Development standards for road improvements within the Master Planned Community will be addressed at the time of application to construct each phase and division of development of the Master Planned Community.

The proposal includes making a site available to Intercity Transit for possible future development of a transit center near the Urban Village component of the Master Planned Community, in close proximity to SR 507.

2.5.3 Phased Development Proposal

The applicant proposes to build-out the Thurston Highlands master planned community over a period of 10 to 30 years in response to market demand, and in response to the availability of public services and infrastructure required to accommodate this growth in the community. At this rate, 250 to 400 residential units per year could be built and made available for occupancy. Full build-out is expected to be complete in the timeframe between 2018 and 2038.

To assist public service providers with planning for early stages of development within Thurston Highlands, a Phase 1 development concept is described, illustrated, and evaluated in this Draft Environmental Impact Statement (see Figure 2.5-6). Phase 1 would consist of approximately 1,008 homes (single-family detached and multi-family) to be constructed between approximately 2008 and 2011, and to be occupied between approximately 2009 and 2012. The projected resident population of Phase 1 development is approximately 2,527 persons, including about 534 students (approximately 298 elementary, 101 middle school, and 135 high school students). It is anticipated that the character of development within Thurston Highlands Phase 1 would be that of a traditional urban neighborhood, similar to the adjacent Tahoma Terra Master Planned Community, as a transition to higher development densities within the Highlands. The Phase 1 conceptual site plan includes approximately 70 acres of open space and habitat area to be preserved, and the 87-acre Regional Sports Complex. The Regional Sports Complex would be completed in phases, to be determined during the Final Master Site Plan review and Development Agreement process.

Most of the City's existing infrastructure could serve this number of homes before major additional capital improvements (such as expansion of facilities) would be needed. Homes within Phase 1 would be entirely within the Yelm Community Schools District, and would require the construction of one new elementary school. Given that the existing Yelm Fire Station (Station No. 21) is currently operating at capacity, Southeast Thurston Fire/EMS has also identified the need for a fire station to be constructed within the Master Planned Community prior to full development and occupancy of Phase 1.

Water System Improvements. Phased construction of the water system within the development may or may not coincide with phased development of the Master Planned Community. Hydraulic models would be performed as the City of Yelm *Comprehensive Water Plan* is periodically updated. These models would identify the needs and locations of reservoirs for storage, pump stations, and line sizes.

Sewage Collection, Treatment, and Reuse/Discharge. Phased development of the wastewater collection system also may or may not coincide with phased construction of the Master Planned Community. A STEP system would be easier than a gravity system to design and install with phased development of the site, as described in Section 2.5.2.3 above. A gravity system would require more advanced planning during the design phase to serve future areas that may utilize gravity lines. Lift station placement would also require advanced planning.

Reclaimed Water Use. It is anticipated that Phase 1 of Thurston Highlands will follow the same practice and standards as the various divisions in Tahoma Terra, in which the main reclaimed water distribution line and service lines were installed for future use. Newer technologies for reclaimed water applications may be available to future phases of the Thurston Highlands Master Planned Community. Design standards for infrastructure should change with these emerging technologies over the course of developing the Master Planned Community.

Insert Figure 2.5-6: Phase 1 Conceptual Land Use Plan

2.5.4 Maintenance and Operations Proposal

The distinction in maintenance responsibilities between improvements that will become part of City systems versus improvements for which the Thurston Highlands Homeowners' Association would retain responsibility will be spelled out in a Development Agreement to be prepared between the City and the applicant during the Master Site Plan Approval process. For example, it is anticipated that Thurston Highlands, L.L.C. would deed neighborhood parks to the City of Yelm, for City ownership and maintenance. Mini parks would be owned and maintained by the Homeowners' Association. The Regional Sports Complex would also be deeded to the City, with a joint public/private partnership for operations. The City would control use of the athletic fields (i.e., be responsible for scheduling use and maintenance), parking and outdoor amenities (like landscaping). Commercial recreation facilities (like a YMCA, batting cages, anything for-profit) would remain private enterprise.

Utility infrastructure such as water and sewer mains, reclaimed water facilities, and streets are typically dedicated to the City upon construction and, upon dedication, these improvements are maintained by the City. Stormwater management facilities are typically maintained by property owners or homeowners' associations.

2.6 Land Use Alternatives

Land use alternatives contemplated at the time of the Conceptual Master Site Plan application include all of the same basic elements as the Preferred Alternative, with variations on the primary attributes in a manner that may result in more or less environmental impact, increased efficiency for the provision of public services and utilities, and/or inclusion of different characteristics identified by the citizens of Yelm as features they would like to see in their community. In order to qualify as viable for evaluation in this Environmental Impact Statement, land use alternatives were also required by the City meet the intent of the City of Yelm Comprehensive Plan and the Washington State Growth Management Act with regard to urban density. To achieve this, any land use alternative would need to provide for a minimum of 5,000 new dwelling units. For the purpose of environmental review, Traditional Development and an Urban Village Alternative were selected as the lower and upper range of development intensity to compare to the Preferred Alternative.

2.6.1 Traditional Development

The Traditional Development Alternative would be characterized by a suburban development pattern consisting of a curvi-linear, gridded street system with an emphasis on single-family residential neighborhoods and small-scale neighborhood convenience commercial uses located throughout the master planned community (see Figures 2.6-1 and 2.6-2). A larger portion of the site would be allocated to a low-density zone. Residential neighborhoods in this alternative would spread the residential density out over the majority of the project site, providing larger lot sizes (5,000 to 7,000 square feet) and an average density of 4 dwelling units per buildable acre. This development pattern would be consistent with the type of residential development that has occurred in Yelm over the past several years.

