

2. Comments and Responses

The *Thurston Highlands Master Planned Community Draft EIS* was circulated for a 48-day public and agency comment period, from June 10 through July 28, 2008. Written comments were received from four agencies (the Washington State Department of Ecology, Washington State Department of Transportation, Washington State Department of Fish & Wildlife, and Intercity Transit); one law firm representing a private property owner adjacent to the project area; and 45 individuals representing 44 households.

The response to comments received is organized below by agencies (Section 2.1) and individuals (Section 2.2). The response to individuals begins with the 25-page letter of comment received from GordonDerr representing JZ Knight, as this letter most comprehensively addresses the Draft EIS, and the response to other individual comments can be referred to the responses provided to this letter.

Two public open houses were held during the 48-day Draft EIS comment period, on June 25 and July 18, 2008. Comments submitted on forms submitted during these meetings are addressed in Section 2.2 along with other written comments received from the public.

Responses to comments constitute the response of the City of Yelm Community Development Department. All comments received, and the response to comments will be considered by City of Yelm decision makers (the Hearing Examiner and City Council) when taking action to approve, condition, or deny the Conceptual Master Site Plan Application, and the subsequent Final Master Site Plan and development applications within the Master Planned Community.

2.1 COMMENTS RECEIVED FROM AGENCIES AND THE CITY'S RESPONSE

The City of Yelm received written comments from three State agencies and one regional agency concerning the *Thurston Highlands Master Planned Community* proposal. These comments were scanned and prepared as Word files for use in inserting the City's response in bold font following each comment. The original letters of comment received from agencies are reproduced in Final EIS Appendix A. Comments received from individuals, and the response to these comments, are addressed in Final EIS Section 2.2.

Response to Comments Submitted by the Washington Department of Ecology

The Department of Ecology (Ecology) reviewed the environmental checklist and has the following comment(s).

Response: As a point of clarification, the document submitted to Ecology for review was a full Environmental Impact Statement, not an Environmental Checklist.

SHORELANDS & WETLANDS

S&W-1: The proposed 2.43 acres of impacts to wetlands will require authorization from both the U.S. Army Corps of Engineers (Corps) as well as Ecology including those wetlands that are not considered jurisdictional by the City of Yelm.

Response to Ecology Comment S&W-1: The Draft EIS Fact Sheet at page iii identifies the need to obtain a Section 404 permit from the U.S. Army Corps of Engineers as well as a Section 401 Water Quality Certification and Coastal Zone Management Consistency Determination from Ecology for the placement of fill in wetlands. Draft EIS Section 3.4 states that "Regulatory jurisdiction varies widely between the wetlands. Some are too small for regulation by the City of Yelm under its Critical Areas Code, and some are isolated and thus not subject to Federal regulation. All wetlands on the site, however, regardless of size and isolation, are subject to Washington Department of Ecology regulations."

S&W-2: The wetland section of the DEIS identifies that the impacts to wetlands total 0.4% of all of the wetlands present on site. This implies that the site contains roughly 600 acres of wetlands, when only approximately 68 acres were identified in the wetland tables of the DEIS. This is a large discrepancy of the reported wetlands in the project area that should be remedied in the final environmental impact statement (FEIS).

Response to Ecology Comment S&W-2: Draft EIS Section 3.4 at page 3.4-16 states that a small amount of wetland fill (approximately 2.43 acres) will be required to construct Tahoma Boulevard through the Thurston Highlands site, and further indicates that this is less than 0.4 percent of the total wetland area. This acreage – 2.43 acres – is actually 0.04% of the total wetlands located on the site, which is approximately 67 acres. This has been corrected in Final EIS Chapter 3.

S&W-3: The wetland summary identifies that the majority of the wetlands present on site are isolated depressions, these wetlands may not be regulated by the Corps, but it will be necessary for the applicant to receive a jurisdictional determination from the Corps identifying those wetlands as isolated. If wetlands on site are found to be isolated by the Corps, Ecology will still regulate these waters of the state under RCW 90.48, and require compensatory mitigation for the impacts.

Response to Ecology Comment S&W-3: See the response to Ecology Comment S&W-1 above regarding the regulation of wetlands on the site. Draft EIS Section 3.4 at page 3.4-12 notes that it is recommended in the *Wetlands Inventory, Impacts, and Mitigation Recommendations Report* (Coot Company, April 2008) that compensatory mitigation in the form of new and/or enhanced wetland habitat associated with the much larger wetlands systems on the site be required if the small kettle wetlands are filled.

TOXICS CLEANUP

If contamination is suspected or discovered during development or construction activities, sampling must be conducted. If contamination is confirmed during testing, Ecology must be notified. Contact the Environmental Report Tracking System Coordinator at Ecology's Southwest Regional Office at (360) 407-6300. For assistance and information about subsequent cleanup and to identify the type of testing that will be required, contact Laura Klasner at the phone number given above.

Response to Ecology Comments re: Toxics Cleanup: Requirement noted. Technical reports prepared for the Thurston Highlands site and proposed project included a Phase I Environmental Site Assessment (ESA) prepared by Insight Geologic, PLLC (August 29, 2005). This document was provided electronically to reviewers as Appendix A to the *Geotechnical Assessment Report* (Insight Geologic, PLLC, February 2008). The Phase I ESA concluded that there is low risk of environmental impairment of the site due to historical uses on the subject property or due to historical uses on surrounding properties.

WATER QUALITY

Erosion control measures must be in place prior to any clearing, grading, or construction. These control measures must be effective to prevent stormwater runoff from carrying soil and other pollutants into surface water or storm drains that lead to waters of the state. Sand, silt, clay particles, and soil will damage aquatic habitat and are considered to be pollutants.

Any discharge of sediment laden runoff or other pollutants to waters of the state is in violation of Chapter 90.48 RCW, Water Pollution Control, and WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington, and is subject to enforcement action.

Proper disposal of construction debris must be on land in such a manner that debris cannot enter waters of the state or cause water quality degradation of state waters.

Soil in stockpiles should be stabilized or protected with sediment-trapping measures to prevent soil loss. All exposed areas of final grade or areas that are not scheduled for work, whether at final grade or otherwise, shall not remain exposed and un-worked for more than two days, between October 1 and April 30. Between May 1 and September 30, no soils shall remain exposed and un-worked for more than 7 days.

Clearing limits and/or any easements or required buffers should be identified and marked in the field, prior to the start of any clearing, grading, or construction. Some suggested methods are staking and flagging or high visibility fencing.

A permanent vegetative cover should be established on denuded areas at final grade if they are not otherwise permanently stabilized.

Properties adjacent to the site of a land disturbance should be protected from sediment deposition through the use of buffers or other perimeter controls, such as filter fence or sediment basins.

All temporary erosion control systems should be designed to contain the runoff from the developed two year, 24-hour storm without eroding.

Provisions should be made to minimize the tracking of sediment by construction vehicles onto paved public roads. If sediment is deposited, it should be cleaned every day by shoveling or sweeping. Water cleaning should only be done after the area has been shoveled out or swept.

Wash water from paint and wall finishing equipment should be disposed of in a way which will not adversely impact waters of the state. Untreated disposal of this wastewater is a violation of State Water Quality laws and statutes and as such, would be subject to enforcement action.

Source control Best Management Practices (BMPs) such as plastic covering, mulch, temporary seeding, and phased clearing (for example) should be used to control erosion during construction. More examples of effective source control BMPs can be found in Ecology's two stormwater management manuals, *Stormwater Management Manual for Puget Sound* (1992) and *Stormwater Management Manual for Western Washington* (2001).

Response to Ecology Comments re: Water Quality: The Draft EIS Fact Sheet at page iii notes the need for a NPDES construction stormwater permit from the Washington Department of Ecology. Draft EIS Section 3.1 notes that a construction stormwater permit is required, and that an element of this permit is an Erosion and Sedimentation Control Plan. This is an *Incorporated Plan Feature* mitigation measure; i.e., proposed by the applicant. Draft EIS Section 3.19 at page 3.19-19 also notes the requirement for a Construction Stormwater Permit as an *Incorporated Plan Feature* mitigation measure.

Ecology's comments are based upon information provided by the lead agency. As such, they do not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

Response: Comment noted.

Response to Comments Submitted by the Washington State Department of Transportation (WSDOT)

Thank you for allowing the Washington State Department of Transportation (WSDOT) the opportunity to review and comment on the proposed Thurston Highlands Master Planned Community Draft Environmental Impact Statement (DEIS). We recognize the substantial investment of time, energy, and resources that this document represents, and we appreciate the opportunity to comment.

WSDOT comments are as follows:

1. Page 1-21: Table 1.4-1 – Environmental Impacts and Mitigation Measures:

The proposed mitigation measures notes a “proposed” signalized at-grade crossing of SR 507 and the Yelm-Tenino Trail. Please note that WSDOT has not concluded that an at-grade crossing is feasible therefore this cannot be noted as a “mitigation measure.” WSDOT requests a Feasibility Study be prepared. The study must account for non-motorized impacts to SR 510, highway traffic operations, and address the close proximity of the at-grade signal at SR 507/SR 510.

The above comments also apply to Page 3.17-38 – Paragraph 3.17.6.7 – Nonmotorized Transportation Impacts.

Response to WSDOT Comment 1: Comment noted, along with the possibility that an elevated crossing rather than an at-grade crossing may be an alternative. The City acknowledges that additional study of the Yelm-Tenino Trail crossing at SR 507 will be required before a final decision is made.

2. Page 3.17-3, Y3, SR 510 North Loop:

Please note that the Yelm North Loop (Y3) is not currently funded for construction. Also, right-of-way purchase is expected to continue through 2011.

Response to WSDOT Comment 2: Comment noted.

3. Page 3.17-37: Table 3.17.6-7 – Arterial Capacity Threshold Analysis:

The signalized intersection average LOS and seconds of delay within the City of Yelm appears to be too optimistic (Table 3.17.3-2). An explanation for this discrepancy may be the capacity thresholds shown in Table 3.17.6-7 on page 3.17-37. Based on our previous analysis 880 vphpl appears to high for this location. WSDOT requests the opportunity to review and comment on the Synchro assumptions and traffic counts.

Response to WSDOT Comment 3: The traffic modeling efforts for the Draft EIS were conducted at a level appropriate to identify potential significant adverse impacts and possible mitigation measures. The Draft EIS states in Table 1.4-1 (page 1-20), and in Section 3.17.6.10 (page 3.17-39), that “. . . a separate Traffic Impact Analysis (TIA) and transportation concurrency evaluation will be prepared for each phase of the development within the Master Planned Community to ensure that the necessary

improvements are in-place at the time of each specific application, or that a financial guarantee has been made by the agency to construct the improvement within 6 years.”

The City will provide WSDOT with an opportunity to review and comment on all TIAs submitted for specific developments within the Thurston Highlands Master Planned Community.

4. Page 3.17-45 and 3.17-46: Table 3.17.7-1 and 3.17.7.2 – Mitigations:

The City of Yelm is to be commended for identifying developer funded improvements and proportionate-share cost amounts for both the local and regional roadway system improvements. However, WSDOT has a concern that needed improvements may not be constructed if these state and local projects are not funded within the 6-year time period. Please be advised that unless WSDOT has a planned and programmed project, we would be unable to collect pro-rata share. But WSDOT would be supportive if the City and/or County were to collect for these projects.

Response to WSDOT Comment 4: Comment noted.

5. WSDOT supports the proposal to construct a park-and-ride lot as mitigation for this development.

Response to WSDOT Comment 5: Comment noted. The Draft EIS notes in Section 3.17.6.6 (page 3.17-38) the applicant’s proposal to make a site available to Intercity Transit for future development of a park-and-ride facility.

Other comments:

6. WSDOT desires to keep intersection improvements to a minimum. That is, some intersections have improvements proposed in both phase 1 and phase 2. If at all possible, WSDOT prefers to see intersections improved in one construction project.

Response to WSDOT Comment 6: Comment noted. The City of Yelm has a similar approach to intersection improvements, and will note WSDOT’s preference when requiring intersection improvements for Thurston Highlands mitigation.

7. Should the Yelm Loop not be constructed prior to phase 2 of this development, as described in the DEIS, one option worth considering is having the proponent build the western-most length of the Yelm Loop Project from SR 510 to Killion Road.

Response to WSDOT Comment 7: Comment noted.

8. Any proposed new traffic signal must meet signal warrants and will require a WSDOT approved signal permit.

Response to WSDOT Comment 8: Comment noted.

9. WSDOT requests to be actively involved in the development agreement that the City of Yelm will prepare with this development.

Response to WSDOT Comment 9: The City of Yelm has historically coordinated closely with WSDOT during development reviews, and intends to continue this close relationship throughout the review process for the Thurston Highlands Master Planned Community.

Response to Comments Submitted by the Washington Department of Fish & Wildlife

1. The Coot Company report indicates that several mapped drainages associated with the subject property are erroneously mapped and/or classified for fish use. This shall require an informal or formal process to verify the findings in order to make the necessary Water Typing Modifications through Washington Department of Natural Resources (WDNR).

Since stream / wetland types dictate the appropriate critical area buffers for habitat protection, the Washington State Department of Fish and Wildlife (WDFW) respectfully requests an informal field review of the mapped and potential unmapped natural drainage courses on the subject property. This informal review shall be made by WDFW (myself), WDNR (Regional Forest Practices forester), Washington Department of Ecology (Wetlands and Shorelands Specialist) and the affected tribe(s).

Response to WDFW Comment 1: The need to go through a process to amend the official WDNR stream type maps is noted. A final determination will be needed before Final Master Site Plan Approval (at the earliest), or before the City receives a development application for the affected area of the site. As a condition of the Conceptual Master Site Plan Approval, the City will require either that the stream reclassification procedure be completed prior to the submittal of a development application for the affected area of the site, or that these areas be regulated under the City's Critical Areas Code with appropriate buffers and setbacks.

In addition to noting the need to officially revise the WDNR stream type maps, Mr. Kunz was contacted by e-mail on August 22, 2008, with the dates of availability of the applicant's wetland and wildlife consultant to conduct the requested informal field review. Mr. Kunz was not available on the dates offered. In his reply, Mr. Kunz noted that his understanding of the most appropriate time to conduct a field review would be during the time of year the stream flow and/or fish would be present. As reported in the *Draft Surface Water Evaluation of Thompson Creek* (Brown and Caldwell 2008), and in Draft EIS Section 3.3: Water Resources, the occurrence of stream flow in the headwaters of Thompson Creek is responsive to seasonal precipitation. Depending on rainfall events, it is likely that stream flow in this area will not begin again until November 2008. Given that the appropriate timing for field review will be 6 to 8 weeks after the date of issue of the Final EIS, and given that the area of the site in question is not within an early phase of proposed development, the stream reclassification process will be initiated at a later time, either by the City or by the applicant's consultant.

2. The Coot Company has indicated that no fish occurrence was documented within the Thurston Highlands project area. WDFW requests further testimony as to how this was determined. This argument shall be necessary in order to substantiate the need to downgrade certain stream types through the WDNR process.

Response to WDFW Comment 2: The need to provide supporting information to the Washington Department of Natural Resources with the application for stream type change is noted. The City accepts as ample the "testimony" presented in the Draft EIS and Surface Water technical report regarding how the absence of fish presence was determined. This information includes a description of Thompson Creek Behavior in Section 1 of the *Surface Water Evaluation of Thompson Creek* (Brown and Caldwell 2008), and documentation of physical characteristics of the stream channel in the same

report section. A determining feature is the canyon with side walls that exceed 50 feet in places in the lower reach of Thompson Creek between SR 510 and the Nisqually River.

3. WDFW realizes that the much of Thompson Creek drainage is prone to cessation, but arguably, there are perennial sections of stream / wetland habitat that should be considered refuge habitat during the low flow periods of year. Since trout and other fish are opportunistic, I am of the opinion that during fall/winter high flow periods in the Thompson Creek watershed, fish and other aquatic resources are migrating to and from the existing habitat on the subject property.

Based on the current hydraulic connectivity from wetland H and channel 4 (including the wetland A complex) to channel 7, the potential for resident trout use the habitat on the subject property appears to exist. Furthermore, the wetland and natural drainage connectivity of channel 4 / wetland A appears to afford the three-spine stickleback fish to migrate to the available low gradient stream and wetland habitat that exists on the subject property. As stated on page 18 of the Coot Company report, the future additional groundwater input to the Thompson Creek, should have a beneficial affect on the habitat within Thompson Creek (channel numbers are from fig. 2 of the Coot Company report).

Response to WDFW Comment 3: The *Fish and Wildlife Species and Habitats Inventory, Impacts and Mitigation Recommendations* report prepared by The Coot Company (April 2008) at page 8, and Draft EIS Section 3.5.6 (pages 3.5-4 and 3.5-5) thoroughly describe the field-reviewed situation with respect to WDNR mapped drainage courses that do and do not exist on the Thurston Highlands and to the south and east, and the seasonal occurrence of fish (sticklebacks) in off-property portions of the system during the wet season. Both of these documents (and the *Surface Water Evaluation of Thompson Creek*) report that the Thompson Creek channel goes completely dry in summer. The Coot Company report and the Draft EIS indicate an assumption that the sticklebacks must survive the dry season in one or more permanent ponds within the landscape east of Thurston Highlands (not on the site), connected to the Thompson Creek channel by drainage ditches. The conclusions in the Draft EIS are not speculative in nature, but have been field-verified by a professional scientist with decades of experience who has spent weeks on the Thurston Highlands site characterizing existing conditions. Site-specific investigations are required during the SEPA process so that decision makers have factual information on which to base mitigation requirements. It is frequently the case that differences are found from the generalized mapping of State agencies. The City intends to proceed on the basis of information reported by the Coot Company, with the assumption that differences of opinion will be resolved during field review and permitting process at some future time.

4. In closing, I believe that the informal field review for the necessary stream typing modification process (conducted by all affected parties) will allow for the reasonable conclusions as to what the appropriate designation of the stream and wetland habitat should be on the WDNR maps and the Thurston Highlands property.

Please contact me at 360-902-2579 or kunzjpk@dfw.wa.gov in order to arrange for the stream typing modification review process.

Response to WDFW Comment 4: See the response to WDFW Comment 1, above.

Response to Comments Submitted by Intercity Transit

1. As you know, Intercity Transit has been providing public transportation to the residents of Yelm for over 20 years. With the anticipation of significant increase in both residential and commercial development within the Thurston Highland over 15 plus years we would certainly anticipate improving a number of transportation options to those that may be interested in using public transportation. I expect there will be plenty of challenges as well as opportunities for the City as there will be for agencies that provide public services to the Yelm community.

Response to IT Comment 1: The City of Yelm has supported Intercity Transit (IT) for the 20 years it has served the residents of Yelm, and looks forward to continuing to work with IT to further improve transportation options.

2. The Draft EIS, as you know, contains a number of references to “public transportation” in the document as well as in a technical document on Transportation Impact Analysis. In these instances the developer suggests they will work with Intercity Transit to provide locations for bus stops, shelters, layover areas for future service within and throughout the development in order to support the use of flexible and fixed routed bus service. It is also noted a reference for the provision of a “park & ride” or “transit center” facility within the development (Draft EIS, Chapter 3, Section 17, Public Transportation Impacts – 3.17.6.6, page 3.17 – 38).

Response to IT Comment 2: Summary of Draft EIS and Technical Report conclusions noted.

3. Intercity Transit is pleased that the developer acknowledges the importance of transportation options as well as actively supporting the opportunity to improve access to public transit. We do, however, have some comments concerning the Draft EIS:
 - a) Provisions for locating bus stops and providing stop amenities should become a condition of development and mitigation.

Response to IT Comment 3a: Draft EIS Section 3.17.7 should have included mitigation measures beyond those identified for vehicle traffic. The potential mitigation measures identified in Draft EIS Section 3.17.6.6 (page 3.17-38) as incorporated plan features (i.e., proposed by the applicant) are noted as mitigation measures in Final EIS Chapter 3.

- b) Bus stop locations be no more than a ¼ mile of residential housing (up to a 5-10 minute walk for most).

Response to IT Comment 3b: Requirement noted.

- c) Bus stops and sidewalks/pathways associated with the stops be constructed to meet federal ADA requirements for accessibility.

Response to IT Comment 3c: Requirement noted.

- d) Develop a series of pedestrian and other non-motorized transportation pathways and/or trails (e.g., “safe routes to school”) that provide more direct or shortest path to an arterial

street so that people aren't required to walk "the long way around" to reach a bus stop for public schools and transit.

Response to IT Comment 3d: Draft EIS Section 3.17.7 should have included mitigation measures beyond those identified for vehicle traffic. The potential mitigation measures identified in Draft EIS Sections 3.17.6.7 and 3.17.6.8 as incorporated plan features (i.e., proposed by the applicant) are noted as mitigation measures in Final EIS Chapter 3.