The Traditional Development Alternative would likely be an automobile-oriented community. As such, commercial areas would likely have the character of "strip malls," with single-story buildings setback from the street edge, with several anchor tenants (drug store, sporting goods, hardware), connected by smaller suites to accommodate specialty retail and office uses, and some building pads near the street for higher-traffic uses such as branch banks and restaurants.

Insert Figure 2.6-1: Traditional Development Conceptual Land Use Plan

Insert Figure 2.6-2: Traditional Development “Zoom-In” Site Plan.

In the automobile-oriented Traditional Development concept, commercial areas would likely be located on the outside curve of Tahoma Boulevard to take advantage of the “drivers eye” to attract customers, helping to foster a successful business environment. The front lot area of these commercial centers would be dominated by large parking lots in the foreground, and large front facades with signage and advertising in the background.

Several other factors would also influence the location of the primary commercial zones in this alternative; for example, a central location within Thurston Highlands, along the Boulevard, equi-distant between SR 510 and SR 507, somewhat near Tahoma Terra and adjacent to the Fort Lewis Military Reservation to buffer the residential neighborhoods.

Approximately 480,000 sf of retail commercial development could be provided in the Traditional Development Alternative, and approximately 150,000 sf of office development.

Open space would be preserved and enhanced in a variety of forms, from small pocket parks to serve very localized blocks within neighborhoods, to community parks serving several neighborhoods or Yelm residents in general, and natural open space areas associated with wetlands and steep slopes. Total open space acreage would be approximately 315 acres (approximately 25 percent of the site) in the Traditional Development Alternative.

2.6.1.1 Schools. The Traditional Development Alternative, with a larger number of single-family homes compared to the Preferred Alternative, would generate a larger number of students, but an approximately equivalent demand for new school facilities (see Tables 2.6.1-1 and 2.6.1-2).

Table 2.6.1-1. Thurston Highlands projected student population with the Traditional Development Alternative (based on Michael J. McCormick 2006 and Yelm Community Schools 2007 Capital Facilities Plan).

	Number of Students per Household		Total Student Population Projections for the Traditional Development Alternative
	Single-Family	Multi-Family	
Elementary	0.388	0.161	1,713
Middle School	0.148	0.032	624
High School	0.115	0.161	621

Table 2.6.1-2. Thurston Highlands projected demand for new school facilities with the Traditional Development Alternative (based Table 2.6.1-1 and on Yelm Community Schools 2007 Capital Facilities Plan).

	New School Student Capacity	Demand for New Schools to Serve the Traditional Development Alternative
Elementary	450	2.15
Middle School	750	0.46
High School	1,300	0.29

2.6.1.2 Water Supply Requirements. The average daily water demand based on the Traditional Development Alternative would be approximately 1.737 million gallons per day (MGD), with a fire flow demand of 960,000 gallons for 4 hours. Similar to the Preferred Alternative, the single largest water usage group would be the single-family residences, with average daily demand (ADD) of approximately 1.223 MGD. This value is based on 4,000 single-family residences with an average household population of 2.91. Overall water demand for residential usage, to serve single-family detached homes, duplexes and multi-family units, would be approximately 1.455 MGD.

The average daily water demand to serve total commercial (retail and office) development under the Traditional Development Alternative (630,000 square feet) would be approximately 0.145 MGD. Fire flow demand based on 4,000 gpm for the duration of 4 hours equates to a total of 960,000 gallons. Fire flow demand is based on the required flow to a building in gallons per minute and for what duration in hours; number of buildings does not contribute to the calculation.

The combined ADD to serve schools within the Traditional Development Alternative is calculated to be 0.055 MGD. This value is based on the projection that this alternative would require four elementary schools and one middle school to be constructed within the Master Planned Community. For other public facilities, like the Regional Sports Complex, fire and/or police stations; an ADD of 0.082 MGD is projected (approximately 5 percent of the total ADD for the area). For all public facilities, including schools, this value equates to approximately 0.137 MGD with the Traditional Development Alternative.

2.6.1.3 Sewage Collection, Treatment, and Reuse/Discharge. The Traditional Development Alternative would generate a total wastewater flow of approximately 1,215,865 gpd, based on 70 percent water usage. Residential use, based on approximately 13,862 residents, would generate an average daily wastewater flow of approximately 1,018,810 gallons per day (gpd). The average daily wastewater demand to serve total commercial (retail and office) development under the Traditional Development Alternative (630,000 square feet) would be approximately 101,430 gpd. Combined average daily wastewater flow from schools is calculated to be 38,325 gpd, based on a total student population of 2,958. For other public facilities, like the Regional Sports Complex, fire and/or police stations, an average daily wastewater sewer flow is projected to be approximately 57,300 gpd (5 percent of the total average daily wastewater flow under any of the conceptual land use alternatives).

2.6.2 Urban Village Alternative

The Urban Village concept would create compact areas of high-density residential uses inter-mixed with commercial uses around a central Village Square (see Figures 2.6-3 and 2.6-4). The predominant land use would be townhomes, apartments, and condominiums oriented around a neighborhood focal point, like a park, plaza or school.

Neighborhoods would have much smaller single-family lots, with an average density ranging from 5 to 7 dwelling units per buildable acre. Private yards would generally be smaller, though some areas of the site would still be developed as traditional single-family residential subdivisions, likely in the northeastern portion of the community adjacent to Tahoma Terra, continuing that land use pattern into Thurston Highlands before transitioning to higher-density areas.

Insert Figure 2.6-3: Urban Village Conceptual Land Use Plan

Insert Figure 2.6-4: Urban Village “Zoom-In” Site Plan.

The higher development density in the Urban Village Alternative would provide opportunities for reduced reliance on automobile travel, as residents would be within walking distance of commercial and other non-residential uses within the development. As with the Preferred Alternative, the Village Square would be the focal point of commercial development and open space. This area would be characterized by plazas, hardscape features, and outdoor urban activities; e.g., outdoor café seating, street vendors, platforms for outdoor performances, general seating and gathering areas around an architectural or landscape feature. Approximately 850,000 sf of retail commercial development could be provided in the Urban Village Alternative, and approximately 650,000 sf of office development.

The Urban Village Alternative would also provide an opportunity for a larger percentage of the site to be set-aside in natural open space. Vertical construction that would increase commercial and residential density near the center of the development would preserve more land in an undisturbed condition around the perimeter to create a more extensive network of natural areas, perhaps as much as 400 to 500 acres (approximately 30 to 40 percent of the site).

2.6.2.1 Schools. The Urban Village Alternative, with the fewest number of single-family homes and the largest number and highest density of multi-family dwelling units, would generate considerably fewer elementary and middle school students than either the Preferred Alternative or the Traditional Development Alternative, but a larger number of high school students (see Table 2.6.2-1).

Table 2.6.2-1. Thurston Highlands projected student population with the Urban Village Alternative (based on Michael J. McCormick 2006 and Yelm Community Schools 2007 *Capital Facilities Plan*).

	Number of Students per Household		Total Student Population Projections for the Urban Village Alternative
	Single-Family	Multi-Family	
Elementary	0.388	0.161	1,032
Middle School	0.148	0.032	276
High School	0.115	0.161	759

The Urban Village student population projections would also exert a lower demand for new school facilities – approximately one-half the demand for elementary and middle school capacity compared to the other conceptual land use alternatives (see Table 2.6.2-2).

Table 2.6.2-2. Thurston Highlands projected demand for new school facilities with the Urban Village (based Table 2.6.2-1 and on Yelm Community Schools 2007 *Capital Facilities Plan*).

	New School Student Capacity	Demand for New Schools to Serve the Urban Village Alternative
Elementary	450	1.30
Middle School	750	0.21
High School	1,300	0.33

2.6.2.2 Water Supply Requirements. The average daily water demand of the Urban Village Alternative would be approximately 1.613 million gallons per day (MGD), with a fire flow demand of 960,000 gallons for 4 hours. The single largest water usage group would be commercial development of approximately 1,500,000 square feet (total of retail and office buildings). This group would exert an average daily water demand of 0.345 MGD. Similar to the other conceptual land use alternatives, fire flow demand based on 4,000 gpm for the duration of 4 hours would equate to a total of 960,000 gallons.

Overall water demand for residential usage, to serve single-family detached homes, duplexes and multi-family units, would be approximately 1.155 MGD. The single-family residences with average daily demand (ADD) of 0.306 MGD would be the second largest water user. This value is based on 1,000 single-family residences with an average household population of 2.91.

The combined ADD to serve schools within the Urban Village Alternative is calculated to be 0.037 MGD. This value is based on the projection that this alternative would require two elementary schools and one middle school to be constructed within the Master Planned Community. For other public facilities, like the Regional Sports Complex, fire and/or police stations; an ADD of 0.077 MGD is projected (approximately 5 percent of the total ADD for the area). For all public facilities, including schools, this value equates to approximately 0.114 MGD with the Urban Village Alternative.

2.6.2.3 Sewage Collection, Treatment, and Reuse/Discharge. The Urban Village Alternative would generate a total wastewater flow of approximately 1,129,445 gpd, based on 70 percent water usage. Residential use, based on approximately 10,999 residents, would generate an average daily wastewater flow of 808,455 gallons per day (gpd). The average daily wastewater demand to serve total commercial (retail and office) development under the Urban Village Alternative (1,500,000 square feet) would be approximately 241,500 gpd. Combined average daily wastewater flow from schools is calculated to be 25,725 gpd, based on a total student population of 2,067. For other public facilities, like the Regional Sports Complex, fire and/or police stations, an average daily wastewater sewer flow is projected to be approximately 53,765 gpd (5 percent of the total average daily wastewater flow under any of the conceptual land use alternatives).

2.6.3 No Action Alternative

The Thurston Highlands site is zoned "Master Planned Community;" therefore, from a City planning perspective for the foreseeable future, the site will either be developed as a master planned community, or not at all. Thurston Highlands, L.L.C. would have the discretion to decide whether to maintain ownership of the property, pursue some other use, or delay and reapply for development at some future time. The property could also be sold to others for development. It is assumed under this alternative that the property would temporarily remain undeveloped. This is the basis for comparison of the No Action Alternative to the Preferred Alternative and other conceptual land use alternatives.

2.7 Clearing, Grading and Construction Sequencing Proposal

To complete development of an urban-density Master Planned Community, significant clearing of vegetation and grading would be required in all areas not designated as sensitive areas, protected habitat, or permanent open space. It can be expected that approximately 100 to 300 acres of land will be cleared and graded at any given time for development purposes. As each of these areas is stabilized with either permanent or temporary methods, another 100 to 300 acres would be cleared.