- e) Develop bicycle storage areas at or near public areas including retail areas, bus stops, parks, etc.

Response to IT Comment 3e: This potential mitigation measure has been added to Final EIS Chapter 3.

- f) Development of a Park & Ride or transit center, as suggested in the Draft, have very different functions. If the intent of the developer is to set aside land for either type of facility the location would be a significant factor in its undertaking. At this point in time, Intercity Transit would simply suggest that Phase 2 or 3 of the development would probably provide a better sense of timing for what is feasible. However, there is little detail, analysis or provision noted in any Phase for such a facility. It should be noted, too, that Intercity Transit has previously requested during the study and planning for the WSDOT Yelm Loop 2 and 3 that a park & ride be included within the scope of that project. Since park & rides are traditionally better suited near limited access roads (highways and interstates) we would expect that any provision for another park & ride in or near the Thurston Highlands be situated close to a major traffic corridor so that its function provides easy access for vehicles and transit alike. However, a development of smaller "park & pool lots", which is more in line with those that carpool or vanpool or smaller neighborhood park & rides associated with bus services, could be located near retail centers or shared use parking lots or activity centers. A community park or recreational center where weekday parking is abundant might be a consideration.

Response to IT Comment 3f: The details of location and type of public transportation facility will be further refined as part of the Conceptual Master Site Plan approval process. The City will ensure that Intercity Transit will be part of this review process, and will incorporate comments and suggestions regarding the location and type of facility into the Conceptual or Final Master Site Plan approval.

- 4. As with any provision for public transit service, residential density is key component on how successful a particular route can be. Even with the current increase in fuel costs the ability to attract and maintain a ridership base is dependent on convenience, frequency and directness/ travel time. While there is currently only one transit route that operates in Yelm, Intercity Transit is certainly interested in working with the City and the developer to help plan for service improvements. Likewise, we would suggest that the Final EIS be reflective of those interests.

Response to IT Comment 4: The City remains committed to public transportation and partnership with Intercity Transit, and will continue to work toward the improved service made possible by building to urban densities in urban areas that support public transit.

2.2 COMMENTS RECEIVED FROM INDIVIDUALS AND THE CITY'S RESPONSE

The City of Yelm received written comments regarding the Thurston Highlands proposal from one law firm and 45 individuals during the 48-day comment period: June 10 through July 28, 2008. Comments received after the close of the comment period have been entered in the project file, but are not reproduced in this Final EIS. As with the letters received from agencies (Final EIS Section 2.1), the substantive comments received from individuals have been scanned and reproduced as Word files so that City responses could be inserted in bold font following each comment, below. The majority of the letters, e-mail messages, and comment forms received commented on a small number of issues in near-verbatim format. The response to these general comments follows the response to comments received from GordonDerr, William Hashim, Ed Wiltsie, Gail Cane, and Carolyn GiaMarco. All written comments received from individuals are reproduced in their original form in Appendix B of the Final EIS.

Response to Comments Submitted by GordonDerr on behalf of JZ Knight

I. GENERAL COMMENTS

A. EIS Style and Size

1. SEPA regulations governing the purpose of an EIS direct lead agencies to prepare short EIS documents:

Environmental impact statements shall be concise, clear, and to the point, and shall be supported by the necessary environmental analysis. The purpose of an EIS is best served by short documents containing summaries of, or reference to, technical data and by avoiding excessively detailed and overly technical information. The volume of an EIS does not bear on its adequacy. Larger documents may even hinder the decision making process.

WAC 197-11-400(3) (emphases added).

The Thurston Highlands DEIS is not concise, clear or to the point. The City of Yelm and the applicant appear to believe that increasing the volume of the DEIS will improve its adequacy. In fact, the size of this DEIS has hindered the public's ability to understand the environmental review of this project and is certain to hinder the decision making process.

Response to GordonDerr Comment I.A.1: The guideline cited from WAC 197-11-400(3) was written and adopted in 1984, and is not based on specific direction from the State Environmental Policy Act itself (Chapter 43.21C RCW). Since that time, the volume and complexity of technical studies required to address the environmental concerns of decision makers and project opponents has increased significantly. EISs are written for basically three audiences: decision makers (e.g., Hearing Examiners and City Council members); organized opposition groups with legal representation; and the general public. With the exception of the general public, these audiences cannot be satisfied with non-technical information. There are numerous examples in the GordonDerr comments alone that criticize Draft EIS sections written as brief summaries in clear and simple language – see the GordonDerr comments below on Draft EIS Sections 3.3.3, 3.8, 3.11, and 3.12. The Thurston Highlands Master Planned Community is a large and complex

proposal, to be developed over a period of 10 to 30 years, during which time technology will change beyond anyone's ability to imagine at the time of this writing. The City made its best effort to characterize the type and magnitude of change that is likely to occur; probable impacts; proposed, required, and other possible measures to avoid or minimize these effects; and elements (like traffic) that will have to be studied further in the context of actual circumstances at the time of application for future phases of the development. If this analysis were done substantially more simply to achieve the artificial goal of a shorter document, it would have been necessary to leave out considerable background factual information about the affected environment, and explanations of the technical investigations performed. Also see the response to the GordonDerr page-length comment below.

Some elements of the Thurston Highlands analysis are quite technical; for example, Water Resources, Air Quality, and Transportation. The majority of the Draft EIS, however, is written clearly in language the general public can understand. The SEPA Guidelines at WAC 197-11-440(6)(b)(i) state that the Affected Environment, Significant Impacts and Mitigation Measures section “ . . . shall be written in a nontechnical manner which is easily understandable to lay persons *whenever possible*, with the discussion commensurate with the importance of the impacts” (emphasis added). There are very few comments from the general public on the actual content of the Draft EIS on subjects other than Water Resources, Air Quality, and Transportation; therefore, it is not apparent whether anyone read the more clear and concise sections of the Draft EIS.

2. SEPA regulations establish mandatory standards for the maximum length of an EIS document. provides:

The text of an EIS (WAC 197-11-430(3)) normally ranges from thirty to fifty pages and may be shorter. The EIS text shall not exceed seventy-five pages; except for proposals of unusual scope or complexity, where the EIS shall not exceed one hundred fifty pages.

WAC 197-11-425(4) (emphasis added).

The Thurston Highlands DEIS does not comply with this mandatory limit on the size of an EIS document. The text of the Thurston Highlands DEIS exceeds 400 pages, almost 3 times larger than the maximum page limit for projects of unusual scope and complexity. This DEIS is too long and fails to comply with basic SEPA requirements. This DEIS must be withdrawn and re-issued in a form that complies with SEPA.

Response to GordonDerr Comment I.A.2: The “text” of the Draft EIS (Chapter 1: Summary; Chapter 2: the Description of the Proposal and Alternatives; and Chapter 3: Affected Environment, Potential Impacts, and Mitigation Measures) is 331 pages, including 95 tables, excluding figures. Chapter 3 (154 pages) summarizes approximately 1,200 pages of separate technical reports. Several methods could have been used to achieve a shorter document; for example, using a smaller font, narrower margins, no subheading structure in the impact analysis or mitigation measures sections, and more cross-referencing to the technical reports. All of these methods, however, would have made the Draft EIS more difficult to read. Exercising its latitude under WAC 197-11-425(6),¹ the City chose to prepare a document with format options and content that would

¹ Agencies shall incorporate material into an environmental impact statement by reference to cut down on bulk, if an agency can do so without impeding agency and public review of the action.

facilitate ease of review of project information in one document, rather than several. Given that there is no evidence in the comments received on the Draft EIS that any of the technical reports prepared as appendices to the Draft EIS were reviewed, it seems that this was an appropriate choice.

It should be noted that, almost without exception, the GordonDerr comments that follow below request additional information and analysis in the Draft EIS that would have further increased its size, not reduced the volume.

3. In light of the fact that the Thurston Highlands DEIS is vastly over-length, at a minimum the City must provide the public with an extended comment period of at least 60 additional days.

Response to GordonDerr Comment I.A.3: The City offered the maximum comment period on the date of issue of the Draft EIS, in accordance with WAC 197-11-455(6) and (7):

Any person or agency shall have thirty days [30] from the date of issue in which to review and comment on the DEIS.

Upon request, the lead agency may grant an extension of up to fifteen [15] days to the comment period.

The Thurston Highlands Draft EIS comment period was set at 48 calendar days without waiting for a request for extension from the public. There is no provision in the SEPA Guidelines for a comment period in excess of 100 days, as requested by GordonDerr Comment I.A.3.

There is very little evidence in the comments received from the general public that persons were engaged in reviewing the document and needed more time. The substantive comments received from GordonDerr, William Hashim, Ed Wiltsie, Gail Cane, and Carolyn GiaMarco are reproduced in this section, followed by responses to each individual comment. The remainder of the public comments appear to be support for comments generated by others, as they cite the same issues with almost verbatim language. Some of these comments appear to be based on hearsay, citing inaccurate information and concerns about the proposed action from blogs and newspaper articles, not the Draft EIS. A response to these general comments is provided in Section 2.3 of the Final EIS.

There will be additional opportunities for public comment during the Master Site Plan Approval process before City decision makers. Citizens are encouraged to continue to review the Draft EIS between now and when the decision making process begins (estimated to occur in late 2008/early 2009), in order to participate in that process with factually correct information.

As a point of interest, the website of the Washington State Superintendent of Public Instruction was checked for quantitative information regarding reading rates. By Spring quarter, 8th grade students reportedly read an average of 151 words per minute.² The Thurston Highlands Draft EIS (Chapters 1 through 3) contains 132,888 words, as calculated by the Microsoft Word software in which the document was generated. Reading at 151 words per minute, this would require 881 minutes (approximately 15

² Hasbrouck and Tindal. 2006. *Oral Reading Fluency Norms for Grades 1-8*.

hours) to read. It was possible to review and respond to the Thurston Highlands Draft EIS within the 48-day comment period, if persons wanted to actively participate in the process.

B. Mitigation Measure Deficiencies

Throughout the Thurston Highland DEIS, "possible" and "potential" mitigation measures are discussed without any discussion regarding whether such mitigation measures will be required and without any discussion regarding whether the City or the applicant is committed to implement any particular mitigation measures. This approach violates SEPA regulations that require disclosure of mitigation measures that will be implemented.

(c) This section of the EIS shall ... (iii) Clearly indicate those mitigation measures (not described in the previous section as part of the proposal or alternatives), if any, that could be implemented or might be required, as well as those, if any, that agencies or applicants are committed to implement.

WAC 197-11-440(6)(c)(iii)

This is a fatal flaw throughout the Thurston Highlands DEIS. Without assurance that "possible" or "potential" mitigation measures will be implemented, it is not possible the conclusions regarding the project's environmental impacts.

Response to GordonDerr Comment I.B: The Draft EIS Reader's Guide (page vii) indicates that Chapter 3 describes Proposed, Required, and Other Possible Mitigation Measures. The Mitigation Measures section for each element of the environment in Draft EIS Chapter 3 is organized in subsections with the following headings: *Incorporated Plan Features*, *Applicable Regulations*, and *Other Possible Mitigation Measures*. Clarification has been added in Final EIS Chapter 3 to correlate the meaning of these terms. *Incorporated Plan Features* are elements of the Master Plan proposal; they are things the applicant proposes to do. Compliance with *Applicable Regulations* is required. Therefore, two of three categories of mitigation measures will be implemented. The third category, *Other Possible Mitigation Measures*, are additional methods City decision makers will consider during the Master Site Plan Approval process, that could be required to further avoid or minimize potential adverse impacts of the proposed development. This is consistent with the cited section of the SEPA Rules, as these mitigation measures could be implemented by the developer and may be required by the decision maker. The purpose of an EIS is to present these options for consideration by decision makers, but not to make a final determination regarding measures that are neither proposed nor required by regulation.

II. SPECIFIC COMMENTS

1.1 Purpose and Objectives of the Proposal

The listed purpose and objectives are too general and ill-defined to be meaningful. The DEIS fails to include any meaningful discussion regarding compliance with the listed objectives. For example, the DEIS asserts that one objective of the Thurston Highlands proposal is to "implement characteristics the citizens of Yelm would like to see in their community." The citizens of Yelm have defined the preferred characteristics of their City in the Yelm Vision Plan that is incorporated in the current Yelm Comprehensive Plan. The Vision Plan states:

[I]f growth is allowed to occur unchecked and without careful planning, the small- town, neighborly qualities, and the natural beauty of the city may be destroyed. Therefore, the Vision Committee has been working to upgrade the downtown, create a real heart for the community, and direct future growth of the city.

The Thurston Highlands proposal to build up to 1.5 million square feet of commercial and office space in SW Yelm is directly contrary to the specific downtown protection goal of the citizens of Yelm that has been adopted in the city's Comprehensive Plan. The adopted goal of the citizens of Yelm is to "[f]ocus new commercial services in existing commercial areas" and to implement measures to strengthen and revitalize the downtown area of Yelm. The DEIS cannot claim that the Thurston Highlands project meets the goals of the community.

The DEIS must include a detailed analysis of the effect of the impact of the unilaterally changing one of the most basic planning decisions of the citizens about the future growth of the City of Yelm and the impact of the proposed commercial/office components of each Thurston Highlands alternative development proposal on the existing urban environment, specifically downtown Yelm and other existing commercial areas.

Response to GordonDerr Comment II.1.1: The conceptual Preferred Alternative for the Thurston Highlands Master Planned Community defined in Draft EIS Section 2.5 includes 825,000 square feet of retail space. For planning purposes, it is anticipated that commercial development within the Preferred Alternative would include the following approximate components:

Neighborhood Shopping Center	100,000 sf
Strip Commercial	60,000 sf
Recreational Commercial and Hotel^a	410,000 sf
Farmers Market Complex	215,000 sf

^a Recreational commercial and a hotel uses associated with the Regional Sports Complex.

Additionally, the Preferred Alternative includes approximately 150,000 square feet of professional office space.

As noted, the Vision Plan is an element of the City's Comprehensive Plan that contains many other goals and policies related to development in Yelm, including Section II.D.3.a, which states:

More than 90% of the Southwest Planning Area is included within the City of Yelm as part of the Southwest Yelm Annexation Area. The area is being planned as the Thurston Highlands Community. The area will have a mix of single family and multifamily residential uses as well as open space, parks, school sites, and commercial spaces. The overall average density of the Planned Community is 4 units per acre (gross density).

Ultimately, it is the role of City decision makers to balance the policies of the Comprehensive Plan and the incorporated Vision Plan and to determine if limitations on the amount or type of commercial development within the Master Planned Community are required to meet the intent of the Comprehensive Plan and the incorporated Vision Plan, being mindful that the potential financial impacts to public services could be

greater if the amount of commercial development within the Master Planned Community is reduced.

A large amount of retail commercial development is needed to serve the daily needs (primary market) of a population of 12,548 – the projected resident population of the Thurston Highlands Master Planned Community under the Preferred Alternative. This principle is in keeping with the creation of livable neighborhoods close to services which itself promotes a more sustainable lifestyle. Providing this type of commercial development within the Highlands is intended to meet the goals of sustainability and traffic reduction by providing goods and services to the residents within development, thereby minimizing the need for additional trips into town or to more distant commercial centers.

1.4.1 Summary of Direct Impacts and Mitigation

1.4.1.a. This summary fails to provide any useful comparison of the impacts and mitigation measures among the development alternatives.

Response to GordonDerr Comment II.1.4.1-a: The 26-page Table 1.4-1 in Chapter 1: Summary is a meticulous condensation of the Chapter 3 statements of impact and mitigation for the proposed action. The 12-page Table 2.8-1 in Draft EIS Chapter 2 compares the environmental impacts of the “book-end” alternatives (Traditional Development and an Urban Village Alternative) to the Preferred Alternative. Chapter 2 is the appropriate location for this comparison, per WAC 197-11-440(5)(c)(vi).

1.4.1.b. Because this section does not state that this DEIS is part of a phased review and does not include a statement or justification that the lead agency is relying on prior or future environmental review, as required under SEPA regulations, the public is entitled to conclude that this DEIS is not a phased review and that the City is not relying on prior or future environmental review.³ If this DEIS is part of a phased review, or if the City intends to rely on prior or future environmental review, the DEIS must be reissued with an opportunity for the public to comment based on this revised approach. It has been a common technique for the City of Yelm and developers affiliated with the Thurston Highlands applicant to promise more detailed environmental review at subsequent stages of project development, but these promises have not been honored in the past. The public is entitled to have a clear description of what subsequent environmental review will be required at specific points in the project review and approval process.

Response to GordonDerr Comment II.1.4.1.b: The Draft EIS is not a phased review. Because the Master Planned Community full build-out will occur over a long period of time, certain mitigation measures establish a framework for ongoing review of anticipated development impacts as they occur in time to ensure that mitigation measures contemplated in 2008 are still effective and appropriate as far out as 2038 as technology, construction methods and materials, social patterns and living habits change over time.

³ (This footnote is an element of GordonDerr Comment 1.4.1.b.) The suggestion in Section 1.5.4.2 that “supplemental environmental review requirements and likely at the time of development applications for future phases of Thurston Highlands” is inadequate to meet the requirements of WAC 197-11-440(4).

The Draft EIS states in Table 1.4-1 (page 1-20), and in Section 3.17.6.10 (page 3.17-39), that “. . . a separate Traffic Impact Analysis (TIA) and transportation concurrency evaluation will be prepared for each phase of development within the Master Planned Community to ensure that the necessary improvements are in-place at the time of each specific application, or that a financial guarantee has been made by the agency to construct the improvement within 6 years.” Review of the traffic projections associated with each phase of development in the context of changed background conditions is the only additional environmental review anticipated at this time. The Thurston Highlands Master Planned Community will be developed in response to market demand, anticipated to occur over a period of 10 to 30 years. There is no specific phased implementation proposal set forth by timeline. There are also several factors unknown at this time that will influence local and regional transportation system improvements during that timeframe. For these reasons, the City will require a current assessment of transportation conditions, impacts, and mitigation requirements at the time of each application for development approval in which conditions differ from those described in the 2008 TIA and Draft EIS.

1.4.1.c The summary of impacts to “earth” described in Table 1.4-1 fails to address impacts during site grading. Attached as Exhibit A are copies of photographs of erosion in November of 2006 on the Tahoma Terra site, a project developed by the same individuals who are principals of the Thurston Highlands development. The DEIS should include specific enforceable mitigation requirements to ensure that similar flooding and erosion damage will not occur as a result of site clearing and grading on the Thurston Highlands site.

Response to GordonDerr Comment II.1.4.1.c: The third paragraph in the left column of Table 1.4-1 on Draft EIS page 1-5 states: “During construction, when site soils are exposed by grading, there would be a potential for surface water runoff to cause erosion and transport sediment to wetlands and/or Thompson Creek.” Three mitigation measures for these conditions are described opposite this statement in the right column of the table on the same page.

The comment that flooding on Thompson Creek is caused by Tahoma Terra is not supported by the analysis or findings in Technical Report 10, the *Surface Water Evaluation of Thompson Creek* (Brown and Caldwell 2008), which describes the history of flooding on Thompson Creek and the cause of this flooding being a combination of regional groundwater build-up coupled with a large precipitation event. There is no indication that the flood event shown in Exhibit A to the GordonDerr letter of comment was any greater than historical floods prior to the development of Tahoma Terra. This is supported by the analysis in Technical Report 7, the *Infiltration Effects Assessment* (Pacific Groundwater Group 2008).

1.4.1.d Air quality assumptions that CO concentrations will decline in the future are speculative and should be deleted. The statement that means are not available to evaluate CO2 emission is in error.

Response to GordonDerr Comment II.1.4.1.d: The Draft EIS Section 3.2 discussion pertaining to future declines in vehicle-related carbon monoxide (CO) concentrations at project-affected intersections is based on projections made using two models developed by the U.S. Environmental Protection Agency for this purpose. These tools include the Mobile6 emissions model, which considers federally-mandated emission control

requirements as well as area-specific vehicle registration and mileage accumulation patterns. The Draft EIS analysis also relied on CAL3QHC dispersion modeling at the several intersections forecast to be most affected by Thurston Highlands project traffic. As indicated in the Potential Developed-Condition Impact Analysis of Draft EIS Section 3.2.1, vehicle-related CO emission rates and related ambient concentrations are projected to decline in future.