Construction of the roadway and utilities infrastructure to serve the Master Planned Community is projected to occur in phases over the course of approximately 10 years, to serve overall phased development of the Master Planned Community. The target date for construction to commence is 2008.

For each phase of development, construction activities would likely occur in the general sequence described below, using the types of equipment identified:

- ◆ Flag clearing limits and sensitive areas, such as wetlands and other critical areas.
- ◆ Post 'NOTICE OF CONSTRUCTION ACTIVITY' signs with ESC supervisor name and contact information.
- ◆ Arrange for and attend Pre-Construction meeting between contractor, engineer and City of Yelm.
- ◆ Establish Temporary Erosion and Sediment Control (TESC) facilities for areas that would be disturbed by development within each phase to prevent sediment-laden water from leaving the site. TESC facilities would be designed per the latest engineering practices for Best Management Practices and permitted as part of the City of Yelm Grading Permit process and would include items such as silt fences, diversion swales, sediment traps/ponds, construction entrances/roads, catch basin inserts and others as necessary.
- ◆ Revise, relocate, or install new TESC measures during construction so that as site conditions change, the erosion control is in accordance with standards to protect surface waters and adjacent properties.
- ◆ Cover all areas that will be unworked for more than seven (7) days during the dry season (May 1 to October 31), or two (2) days during the wet season (November 1 to April 30). Cover measures shall be per the latest accepted Engineering Practices.
- ◆ Keep all paved roadways clean at all times by sweeping regularly and providing approved construction entrances.
- ◆ During Construction, the TESC measures would be inspected daily and maintained to ensure continued proper functioning. Written records of inspections would also be kept.
- ◆ Install stormwater infrastructure and water quality controls for all areas to be disturbed by development in each phase. Stormwater infrastructure would include piping conveyance systems, infiltration retention and/or detention facilities, and water quality treatment facilities. At a minimum, the stormwater infrastructure would be developed to meet the capacity requirements of the completed phase. However, in some instances, it may be more efficient to provide stormwater infrastructure with capacity to also serve the completed improvements of future phases.
- ◆ Establish temporary facilities, such as construction staging areas.
- ◆ Accomplish site clearing and grading activities.
- ◆ Construct new utility infrastructure as necessary to meet capacity requirements. This work would also be accomplished using conventional construction equipment. Where existing utility infrastructure is owned by franchise utilities and crosses Thurston Highlands property,

easements would be granted to allow for construction and maintenance of the utility infrastructure.

- ◆ Construct new roadway and utility infrastructure. Most, if not all, utility infrastructure will be located within the Boulevard right-of-way for the length of the boulevard. Upon completion of the items listed above, excavation may commence to place utilities and stormwater facilities, provide stub-outs of all facilities to future phases, followed by final paving and stabilization of the right-of-way.
- ◆ In residential areas, facilitate new home construction by builders to whom lots would be sold.
- ◆ In commercial areas, construct building foundations, followed by structures, cladding, roofing, interior mechanical and electrical systems, interior finishes and improvements.
- ◆ Concurrently construct site utilities including building connections from service lines.
- ◆ Construct pedestrian amenities and parking areas, and install landscaping.
- ◆ Stabilize the site the performing final paving and landscaping to all disturbed areas.
- ◆ Remove Best Management Practice temporary facilities and construction controls.

If an alternative that differs from the Preferred Alternative described in this EIS is selected for implementation, some elements of construction sequencing may differ, and would be reviewed by the City of Yelm at the time of applications for specific site development approvals. For example, due to the taller height of structures in the Urban Village Alternative, tower cranes would likely be utilized for efficient construction of these structures. These cranes could be on the order of 60 to 100 feet tall.

2.8 Comparison of Environmental Impacts

Table 2.8-1 compares the potential developed-condition impacts of the conceptual land use alternatives. Any of these site plan alternatives would basically implement the principle features of the proposed Master Planned Community, as described above in Section 2.5.1. Where it is possible to estimate quantitative differences between the alternatives, to determine which would have greater or lesser impacts, these quantitative comparisons are made in Table 2.8-1.

More descriptive presentations of the potential impacts of proposed development, and mitigation measures to avoid or minimize these impacts, are provided in Table 1.4-1 in Chapter 1 (Summary), and throughout Draft EIS Chapter 3. Readers are referred to those locations in the document for a more comprehensive context regarding the comparative impacts summarized below.

Table 2.8-1. Comparison of environmental impacts of the alternatives.

Element of the Environment	Preferred Alternative	Traditional Development Alternative	Urban Village Alternative	No Action Alternative
Earth	Significant recontouring of the site would be required.	Similar to the Preferred Alternative.	Similar to the Preferred Alternative.	The site would not be graded under the No Action Alternative.
	Soils exposed by grading would have increased potential for erosion by wind and/or precipitation.	Similar to the Preferred Alternative.	Similar to the Preferred Alternative.	Risk of erosion would not increase over existing conditions.
Air Quality	Only minor emissions of any pollutants would occur in the developed condition of the site.	Similar to the Preferred Alternative.	Similar to the Preferred Alternative.	There would be no change in air quality emissions from the site.
	Carbon monoxide emissions would decline in future years due to federal vehicle emission reduction requirements.	Similar to the Preferred Alternative.	Similar to the Preferred Alternative.	There would be no change in very low levels of carbon monoxide emissions from the site associated with occasional vehicular access.
	No gage has yet been developed to determine whether greenhouse gas emissions associated with the useful life of residential development constitute an impact to climate.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Forest cover on the site would continue to serve a beneficial effect, emitting no GHG emissions and absorbing GHGs emitted by other sources.
Surface Water	Regrading the site will result in changes to existing drainage systems, and an increase in runoff.	Similar to the Preferred Alternative.	Similar to the Preferred Alternative.	There would be no change in surface water runoff, infiltration, or evapotranspiration conditions.
	Surface water runoff from the developed condition of the site is likely to have impaired water quality.	Similar to the Preferred Alternative.	Similar to the Preferred Alternative.	There would be no change in the quality of surface water runoff from the undeveloped site.

Table 2.8-1. Comparison of environmental impacts of the alternatives, *continued*.

Element of the Environment	Preferred Alternative	Traditional Development Alternative	Urban Village Alternative	No Action Alternative
Surface Water, <i>continued</i>	Stormwater infiltrated on the site will recharge groundwater. Modeling indicates that approx. 30% of the increase will reach Thompson Creek, with possible effects on flow rates, water surface levels, and duration of seasonal flow conditions.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	No change in shallow groundwater input to Thompson Creek from the undeveloped site.
Groundwater	If reclaimed water from the City's wastewater treatment process is infiltrated on-site, approx. 30% of this volume would also reach Thompson Creek, with similar results to those indicated above for surface water infiltration	Same as the Preferred Alternative.	Same as the Preferred Alternative.	The undeveloped site could also be considered for reclaimed water infiltration.
Public Water Supplies	The City is engaged in acquisition of additional water rights to serve the proposed development and other anticipated growth within the UGA.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	No additional water supply would be required to serve the undeveloped site.
Wetlands	All high-value wetland systems on the property would be preserved. Isolated "kettle" wetlands (small, low-value features) may be used as stormwater ponds or may be filled.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	There would be no change to wetland systems on the property. There would be no alteration of kettle wetlands.

Table 2.8-1. Comparison of environmental impacts of the alternatives, *continued*.

Element of the Environment	Preferred Alternative	Traditional Development Alternative	Urban Village Alternative	No Action Alternative
Wetlands, <i>continued</i>	Tahoma Boulevard construction through the site would result in unavoidable wetland fill at crossings in two locations (approx. 2.35 acres, total). Providing road access to property east of Thurston Highlands Phase 1 would result in unavoidable wetland fill in the amount of approx. 3,286 sf.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	There would be no wetland fill with the No Action Alternative.
Fish and Wildlife	The number and diversity of wildlife that presently use the site would be significantly reduced, and the SW quadrant of the City would be significantly degraded for potential wildlife use. There would be no impact to Washington State priority habitats or species. There would be no impact to Federally-listed threatened or endangered species or critical habitat. There would be no impacts to listed species of anadromous fish.	Same as the Preferred Alternative.	Human disturbance to wildlife may be slightly less due to the larger amount of open space to be retained around more intensive, centralized development.	Access to property to the east may require the identified wetland fill with or without Thurston Highlands development. There would be no alteration to the suitability of the site for wildlife use with the No Action Alternative.
Habitats	Two areas of high-value upland habitat (mature forest) would be preserved on the site.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative. Same as the Preferred Alternative. Same as the Preferred Alternative.

Table 2.8-1. Comparison of environmental impacts of the alternatives, *continued*.

Element of the Environment	Preferred Alternative	Traditional Development Alternative	Urban Village Alternative	No Action Alternative
Habitats, <i>continued</i>	The stormwater infiltration proposal has the potential to have a beneficial impact on resident fish (stickleback) habitat in Thompson Creek, as a result of prolonged seasonal streamflow.	Same as the Preferred Alternative	Same as the Preferred Alternative	There would be no change from existing conditions with respect to Thompson Creek streamflow.
Land Use	Vacant land would be converted to an urban mixed-use development over a period of 10 to 30 years.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	There would be no alteration of land use with the No Action Alternative.
	The character of Yelm would be changed by the creation of a large population center somewhat removed from the Central Business District and existing residential neighborhoods.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	There would be no change to the existing character of southwest Yelm.
	A mix of housing types and densities would be provided, and thus a range of housing prices.	Similar to the Preferred Alternative, though with the least diversity in housing types.	Similar to the Preferred Alternative, though with a higher percentage of multi-family units and more pedestrian-oriented neighborhoods.	No housing would be developed on the site.
	Approx. 825,000 sf of retail commercial development, and approx. 135,000 sf of office space (960,000 sf total commercial) would be provided.	Approx. 480,000 sf of retail commercial development, and approx. 150,000 sf of office space (630,000 sf total commercial) would be provided.	Would provide the largest amount of commercial development: approx. 850,000 sf of retail commercial, and approx. 650,000 sf of office space (1.5 million sf total).	No commercial development would occur on the site.

Table 2.8-1. Comparison of environmental impacts of the alternatives, *continued*.

Element of the Environment	Preferred Alternative	Traditional Development Alternative	Urban Village Alternative	No Action Alternative
Land Use, <i>continued</i>	Approx. 400 acres in open space and common areas would be preserved (34% of total site area).	Approx. 315 acres in open space and common areas would be preserved (25% of total site area); no Village Square.	Would preserve the largest amount of open space and common area: approx. 400 to 500 acres (30% to 40% of total site area), due to higher-density development near the center of the site.	There would be no designated open space to be preserved in perpetuity.
Noise	The Regional Sports Complex would have the greatest potential to generate noise in the completed condition of the development.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	There would be no change in existing sound levels emanating from or received on the site.
Relationship to Fort Lewis	Residents and visitors would, at times, experience noise generated by training exercises on the adjacent Fort Lewis Military Reservation.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	There would be no resident population on the site to be affected by noise associated with military training exercises.
	Prescribed burning on the Military Reservation (approx. once per year) may be a source of smoke and odor within the Master Planned Community.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	There would be no resident population on the site to be affected by smoke and odor associated with Fort Lewis prescribed burning.
	Loss of habitat on the Thurston Highlands site would put pressure on habitats within the adjacent Military Reservation.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	There would be no loss of habitat from the undeveloped site.