Draft EIS Table 1.4-1 in the Summary (page 1-6) includes a statement from Section 3.2.1: "There are, as yet, no particular means to gage whether carbon dioxide (CO₂) emissions associated with the useful life of a residential development *constitute an impact* in terms of their potential effects on climate" (emphasis added). Lifecycle CO₂ emissions for Phase 1 of the project were estimated and reported. Because greenhouse gas emissions and their potential effects on climate change constitute a global issue, there are as yet no established means for assessing the relative scale of any potential impacts of comparatively small-scale emission sources such as the proposed development.⁴

1.4.2 Summary of Thurston Highlands Impacts and Mitigation Measures in Relation to Baseline Environmental Conditions.

The summary conclusion that "the City does not anticipate that the Thurston Highlands Master Planned Community would precipitate any cumulative effects" needs to be supported by a reasonable analysis. It is not sufficient for a DEIS to state such a conclusion without factual and analytical support.

Response to GordonDerr Comment II.1.4.2: The summary conclusion in Draft EIS Section 1.4.2 actually indicates that it is not anticipated that Thurston Highlands would precipitate any cumulative effects as defined in Draft EIS Subsection 1.5, which clearly notes that the cumulative impacts reviewed in the Draft EIS, but not specifically required by SEPA, are those impacts resulting from growth outside the boundaries of the project but caused by the project, and whether the project would serve as a precedent for future actions. Because the Thurston Highlands Master Planned Community has been a part of the City of Yelm and its urban growth area since the adoption of GMA-compliant Comprehensive Plans by both Thurston County and the City of Yelm, it is logical that Thurston Highlands would not serve as a precedent for future actions or result in unanticipated changes outside the boundaries of the areas identified by the Comprehensive Plan as a Master Planned Community or the Yelm UGA.

Table 1.4-3 Qualitative Summary of Thurston Highlands Master Planned Community Impacts and Mitigation Measures in Relation to Current Baseline Environmental Conditions

This table purports to identify "substantial and effective mitigation proposed" but the mitigation measures described throughout the DEIS are inadequate and cannot be considered "substantial and effective" unless they are required. All of the discussion of mitigation measures throughout the DEIS must be revised to define not just what mitigation measures "could be" implemented, but what mitigation measures "will be" implemented in order to provide "substantial and effective mitigation."

⁴ The response to comments regarding the Air Quality impact analysis was prepared by Richard Steffel, author of the *Thurston Highlands Master Planned Community Air Quality Assessment* (Geomatrix Consultants, Inc., March 2008). Mr. Steffel is now with the consulting firm of Environ Corporation.

Response to GordonDerr Comments re: Table 1.4.3: See the response to GordonDerr General Comment I.B, above.

1.5 Cumulative Effects

The suggestion that the impacts of the Thurston Highlands project have been addressed in the City's Comprehensive Plan and in the' FEIS for the Comprehensive Plan is misleading and erroneous. Other sections of this DEIS admit that the current versions of the Water System Plan, the Sewer System Plan, the Reclaimed Water Plan, and other planning documents are inadequate to address the Thurston Highlands project. The DEIS for Thurston Highlands cannot be lawfully approved until all of these updates are completed.

Response to GordonDerr Comment II.1.5: The Draft EIS does not purport to suggest that the impacts of the Thurston Highlands Master Planned Community are addressed in the City's Comprehensive Plan or its environmental review, but rather that there are no cumulative impacts due to potential changes in land use patterns not anticipated by the Comprehensive Plan attributable to the Thurston Highlands project. By way of example, it is unlikely that approval of the Thurston Highlands Master Planned Community would spur rezoning areas adjacent to the project but outside the Yelm Urban Growth Area to designations that support a higher residential density.

There is no *approval* process for an Environmental Impact Statement; it is issued as an impartial discussion of significant environmental impacts, reasonable alternatives and mitigation measures that would avoid or minimize adverse environmental impacts.

1.5.4 Cumulative Effects Analysis of Thurston Highlands Development

1.5.4.a The DEIS states that the official growth projections prepared by the Thurston Regional Planning Council ("TRPC") "address growth both within the Thurston Highlands Master Planned Community and within the remainder of the City limits and UGA." This is erroneous. For example, Table 1 on page III-5 and Table 3 on page IV-4 of the Land Use and Housing elements of the City's current Comprehensive Plan show TRPC's estimate that 3,239 housing units will be needed to accommodate growth in Yelm between 2005 and 2030. These Tables also show that 1,200 units of housing are "vested or recently approved." At least 500 additional housing units have been vested or approved by the City of Yelm. Therefore, of the 3,239 housing units that will be needed to accommodate growth to the year 2030, at least 1,700 housing units (more than half of this total) have already been vested or approved. This means that only 1,539 housing units will be needed to accommodate Yelm's growth to the year 2030. The Thurston Highlands DEIS proposes 5000 housing units over the next 10 to 30 years. This is over three times the total number of housing units projected under the City's Comprehensive Plan for this time period, even without considering the hundreds of housing units likely to be proposed in other areas of this City over the next 10 to 30 years.

Response to GordonDerr Comment II.1.5.4.a: The 1,200 "vested or recently approved" units in the tables noted in Comment 1.5.4.a are clearly labeled "Master Planned Dwelling Units" and coincide with the Conceptual Master Site Plan approval for Tahoma Terra. Other "vested or recently approved" lots would be included in the base population projections. The footnote below the noted tables states:

TRPC traditionally updates population and employment forecasts every 3-5 years, and released the most recent small area (city and rural) populations forecasts in

July of 2005. The latest release was prior to the proposal of the Thurston Highlands master planned community in Yelm, which may include 5,000 to 6,000 new dwelling units. The buildout of this development may exceed the time range of the 2030 forecast. TRPC will continue to monitor residential and commercial development activity and any proposed changes in Thurston County's rural zoning or the size of the UGA, and anticipates updating the small area (city and rural) populations forecasts in 2007.

Thurston Regional Planning Council did update the population forecasts in late 2007, and those forecasts were referenced in Draft EIS Table 3.11-2. These forecasts have been incorporated into the Thurston County Comprehensive Plan, and will be included in a future update to the Yelm Comprehensive Plan and Joint Plan with Thurston County during an upcoming update cycle. The Yelm Comprehensive Plan at Section I-D states that the Joint Comprehensive Plan incorporates and consolidates many plans and, where variation exists, the more recent shall control and nonconforming plans are to be modified accordingly.

1.5.4.b The scale and impacts of the Thurston Highlands development have not been addressed in the City's current Comprehensive Plan or the FEIS for that plan. The DEIS for Thurston Highlands fails to include any reasonable assessment of cumulative impacts attributable to developing a master planned community that would be equivalent to 3 or 4 times the current size of the City of Yelm based on almost any standard of comparison. The DEIS must include a quantitative and qualitative cumulative impact assessment sufficient to meet the requirements of SEPA.

Response to GordonDerr Comment II.1.5.4.b: See the response to GordonDerr Comment II.1.5, above.

1.5.4.1 Geographical Boundaries of the Cumulative Effects Analysis

The assertion that there are geographic limitations on cumulative impacts attributable to Thurston Highlands is not adequately supported. SEPA requires that the DEIS must include an analysis of cumulative impacts not only within the City of Yelm's UGA, but also within other jurisdictions that will experience cumulative impacts. A cumulative impact analysis must be included in the evaluation of impacts for each element of the environment considered in the DEIS.

Response to GordonDerr Comment II.1.5.4.1: Section 1.5.4 (two paragraphs above the paragraph referred to in the GordonDerr comment regarding Draft EIS Section 1.5.4.1) states that:

Because both the City of Yelm and Thurston County have planned for growth under the requirements of the Growth Management Act, and because both the City and County comprehensive plans have included the Thurston Highlands Master Planned Community in population projections and buildable lands analysis, it is not anticipated that Thurston Highlands will precipitate any current or reasonably foreseeable future actions that are not otherwise addressed in the *Comprehensive Plan and Joint Plan with Thurston County* (City of Yelm 2006).

1.5.4.2 Temporal Boundaries of the Cumulative Effects Analysis

The statement that "supplemental environmental review requirements are likely at the time of development applications for future phases of Thurston Highlands" is inadequate to meet the requirements of WAC 197-11-440(4). See comments under Section 1.4.1.

Response to GordonDerr Comment II.1.5.4.2: See the response to GordonDerr Comment II.1.4.1.b, above.

1.6 Major Issues, Significant Areas of Controversy and Uncertainty, and Issues to be Resolved

The City admits that its ability to obtain sufficient additional water rights to serve the proposed Thurston Highlands development is "a significant area of uncertainty." This admission alone is sufficient to find that none of the proposed development alternatives is "reasonable" as required by SEPA. The City's concern about accommodating "the anticipated urban growth that the City is required to accommodate pursuant to the requirements of the Growth Management Act" should be clarified. How much urban growth is the City required to accommodate under the GMA? How much of that urban growth can be accommodated elsewhere within the City's Urban Growth Area ("UGA")? See comments in response to Section 1.5.4. The City's promise that it "has undertaken a methodical and comprehensive process toward obtaining the water rights needed to provide for the anticipated urban growth" is wholly inadequate. This DEIS cannot rely on such illusory promises. This DEIS must provide an analysis of the environmental impacts of the Thurston Highlands development on water resources.

Response to GordonDerr Comment II.1.6: The Growth Management Act requires that Cities plan for urban growth and that decisions to build and fund infrastructure to accommodate urban growth be linked to population projections provided by the State and allocated by the County. Planning for the needs of future growth includes both infrastructure as well as the necessary permits and approvals to support the infrastructure, such as water rights and permits for the discharge of wastewater. Section 3.3.3 of the Draft EIS summarizes the planning process the City has undertaken to support its applications for new water rights sufficient to serve the projected population growth within and beyond the 20-year planning horizon mandated by the Growth Management Act.

The anticipated growth that Yelm is required to accommodate is found in the latest population projections and allocations prepared by the Thurston Regional Planning Council (see the response to GordonDerr Comment II.1.5.4.a above). The population projections are inclusive of the entire Yelm Urban Growth Area, including the Thurston Highlands property and other areas inside the existing City limits.

As noted in Section 3.3.3 of the Draft EIS, the City currently does not have sufficient water rights to serve the entire water service area at full build-out, including Thurston Highlands and other properties within the water service area. The potential impacts of the acquisition of additional water rights by the City is not an impact attributable directly to the Thurston Highlands Master Planned Community, but rather an impact associated with expected growth in the entire Yelm Urban Growth Area.

2.4 Master Site Plan Review Process

This section fails to address future environmental review requirements. The DEIS must define what additions or changes to the project as currently proposed will trigger additional environmental review.

Response to GordonDerr Comment II.2.4: See response to GordonDerr Comment II.1.4.1.b, above.

2.5.2.2 Water Supply Proposal

The DEIS states that "[t]he City's Water System Plan is being updated concurrent with review of the Thurston Highlands Conceptual Master Plan proposal." The DEIS must include a water supply analysis and must evaluate all significant environmental impacts related to providing 1864 acre-feet/year (afy) of additional potable water needed to serve the Thurston Highlands project (preferred alternative) when the City's current water rights total only 796.66 afy.

Response to GordonDerr Comment II.2.5.2.2: See the response to GordonDerr Comment II.1.6, above.

This evaluation is provided in the *Thurston Highlands Grading, Drainage, and Utilities Technical Report* (KPF Consulting Engineers 2008), summarized in Draft EIS Section 3.19.1

Although the City has made a commitment to the Washington Department of Ecology to not pump more than 796.66 acre feet of water in 2008, the City is performing a water rights self-assessment as part of its updated Water System Plan, the conclusion of which may be that the City holds water rights greater than those expressed in the opinion above.

2.5.2.3 Sewage Collection, Treatment, and Reuse/Discharge Proposal

The DEIS must include an evaluation of the significant environmental impacts related to the construction and operation of sewage collection, treatment and reuse/discharge facilities required to serve the Thurston Highlands development (preferred alternative).

Response to GordonDerr Comment II.2.5.2.3: This evaluation is provided in the *Thurston Highlands Grading, Drainage, and Utilities Technical Engineering Report* (KPF Consulting Engineers 2008), summarized in Draft EIS Section 3.19.2. Upgrades and improvements to the City of Yelm sewage collection, treatment and reuse/discharge facilities to serve growth in general, including Thurston Highlands, will be described and addressed by the City in updates to the *Sewer System Plan*. Also see the response to GordonDerr Comment II.3.3.3.b, below.

2.5.2.4 Reclaimed Water Proposal

The DEIS must include an evaluation of the significant environmental impacts related to the infiltration of reclaimed water and must evaluate the water quality and water quantity impacts of impacts of using reclaimed water to recharge the regional aquifer.

Response to GordonDerr Comment II.2.5.2.4: Section 2.5.2.4 of the Draft EIS clearly states that the Thurston Highlands site is being evaluated for consideration in the City-wide mitigation plan for the consumptive use of water as a possible location for the infiltration of reclaimed water generated by the City's wastewater treatment process. Reclaimed water infiltration on the Thurston Highlands site is not an element of the Master Plan proposal. To provide the City with information for its consideration of this option, technical analysis of the effects of infiltrating reclaimed water on the Thurston Highlands site is provided in the *Draft Infiltration Effects Assessment: Thurston Highlands* (Pacific Groundwater Group 2008), and summarized in Draft EIS Section 3.3.2.

2.5.2.5 Transportation/Circulation Proposal

The DEIS must include a discussion of the City's reliance on the Y2 and Y3 loop highways as "critical components" of the City's future transportation system, including a discussion of the reasonableness of assuming the construction of these facilities within relevant time frames and what phases of Thurston Highlands would be allowed to proceed without the Y2 and/or Y3 loop highways in place.

Response to GordonDerr Comment II.2.5.2.5: See the response to GordonDerr Comments II.3.17.a through II.3.17.c, below.

2.6.1.2 Traditional Development Alternative: Water Supply Requirements

The DEIS must include a water supply analysis and must evaluate all significant environmental impacts related to providing 1946 acre-feet/year (afy) of additional potable water needed to serve the Thurston Highlands project (traditional development alternative) when the City's current water rights total only 796.66 afy.

Response to GordonDerr Comment II.2.6.1.2: See the response to GordonDerr Comment II.2.5.2.2, above.

2.6.1.3 Traditional Development Alternative: Sewage Collection, Treatment, and Reuse/Discharge

The DEIS must include a water supply analysis and must evaluate all significant environmental impacts related to providing 1807 acre-feet/year (afy) of additional potable water needed to serve the Thurston Highlands project (urban village alternative) when the City's current water rights total only 796.66 afy.

Response to GordonDerr Comment II.2.6.1.3: Given that the substance of this comment addresses the water supply requirements of the Urban Village Alternative, the Draft EIS section to which it refers is 2.6.2.2, rather than 2.6.1.3 as indicated. See the response to GordonDerr Comment II.2.5.2.2, above.

2.6.2.3 Urban Development Alternative: Sewage Collection, Treatment, and Reuse/Discharge

The DEIS must include an evaluation of the significant environmental impacts related to the construction and operation of sewage collection, treatment and reuse/discharge facilities required to serve the Thurston Highlands development (urban village alternative).

Response to GordonDerr Comment II.2.6.2.3: See the response to GordonDerr Comment II.2.5.2.3, above.

2.7 Clearing, Grading, and Construction Sequencing Proposal

This description should include a summary of the key substantive and procedural requirements of the NPDES permit required for the clearing and grading activities. Failure to comply with NPDES permit requirements on the adjoining Tahoma Terra development resulted in flooding and erosion damage described in Exhibit A.

Response to GordonDerr Comment II.2.7: Compliance with NPDES Permit requirements is described in the mitigation measures for Erosion, Draft EIS Section 3.1.3, page 3.1-14. Also see the response to GordonDerr Comment II.1.4.1.c, above.

Table 2.8-1. Comparison of Environmental Impacts of Alternatives

The relative similarity of impacts of the three development alternatives (preferred, traditional and urban village) confirms that the three development alternatives are too similar to serve as meaningful development alternatives. The DEIS must be revised to develop and compare development alternatives that are not just minor variations of the preferred alternative, for example an alternative that includes substantially fewer residential units.

Response to GordonDerr Comments re: Table 2.8-1: According to the SEPA Handbook, published in 2003 by the Washington State Department of Ecology, a reasonable alternative is a feasible alternate course of action that meets the proposal's objective and may include design alternatives and location options on the site. The alternatives included in the Draft EIS are certainly feasible alternate courses of action. An alternative with substantially fewer residential units, however, would not meet the City's objective of urban development consistent with the Growth Management Act, which requires that urban areas contain urban densities, generally considered to be a minimum gross density of four units per acre.

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

2.9.a The DEIS must include information to support the conclusion that if the Thurston Highlands property were unavailable for development, the City would not be able to accommodate the amount of urban growth allocated to Yelm and its UGA by the Washington State Office of Financial Management.

Response to GordonDerr Comment II.2.9.a: See the response to GordonDerr Comment II.1.6, above.

2.9.b This Benefits/Disadvantages section should include a summary of the Thurston Highlands' "contribution" to the cause of roadway and intersection congestion problems and the Thompson Creek flooding problems compared to the Thurston Highlands' contribution to the solution of these problems.

Response to GordonDerr Comment II.2.9.b: Section 2.9 of the Draft EIS correctly notes these two issues among the list of perceived benefits of leaving the Thurston Highlands site undeveloped. Additional information regarding project impacts in the form of roadway and intersection congestion is discussed in Draft EIS Section 3.17, and regarding Thompson Creek flooding problems in Draft EIS Section 3.3.1.

3.1.1 Topography

The conclusion that changes in topography would not result in significant adverse impacts to predominant topographic features is an over-generalized and inadequate conclusion that is not supported by the DEIS, including the referenced Section 3.19.4. This conclusion is inconsistent with other statements in the DEIS, for example, that that 800,000 cubic yards of on-site gravel will be used for road construction, utility trench backfill, and building pad construction. It is also inconsistent with the statement in 3.1.2 that "deeper, more permeable deposits" would be exposed and utilized for local stormwater infiltration as a result of grading on the site.

Response to GordonDerr Comment II.3.1.1: Potential changes in drainage basins and exposure of more permeable soils have been identified as potential impacts in Section 3.1.1: Topography, by means of Revisions, Corrections, and/or Additional Information to Add to the Draft EIS: Chapter 3 of this Final EIS.

3.1.2 Geology and Soils

The reference to "possible" mitigation measures fails to provide a basis for evaluating the environmental impacts to this element of the environment. For example, the DEIS fails to disclose whether seasonal limitations on earthwork would be required. Other mitigation measures must be clarified to establish which are possible and which are required mitigation measures. The summary of significant unavoidable adverse impacts is incomplete and is inconsistent with the description of the extent of site alteration in other sections of the DEIS.

Response to GordonDerr Comment II.3.1.2: The *Ecology Stormwater Manual for Western Washington (2005)* defines erosion and sediment control measures that must be implemented for construction in dry and wet seasons. Section 3.1.3: Erosion in the Draft EIS (page 3.1-14) identifies compliance with the Ecology 2005 Manual (or more recent guidance developed by regulatory agencies over the course of the development) as an incorporated feature of the Master Plan proposal. Also see the response to GordonDerr General Comment I.B, above.

3.1.3 Erosion

This section must include a clear confirmation that the Thurston Highlands project will comply with the most recent Washington Department of Ecology Stormwater Manual, regardless of what version of the Manual is adopted by the City of Yelm. The description of mitigation measures must be revised to establish which are possible and which are required mitigation measures. The conclusion regarding unavoidable impacts must be clarified to identify what mitigation measures are assumed to be required and implemented.

Response to GordonDerr Comment II.3.1.3: Mitigation measures proposed by the applicant (i.e., *Incorporated Plan Features*) in Draft EIS Section 3.1.3 (page 3.1-14) include the following:

The Thurston Highlands stormwater management proposal includes complying with the Washington Department of Ecology 2005 *Stormwater Management Manual for Western Washington* or more recent guidance likely to be developed by regulatory agencies, including the City of Yelm, over the course of Thurston Highlands development.

This statement does not limit Thurston Highlands compliance to the version of the Ecology Manual adopted by the City of Yelm.

3.2.1 Criteria Air Pollutants

3.2.1.a The DEIS concludes that CO is the air pollutant of major concern, apparently due to volume. This fails to account for other pollutants that pose environmental risks even with smaller emission volumes. The air quality analysis must include and evaluation of full build-out emissions for all pollutants of concern, not just CO, and cannot be limited only to early phases of development.