Table 2.8-1. Comparison of environmental impacts of the alternatives, *continued*.

Element of the Environment	Preferred Alternative	Traditional Development Alternative	Urban Village Alternative	No Action Alternative
Relationship to Fort Lewis, <i>continued</i>	The proposal includes relocating the Centralia Power line to a 50-ft wide easement along the west and northwest boundary with Fort Lewis.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	The Centralia Power line would not be relocated with the No Action Alternative.
Population	A resident population of approx. 12,548 persons would occupy the site at full build-out (2025).	A resident population of approx. 13,859 persons would occupy the site at full build-out (2025).	A resident population of approx. 10,998 persons would occupy the site at full build-out (2025).	There would be no resident population on the site with the No Action Alternative.
Housing	Approx. 3,000 single-family homes, 546 duplexes, and 1,454 multi-family units would be constructed on the site.	Approx. 4,000 single-family homes, 400 duplexes, and 600 multi-family units would be constructed on the site.	Approx. 1,000 single-family homes, 1,240 duplexes, and 2,760 multi-family units would be constructed on the site.	There would be no residential development on the site with the No Action Alternative.
Light and Glare	Site development would introduce a substantial number of new sources of light and glare, most concentrated in commercial areas.	Similar to the Preferred Alternative, though light and glare would be more widespread throughout the Master Planned Community.	Similar to the Preferred Alternative, though there may be a somewhat higher potential to create sky glow from centralized, higher-density development.	There would be no change in existing light sources emanating from or received on the site.
	The Regional Sports Complex would have the greatest potential to generate nighttime illumination within the development.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as above.
Aesthetics	Conversion of the property to an urban mixed-use development would be aesthetically pleasing to some, and objectionable to others.	Similar to the Preferred Alternative.	Similar to the Preferred Alternative.	There would be no change in the appearance of the site with the No Action Alternative.

Table 2.8-1. Comparison of environmental impacts of the alternatives, *continued*.

Element of the Environment	Preferred Alternative	Traditional Development Alternative	Urban Village Alternative	No Action Alternative
Parks and Recreation	The projected resident population would exert a demand for approx. 78.4 to 131.8 acres of park land. Approx. 27.25 acres should be developed for active recreation.	The projected resident population would exert a demand for approx. 86.6 to 145.5 acres of park land. Approx. 28.10 acres should be developed for active recreation.	The projected resident population would exert a demand for approx. 68.7 to 115.5 acres of park land. Approx. 26.05 acres should be developed for active recreation.	The No Action Alternative would generate no demand for additional park land. The present condition of no authorized public use or recreation on the site would continue.
Historic/Cultural Resources	There is a possibility that presently unknown cultural or archaeological resources would be discovered during ground-disturbing activities.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	There would be no increased risk of encountering unknown cultural or archaeological resources with the No Action Alternative.
Transportation	Full build-out (in 2025) would generate approx. 64,000 average daily trips, with approx. 5,345 trips during the PM peak hour.	Full build-out (in 2025) would generate approx. 52,450 average daily trips, with approx. 4,675 trips during the PM peak hour.	Full build-out (in 2025) would generate approx. 68,200 average daily trips, with approx. 5,335 trips during the PM peak hour.	No new vehicular trips would be generated with the No Action Alternative.
Fire Protection/EMS	At the present rate of 230 calls per 1,000 population per year, approx. 2,886 calls per year would be generated for fire protection and/or emergency medical aid services (EMS). Tax revenues generated by the Preferred Alternative would result in a slight operating cost surplus for fire protection/EMS (see DEIS Table 3.18.2-2).	With the highest population projection, the Traditional Development Alternative would generate the highest demand for fire protection and emergency medical aid services: approx. 3,188 calls per year. Tax revenues generated by the Traditional Development Alternative would result in an operating cost deficit for fire protection/emergency medical aid services.	The Urban Village Alternative would generate approx. 2,530 calls per year for fire protection and/or emergency medical aid. Tax revenues generated by the Urban Village Alternative would result in an operating cost surplus for fire protection/emergency medical aid services.	There would be no change from the present low likelihood of demand for fire protection or emergency medical aid services with the No Action Alternative. The No Action Alternative would exert no measurable operating cost for fire protection/emergency medical aid services.

Table 2.8-1. Comparison of environmental impacts of the alternatives, *continued*.