Response to GordonDerr Comment II.3.2.1.a: The DEIS discussed carbon monoxide (CO) as the air pollutant of major concern associated with transportation sources because – of the various pollutants emitted by vehicles for which there are health-based ambient air quality standards – CO is emitted in the largest quantities. Conversely, other pollutants emitted by vehicles for which there are health-based standards (e.g., fine particulates, and SO₂) are emitted in such lesser amounts that there is little or no probability of these emissions resulting in concentrations that would exceed the ambient standards. In contrast, in the past CO concentrations in the Puget Sound region did exceed allowed levels to the extent that a large portion of the area was designated as "nonattainment" for this pollutant. CO is therefore typically used as the representative pollutant for considering the potential air quality impacts related to transportation sources, and was used in this manner in the Thurston Highlands Draft EIS. This is an accepted approach to such analyses, and is considered appropriate for this project. As discussed in Draft EIS Section 3.2.1, project-related traffic associated with build-out of conceptual Phase 1 and Phase 2 development within the Master Planned Community would not be expected to result in any significant air quality impacts.

3.2.1.b Support must be provided for the speculative conclusion that air quality concerns in future years will be addressed by emission reduction requirements, including a discussion of technological limits on emission reductions.

Response to GordonDerr Comment II.3.2.1.b: Since the early 1990s when CO was found to be causing air quality problems in many urban areas of the United States, vehicle emission control programs have significantly reduced emissions from most vehicles. The current emission control requirements will continue to apply in the future, and will continue to reduce CO emissions. At this point, CO emissions are rarely found to represent air quality problems in the Puget Sound region, and the farther into the future one projects, the lower expected emissions become (based on the EPA Mobile model). Therefore any traffic-related air quality impacts would be expected to show up nearer into the future and not farther. In addition, there are many variables that could affect future traffic conditions in the project area, so looking out farther into the future becomes more and more speculative the farther one looks.

Besides air pollution stemming from traffic, the proposed project will intentionally avoid the other single largest emission type often associated with residential developments; that is, space heating and/or aesthetic fires using wood-burning appliances (i.e., stoves and fireplaces). Such residential wood burning produces large amounts of CO and inhalable particulate matter along with a range of known or suspected carcinogenic substances. Given the applicant's commitment to prohibit wood burning appliances within the Thurston Highlands Master Planned Community, as reported in Draft EIS Section 3.2.1 (pages 3.2-3 and 3.2-4), a large air pollution source will be avoided.

3.2.1.c The description of mitigation measures must be revised to establish which are possible and which will be required as mitigation measures.

Response to GordonDerr Comment II.3.2.1.c: The mitigation measures listed on Draft EIS pages 3.2-7 and 3.2-8 related to controlling emissions from construction activities comprises a list of the actions to which the project proponent has committed as part of the project, identified as *Incorporated Plan Features*. In addition, compliance with the *Applicable Regulations* described on page 3.2-8 will be required.

3.2.1.d The conclusion regarding unavoidable impacts must be clarified to identify mitigation measures that are assumed to be required and implemented. All of these mitigation measures apply only to construction activities. The DEIS must include mitigation measures to address air quality impacts after construction.

Response to GordonDerr Comment II.3.2.1.d: With implementation of the listed mitigation measures during construction, no significant adverse air quality impacts would be expected related to construction of the project components. The Draft EIS Section 3.2 analysis of Developed-Condition Impacts of the proposed Master Planned Community indicated no significant air quality impacts would be expected. Therefore, no additional air quality mitigation measures are warranted or proposed.

3.2.2 Greenhouse Gas Emissions

3.2.2.a The DEIS must include consideration of measures to reduce CO₂ emissions, especially VMT reductions.

Response to GordonDerr Comment II.3.2.2.a: The CO₂ equivalent (CO₂e) emissions estimates for the project considered measures incorporated into the Master Plan proposal that would reduce CO₂e emissions compared with conventional developments. For example, these estimates considered the emission-reducing potentials of project-specific building components, as well as due to energy use reductions that would be expected with Built-Green certified homes.

3.2.2.b It is not accurate to conclude that there are no means to determine whether CO₂ emissions constitute an "impact" to the environment.

Response to GordonDerr Comment II. 3.2.2.b: As indicated in Draft EIS Section 3.2.2 (page 3.2-11), there are, as yet, no particular means to gauge whether carbon dioxide (CO₂) emissions associated with the useful life of a residential development *constitute an impact* in terms of their potential effects on climate. Lifecycle CO₂ emissions for Phase 1 of the project were estimated and reported. Because greenhouse gas emissions and their potential effects on climate change constitute a global issue, there are as yet no established means for assessing the relative scale of any potential impacts of comparatively small-scale emission sources such as the proposed development. In the absence of some defined impact "threshold" for CO₂e emissions, and given the lack of requirement to estimate the potential for impacts to a global climate system, the analysis presented in Draft EIS Section 3.2.2 provided a comparison of the relative scale of expected project-related GHG emissions. Additional speculation would provide little if any meaningful insight, and would be unlikely to lead to different conclusions.

3.2.2.c It is not acceptable to ignore full build-out GHG emissions due to "the absence of project specific information." Reasonable estimates of the relevant information (number of housing units, VMT estimates) exists for future phases and must be included in the DEIS.

Response to GordonDerr Comment II.3.2.2.c: The timing and many of the specifics of full build-out of the proposed Master Planned Community are speculative at this time. In addition, there are not yet any specific requirements or guidelines defining the approach or methods to be used in calculating project-related GHG emissions. Methods to estimate project-related vehicle miles traveled (VMT) are especially problematic and likely unrealistic because there are no generally agreed-upon approaches for differentiating what VMT-related emissions would stem from the project as opposed to occurring in some other location. Because GHG issues are global in nature, most GHG emissions that could be identified as being project-related would likely occur somewhere else, with or without the proposed project. If the demand for housing within the City of Yelm identified by the Washington State Office of Financial Management and the Thurston Regional Planning Council is not satisfied on the Thurston Highlands site, it will occur somewhere else in the vicinity (see Draft EIS Section 3.11, Population). It is not, therefore, particularly meaningful to speculate far into the future when any of a number of variables (e.g., escalating fuel prices) could markedly change underlying conditions.

3.2.2.d The description of mitigation measures must be revised to establish which are possible and which will be required as mitigation measures. The conclusion regarding unavoidable impacts must be clarified to identify mitigation measures that are assumed to be required and implemented.

Response to GordonDerr Comment II.3.2.2.d: See the response to GordonDerr Comments I.B and II.3.2.1.d, above.

3.3.1 Surface Water Movement, Quantity and Quality

3.3.1.a Information regarding the "stream geometry information" assumptions used in the HEC-RAS model must be provided. Information regarding calibration of the model to match actual Thompson Creek stream conditions must be provided, including the ability of the model to portray flooding events such as November of 2006. The DEIS must include a justification for calibrating the model using flow data collected during the 2007/2008 west season.

Response to GordonDerr Comment II.3.3.1.a: The "stream geometry information" (e.g. survey locations, reach slopes) were described in the *Draft Surface Water Technical Report* (Brown and Caldwell, May 2008). Calibration and validation information are included in the Section 1 of the *Final Surface Water Technical Report* (Brown and Caldwell, November 2008). Brown and Caldwell developed and calibrated a Hydrologic Simulation Program-Fortran (HSPF) hydrologic model to observed Thompson Creek flows from the 2007/2008 season. Brown and Caldwell then ran the HSPF model using 44 years of historical precipitation data to simulate stream flow rates that occurred during several previous large flood events. Brown and Caldwell focused on the February 1996 flood event to validate the combined HSPF and HEC-RAS hydraulic models. The HSPF model predicted a peak flow rate of 47 cfs in Thompson Creek for this event. This flow rate was entered into the HEC-RAS hydraulic model to simulate the water surface elevation and floodwater inundation for the February 1996 event. The simulated inundation extent was compared to the WSDOT aerial mapping during this flood; the simulation captured the key flooding features of the WSDOT aerial mapping. The calibrated and validated combined hydrologic and hydraulic modeling (HSPF, HEC-RAS) formed a baseline flood condition. The predicted increases in Thompson Creek base flow were added to the baseline condition to estimate the potential flood stage rise and inundation expansion. The results are provided in Section 1 of the *Final Surface Water Technical Report* (Brown and Caldwell, November 2008).

Brown and Caldwell selected the February 1996 event to validate the modeling because more detailed aerial mapping was available for this event.

3.3.1.b The modeling assumes that reclaimed water infiltration would occur only at a single engineered facility in the area of the Regional Sports Complex. The DEIS must confirm that any alternative infiltration scheme will require a separate environmental review.

Response to GordonDerr Comment II.3.3.1.b: The single reclaimed water infiltration location was selected as an example only, for the purpose of modeling potential effects in the shallow aquifer and Thompson Creek. This is clearly explained in Draft EIS Section 3.3.1 (page 3.3-12); Section 3.3.3 (pages 3.3-34 through 3.3-36); and Section 2.5.2.4 (page 2-16). Additional studies, including groundwater modeling, would be undertaken as an element of the City's proposal for infiltration of reclaimed water generated by the City-

wide wastewater treatment process, whether within Thurston Highlands or at some other location.

3.3.1.c The analysis of "potential change in flood stage associated with increased groundwater flows to Thompson Creek" promised for the Final EIS must be included in the DEIS for public review and comment. It is not acceptable for this important analysis to be omitted from the DEIS.

Response to GordonDerr Comment II.3.3.1.c: The *Final Surface Water Technical Report* (Brown and Caldwell, November 2008) includes additional analyses on the change in flood stage of Thompson Creek performed during the Draft EIS review period. These revisions are reflected in Section 1 of the *Final Surface Water Technical Report*, and in Chapter 3 of this Final EIS, in the updated version of Section 3.3 Water Resources.

3.3.1.d The reference to "potential" mitigation measures in Section 3.19.4 and the listing of "possible" mitigation measures is inadequate to evaluate the full build-out impacts. The description of mitigation measures in this Section 3.3.1 and in Section 3.19.4 must be revised to establish which are possible and which will be required as mitigation measures. The conclusion regarding unavoidable impacts must be clarified to identify mitigation measures that are assumed to be required and implemented.

Response to GordonDerr Comment II.3.3.1.d: See the response to GordonDerr General Comment I.B, above.

3.3.1.e The reference to the year "1987" in Table 3.3-7 should be revised to "1997." A justification must be provided for evaluating "annualized average increases" in Thompson Creek flow and volume instead of peak increases in flow and volume that are likely to cause downstream flooding impacts.

Response to GordonDerr Comment II.3.3.1.e: This date has been corrected in the Thurston Highlands Phase 1 scenario in Table 3.3-9 in Final EIS Chapter 3. Groundwater discharge to the creek is much less variable than flow in the creek. "Peak" groundwater discharge to Thompson Creek is included in the analyses by using groundwater model estimates of the flux to the creek from the wettest year on record. Peak flows in the creek have been considered, and are further evaluated in Section 2 of the *Final Surface Water Technical Report* (Brown and Caldwell, November 2008).

3.3.1.f The discussion of improving the conveyance capacity of Thompson Creek should include a full analysis of the unacceptable adverse impacts of making Thomson Creek a "drainage ditch" for the Thurston Highlands development.

Response to GordonDerr Comment II.3.3.1.f: As reported in Draft EIS Section 3.1.1, Thompson Creek has a drainage area of about 16 square miles, of which the Thurston Highlands site comprises about 2 square miles, or 12.5 percent. The proposed Master Planned Community and other development to-date within the Thompson Creek basin are consistent with current City of Yelm Comprehensive Plan and zoning designations for these properties. Improving the conveyance capacity of Thompson Creek, discussed as a stormwater mitigation option in the Thurston Highlands Draft EIS and technical reports, would also be beneficial in reducing the impacts that may have occurred from development that has previously taken place within the basin.

Any improvements to the hydraulic capacity of the channel would be designed and constructed in accordance with applicable City, County and State regulations. Because the creek runs through private property, local residents (affected property owners) would have an opportunity to participate in the process to ensure that upstream hydraulic improvements would not generate new downstream problems or exacerbate existing problems. Measures that would improve the hydraulic capacity of the channel could be designed to preserve habitat and aesthetic values along Thompson Creek.

3.3.2 Groundwater Movement, Quantity and Quality

3.3.2.a Table 3.3-9 and the related text of the DEIS should be expanded to evaluate peak infiltration conditions, not just average annual quantities. The DEIS states that there will be a five-fold increase in discharge to Thompson Creek due to infiltration of reclaimed water, mostly in the wet season. The conclusion that groundwater impacts "are either not adverse or not significant ... or are avoidable by mitigation" is inconsistent with the described impacts to Thompson Creek, even based on annualized rather than peak data.

Response to GordonDerr Comment II.3.3.2.a: Table 3.3-9 was presented in the Draft EIS to illustrate how total recharge over the full Thurston Highlands site would differ with the different conceptual land use alternatives, and compares these volumes to existing conditions in median and wet years of precipitation. As noted immediately below the table, only about 30 percent of the increase in infiltration would report to Thompson Creek for any of the conceptual land use alternatives. By using precipitation and infiltration data from the wettest year on record (1997), peak infiltration conditions are included in the analyses.

Reference to a five-fold increase in discharge to Thompson Creek in Comment II.3.3.2.a reflects an error in understanding. The Draft EIS states: "Using the annual water volumes discharging to Thompson Creek, the model predicts an increase by a factor of about five in the change in discharge to Thompson Creek with infiltration of reclaimed water, compared with the change in discharge without infiltration of reclaimed water." The five-fold increase is the *change* in discharge, not the total discharge. Also see the response to GordonDerr Comment II.2.5.2.4 with regard to the evaluation of reclaimed water infiltration on the Thurston Highlands site. (Note that the five-fold increase has been revised to four-fold in the *Final Surface Water Technical Report* prepared by Brown and Caldwell, November 2008.)

3.3.2.b The mitigation measures described in this section assume that infiltration facilities can be located in areas where groundwater flow does not report to Thompson Creek. The DEIS does not discuss the reasonableness of this assumption. The DEIS must confirm that any alternative infiltration scheme will require a separate environmental review.

Response to GordonDerr Comment II.3.3.2.b: The drilling investigation performed in support of the Draft EIS identified a large area of the site where the shallow aquifer is absent and/or where the till layer is fractured, thereby allowing infiltration to directly enter the deeper regional aquifer. Due to the size of this area, the available area for infiltration would not be significantly constrained by the proposed development. Note that infiltrating stormwater in a location that does not report to Thompson Creek is one of five mitigation options identified in the Draft EIS and evaluated in the technical reports prepared for the project (Pacific Groundwater Group 2008, and Brown and Caldwell

2008). Depending on which option, or combination of options, is selected by the City to require of the development, additional environmental review may or may not be required.

3.3.2.c All of the mitigation measures are presented in terms of "possible" mitigation. The reference to "potential" and "possible" mitigation measures in this section is inadequate to evaluate the full build-out impacts. The description of mitigation measures must be revised to establish which are possible and which will be required as mitigation measures. The conclusion regarding unavoidable impacts must be clarified to identify mitigation measures that are assumed to be required and implemented.

Response to GordonDerr Comment II.3.3.2.c: See the response to GordonDerr General Comment I.B, above.

3.3.2.d This section must include a discussion of water quality impacts to groundwater based on increased infiltration of stormwater and reclaimed water, including the risk of pharmaceutical and other pollutants that would affect the aquifer that is a drinking water source.

Response to GordonDerr Comment II.3.3.2.d: The infiltration of stormwater and reclaimed water (if any) on the Thurston Highlands site will meet all applicable standards promulgated by jurisdictional State and Federal agencies. Stormwater infiltration is encouraged by State agencies to help maintain existing groundwater resources. In discussion of flow control best management practices, Ecology's *Stormwater Management Manual for Western Washington* (Volume I, Section 1.5.4) states "[C]onstruction of an infiltration facility is the preferred option . . ." A recent opinion by the Washington State Pollution Control Hearings Board⁵ ordered some of the State's largest local governments subject to NPDES requirements for permitting stormwater discharge to use "low-impact development" (LID) techniques to control stormwater "where feasible." LID techniques emphasize, among other techniques, on-site control and infiltration of stormwater. If the Board's decision stands, there will be a requirement for increased use of LID techniques, such as those voluntarily proposed within Thurston Highlands, in areas subject to NPDES permitting requirements for municipal stormwater.

Pharmaceutical chemicals are unlikely to be present in stormwater. The quality of reclaimed water and its reuse or point of discharge is a general issue applicable City-wide, not only within the proposed Thurston Highlands Master Planned Community. This will be addressed, as appropriate, in the *Reclaimed Water Plan* currently being prepared. The City complies with all applicable water quality standards for this resource.

⁵ Washington State Pollution Control Hearings Board. August 7, 2008. Puget Soundkeeper Alliance case, Phase I PCHB Nos. 07-021, 07-026, 07-027, 07-028, 07-029, 07-030, and 07-037).

3.3.3 Public and Private Water Systems

3.3.3.a The DEIS admits that the City does not currently have water rights to serve this proposed development. The reference to 1994 applications to withdraw water from the Thurston Highlands site must be expanded to evaluate the reasonableness of any assumptions that additional water rights sufficient to serve this development will be obtained by the City. This discussion must include a disclosure that the City exceeded its water rights in 2006 and 2007 and should include a reference to the limit on water withdrawal imposed by Ecology in 2008 and agreed to by the City.

Response to GordonDerr Comment II.3.3.3.a: See the response to GordonDerr Comments II.1.6 and II.2.5.2.2, above.

The City's current and previous *Water System Plans* all included a water rights self assessment which includes an additional 112 acre feet of water rights in the City's 'inventory.' The City has carefully managed its water resources, and has never exceeded the water rights identified in the *Water System Plans* approved by the Washington Department of Health and the Washington Department of Ecology. In 2007, outside the Water System Planning process and at the request of JZ Knight, the Washington Department of Ecology conducted a separate water rights analysis that concluded the City held, in 2007, certificated rights to 719.66 acre feet of water. The City has since accomplished a transfer of water rights, continues to manage its water resources carefully, and has made a commitment to the Washington Department of Ecology that it will not pump more than 796.66 acre feet of water in 2008. The City is currently reviewing its water rights portfolio to determine the status of all of its certificates.

3.3.3.b This section of the DEIS must include a statement that the City's Water System Plan is being updated and must include a confirmation that the City's approval of any phase of the Thurston Highlands project will require a determination of consistency with the updated Water System Plan and will require evidence that water rights approved by the Department of Ecology will be available prior to final subdivision or site plan approval.

Response to GordonDerr Comment II.3.3.3.b: Draft EIS Section 3.3.3 addresses the potential impacts of Thurston Highlands development to other public and private water systems. Draft EIS Section 3.7, at page 3.7-4, specifically describes the various Capital Facilities Plans that are part of the City of Yelm planning processes, including the *Water System Plan*. This section notes that, as these plans are periodically updated to reflect the upcoming 6-year Capital Facilities needs, development within the Thurston Highlands Master Planned Community would begin to be reflected therein. Also see the response to GordonDerr Comment II.2.5.2.2, above.

Evidence of an adequate water supply, which may be in the form of a water right permit from the Department of Ecology or a letter from an approved water purveyor stating the ability to provide water, is required prior to building permit issuance pursuant to Section 19.27.097 RCW, not at the time of final subdivision or site plan approval.

The requirement that adequate water and water rights be shown at the time of building permit issuance is supported by Goal 12 of the Growth Management Act, which ensures that those public facilities and services necessary to support development are adequate to serve the development at the time the development is available for occupancy and use.

3.3.3.c This section of the DEIS must also include a confirmation that the City's approval of any phase of the Thurston Highlands project will require a determination of consistency with the proposed Reclaimed Water Plan and will require confirmation that the any reclaimed water infiltration within the Thurston Highlands project has been adequately reviewed in this DEIS or by subsequent environmental review.

Response to GordonDerr Comment II.3.3.3.c: See the response to GordonDerr Comment II.2.5.2.4, above.

3.3.3.d The conclusion that the risk of aquifer contamination from sources on Thurston Highlands is "extremely low" must be supported by a reasonable qualitative and quantitative analysis - at a minimum comparing geology and land uses in the locations of the City's existing water supply wells with the geology and land uses in the Thurston Highlands area at full build-out.

Response to GordonDerr Comment II.3.3.3.d: Groundwater is the principal source of drinking water in the City of Yelm, which currently operates two water supply wells (wells 1a and 2) off Second Street in the downtown area. The City is considering installing additional wells. State-mandated maintenance and water quality testing programs are followed by the City, and by Group A and B community systems outside the municipal water service area.

The area hydrogeology is characterized by multiple water-bearing zones (three aquifers and two aquitards) with depth. The regional aquifers consist of highly permeable saturated layers of unconsolidated deposits of sand and gravel layered between low-permeability silts. The Advance Outwash Aquifer is the principal groundwater source used in Yelm. The top of the aquifer occurs at a depth of 60 to 100 feet below the ground surface. The two operational City wells are completed at depths of 61 and 67 feet.

Potential water quality impacts to groundwater from infiltrating stormwater at the Thurston Highlands site would be minimized by treatment of the water prior to infiltration. As noted in Draft EIS Section 3.3.2, the stormwater treatment requirements defined in Ecology's 2005 SWMWW would be implemented. These requirements were formulated to reduce typical contaminants in stormwater, such as suspended solids, oil and grease, and phosphates.

In sewer service areas within the City, wastewater is piped to the treatment plant just east of downtown Yelm. Outside sewer service areas, wastewater is treated with individual septic systems with on-site infiltration via drainfields. Wastewater generated within the proposed Thurston Highlands Master Planned Community would be collected and treated by the City, eliminating risks of groundwater contamination from poorly maintained or failed septic systems, or from on-site disposal of hazardous chemicals.

The City of Yelm has successfully implemented reclaimed water infiltration generated by its wastewater treatment plant, at Cochrane Park in the downtown area. A similar system may be considered within the Thurston Highlands development or elsewhere in Yelm. Stringent State standards (currently met by Yelm's wastewater treatment facility) are in place for infiltrating reclaimed water. Use of reclaimed water for surface percolation must meet the groundwater recharge criteria set forth in Chapter 90.46.080(1) and Chapter 90.46.010(10) RCW. Standards for reclaimed water have been jointly developed by the

Washington Department of Health and the Washington Department of Ecology. Within the State of Washington, the quality of reclaimed water must fully protect beneficial uses including public health and environmental water quality. For groundwater recharge by surface percolation, the minimum treatment required prior to groundwater recharge must meet Washington's Class A reclaimed water standards plus biological nitrogen reduction. Reclaimed water must also meet the State's groundwater recharge criteria (drinking water standards) in the mound beneath the site or downgradient of the recharge site.

Engineered features (collection and treatment of stormwater to current stringent standards prior to infiltration; collection and off-site treatment of wastewater; treatment of reclaimed water for infiltration to Washington State Department of Health and Department of Ecology-mandated standards), and natural setting (substantial thickness of soil through which infiltrating water would move before reaching groundwater) at the Thurston Highlands site would present a high level of protection to the groundwater resource. These engineered features and natural setting are in all cases as good as, or better than, infiltration conditions as they relate to the City's existing water supply.

3.3.3.e The DEIS concludes that the withdrawal of additional water to serve Thurston Highlands as well as other anticipated growth in the City's water service area has the potential to impact other public and private water systems. These adverse impacts are likely to be significant and must be evaluated in the DEIS. It is inadequate for purposes of the Thurston Highlands DEIS to suggest that the City's application for new water rights would include a detailed mitigation plan. In fact, the City of Yelm submitted the application for these additional water rights in 1994 and has asked the Department of Ecology to review and act on the City's pending application. However, contrary to the claim in the DEIS, the City has not provided a detailed mitigation plan to address the impacts of this additional groundwater withdrawals.

Response to GordonDerr Comment II.3.3.3.e: See the response to GordonDerr Comment II.1.6, above. The City of Yelm has not requested that the Washington Department of Ecology take action on its pending water rights application since, as noted in the Draft EIS, the City continues to work with the Watershed Planning Unit on water rights on a watershed-wide level within the Nisqually Water Resource Inventory Area.

The Draft EIS does not claim that Yelm has "provided a detailed mitigation plan," but notes that the Watershed Planning Unit has completed a final Detailed Implementation Plan outlining the methodology and process for reviewing mitigation plans. The City continues to support its water rights applications currently before the Washington Department of Ecology. A mitigation plan consistent with the work completed to date by Yelm and its partners in the Watershed Planning Unit will be part of that effort.

3.3.3.f It is improper to defer the environmental review of the impact of the withdrawal of additional groundwater required to serve the full build-out of the Thurston Highlands development. SEPA does not allow such piece-meal review. The DEIS must be revised and reissued to provide a meaningful opportunity for the public to review and comment on this critical environmental review. If the DEIS is not revised and reissued to address this issue, the FEIS must include a specific and enforceable mitigation measure to prohibit approval of the conceptual or final master plan for any portion of the Thurston Highlands project until a complete environmental review of the impact of the withdrawal of additional groundwater required to serve the Thurston Highlands development is completed.

Response to GordonDerr Comment II.3.3.3.f: See the response to GordonDerr Comment II.1.6, above.

3.3.3.g The conclusion regarding impacts to public or private water supplies in this section is meaningless in light of the fact that these impacts are not evaluated in the DEIS. This section of the DEIS is wholly inadequate not only for failing to include any evaluation of impacts but also for failing to include any discussion of meaningful mitigation measures.

Response to GordonDerr Comment II.3.3.3.g: See the response to GordonDerr Comment II.1.6, above.

3.4 Wetlands

3.4.a The references in this section to a road "required to serve the adjacent (Purvis) property" must be revised to explain to the public that the Purvis development is a project proposed by the same developers who are proposing the Thurston Highlands. This revision should also justify this road is "required" to serve the Thurston Highlands project and why other proposed access is not adequate. The specific applicable requirements of the City's "Connectivity Policy" must be disclosed, and justification must be provided to show why the Purvis roadway connection is "required" under this policy.

Response to GordonDerr Comment II.3.4.a: A subdivision application for the Purvis property, adjacent to the northeast boundary of the Thurston Highlands property, has been issued preliminary subdivision approval for a first phase. At least one of the developers of the Purvis property is also a proponent of the Thurston Highlands Master Planned Community. Regardless of who were to implement urban development of the Purvis property, road access to the west, through Thurston Highlands, would be required so as to avoid creating a dead-end cul-de-sac on the Purvis property. The City's Connectivity Policy is described in footnote 2 at the bottom of Draft EIS page 3.4-9. Access through the Purvis property is not required to serve Thurston Highlands, as other routes are proposed to achieve the required connectivity for the Master Planned Community. These are described and illustrated in Draft EIS Section 3.17.

3.4.b The DEIS concludes that the proposed stormwater treatment systems will remove potential contaminants "except nitrates." The impact of nitrate contamination must be evaluated and effective mitigation requirements for nitrates must be described.

Response to GordonDerr Comment II.3.4.b: Nitrate sources from the development will primarily originate from lawn fertilizers and very minimally from domestic pet waste. These will occur in runoff from lawn areas that typically do not have stormwater treatment facilities associated with them. Nitrate levels from residential/commercial

development are lower than those of agricultural and farm lands, which have typically been the sources of concern in relation to the Maximum Contaminant Level (MCL) for nitrates of 10 parts per million (ppm) established by the U.S. Environmental Protection Agency. Low Impact Development (LID) techniques can be employed to minimize nitrate levels in large lawn areas such as the Regional Sports Complex. Educating homeowners on proper lawn care and types of fertilizers to use could be required through development of an *Integrated Pest Management Plan* (IPMP), although not currently required for residential developments by the most recent Department of Ecology Stormwater Manual (2005). Homeowner education could also be an element of the Covenants, Codes and Restrictions (CC&Rs) of the Master Planned Community to be enforced by the Home Owners Association. These *Other Possible Mitigation Measures* have been added to the Surface Water Movement, Quantity and Quality section in 3.3.1, reproduced in Chapter 3 of this Final EIS. As with all mitigation measures in the *Other Possible* category, the Hearing Examiner and City Council will decide whether these are to be required of the proposed Master Planned Community.

3.4.c The description of stormwater infiltration in isolated kettle basin wetlands must be revised to evaluate the impact of the lateral infiltration, especially the impact to Thompson Creek. Required mitigation measures to preserve the function of these wetlands must be included to address the risk of site development activities that would deliver stormwater to these isolated kettle basin wetland areas.

Response to GordonDerr Comment II.3.4.c: The potential effects of stormwater infiltration on the Thurston Highlands site has been evaluated for the site as a whole, based on the relative permeability of soils in different areas of the property (PacificGroundwater Group 2008, as summarized in Draft EIS Sections 3.3.1 and 3.3.2). A decision has not yet been made whether kettle wetlands will be used for stormwater infiltration. As stated in Draft EIS Section 3.4 (pages 3.4-8 and 3.4-11), it would be difficult and not necessarily desirable to try to preserve the kettle wetlands in the urban landscape of the Master Planned Community. The *Wetlands Inventory, Impacts, and Mitigation Recommendations* technical report prepared for the project (Coot Company 2008B) includes a recommendation that the kettle wetlands be filled, and that compensatory mitigation be provided in the form of new and/or enhanced wetland habitat associated with the much larger systems on the property – wetland complexes that can be protected with upland connections to significant, undeveloped landscape – for a net gain in habitat function (Draft EIS page 3.4-11). City decision makers will consider options for the kettle wetlands during their deliberations regarding the proposed Master Planned Community. Some may be addressed on a case-by-case basis at the time of each phased development proposal application. In any event, if wetland alteration occurs, it will be subject to all applicable Federal, State and local regulations through required permitting processes.

3.4.d References to the Department of Ecology Stormwater Manual must include confirmation that Thurston Highlands will comply with the current and any updates to this Manual, regardless of which version has been adopted by the City of Yelm.

Response to GordonDerr Comment II.3.4.d: Draft EIS Section 3.19 identifies the following Incorporated Plan Feature as a mitigation measure proposed by the applicant:

"The *Stormwater Management Manual for Western Washington* (Ecology 2005) will be used for design guidance. Since the project will take a number of years for full

build-out, the most current local or State manual for guidance on stormwater design will be followed throughout implementation of the Master Planned Community.

3.4.e The reference to "potential" and "possible" mitigation measures in this section is inadequate to evaluate the full build-out impacts. The description of mitigation measures must be revised to establish which are possible and which will be required as mitigation measures. The conclusion regarding unavoidable impacts must be clarified to identify mitigation measures that are assumed to be required and implemented.

Response to GordonDerr Comment II.3.4.e: See the response to GordonDerr General Comment I.B, above.

3.5 Wildlife, Habitats and Fish

3.5.a The conclusion that two areas of high-value upland habitat "would be almost completely avoided" must be revised to include a reasonable assessment of actual impacts to these habitat areas.

Response to GordonDerr Comment II.3.5.a: At the Conceptual Master Site Plan stage evaluated in the Draft EIS, there are no specific development plans for Phase 1 or subsequent phases of the Thurston Highlands Master Planned Community. Hypothetical concepts – as close as possible to the type and location of development anticipated within the project – were used for environmental review. It will not be possible to quantify actual impacts to the Mature Forest habitat areas shown on Draft EIS Figure 3.5-1 until applications for specific development proposals are submitted to the City; however, the City will review these for falling within the range of impacts evaluated in the EIS.

3.5.b This section of the DEIS suggests that the infiltration of 100 percent of the Thurston Highlands stormwater runoff and the potential infiltration of significant quantities of reclaimed water from the City's treatment plant could be viewed as a beneficial mitigation measure for fish habitat. The DEIS must address the net effect of such additional infiltration on all elements of the environment. It is not acceptable to draw conclusions about impacts limited to only one element of the environment.

Response to GordonDerr Comment II.3.5.b: The impact analysis of the potential infiltration of significant quantities of stormwater and reclaimed water on the Thurston Highlands site is provided in Draft EIS Sections 3.3: Water Resources; 3.19.3: Utilities – Reclaimed Water; and 3.4: Wetlands (page 3.4-11); as well as in 3.5: Wildlife, Habitats and Fish (page 3.5-8) cited in the comment above.

3.5.c The reference to "possible" mitigation measures in this section is inadequate to evaluate the full build-out impacts. The description of mitigation measures must be revised to establish which are possible and which will be required as mitigation measures. The conclusion regarding impacts to wildlife fails to provide a meaningful evaluation as to whether the expected adverse impacts are significant and unavoidable. It must be revised to comply with the disclosure requirements of SEPA. This section also must be revised to identify mitigation measures that are assumed to be required and implemented.

Response to GordonDerr Comment II.3.5.c: See the response to GordonDerr General Comment I.B, above.

3.6 Energy and Natural Resources

3.6.a The DEIS references possible "built green" and energy conservation mitigation measures that the developer of Thurston Highlands "intend to encourage" or that the applicant and the City "could encourage." These statements provide no reasonable basis for evaluating whether such mitigation measures will be implemented.

Response to GordonDerr Comment II.3.6.a: See the response to GordonDerr General Comment I.B, above.

3.6.b The description of mitigation measures in this section is inadequate to evaluate the full build-out impacts. The description of mitigation measures must be revised to establish which are possible and which will be required as mitigation measures. The conclusion regarding significant unavoidable adverse impacts "based on communications with Puget Sound Energy representatives" fails to provide any meaningful evaluation as to whether the project's expected adverse impacts with respect to energy and natural resources are significant and unavoidable. It must be revised to comply with the disclosure requirements of SEPA. This section also must be revised to identify mitigation measures that are assumed to be required and implemented.

Response to Gordon Derr Comment II.3.6.b: See the response to GordonDerr General Comment I.B, above.

3.7 Relationship to Plans and Policies

3.7.a The DEIS must address the fact that the proposed Thurston Highlands project is not consistent with the City's current Comprehensive Plan, especially the Vision Plan. The DEIS must address the fact that the Thurston Highlands project proposes housing units far in excess of the housing unit projections in the Comprehensive Plan. The proposal to construct up to 1.5 million square feet of commercial and office development in the Thurston Highlands area is completely at odds with the City's Vision Plan adopted to guide future development and to preserve and strengthen the downtown area of Yelm. Moreover, the current Water System Plan element of the City's Comprehensive Plan specifically requires an update prior to approval of Master Planned Community Development in SW Yelm. The Water System Plan update has not been completed. Until this update is completed, it is not possible to conclude that the Thurston Highlands project is consistent with the City's Comprehensive Plan.

Response to GordonDerr Comment II.3.7.a: See the response to GordonDerr Comments II.1.1 and II.3.3.3.b, above.

3.7.b The DEIS states: "The Thurston Highlands Master Planned Community must be consistent with policies of the Yelm Comprehensive Plan as part of the Master Planned Community approval." The DEIS should include a finding that the each of the three proposed development alternatives is inconsistent with the City's Current Comprehensive Plan.

Response to GordonDerr Comment II.3.7.b: See the response to GordonDerr Comment II.1.1 above, addressing the ultimate responsibility of decision makers to balance the policies of the Comprehensive Plan and adopt findings supporting the decision.

3.7.c The DEIS acknowledges that it is not possible to evaluate whether the Thurston Highlands project is consistent with the City's Capital facilities plans because the Water System Plan, the Sewer System Plan, the Parks Plan, and the Transportation Plan are being updated and a Reclaimed Water Plan being prepared. The DEIS must include a determination of the Thurston Highland project's consistency with each of these capital facilities plans. With such an evaluation, it is not possible to evaluate the project's impact on the built environment as required under SEPA. The DEIS must be revised to include this consistency determination once the plans described above are available. Alternatively, the DEIS must include an acknowledgement that the evaluation of the project's impact on the built environment as required by SEPA is not included in the DEIS.

Response to GordonDerr Comment II.3.7.c: See the response to GordonDerr Comment II.1.1, above.

3.8 Land Use

3.8.a This section of the DEIS is misleading. See comments in response to Section 1.5.4. The DEIS must be revised to acknowledge that the Thurston Highlands project proposes far more housing units than projected in the City's Comprehensive Plan. In addition, the DEIS must be revised to acknowledge that the proposal to construct up to 1.5 million square feet of commercial and office development is not consistent with the City's Comprehensive Plan.

Response to GordonDerr Comment II.3.8.a: See the response to GordonDerr Comments II.1.1 and II.1.5.4, above.

3.8.b The statement in the DEIS that the Thurston Highlands project "would change the character of the City of Yelm" is a clever understatement, but it fails to describe the magnitude of this impact. The DEIS must be revised to provide a more meaningful assessment of this impact.

Response to GordonDerr Comment II.3.8.b: The impacts of change may or may not be considered adverse and are always qualitative in nature. The assessment in the Draft EIS of the potential impacts of change are sufficient to provide the Hearing Examiner and City Council with the tools they will need to ensure that changes to the character of Yelm are positive ones.

3.8.c The conclusion that the Thurston Highlands "could create the feeling of a separate community" is another clever understatement that fails to assess the magnitude of the impact of the Thurston Highlands project on land use within the City of Yelm. The DEIS must be revised to provide a more meaningful assessment of this impact.

Response to GordonDerr Comment II.3.8.c: See the response to GordonDerr Comment II.3.8.b, above.

3.8.d The statement that the proposed commercial development "will comprise a significant percentage of total commercial development within the City" fails to provide a meaningful assessment. The DEIS must be revised to provide a quantitative and qualitative comparison of existing and proposed commercial developments and to assess the impact of Thurston Highlands on existing commercial development. More importantly, the DEIS must show how 1.5 million square feet of commercial and office space could possibly comply with the following adopted guideline in the Vision Plan: "Commercial development should be kept to a minimum. Allow only small neighborhood-oriented commercial, such as small grocery stores." Vision Plan, p. 19.

Response to GordonDerr Comment II.3.8.d: See the response to GordonDerr Comment II.1.1 above regarding the correct amount and type of commercial development anticipated in the Thurston Highlands Preferred Alternative. A single neighborhood center and single strip commercial development would just serve the convenience needs of the population in the Thurston Highlands Community, according to the *Yelm Retail & Commercial Development Opportunities* prepared by E.D. Hovee & Company, LLC, for the Thurston County Economic Development Council and the City of Yelm.

3.8.e The description of mitigation measures in this section must be revised to establish which are possible and which will be required as mitigation measures. The DEIS refers to a Development Agreement that would include regulations to ensure that retail and professional services would "not compete with the existing Yelm commercial core." The DEIS must include an evaluation of the likelihood that Yelm's commercial core will remain viable if 1.5 million square feet of commercial and office space is constructed in the Thurston Highlands area. The conclusion in this section regarding impacts to land use is completely unsupported by any analysis in the DEIS and fails to acknowledge that the impacts of development proposed for the Thurston Highlands site have not been accounted for and have not been addressed in the City's current Comprehensive Plan. For example, the City's current Water System Plan, a key component of the City's Comprehensive Plan, has no plan for providing potable water for this development and contains a specific requirement that the Water System Plan must be updated prior to any Master Planned Community approvals (including the Thurston Highlands MPC) in SW Yelm. The DEIS must confirm this Water System Plan update requirement. This section of the DEIS also must be revised to identify mitigation measures that are assumed to be required and implemented.

Response to GordonDerr Comment II.3.8.e: See the response to GordonDerr Comment II.1.1 above regarding the correct amount and type of commercial development anticipated in the Thurston Highlands Preferred Alternative. See the response to GordonDerr General Comment 1.B regarding the relationship between mitigation measures identified in the Draft EIS and the application of those measures by the Hearing Examiner and City Council. See the response to GordonDerr Comment II.3.3.3.b regarding the relationship between the Comprehensive Plan, Capital Facilities Plans, and the Thurston Highlands Master Planned Community.

3.9 Noise

The description of mitigation measures in this section must be revised to establish which mitigation measures are possible and which mitigation measures will be required.

Response to GordonDerr Comment II.3.9: See the response to GordonDerr General Comment I.B, above.

3.10 Relationship of the Proposal to the Fort Lewis Military Reservation

The description of mitigation measures in this section must be revised to establish which mitigation measures are possible and which mitigation measures will be required.

Response to GordonDerr Comment II.3.10: See the response to GordonDerr General Comment I.B, above.

3.11 Population

3.11.a The housing unit projections cited in the TRPC Buildable Lands Report for Thurston County are inconsistent with Yelm's current Comprehensive Plan and are inconsistent with OEM's 20-year population projections. See comments in response to Section 1.5.4 and Section 3.8. The comparison of the three development alternatives masks the fundamental problem that all three development alternatives are inconsistent with the City's current Comprehensive Plan.

Response to GordonDerr Comment II.3.11.a: See the response to GordonDerr Comment II.1.5.4.a, above.

3.11.b The conclusion regarding no impacts to anticipated population growth is completely unsupported by any analysis in the DEIS and fails to acknowledge that the impacts related to the huge increase in housing and population proposed for the Thurston Highlands site have not been accounted for and have not been addressed in the City's current Comprehensive Plan.

Response to GordonDerr Comment II.3.11.b: See the response to GordonDerr Comment II.1.5.4.a above regarding the relationship between the Comprehensive Plan and the population projections in the Thurston Highlands Draft EIS.

3.12 Housing

See comments in response to Sections 1.5.4, 3.8 and 3.11. This section of the DEIS is a one-page, superficial analysis of impacts to the City's housing supply that fails to address significant inconsistencies with the City's current Comprehensive Plan and fails to provide any evaluation of housing affordability.

Response to GordonDerr Comment II.3.12: See the response to GordonDerr Comments II.1.5.4.a, II.1.5.4.b, II.3.8.a through e, II.3.11.a, and II.3.11.b.