Element of the Environment	Preferred Alternative	Traditional Development Alternative	Urban Village Alternative	No Action Alternative
Fire Protection/EMS, <i>continued</i>	The Preferred Alternative would result in a capital cost shortfall for fire protection/emergency medical aid services (see DEIS Table 3.18.2-3).	Similar to the Preferred Alternative, the Traditional Development Alternative would result in a capital cost shortfall.	Similar to the Preferred Alternative, the Urban Village Alternative would result in a capital cost shortfall.	The No Action Alternative would exert no measurable capital cost for fire protection/emergency medical aid services.
Police Protection	The developed condition of the site would generate additional traffic patrol requirements and additional calls for community policing activities.	Similar to the Preferred Alternative.	Similar to the Preferred Alternative.	There would be no change from the present low likelihood of a requirement for a police response to the site with the No Action Alternative.
Schools	The Preferred Alternative would generate a total student population of approximately 2,661: 1,486 elementary, 508 middle school, and 667 high school students.	The Traditional Development Alternative would generate a total student population of approximately 2,958: 1,713 elementary, 624 middle school, and 621 high school students.	The Urban Village Alternative would generate a total student population of approximately 2,067: 1,032 elementary, 276 middle school, and 759 high school students.	The No Action Alternative would generate no student population.
	The school building requirements of the projected student population would be approx. 2.18 elementary schools, 0.47 middle school, and 0.29 high school, if in one district.	The school building requirements of the projected student population would be approx. 2.15 elementary schools, 0.46 middle school, and 0.29 high school, if in one district.	The school building requirements of the projected student population would be approx. 1.30 elementary schools, 0.21 middle school, and 0.33 high school if in one district.	The No Action Alternative would generate no demand for school building capacity or new school construction.
	The Preferred Alternative would result in an operating cost surplus for school district(s) – DEIS Tables 3.18.4-8 and -9.	Similar to the Preferred Alternative.	Similar to the Preferred Alternative.	The No Action Alternative would generate no demand and minimal revenue for school district(s).

Table 2.8-1. Comparison of environmental impacts of the alternatives, *continued*.

Element of the Environment	Preferred Alternative	Traditional Development Alternative	Urban Village Alternative	No Action Alternative
<i>Schools, continued</i>	Would result in a capital cost shortfall for school district(s) – see DEIS Tables 3.18.4-10 and -11.	Similar to the Preferred Alternative	Similar to the Preferred Alternative	Same as above.
Water Service	The Preferred Alternative would generate an average daily water demand in the amount of approximately 1.664 mgd, with single-family residences being the largest user group. The 4-hour fire flow demand would be an additional estimated 960,000 gallons.	The Traditional Development Alternative would generate an average daily water demand in the amount of approximately 1.737 mgd, with single-family residences being the largest user group; same approximate fire flow demand as the Preferred Alternative.	The Urban Village Alternative would generate an average daily water demand in the amount of approximately 1.613 mgd, with commercial development being the largest user group; same approximate fire flow demand as the Preferred Alternative.	The No Action Alternative would exert no demand for domestic water supply, and no anticipated fire flow demand.
Sewer Service	The Preferred Alternative would generate a total wastewater flow of approximately 1.165 mgd, based on 70% water usage.	The Traditional Development Alternative would generate a total wastewater flow of approximately 1.216 mgd.	The Urban Village Alternative would generate a total wastewater flow of approximately 1.129 mgd. May require less infrastructure in the ground due to more vertical development.	The No Action Alternative would generate no wastewater for collection, treatment, reuse or disposal.
Reclaimed Water	The City of Yelm will be responsible for decisions regarding whether and how to utilize and/or infiltrate reclaimed water on the Thurston Highlands site.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	The undeveloped site may still be considered as a location for infiltration of reclaimed water generated by the City's wastewater treatment process.

Table 2.8-1. Comparison of environmental impacts of the alternatives, *continued*.

Element of the Environment	Preferred Alternative	Traditional Development Alternative	Urban Village Alternative	No Action Alternative
Stormwater Management	The Preferred Alternative would introduce approx. 580.9 acres of impervious cover (approx. 46.9% of the site).	The Traditional Development Alternative would introduce approx. 586.4 acres of impervious cover (approx. 47.3% of the site).	The Urban Village Alternative would introduce approx. 529.5 acres of impervious cover (approx. 42.7% of the site).	The No Action Alternative would introduce no new impervious or pollutant-generating surfaces on the site.
	The Preferred Alternative would generate approx. 290.656 cfs of unmitigated stormwater runoff during a 50-year event.	The Traditional Development Alternative would generate approx. 294.65 cfs of unmitigated stormwater runoff during a 50-year event.	The Urban Village Alternative would generate approx. 264.591 cfs of unmitigated stormwater runoff during a 50-year event.	The No Action Alternative would result in no increase in unmitigated stormwater runoff over existing conditions.
	The Preferred Alternative would require approx. 217.541 ac ft of stormwater detention/infiltration facilities.	The Traditional Development Alternative would require approx. 218.845 ac ft of stormwater detention/infiltration facilities.	The Urban Village Alternative would require approx. 206.988 ac ft of stormwater detention/infiltration facilities.	No stormwater detention/infiltration facilities would be constructed on the site with the No Action Alternative.
	The Preferred Alternative would require approx. 93.487 ac ft of water quality treatment facility volume.	The Traditional Development Alternative would require approx. 93.888 ac ft of water quality treatment facility volume.	The Urban Village Alternative would require approx. 87.290 ac ft of water quality treatment facility volume.	No stormwater treatment facilities would be constructed on the site.
Electrical Service	The Preferred Alternative would exert an all-electric peak demand of approx. 41,093 kW.	The Traditional Development Alternative would exert an all-electric peak demand of approx. 40,999 kW.	The Urban Village Alternative would exert an all-electric peak demand of approx. 38,903 kW.	The No Action Alternative would exert no demand for electrical service to the site.

Table 2.8-1. Comparison of environmental impacts of the alternatives, *continued*.