3.13 Light and Glare

3.13.a This section fails to address lighting as an impact on wildlife and wildlife habitat. Studies of sports facility lighting impacts in Seattle have documented adverse impacts to wildlife that should be addressed in this DEIS with respect to the Regional Sports Complex. The conclusion regarding light and glare impacts fails to acknowledge that converting 1200 acres of undeveloped land to urban development will result in significant increases in light and glare. This impact cannot be ignored by stating that final design determinations regarding the proposed improvements are not available.

Response to GordonDerr Comment II.3.13.a: The potential effects of nighttime lighting on wildlife and wildlife habitat is discussed in Draft EIS Section 3.5 (page 3.5-5). Possible

mitigation measures to avoid or minimize these effects are also discussed in Draft EIS Section 3.5 (page 3.5-9).

3.13.b The description of mitigation measures in this section must be revised to establish which mitigation measures are possible and which mitigation measures will be required.

Response to GordonDerr Comment II.3.13.b: See the response to GordonDerr General Comment I.B, above.

3.17 Transportation

3.17.a The statement that construction of the Y3 - SR 510 North Loop "could begin as early as 2009, based on current project funding and project schedule determined by WSDOT" is misleading and deceptive. Information on the WSDOT website for this project shows that the purchase of right of way for this project is expected to continue through 2011 and that the construction phase is not currently funded. WSDOT estimates that the current unfunded construction budget for this project is \$56,059,900. In light of this information from WSDOT, there is no reasonable basis for assuming that construction of this project will begin 2009 or any time in the foreseeable future. Any reliance on the Y3 - SR 510 North Loop as transportation facility that will be available to address the impacts of the Thurston Highlands development is speculation and does not meet the requirements of SEPA for mitigation.

Response to GordonDerr Comment II.3.17.a: The Y3 – SR 510 corridor is an important link in the City’s transportation network and significant progress has been made over the past three to four years to advance the completion of this corridor within the foreseeable future. However, because of the uncertainty of future funding, the Draft EIS does not assume build-out of this facility until 2015. Prior to this horizon, development levels were tested and mitigation was identified to support initial phases of development within the Thurston Highlands Master Planned Community. Because of the time duration between the primary development horizons, the Draft EIS recommends that subsequent traffic studies be prepared to assess those potential impacts based on traffic conditions at the time of phased development applications. This will hold true whether or not the Y3 – SR 510 Loop is completed by 2015. As stated, each updated traffic study will be used by the City to identify appropriate mitigation measures and network strategies.

3.17.b It is misleading for the DEIS to suggest that transportation facilities will be available to accommodate the transportation impacts of the Thurston Highlands. While the City might have documents that have "identified" needed transportation facilities, the City cannot point to documentation that would provide assurance that the needed facilities can be funded and will be implemented. Without reasonable assurance of funding and implementation, the proposed transportation facilities described in the DEIS are speculative and inadequate as mitigation under SEPA.

Response to GordonDerr Comment II.3.17.b: The City was very thorough in its selection of baseline transportation improvements that were assured of funding and implementation both within the City and within outside jurisdictions. In fact, a number of mitigation elements identified by the Draft EIS as the responsibility of the developer are currently unfunded transportation needs. As such, the Draft EIS ensures where funding gaps currently exist for future transportation deficiencies, they are the responsibility of the applicant to fund.

3.17.c There is no reasonable factual support for assuming that the Y3 - SR 510 North Loop will be completed "at the time Phase 2 opens" in 2015, or even at the time of full build-out in 2025. The DEIS must include an analysis a traffic impacts in 2015 and 2025 without the Y3 - SR 510 North Loop.

Response to GordonDerr Comment II.3.17.c: As stated in response to GordonDerr Comment II.3.17.b, inclusion of the Y3 – SR 510 North Loop by 2015 is a reasonable baseline assumption for purposes of addressing network and system performance. If the facility is not constructed by 2015, the development phases will acknowledge that condition in future traffic studies that will be required for all subsequent phases of Thurston Highlands beyond the 2012 horizon. Evaluation of the predicted traffic conditions in 2015 with the Y3-SR 510 North Loop provides meaningful information to validate the positive benefits of this corridor and what additional improvements might be required to support proposed development activity within the Thurston Highlands Master Planned Community.

3.17.d Excluding the Regional Sports Complex from the traffic impact analysis is improper under SEPA and distorts the environmental review of the transportation element of the DEIS. As a major land use activity with significant traffic peaking characteristic, an evaluation of the Regional Sports Complex on the transportation system is required if the DEIS is to be considered a reliable evaluation of transportation impacts. Deferring analysis of the Regions! Sports Complex until "later phases" is unlawful "piecemealing "under Washington SEPA law. At a minimum, the DEIS must describe the transportation impacts of the full build-out of Regional Sports Complex based on reasonable assumptions about likely recreational facilities, and the City must commit to requiring a subsequent detailed analysis in a supplemental EIS for later phases when final recreational facilities are defined.

Response to GordonDerr Comment II.3.17.d: The Regional Sports Complex is expected to be developed during later phases of the Thurston Highlands Master Planned Community. Its inclusion in the initial project horizons would not reflect a reasonable or predictable traffic assessment. Since future updated traffic studies will be required for all development phases beyond the 2012 horizon, these studies will include the Regional Sports Complex in the context of the appropriate development phase(s) and actual baseline conditions at that time.

3.17.e The DEIS must include an assessment "for-profit" aspects of the private commercial nature of the proposed recreational facilities. See e.g., Sections, 2.5.1.2, 2.5.4.

Response to GordonDerr Comment II.3.17.e: The *Thurston Highlands Fiscal Analysis of Development Alternatives* (Property Counselors, April 2008) prepared for the proposed action includes the analysis requested in this comment. This information is summarized in Draft EIS Section 3.20.

3.17.3.2 Level of Service

3.17.3.2.a The DEIS must clarify whether levels of service and measured delays for existing traffic operations on roadways and at intersections were determined based on actual filed measurements or were derived from traffic modeling. It appears that the DEIS analysis was based on modeling in which operational characteristics of roadways and intersections were artificially "optimized" by modeling software.

Response to GordonDerr Comment II.3.17.3.2.a: Field traffic counts were conducted at each of the study area intersections. Where signal timing/phasing plans were not readily available, field verification was made to ensure proper modeling of existing traffic operations. Where coordinated signal systems are in-place, "optimization" through the modeling software is necessary to reflect adjustments that the master control program in the field would achieve. In addition, adjustment at individual signalized intersections is also standard transportation engineering practice, as peak hour factors and volumes fluctuate throughout the peak hour and are self-adjusted by an actuated signal. Therefore, the methods and procedures applied during the Draft EIS analysis, as well as the field verification, support standard transportation engineering practice.

3.17.3.2.b The use of LOS "F" as an acceptable level of service within the urban core is not permissible unless "mitigation to create traffic diversions, bypasses, and alternate routes and modes of transportation are authorized and being planned, funded, and implemented." City of Yelm, Comprehensive Plan, p. VI-2. The DEIS must disclose what mitigation is assumed to justify use of LOS "F" in the urban core.

Response to GordonDerr Comment II.3.17.3.2.b: As the City has consistently stated in the past when this issue has been raised by Mr. Moxon on behalf of JZ Knight in relation to the 2007 Yelm Comprehensive Plan Amendment and Joint Plant Amendment, the LOS "F" designation for the City of Yelm urban core is in-place until these alternative routes are implemented. Detailed environmental studies have been prepared and the current planning, design and right-of-way acquisition is being accomplished for the Y3 – SR 510 North Loop. Implementation of these alternative routes would provide the necessary mitigation to release the LOS "F" designation from the urban core. This has been in-place since the adoption of the 1995 City of Yelm Comprehensive Plan and subsequent updates to the City of Yelm's Transportation Element of the Comprehensive Plan.

3.17.3.2.c WSDOT has informed the City of Yelm that the appropriate level of service for SR 507 and SR 510 is LOS "D." The DEIS must be revised to reflect this level of service standard for these two state roadways.

Response to GordonDerr Comment II.3.17.3.2.c: As the City has consistently stated in the past when this issue has been raised by Mr. Moxon on behalf of JZ Knight in relation to the 2007 Yelm Comprehensive Plan Amendment and Joint Plant Amendment, the City of Yelm has the authority to designate and adopt level of service standards for facilities within its jurisdiction. The segments of SR 510 and SR 507 within the City of Yelm corporate limits are considered a "strategy corridor" consistent with the definitions defined by the Thurston Regional Planning Council (TRPC), and as depicted on Map 2-8 of the TRPC Regional Transportation Plan. This map illustrates the adopted regional level of service policy and reflects the designations against which the corridors will be measured.

3.17.3.4 Existing Intersection Level of Service

The use of averages and weighted averages to evaluate study area intersections is not acceptable. The City of Yelm's adopted Traffic Impact Analysis Guidelines (January 2007) required that "LOS conditions and average vehicle delay shall be provided for each approach and the intersection as a whole." TIA Guidelines, p. 10 (emphasis added). The DEIS's conclusion that identified intersections "operate at acceptable levels based on the overall intersection performance" fails to correctly evaluate intersection performance.

Response to GordonDerr Comment II.3.17.3.4: The City's TIA Guidelines outline the specific technical information that is required to review the potential traffic impacts of new development. This information is requested in a tabular format, used to review the operational performance of each approach and the intersection as a whole. For concurrency review, the average weighted LOS measurement is used to identify appropriate mitigation measures, while the individual approach requires mitigation through SEPA. The level of service standard of reviewing the overall performance of the intersection is appropriate from the standpoint of good engineering practices, and has been the consistent practice of the City of Yelm.

3.17.3.5 High Accident Locations

The DEIS should consider more recent accident data from WSDOT instead of relying on accident data that are 5 years old.

Response to GordonDerr Comment II.3.17.3.5: The accident data summary and analysis was performed based on complete data sets available at the time of this study. The data provide an historical perspective and reasonable assessment of the existing conditions.

3.17.4.1 Planned Transportation Improvements

The list of "planned" improvement included in Appendix C of the TIA cannot be relied on in the DEIS as mitigation measures, Not only are projects on this list "not guaranteed to be constructed," most are unfunded and significant projects are not likely to be constructed in a time frame that would meet the concurrency requirements of the Growth Management Act. The DEIS must be revised to reflect reasonable assumptions about the funding and implementation of these transportation improvement projects.

Response to GordonDerr Comment II.3.17.4.1: The list of "planned" transportation improvements noted in Appendix C of the TIA are not assumed for construction as part of the traffic analysis. Only those projects noted on pages 33 and 34 of the TIA were assumed to be funded and completed as part of the traffic analysis. Also see the response to GordonDerr Comment II.3.17.b, above.

3.17.4.2 Travel Demand Forecasts: 2012 and 2015

The base year must be defined in this section. The use of an annual traffic growth rate of 2 percent applied to the base year is unreasonable and is certain to distort the traffic demand forecasts for 2012 and 2015. According to the Thurston Regional Planning Council, the rate of population growth in the City of Yelm from 1990 to 2000 was 9.4 percent and was 5.7 percent from 2000 to 2007. According to TRPC, automobile registrations are increasing at a faster rate than population. The DEIS must be revised to reflect a realistic assumed annual traffic growth rate of at least 6 percent.

Response to GordonDerr Comment II.3.17.4.2: The growth rate of 2 percent is just one component of the total background traffic growth that is accounted for in the *Transportation Impact Analysis*. Use of an average annual growth rate is a highly conservative approach given the direct application of additional traffic generated by more than 40 separate pipeline projects at each of the study area intersections. The resultant average annual growth rates therefore varied greatly by study area intersection, ranging between approximately 2.2 percent per year to more than 25 percent per year of total entering traffic volumes.

3.17.5.4 Trip Distribution and Assignment

3.17.5.4.a The DEIS includes confusing language regarding the assumption about when Y3 - SR 510 North Loop will be constructed -either by "completion of Phase 2" or "at the time Phase 2 opens." This must be clarified. An estimate of the year intended should be provided. See comments in response to Section 3.17 regarding speculative nature of assumptions regarding the funding of this roadway.

Response to GordonDerr Comment II.3.17.5.4.a: For analysis purposes, it was assumed that the Y3 – SR 510 North Loop would be completed by 2015, coinciding with full build-out of Thurston Highlands Phase 2.

3.17.5.4.b The reference to "28 percent via Killion Road" on page 3.17-22 appears to be an error and should be revised to "38 percent."

Response to GordonDerr Comment II.3.17.5.4.b: Thurston Highlands Phase 1 (2012) local trip distribution on Killion Road is forecast to be 38 percent, not 28 percent. This is corrected in Final EIS Chapter 3.

3.17.6.1 Phase 1: 2012

The DEIS identifies 6 local study area intersections and 7 regional study area intersections that would operate at LOS "F" with the addition of Thurston Highlands Phase 1 traffic. Five other regional intersections would experience poor operations. These are significant adverse impacts. The DEIS must identify specific mitigation measures that will be required by the City to mitigate impacts resulting from Phase 1 of the Thurston Highland project. Failure to provide this analysis renders the DEIS inadequate under SEPA.

Response to GordonDerr Comment II.3.17.6.1: Fourteen specific mitigation measures necessary to accommodate traffic resulting from Thurston Highlands Phase 1 development are listed on pages 3.17-41 through 3.17-43 of the Draft EIS, and in Table 3.17-7-1.

3.17.6.2 Phase 2: 2015

The DEIS identifies 5 local study area intersections and 12 regional study area intersections that would operate at LOS "F" with the addition of Thurston Highlands Phase 2 traffic. Six other local intersections would experience poor operations. These are significant adverse impacts. The DEIS must identify specific mitigation measures that will be required by the City to mitigate impacts resulting from Phase 2 of the Thurston Highland project. Failure to provide this analysis renders the DEIS inadequate under SEPA.

Response to GordonDerr Comment II.3.17.6.2: Sixteen specific mitigation measures necessary to accommodate traffic resulting from Thurston Highlands Phase 2 development are listed on pages 3.17-43 and 3.17-44 of the Draft EIS, and in Table 3.17.7-2.

3.17.6.3 Impacts to Local Arterials: 2012 and 2015

The DEIS must clarify that the arterial speed analysis for local arterials in 2012 and 2015 is a theoretical modeling assessment that does not take into consideration the operation impacts to traffic flow due to intersections, driveway approaches, and other operational delay factors.

Response to GordonDerr Comment II.3.17.6.3: The arterial speed analysis does reflect the upstream and downstream influences and friction from intersections along the specific modeled corridor. The evaluation was performed using a modeling assessment process, and is a reasonable transportation planning method for determining traffic performance metrics.

3.17.6.4 Arterial Roadway Capacity Thresholds: 2025

3.17.6.4.a The DEIS must clarify that the roadway capacity analysis for arterial roadways in 2025 is a theoretical modeling assessment that does not take into consideration the operation impacts to traffic flow due to intersections, driveway approaches, and other operational delay factors.

Response to GordonDerr Comment II.3.17.6.4.a: The roadway link capacities reflect the type of urban and/or rural nature of the facility. The arterial capacities are factored to reflect these conditions, and do not represent ideal unconstrained parameters.

3.17.6.4.b The DEIS must include a more detailed discussion of the fact that the Y3 - SR 510 North Loop is projected to be over capacity at the time of full build-out of the Thurston Highlands project. What mitigation measures are likely to be needed to address this future roadway capacity problem?

Response to GordonDerr Comment II.3.17.6.4.b: The link capacity analysis for 2025 conditions represents a projected outlook and is one indicator to predict future traffic flow conditions. The Y3 – SR 510 North Loop is projected to be at capacity by the 2025 horizon year, which does not necessarily mean that additional strategies are needed or required. Prior to considering additional remedies based on this planning level assessment, future studies would be conducted to assess actual conditions once the facility is constructed.

3.17.6.10 Concurrency Evaluation

The concurrency discussion must be revised to include a discussion of whether it is reasonable to assume that the transportation improvements necessary to mitigate project impacts will be in place or "guaranteed" by a funding commitment for construction within 6 years.

Response to GordonDerr Comment II.3.17.6.10: The traffic mitigation strategy described in the Draft EIS (Section 3.17.7, pages 3.17-40 through 3.17-46) outlines specific transportation improvement projects and funding commitments for Thurston Highlands Phase 1 and Phase 2.

3.17.6.11 Thurston Highlands Added to Background Growth

See comments in response to Section 3.17.4.2.

Response to GordonDerr Comment II.3.17.6.11: See response to GordonDerr Comment II.3.17.4.2, above.

3.17.7 Mitigation Strategy

3.17.7.a This section of the DEIS must be revised to disclose significant unavoidable adverse transportation impacts related to each phase of the Thurston Highlands project. This discussion must analyze the transportation impacts of each phase of the project with mitigation measures in place and must identify the extent to which improvements will be constructed when such improvements are only partially funded by Thurston Highlands.

Response to GordonDerr Comment II.3.17.7.a: See the responses to WSDOT Comment 3 and GordonDerr Comment II.1.4.1.b, above. The Draft EIS discloses potential significant impacts to the transportation system and identifies potential mitigation measures. A Conceptual Master Site Plan will be implemented over time through a series of final master site plans or 'phases' that cannot be foreseen at the time of the conceptual approval. A mitigation strategy that is adaptive to be able to identify required mitigation measures at the time a more specific final master site plan is submitted for approval and even at the time a specific development proposal is made, is appropriate and responsible.

3.17.7.b A major deficiency of this section is that it does not provide a reasonable assessment of the impact of adding 64,000 daily vehicle trips to Yelm's roadways and intersections since it does not provide assurance that all mitigation necessary to address Thurston Highlands transportation impacts will be in place when needed. Mitigation measures required to address the impact of full build-out must be identified in this DEIS to meet the requirements of SEPA.

Response to GordonDerr Comment II.3.17.7.b: Specific mitigation measures for full build-out of the Thurston Highlands Master Planned Community will be verified upon completion of an updated TIA and SEPA/land-use approval at the time of application for development phases beyond 2015. To assess potential probable impacts at this time for projected traffic conditions in 2025 would be highly speculative.

3.17.7.c It is not acceptable under SEPA to piecemeal the analysis of transportation impacts or to promise that impact analyses will be provided as future phases are proposed. Any future update to the review of transportation impacts in this DEIS must be provided as a subsequent detailed analysis in a supplemental EIS.

Response to GordonDerr Comment II.3.17.7.c: See the response to GordonDerr General Comment I.A.1, above. The Draft EIS does not piecemeal the analysis of potential impacts or the identification of potential mitigation measures but rather establishes a framework for ongoing review of development impacts as they actually occur over time. This ensures that mitigation measures are not fixed today based on traffic conditions in 2008 for development conditions that may occur as far out as 2038.

3.19.1 Utilities

3.19.1.a The City's average water demand in 2007 reported by the DEIS (730,400 gallons per day) equals an annual water demand of 818 acre-feet/year. This demand substantially exceeds the City's total water rights in 2007 - 719.66 Acre-feet/year. This is farther evidence that the City is not managing its current water demand and raises serious questions about the City's ability to provide water to the Thurston Highlands development. See also comments in response to Sections 1.6, 2.5.2.2, 2.6.1.2, 2.6.1.3, and 3.3.3.

Response to GordonDerr Comment II.3.19.1.a: See the response to GordonDerr Comments II.1.6, II.2.5.2.2, II.2.6.1.2, II.2.6.1.3, and II.3.3.3. Also, the 2007 water demand found in the Draft EIS was an engineering estimate prepared prior to the end of 2007. Actual water use in 2007 was 730 acre feet.

3.19.1.b The description of mitigation measures in this section must be revised to establish which mitigation measures are possible and which mitigation measures will be required.

Response to GordonDerr Comment II.3.19.1.b: See the response to GordonDerr General Comment I.B, above.

3.19.1.c The conclusion that the Thurston Highlands project would result in no significant unavoidable adverse impacts to the City's water service system is completely unsupported by the evidence in the DEIS and is directly contradicted by the City's current Water System Plan, which concludes that the approval of additional water rights in an amount needed to serve the Thurston Highlands project is "unlikely." Moreover, the City's current Water System Plan includes a requirement that the Water System Plan must be updated prior to approval of any new master planned community, which would include Thurston Highlands. Comprehensive Water Plan at p. 2-6. The DEIS must be revised to include a complete evaluation of the impacts of the Thurston Highlands project on the City's water supply system and the local/regional aquifer. It is unlawful for the DEIS to propose a piecemeal environmental review of this element of the environment.

Response to GordonDerr Comment II.3.19.1.c: See the response to GordonDerr Comments II.1.6 and II.3.3.3.b. Draft EIS Chapter 3.19 and the *Thurston Highlands Grading, Drainage, and Utilities Technical Engineering Report* (KPFF Consulting Engineers 2008) address in detail the impacts of the proposed Thurston Highlands Master Planned Community to the City's water supply system.

3.19.2 Sewage Collection, Treatment, and Reuse/Discharge

3.19.2.a The description of mitigation measures in this section must be revised to establish which mitigation measures are possible and which mitigation measures will be required.

Response to GordonDerr Comment II.3.19.2.a: See the response to GordonDerr General Comment I.B, above.

3.19.2.b The evaluation of impacts to the City's wastewater collection, treatment, and reuse/discharge system is wholly inadequate. Until the City completes the update to its Sewer System Plan, any evaluation of impacts to the sewer facilities and operations is speculative. Because the updated information is lacking, the DEIS provides no meaningful evaluation of impacts to the sewer facilities and operations due to the Thurston Highlands project. The suggestion that there will not be an "economic" impact is unsupported speculation and fails to address impacts to all elements of the environment other than economic impacts.

Response to GordonDerr Comment II.3.19.2.c: See the response to GoronDerr Comment II.3.3.3.b, above. Draft EIS Chapter 3.19 and the *Thurston Highlands Grading, Drainage, and Utilities Technical Engineering Report* (KPF Consulting Engineers 2008) address in detail the impacts of the Thurston Highlands Master Planned Community to the City's wastewater collection, treatment, and reuse/discharge system. Draft EIS Chapter 3.20 and the *Thurston Highlands Fiscal Analysis of Development Alternatives* (Property Counselors, April 2008) supports the conclusion that there will not be an economic impact to existing ratepayers of the wastewater collection, treatment, and reuse/discharge system.

3.19.3 Reclaimed Water

3.19.3.a The description of mitigation measures in this section must be revised to establish which mitigation measures are possible and which mitigation measures will be required.

Response to GordonDerr Comment II.3.19.3.a: See the response to GordonDerr General Comment I.B, above.

3.19.3.b The conclusion regarding impacts associated with reclaimed water is unsupported by the information in the DEIS. The DEIS must acknowledge and address the impacts associate with infiltrating 1.5 million gallons of reclaimed water per day, especially to Thompson creek. The City cannot dismiss these impacts by proposing to "direct all or some portion of reclaimed water for infiltration to another site or sites for all or some portion of the year, in order to avoid exacerbating flooding with the Thompson Creek basin. How and where will this reclaimed be directed to another location for infiltration?

Response to GordonDerr Comment II.3.19.3.b: Technical reports prepared to accompany the Draft EIS,⁶ and Draft EIS Section 3.3: Water Resources describe the results of a year-long study and evaluation of the potential impacts of infiltrating the entire volume of reclaimed water generated by the City's wastewater treatment process (in addition to

⁶ *Draft Infiltration Effects Assessment: Thurston Highlands, Yelm, Washington* (Pacific Groundwater Group 2008.); and *Draft Surface Water Evaluation of Thompson Creek* (Brown and Caldwell. 2008.).

project stormwater) on the Thurston Highlands site. Reclaimed water will not originate on the Thurston Highlands site; it will originate at the City's downtown wastewater treatment plant. It can be piped to whatever location(s) the City determines to be optimum for reuse or subsurface discharge. The location(s) for reclaimed water infiltration have not yet been selected by the City. Options are still being considered in the City's *Reclaimed Water Plan* currently in preparation. As previously stated in the response to GordonDerr comments above regarding Draft EIS Section 2.5.2.4, infiltration of reclaimed water on the Thurston Highlands site is not an element of the Master Planned Community proposal, but rather one option being considered by the City. This is clearly stated throughout the Draft EIS and technical reports.

3.19.4 Stormwater Management

3.19.4.a The DEIS acknowledges that the goal of stormwater quantity control "is to protect downstream areas of a drainage basin from erosion and flooding due to increases in the rate and peak frequency of runoff from developed areas." However, the DEIS fails to show how such impacts to the Thompson Creek basin will be avoided.

Response to GordonDerr Comment II.3.19.4.a: Mitigation options to achieve the goal of stormwater quantity control were still being evaluated at the time the Draft EIS was published. Additional information is now available in the *Final Surface Water Technical Report* (Brown and Caldwell, November 2008). The Final EIS (Section 3.3 reproduced in Chapter 3 of this document) contains an analysis of the impacts of Thurston Highlands infiltration on the Thompson Creek flood stage. Using the February 1996 flood as a benchmark, the additional groundwater recharge associated with Thurston Highlands would raise the flood stage from less than one-quarter inch as a result of conceptual Phase 1 development, to a maximum of one-half inch at full build-out with on-site infiltration of 1.5 mgd of reclaimed water (see Final EIS Tables 3.3-4 and 3.3-8 in Section 3.3). A wetland located along the right bank of Thompson Creek near the Tahoma Boulevard bridge in the adjacent Tahoma Terra Master Planned Community could be modified (if permitted) such that high flows in Thompson Creek would spill into the wetland area and return slowly to Thompson Creek. This area could reduce overall peak flows by diverting more water to storage during flood-generating storms than enters the creek due to the Thurston Highlands development. Details of the analyses are provided in the *Final Surface Water Technical Report* (Brown and Caldwell, November 2008). This mitigation measure would require permits from the U.S. Army Corps of Engineers, the Washington Department of Ecology, and the City of Yelm. The potential adverse environmental impacts of this option would need to be examined prior to obtaining these permits.

3.19.4.b The reference to City of Yelm requirements for water quality treatment facilities must be revised to provide a commitment that the City of Yelm will apply the most recent version of Ecology's Stormwater Manual. It is not adequate to state that the 2005 Manual "will be used for design guidance." The DEIS must clarify that Thurston Highlands will be required to meet the requirements of the 2005 Stormwater Manual (or later version issued by Ecology).

Response to GordonDerr Comment II.3.19.4.b: See the response to GordonDerr Comment II.3.1.3, above.

3.19.4.c The description of mitigation measures in this section must be revised to establish which mitigation measures are possible and which mitigation measures will be required.

Response to GordonDerr Comment II.3.19.4.c: See the response to GordonDerr General Comment I.B, above.

3.19.4.d See comments in response to Sections 3.3.1 and 3.3.2.

Response to GordonDerr Comment II.3.19.4.d: See the response to GordonDerr Comments II.3.3.1.a through II.3.3.1.f, and II.3.3.2.a through II.3.3.2.d, above.

Appendix A -Sustainable Development

(1) The DEIS apparently intends to incorporate these principles for sustainable development. However, the DEIS does not provide any information about how any of these principles will be incorporated as requirements for the Thurston Highlands project. The DEIS must be revised to show which sustainable development standards will be required for this project and what the impact of this development will be if compliance with these standards is not required.

Response to GordonDerr Comment (1) on Appendix A: Many of the Sustainable Development Principles have been included in the Draft EIS as Incorporated Plan Features (i.e., proposed by the applicant), such as providing for sufficient retail commercial, professional office space, and recreational opportunities to serve the needs of the Master Planned Community at the neighborhood level. Draft EIS Section 3.19 at page 3.19-18 specifically incorporates low impact development standards as an incorporated plan feature. The Hearing Examiner and City Council will review the proposed Master Planned Community in the context of the Principles for Sustainable Development adopted by the City of Yelm.

(2) A more fundamental problem is that the DEIS fails to acknowledge that the Thurston Highlands project is inherently in conflict with the principles of sustainable development. The City of Yelm can talk about sustainable development and use terms such as Smart Growth, Low Impact Development, and Built Green, but the City has failed to demonstrate that the Thurston Highlands community will be anything other than a very large bedroom community for commuters employed outside of the City of Yelm. As stated in the City's definition of sustainable development: "a community that provides industry and retail services to its population consumes less petroleum per capita than a 'bedroom' community whose citizens have to commute to jobs and for goods and services." What primary industrial and other employment bases will support the Thurston Highlands development? What assessment has been made of the impact of the Thurston Highlands development if a job base within the City of Yelm is not available?

Response to GordonDerr Comment (2) on Appendix A: The City of Yelm has planned for both industrial and commercial growth within the City and its Urban Growth Area consistent with the Principles for Sustainable Development, and is committed to the economic growth of the community. The City has conducted both retail trade and industrial analysis in recent years, and has gone so far as to purchase a spur rail line to support future industrial growth.

Development within the Thurston Highlands Master Planned Community would be responsive to market demand. In other words, if jobs or other reasons cause people to

seek housing in Yelm, as indicated in the 20-year projections prepared by the Washington State Office of Financial Management (OFM) and Thurston Regional Planning Council, the demand will support development of the proposed homes. The Population and Housing sections of the Draft EIS (Sections 3.11 and 3.12, respectively) describe growth forecasts for the City of Yelm. Given the mixed-use nature of development proposed within the Master Planned Community, to include professional offices, retail commercial uses, a significant recreational component, schools and other public service sites, it is expected that employment opportunities would also be available within the development.

(3) The City's sustainable development document acknowledges that "the needs of every community and the programs to address these needs are best defined by the people who live and work there." The Vision Plan reflects the definition of Yelm's growth as defined by its citizens. The Thurston Highlands DEIS describes a plan for growth that is completely at odds with the citizen's adopted vision for Yelm's growth.

Response to GordonDerr Comment (3) on Appendix A: See the response to GordonDerr Comment II.1.1, above.

(4) The City's sustainable development document goes on to warn that "[s]mart growth plans and policies developed without strong citizen involvement will at best lack staying power; at worst, they may be used to create unhealthy, undesirable communities."

Response to GordonDerr Comment (4) on Appendix A: Comment noted.

GordonDerr Concluding Remarks

The purpose of environmental impact statements is not only to disclose environmental impacts, but also to guide decision-making. The Thurston Highlands DEIS not only fails to provide an adequate basis for reviewing environmental impacts. It fails to provide an adequate basis for guiding decision-making regarding future growth in the City of Yelm.

Response to GordonDerr Concluding Remarks: Judging from the fact that the majority of the responses to comments are restatements of the analysis in the Draft EIS or identification of locations in the technical reports that are responsive to the comment, an objective reviewer could conclude that the Thurston Highlands Draft EIS *does* adequately disclose the potential environmental impacts of the Thurston Highlands Master Planned Community.

Response to Comments Submitted by William Hashim

I am going to start my comments by listing those elements I identified during the scoping process. Typical of the City of Yelm, public comments are ignored or minimized as were mine.

Response: Opinion noted.

Also, I require extra time to do a meaningful read and comment on the DEIS. It is large and complex. I handed you a request at the open house in July for additional time. The time you gave was not sufficient given the size and scope of the DEIS. The SEPA Rule requires additional time. Since I have not heard from you I will assume extra time is not granted. Thus I will appeal your decision.

Response: See the response to GordonDerr General Comment I.A.

I also require a complete and thoughtful response to comments as I suspect they will be used during possible litigation. I do not want to see those little thoughtless text box comments which is the modus operandi of your department.

Response: A response to each comment submitted in the William Hashim letter is provided below.

What follows are my comments for consideration of the Thurston Highlands Development EIS. But first:

1. Who Paid for Preparation of the EIS

I am receiving mixed messages as to who actually paid for this study. I hope it is the developers since under state law public funds cannot pay for private development. This DEIS supports private development and thus should be funded by the developers. Please provide documentation that the city of yelm did not pay for this study.

Article VIII, SECTION 7 from the States Constitution -- CREDIT NOT TO BE LOANED.
No county, city, town or other municipal corporation shall hereafter give any money, or property, or loan its money, or credit to or in aid of any individual, association, company or corporation, except for the necessary support of the poor and infirm, or become directly or indirectly the owner of any stock in or bonds of any association, company or corporation.

If you can't prove that you did not pay for this study, I request that the city surrender their status as responsible official. At face value, it seems that the city is the actual proponent of this project, that is, they want this project badly. The city, the director of development, and a staff planner are too close to the developers to give a truly objective decision. Surrendering responsible official status will make this a fair process.

Response to William Hashim Comment 1: The applicant paid all costs associated with preparation and publication of the Draft EIS. Most of the consultants were paid directly

by the applicant, but were supervised and directed by City staff. Documentation that would prove this would consist of invoices submitted to and paid by Thurston Highlands, L.L.C. The City does not have copies of this documentation, and has no need to request it.

Two consulting firms were contracted by the City: Shea, Carr and Jewell; and Parametrix. The City paid these consultants directly, then invoiced the applicant for the amount expended by the City. Documentation of payments to these consultants, invoices to the applicant, and payment from the applicant are available from the City, if requested.

Finally, the City required a developer fee agreement in the amount of \$10,800 per month starting July 1, 2006, to reimburse the Community Development Department for staff time to process the application and supervise preparation of the Draft EIS. Documentation of these payments made by the applicant are also available from the City, if requested.

2. Alternatives

There are many potentials for the Thurston County Highlands Area. This DEIS only considered a few alternatives citing the history of Thurston Highland Proposals and eliminating those as alternatives:

Alternatives Considered and Eliminated. The applicant for the Thurston Highlands Master Planned Community did not consider alternative development concepts for the property other than those described and evaluated in this Draft EIS. Prior proposals considered and eliminated by others are described in Draft EIS Section 2.3, *History and Background of Environmental Review, Land Use Regulations, and Development Proposals for the Site*, in Chapter 2.

What you failed to do was consider alternative buildout scenarios; consider for example, 2500 homes, 2000 homes, or even less. Especially given the uncertainty of Y3 and water availability, I request you entertain those options in addition to the ones identified in the DEIS.

Response to William Hashim Comment 2: See the response to GordonDerr Comments re: Table 2.8-1. An alternative at one-half the proposed residential density of the Thurston Highlands Master Planned Community would foreclose the opportunity to achieve required densities on the site, and therefore would be inconsistent with the GMA or the objectives of the proposal.

3. Groundwater Contamination

3.1 Unregulated and emerging chemical contaminants present numerous technical and institutional challenges to society and to environmental and public health professionals. Over the past four decades, increasingly sensitive analytical techniques have chronicled the emergence of specific chemicals in actual or potential sources of drinking water. As the ability to detect these agents has improved, the number of contaminants regulated under various environmental statutes has also increased, and the universe of regulated agents has grown dramatically. Despite these advances, many contaminants remain unregulated, and the number of such regulated contaminants will continue to grow slowly over the next several decades.

Emerging chemical contaminants such as industrial solvent stabilizers (1,4-dioxane), disinfection byproducts (NDMA), pharmaceuticals (antibiotics/drugs), personal care products (polycyclic musks), pesticides/herbicides (1,2,3-trichloropropane), other persistent compounds such as flame retardants (PBDEs) and phthalates illustrate many technical and institutional challenges. While technologies are available to remove many of these contaminants from water, these technologies are often expensive, and water treatment costs may not balance the estimated reduction in risk.

Since Yelm's drinking water is solely from area wells, risk management decisions in the future will require more complex assessments of the vulnerability of a water supply source to unregulated contaminants, and an analysis of the appropriate combination of treatment processes in the context of water quality uncertainties to meet both current and future hazards arising due to these contaminants taking cost into consideration. It becomes imperative that the risk of not only continued contamination but the exacerbation of ground water contamination from this development be assessed.

Response to William Hashim Comment 3.1: The City of Yelm Critical Areas Code, Chapter 14.08 YMC, is the development regulation promulgated pursuant to the requirement of the Washington State Growth Management Act to protect Critical Aquifer Recharge Areas. The Act requires local Critical Areas regulations to be updated periodically in order to incorporate the latest protection standards. If the issues raised in the comment above are identified in the future as something that should be regulated in local Critical Areas regulations, the Yelm Municipal Code would be updated to incorporate appropriate standards for the protection of the Critical Aquifer Recharge Area.

3.2 The draft EIS never discusses the quality of groundwater. That needs to be known as a baseline condition given the probable impacts this development will create. Thus prior to approving this project, I require at least 1 years worth of ground water quality monitoring.

Response to William Hashim Comment 3.2: A baseline condition is not necessarily a prerequisite for discussing potential impacts from a specific development. Potential impacts to groundwater quality during construction and in the developed condition of the Thurston Highlands Master Planned Community are described in Draft EIS Section 3.3.2 (Groundwater Movement, Quantity, and Quality: Mitigation Measures; pages 3.3-32 and -33), and Section 3.3.3 (Public and Private Water Supplies: Potential Impacts and Mitigation Measures; pages 3.3-36 and -37).

3.3 As mitigation, developers shall be required to perform monthly monitoring of area wells to detect changes in water quality. My well has excellent water and I will hold the City and the developers responsible for any changes to that quality.

Response to William Hashim Comment 3.3: Comment noted.

3.4 On page 3.3-30 you claim that identified groundwater impacts are either not adverse or not significant (for example, the rise in the groundwater level under infiltration areas), or are avoidable by mitigation (such as the increase in groundwater flux to Thompson Creek). However, you never discuss groundwater quality, thus your statement is meaningless. Given the characteristics of the CARA and the likelihood that any treatment will not trap all pollutants, there is a strong likelihood that area wells will be contaminated with infiltration of stormwater and reused water. What kind of mitigation would you propose?

Response to William Hashim Comment 3.4: See the response to William Hashim Comments 3.1 and 3.2 above. Mitigation measures for groundwater quality are clearly identified in Draft EIS Sections 3.3.2 and 3.19.4. Also see the response to GordonDerr Comment II.3.4.b.

4. Protection of Yelm's Critical Aquifer Recharge Area

A Critical Aquifer Recharge Area (CARA) is defined by the GMA as "areas with a critical recharging effect on aquifers used for potable water." The Washington Administrative Code Chapter 365-190 uses the following definition:

"Areas with a critical recharging effect on aquifers used for potable water are areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water."

Given that a large part of Yelm's CARA is under both the Berry Valley Development and the proposed Thurston Highlands Development, how do you plan on protecting this critical resource? The increase in impervious surfaces will not allow full capacity recharge. As you know, effective impervious surface over 10% alters the recharge regime forever.

Response to William Hashim Comment 4: See the response to William Hashim Comments 3.1, 3.2, 3.3, and 3.4, above.

Questions that need to be answered:

4.1. What is the cumulative impact of both large developments and all the smaller ones on Yelm's CARA? This was never answered in the DEIS.

Response to William Hashim Comment 4.1: See the response to GordonDerr Comments II.1.4.2 and II.1.5 regarding the cumulative effects analysis in the Draft EIS.

4.2. How do you propose to protect CARA from contamination? This was never answered in the DEIS.

Response to William Hashim Comment 4.2: See the response to William Hashim Comments 3.1, 3.2, 3.3, and 3.4, above.

4.3. What is the impact on available potable water if this CARA is adversely impacted, and the resultant impact on Yelm's ability to provide potable water to it's citizens? This was never answered in the DEIS.

Response to William Hashim Comment 4.3: The City of Yelm does not have reason to believe that the Critical Aquifer Recharge Area (CARA) would be adversely impacted by the Thurston Highlands development. The SEPA Guidelines require consideration of environmental impacts that are likely, not merely speculative (WAC 197-11-060[4][a]).

4.4. How do you propose to manage groundwater withdrawals and recharge impacts to maintain availability for drinking water sources? This was never answered in the DEIS.

Response to William Hashim Comment 4.4: Section 3.3.3 of the Draft EIS summarizes the process that is in place to ensure that impacts to public and private drinking water supplies are not adversely impacted by additional groundwater withdrawals required to serve planned growth in Yelm, including the Thurston Highlands Master Planned Community. The balance between groundwater withdrawals and recharge is a City-wide water resources management issue currently being addressed in the applications for new water rights to serve future growth.

5A. Impacts to Thompson Creek

5A.1 Page 3.3-4 first paragraph you stated that Thompson Creek is dry most of the year. It is an intermittent creek that historically had water only in the winter/early spring months. However, the last several years has seen the creek with running water for longer and longer periods. I suspect it is a result of increased impervious surfaces and excess flows directed to the creek. Your study is silent on that matter. This hydrologic year water was in the creek from October 2007 to July 2008. That is substantial from historical flows.

Response to William Hashim Comment 5A.1: See the response to GordonDerr Comment II.3.3.1.f. Flow was observed at SR 510 by the Thurston Highlands technical team for two periods in 2008: first in February, as reported in the *Draft Surface Water Technical Report* (Brown and Caldwell, May 2008), and second in March, as reported in the *Infiltration Effects Assessment* (Pacific Groundwater Group 2008). These observations both occurred on a single day, so the period of flow is not known.

5A.2 However, your proposal to infiltrate stormwater into the shallow aquifer system which would directly impact Thompson Creek is absurd. You will change the flow regime from intermittent to perennial. In addition, you[r] description of Thompson Creek as a "conveyance" is disturbing. A conveyance is used to direct polluted waters (whether it is waste or stormwater) to a receiving waterbody. If I understand your proposal, excess stormwater will be infiltrated into a CARA, which will find its way to Thompson Creek, and that polluted water will find its way to the Nisqually River. That is a NO NO.