Element of the Environment	Preferred Alternative	Traditional Development Alternative	Urban Village Alternative	No Action Alternative
Electrical Service, <i>continued</i>	With natural gas used for residential heat and hot water, the Preferred Alternative would exert a peak demand for electricity of approx. 19,243 kW.	With natural gas used for residential heat and hot water, the Traditional Development Alternative would exert a peak demand for electricity of approx. 17,661 kW.	With natural gas used for residential heat and hot water, the Urban Village Alternative would exert a peak demand for electricity of approx. 20,720 kW.	Same as above.
Natural Gas Service	The Preferred Alternative would generate a natural gas demand of approx. 573.345 million cu ft/year.	The Traditional Development Alternative would generate a natural gas demand of approx. 548.75 million cu ft/year.	The Urban Village Alternative would generate a natural gas demand of approx. 619 million cu ft/year.	The No Action Alternative would generate no demand for natural gas service to the site.
Telecommunications	Telecommunications services would be extended throughout the development, concurrent with electrical service distribution.	Same as the Preferred Alternative.	The Urban Village Alternative may exert a somewhat higher demand for telecommunications service due to the highest projection of commercial development.	The No Action Alternative would exert no demand for telecommunications service to the site.
Solid Waste Service	The Preferred Alternative would generate approx. 6,500 cy/month of solid waste and recyclables for collection.	The Traditional Development Alternative would generate approx. 6,100 cy/month of solid waste and recyclables for collection.	The Urban Village Alternative would generate approx. 7,200 cy/month of solid waste and recyclables for collection.	The No Action Alternative would generate no solid waste or recyclables for collection.
Fiscal Impacts	The Preferred Alternative would generate one-time revenue from construction activity in the amount of approx. \$967,755.	The Traditional Development Alternative would generate one-time revenue from construction activity in the amount of approx. \$1,038,500.	The Urban Village Alternative would generate one-time revenue from construction activity in the amount of approx. \$898,075.	The No Action Alternative would generate no revenue from construction activity.

Table 2.8-1. Comparison of environmental impacts of the alternatives, *continued*.

Element of the Environment	Preferred Alternative	Traditional Development Alternative	Urban Village Alternative	No Action Alternative
Fiscal Impacts, <i>continued</i>	The Preferred Alternative would generate a tax base of approx. \$1,265,635,000 in assessed value.	The Traditional Development Alternative would generate a tax base of approx. \$1,359,700,000 in assessed value.	The Urban Village Alternative would generate a tax base of approx. \$1,175,070,000 in assessed value.	The No Action Alternative would generate no increase in assessed value.
	The Preferred Alternative would generate a surplus in revenue to the City of Yelm in the amount of approx. \$557,097 for annual operating costs.	The Traditional Development Alternative would generate a surplus in revenue to the City of Yelm in the amount of approx. \$1,156,560 for annual operating costs.	The Urban Village Alternative would generate a surplus in revenue to the City of Yelm in the amount of approx. \$203,764 for annual operating costs.	The No Action Alternative would result in no change in operating costs or revenues to the City of Yelm.
	The Preferred Alternative would generate a surplus in revenue to other taxing jurisdictions in the amount of approx \$11,861 for annual operating costs.	The Traditional Development Alternative would generate a surplus in revenue to other taxing jurisdictions in the amount of approx \$12,743 for annual operating costs.	The Urban Village Alternative would generate a surplus in revenue to other taxing jurisdictions in the amount of approx \$11,012 for annual operating costs.	The No Action Alternative would result in no change in operating costs or revenues to other taxing jurisdictions.

2.9 Benefits and Disadvantages of Reserving Project Implementation for Some Future Time

The SEPA Guidelines encourage applicants and permitting agencies to view each generation as a trustee for succeeding generations. With this perspective, environmental review is encouraged to consider whether approving a proposal at this time would foreclose future options (WAC 197-11-440[5][c][vii]). The City of Yelm *Comprehensive Plan* similarly establishes sustainable development as a guiding principle, which also encourages the perspective that current decisions are made for future generations.

In the short-term, leaving the Thurston Highlands property undeveloped as a Master Planned Community until some future time would effectively result in implementing the No Action Alternative. The No Action Alternative is discussed throughout Draft EIS Chapter 3, in the context of each element of the environment. Perceived benefits of leaving the Thurston Highlands site undeveloped may include: no change in surface or shallow groundwater effects to Thompson Creek, no loss of forest cover from the site, no alteration of wildlife habitat or wildlife populations on the site, no added population or traffic increase attributable to this site, no change in the appearance of the property or introduction of artificial light sources (and thus “sky glow”), and no requirement for public services and utilities to serve a significant addition to the community.

The primary disadvantage of reserving project implementation to some future time would be the fact that the Thurston Highlands property is within the City limits, and it is currently factored into the City’s buildable lands analysis which helps identify whether the City can provide for the anticipated urban growth the City is required to accommodate over the current 20-year planning horizon. If this property were unavailable for development in the long-term, the City would not be able to accommodate the amount of urban growth allocated to Yelm and its Urban Growth Area (UGA) by the Washington State Office of Financial Management, as there is no comparable quantity of available, undeveloped land within the City or its UGA. Other disadvantages of not initiating development of the Thurston Highlands Master Planned Community at this time would include: no significant financial participation in constructing area roadway and intersection improvements or in resolving current flooding problems within the Thompson Creek basin; and lost opportunity for the addition of significant new amenities in the greater Yelm community, such as the Regional Sports Complex, farmers market, village square, and a transit center. A Master Planned Community development proposal at a later time or by a different applicant might not include these amenities.