Response to William Hashim Comment 5A.2: It is unclear from what source the misconception is derived that the word "conveyance" pertains only to the transport of polluted waters. This narrow definition is not found in conventional dictionaries used for written communications with the general public.

With regard to the comment that development on the Thurston Highlands property “ . . . will change the flow regime from intermittent to perennial,” the groundwater monitoring and modeling performed to evaluate the effects of the Thurston Highlands Master Planned Community suggest that Thompson Creek may flow for a longer period each year, but the creek would remain intermittent, not perennial.

With regard to stormwater quality in runoff to be infiltrated to shallow and deep aquifers, see the response to Gordon Derr Comment II.3.3.2.d.

5A.3 On page 2.13 you claim that upwards of 30% of infiltrated stormwater would reach Thompson Creek and yet on page 3.3-19 you state that No significant unavoidable adverse impacts to surface water movement, quantity or quality would be anticipated. What you are proposing is a huge impact. The statement does not follow your proposal. How can you say that 30% of infiltrated stormwater reaching Thompson Creek is not a significant environmental impact?

Response to William Hashim Comment 5A.3: See responses to William Hashim Comment 5A.2 above and GordonDerr Comment II.3.19.4.a.

5B. Controlling Stormwater Runoff

I suggest Yelm volunteer to be part of the Phase II general stormwater permit because if they allow this proposal to happen according to the DEIS they will be liable for third party lawsuit. Yelm and the developers are not capable of controlling stormwater through either source control or treatment. Phase II regulations will help immensely.

Response to William Hashim Comment 5B: Suggestion and opinion noted.

6. Transportation

6.1 This may be the most obvious issue facing Yelm and all developments within the city. For the EIS, this project needs to identify every transportation option possible, study the current transportation patterns, ownership, environmental effects, and then select the most appropriate. It may be that there is no option that would allow the size of development proposed. This issue needs to be addressed also. What is needed is a transportation cumulative impacts study for the city of yelm. The current proposal for egress onto 93rd is not acceptable, nor is any egress that will impact 93rd, including using Rathbun as a future transportation corridor. I suggest looking at options for egress onto 507 in the area of George road. That would put outgoing traffic nearer the currently planned loop around Yelm.

Response to William Hashim Comment 6.1: The Draft EIS included a thorough analysis of options to mitigate potential significant impacts to the transportation system, and provides decision makers with a basis for establishing appropriate mitigation through the project review process. Yelm’s Transportation plan has included a connection from 93rd Avenue SE into the area of the Thurston Highlands since 1992. Therefore, to not identify this potential connection would be inconsistent with adopted plans and policies.

6.2 There is a strong indication that gas tax funds are decreasing and thus funds for Y3 are not guaranteed by a long shot. As I discussed above, you need to develop options for buildout less than what you would desire. In the event of no Y3, what would be the impacts of 2500 homes, 2000 homes or less.

Response to William Hashim Comment 6.2: Construction of the SR 510 Yelm Loop is identified in the Draft EIS as being necessary prior to development within the Thurston Highlands Master Planned Community of anything beyond the first conceptual phase. If a Traffic Impact Analysis or concurrency analysis prepared for a future phase of development within the Thurston Highlands Master Planned Community identifies the need for the SR 510 Yelm Loop prior to approval, City decision makers would condition that approval on construction of the Loop, whenever it may occur.

6.3 On page 33 of the Transportation Impact Analysis it was stated,

“In general, transportation improvements identified in **Appendix C** are not guaranteed for construction; they simply define a need that should be addressed as funding becomes available. In review of the entire list of planned transportation improvements, funded projects have been identified in coordination with the City of Yelm, and have been assumed for completion by 2012 and 2015 as baseline conditions including: . . .”

Given that you admit there is no guarantee for transportation funding, you need to propose alternative buildout scenarios. Failure to do so is a huge mistake.

Response to William Hashim Comment 6.3: The report section cited in this comment explains that the TIA used a conservative methodology in that future projects without a secured source of funding were assumed to be un-built as part of the ‘baseline’ transportation system. Thus, even though a project may be listed in an approved Six-Year Transportation Improvement Program, the model assumed that it was un-built unless it is funded.

If these improvements had been included in the baseline transportation system network, the impacts of the Thurston Highlands Master Planned Community would have been under-reported.

7. Water Quantity – Water rights

7.1 There is “probably” not enough water for this project. What is the projected water need to support a development of this size? If there is not enough water, how do you propose to acquire it? You need to create development options in the event that you cannot acquire all the water you need. I propose you begin an aquifer drawdown study. This aquifer supports the existing wells, both in the city and outside the city limits, and probably the water quantity in the Nisqually River. There is a study that is either ongoing or has been completed that measures the impacts of aquifer drawdown on the Nisqually. If that study is not sufficient to answer the questions of impact to not only the Nisqually but other area wells, then the city or proponents need another more comprehensive study is needed for this EIS.

Response to William Hashim Comment 7.1: The projected water requirements of the conceptual land use alternatives for the Thurston Highlands Master Planned Community are described in Draft EIS Section 3.19.1 (page 3.19-4). Also see the response to GordonDerr Comment II.1.6.

7.2 On page 3.3-37 you claim that No significant adverse impacts to public or private water supplies are anticipated that could not be avoided or mitigated, but yet you never go into much detail on water use or the potential impacts to other groundwater users. Nor do you go into any possible ways to avoid or mitigate. RCW 90.44 gives me the right to the water I use. Over the last 12 years since I have lived in my house, my water level has only fluctuated a few inches. If my water rights are harmed in any way I will hold the city of yelm and Thurston Highland Developers responsible. So you better understand the impacts of the water use for your development prior to any approval and breaking of ground.

Besides, how can you even approve of a project of this scope without water being guaranteed to you. As a junior water right holder, there are many users first in line that want water also.

Response to William Hashim Comment 7.2: See the response to GordonDerr Comments II.1.6, II.3.3.3.a, II.3.3.3.b, and II.3.3.3.d.

8. Population

8.1 The increase in population is dramatic and yet you claim that:

POSSIBLE MITIGATION MEASURES

Because no adverse impacts to anticipated population growth are anticipated, no mitigation measures for such impacts have been identified.

and

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

From a City planning perspective, no significant unavoidable adverse impacts to population growth within the City of Yelm and its UGA would be anticipated.

With dramatic population growth there is a need for increased services. The economic impact to the people of Yelm will be tremendous. Fire, police, waste water, education, public health are just a few of the impacts that will be felt. How do you propose to mitigate these?

Response to William Hashim Comment 8.1: The fiscal impacts to public services are fully analyzed in the *Thurston Highlands Fiscal Analysis of Development Alternatives* (Property Counselors, April 2008), summarized in Draft EIS at Sections 3.18 and 3.20.

8.2 Public Services, 3-18, claims that the cities use of sustainability principles, LID, and Smart Growth will help mitigate impacts to the citizens.

However, I commented on your statement of sustainability during the time it was adopted. Then as now, I find it a meaningless statement with no real policies or principles attached to it. In addition, Yelm is not a Smart Growth community and the LID concepts are cut and past from somewhere else. Until Yelm decides to adopt Smart Growth, I want to see in place mitigation that will protect Yelm citizens from unsustainable planning practices.

Response to William Hashim Comment 8.2: Opinion noted. Also see the response to GordonDerr Comments on Appendix A.

Response to Comments Submitted by Ed Wiltsie

1. Watershed Alterations

1.A Stormwater generated by this project is proposed to be infiltrated into the site areas with good subgrade infiltration characteristics. These areas are coincident with areas identified in the DEIS as having essentially no aquitard between the surface and the Qva aquifer. As such, storm runoff will by-pass the traditional shallow groundwater aquifer (Qvr) and enter directly into the drinking water aquifer that serves numerous drinking water wells north of the project site (downstream). This introduction of runoff into the aquifer is very likely to degrade the water quality conditions in this presently pristine aquifer, altering the conditions permanently and irreparably. This potentially very adverse condition has not been discussed at any length in the DEIS.

Response to Ed Wiltsie Comment 1.A: The Draft EIS reports in Section 3.3.2 (page 3.3-33) that the quality of stormwater infiltrated on the Thurston Highlands site will be treated in compliance with methods set forth in the Washington Department of Ecology *Stormwater Manual for Western Washington* (2005) prior to infiltration. Stormwater infiltration is encouraged by these regulations to help maintain groundwater resources. Also see the response to GordonDerr Comments II.3.3.2.d and II.3.4.b. In addition, the significant thickness of unsaturated soil will retard and/or retain some of the potential pollutants in stormwater, such as metals and polycyclic aromatic hydrocarbons (PAHs), the latter originating from sources such as vehicle exhaust emissions and parking lot sealants (e.g., coal tar and asphalt).

1.B Stormwater runoff generated in areas not tributary to the Qva drinking water aquifer that is disposed of in areas tributary to the Qva aquifer constitute the transfer of water between drainage basins and alteration of the aquifer recharge conditions. This action has the potential of major broad area and long-term adverse impacts within the City of Yelm and Thurston County. This transfer of water between basins has not even been mentioned in the DEIS. Similar alternatives were discussed at the January 2006 meeting held by WSDOE in the aftermath of the severe Thompson Creek flooding of 2005/2006. It was determined that prior to any action being taken a Thompson Creek Water Conservation District should be formed to provide for regional planning of the Creek flood plain and tributary areas.

Response to Ed Wiltsie Comment 1.B: The preferred method identified in the Draft EIS for the disposal of stormwater is infiltration, which is a best management practice in the most current Stormwater Manual for Western Washington (Ecology 2005), and recommended as a method for low impact development. The infiltration of stormwater by its nature does not move stormwater between surface water drainage basins.

The *Thurston Highlands Grading, Drainage, and Utilities Technical Engineering Report* (KPF Consulting Engineers 2008) identifies 10 logical site sub-basins on the property and does identify pumping stormwater between site sub-basins as a potential mitigation measure relating to adverse impacts to Thompson Creek.

The alteration of aquifer recharge conditions resulting from changes to stormwater infiltration was not specifically identified in the scoping documents as a potential significant adverse impact, and would be difficult to quantify for any specific project, as the amount of rainfall 'moved' between aquifers even in a development the size of

Thurston Highlands is statistically meaningless in a 50 square mile watershed such as the Yelm Sub-basin of the Nisqually watershed.

The possible formation of a Thompson Creek Drainage District is discussed among stormwater mitigation options in Draft EIS Section 3.19.4 (pages 3.19-19 and 3.19-20). This is not an element of the Thurston Highlands proposal, as it is a broader issue involving all property owners within the drainage basin. The applicant has expressed an interest in working with the City and other property owners along the creek to form a district of this nature to improve the current situation for all affected property owners, if there is a willingness on the part of the other property owners to proceed.

1.C The DEIS clearly states that more than one half of the 40 inches of rainfall that falls as an annual average in the Yelm Area is lost to evaporation or plant transpiration. The proposed development will reduce this rate of rainfall transfer directly to the atmosphere by more than 60% returning an additional 30% of the annual rainfall to be handled by the existing groundwater system and Thompson Creek as also stated in the DEIS. This change will irreversibly alter the local hydrology and will require large scale mitigation measures.

Response to Ed Wiltsie Comment 1.C: The volume of water currently lost to evaporation and plant transpiration would become available for infiltration and aquifer recharge. This has the potential to increase the groundwater resource available in the Yelm and downgradient areas. The measures required to mitigate potential impacts to Thompson Creek are described in Draft EIS Section 3.3 Water Resources, reproduced in Chapter 3 of this Final EIS. These measures are limited in scale, consisting of, for example, pumping excess stormwater to an area on the Thurston Highlands site where it would not report to Thompson Creek; improving the conveyance capacity of Thompson Creek by improving stream crossings that currently restrict flow and/or cleaning the channel of vegetation and improving the channel cross section; or increasing the storage capacity at selected locations along Thompson Creek to reduce peak flows from stormwater runoff.

1.D The DEIS very clearly points out that the proposed development will change the flow characteristics of Thompson Creek in the form of creek stage and flood area. This change will adversely impact downstream property owners by increasing inundation on their land without their permission and can not be legally justified. Proposed mitigation measures will not resolve or minimize this condition.

Response to Ed Wiltsie Comment 1.D: See the response to GordonDerr Comments II.3.3.1.c, II.3.3.1.f and II.3.19.4.a.

1.D.1 The DEIS lists retaining as much undisturbed/naturally vegetated area as possible to enhance evapo/transpiration as a mitigation measure. This not mitigation, but is maintenance of natural conditions which is a break even for the area considered for this application. It does not provide mitigation or improvement of condition changes that result as a result of the proposed development.

Response to Ed Wiltsie Comment 1.D.1: Comment 1.D.1 takes information out of context from Draft EIS Section 3.3.1 (page 3.3-18). The full statement with regard to enhancing evapotranspiration to the maximum extent possible is as follows:

The quantity of stormwater to be infiltrated could be reduced by enhancing evapotranspiration within the development. This could be accomplished by maintaining as much of the existing forest cover as possible, and by enhancing transpiration by select plantings. However, evapotranspiration is highest in the summer months, which is not the period when stormwater generation is greatest. This alternative is therefore considered to have limited mitigation potential.

The Draft EIS acknowledges that this is likely the least effective mitigation option for minimizing the impacts of increased quantities of stormwater runoff from the developed condition of the site. Four additional options are described at this same location in the Draft EIS.

1.D.2 The DEIS mentions mitigation by retention/detention and off season release of collected runoff.

Thompson Creek is an intermittent seasonal creek, as accurately described in the DEIS. It is also accurately noted that the creek lies dry for most of the year. The release of retained/detained runoff would result in creek flow or recharge into the subgrade along the creek during the normal dry season. This will amount to intentionally changing the local and regional hydrology of the creek within the City of Yelm and Thurston County. As noted above this condition was reviewed at the meeting with WSDOE and it was determined that 2005/2006 and 2006/2007 flood damage (downstream of Tahoma Terra and Thurston Highlands) and future creek maintenance and operation would require the formation of a local Water Resources Conservation District.

Response to Ed Wiltsie Comment 1.D.2: With regard to the change in flow in Thompson Creek, see the response to GordonDerr Comment II.3.19.4.a, and William Hashim Comment 5A.2, above. With regard to the possible formation of a Thompson Creek Drainage District, see the response to Ed Wiltsie Comments 1.B above and 7 below.

1.D.3 The DEIS describes mitigation via retention/detention with the infiltration of as much collected runoff as possible. Based on assessments of infiltration potential, the areas used will be relative close to Thompson Creek and into soil with relatively high infiltration rates. This combination will result in significantly reduced travel time of the infiltrated runoff within the shallow groundwater system. The DEIS states that the "Interflow Transmission Rate ranges from ft per day to ft per year." Infiltrating runoff closer to the creek than naturally occurs at present will cause runoff to reach the creek days to years faster than at present, which will change the regional creek hydrology. This change will result in less flow attenuation, higher creek stages and expanded creek flooding areas, hence damage to downstream property owners. As noted above this condition was discussed at the WSDOE meeting in 2006 with the resultant recommendation that a Water Resource Conservation District be formed.

Response to Ed Wiltsie Comment 1.D.3: The groundwater flow model used infiltration over the same sub-basins as existing conditions; therefore, only the volume of water infiltrated was changed. Thus, the travel times would not be changed from existing conditions, although the total volume infiltrated would increase. The increase in the groundwater discharge to Thompson Creek and its effect on flooding is discussed in the response to GordonDerr Comment II.3.19.4.a. Details of the analysis are provided in the *Final Surface Water Technical Report* (Brown and Caldwell, November 2008). With regard to the possible formation of a Thompson Creek Drainage District, see the response to Ed Wiltsie Comments 1.B above and 7 below.

1.D.4 The DEIS describes mitigation via Improving the Creek Channel Hydraulic Characteristics. This alternative would require either dredging the creek on private property, mowing the creek channel on private property. Creek dredging to increase flow capacity would require major modification of the creek in Critical Areas Environments and is not permitted by City Ordinance, Thurston County, WSDOE and WSDF&W. Recently, a downstream farm was admonished by state agencies for this exact action. Mowing of the creek to improve channel hydraulics would involve the cooperation of downstream property owners and was discussed at the January 2006 post-flood WSDOE meeting with the ultimate determination that a Water Resource Conservation District needs to be formed to consider such issues and applications. This has no[t] been undertaken to date.

Response to Ed Wiltsie Comment 1.D.4: See the second paragraph of the response to GordonDerr Comment II.3.3.1.f. With regard to the possible formation of a Thompson Creek Drainage District, see the response to Ed Wiltsie Comments 1.B above and 7 below.

1.D.5 The DEIS describes adding storage along Thompson Creek. Similar to the above item, this approach would require the alteration of the topography along Thompson Creek within Critical Areas, which is not permitted by City Ordinance, Thurston County, WSDOE and WSF&W. This approach was discussed at the January 2006 post-flood WSDOE meeting with the determination that a Water Resources Conservation District be formed. To date this District has not been formed.

Response to Ed Wiltsie Comment 1.D.5: Any proposal to perform earthwork to encourage off-channel, peak-flow storage would require permits and compliance with applicable City, County, State and Federal regulations. See the response to GordonDerr Comments II.3.3.1.f and II.3.19.4.a. With regard to the possible formation of a Thompson Creek Drainage District, see the response to Ed Wiltsie Comment 1.B above.

1.D.6 The DEIS states that the most effective stormwater disposal approach (most nearly emulating the natural conditions at the site), near source retention and infiltration was not considered to be suitable for broad scale application for this project, as it would require the dedication of too much land from the development. The amount of land required to appropriately mitigate stormwater runoff disposal, adverse hydrologic and creek flow impacts should not be justification for not using the most suitable mitigation process. Mitigation in this case should consist nearly totally of near source retention and infiltration for disposal. This approach should be modeled in this DEIS and the results described.

Response to Ed Wiltsie Comment 1.D.6: Without a specific citation for where in the Draft EIS or technical reports the first sentence of Comment 1.D.6 is made, it is unclear how this misconception was derived. The proposed stormwater management plan for the Thurston Highlands development is to mimic the existing stormwater condition to the extent practicable by designing to the criteria in the 2005 Washington Department of Ecology *Stormwater Management Manual for Western Washington (SWMMM)*, and the City of Yelm *Principles for Sustainable Development (PSD)*, without significant impacts to Thompson Creek. Both documents encourage Low Impact Design (LID) techniques that apply stormwater management facilities for quantity and quality control at a smaller scale than traditional designs so that the facilities are closer to the original source. The Thurston Highlands site has areas with low permeability; therefore, some larger regional

ponds may be necessary to either *retain* the runoff for a slow infiltration rate at that location, or *detain* it for release to another area with better infiltration rates.

Retention facilities hold runoff at their location for infiltration at the allowed rate. *Detention* facilities hold runoff to be released to another facility at controlled rates. Retention and detention are not synonymous, interchangeable terms.

Near-source retention is targeted for this development to the extent practicable, except in those areas that would have a significant impact to Thompson Creek or protected wetlands. In those areas, the plan is to detain the runoff and convey it to a better location for infiltration. Because no specific site plan exists at the time of this writing, there is no detailed grading plan, and no soil testing at the elevation of future facilities has been performed. For this reason, modeling a specific system is not practical at this time. With the information that has been gathered from testing and modeling performed by Pacific Groundwater Group and Brown and Caldwell, KPFF Consulting Engineers have calculated estimates of total volumes of stormwater for infiltration, sufficient to confirm that it can feasibly be infiltrated around the proposed development. Results of these models are presented in Draft EIS Section 3.19.4.

2. Hydrologic/Hydraulic & Shallow Groundwater Modeling

2.A The DEIS describes and includes considerable technical information relating to subgrade infiltration of runoff, subgrade transmission of runoff and modeling of Thompson Creek stage and flood area. In reviewing the analyses performed, I find the following:

2.A.1 The modeling performed is noted to have been performed using rainfall data for Olympia Airport.

Response to Ed Wiltsie Comment 2.A.1: All analyses used the Olympia Airport precipitation data, since it is the most complete record, multiplied by a factor 0.8. This is the gauge factor for Yelm used in the Ecology WWHM3 software for analysis of stormwater systems.

2.A.2 In my own hydrologic studies performed within the City of Yelm, I have found that there are significant differences in the rainfall data collected in Olympia and Yelm. For example, the Olympia Gauge records average annual rainfall to be about 53 inches, while Yelm records (as is stated in the DEIS) 40 inches per year.

Response to Ed Wiltsie Comment 2.A.2: The precipitation values noted in Comment 2.A.2 confirm that a gauge factor of 0.8 is appropriate to adjust the Olympia precipitation record to Yelm. Also see the response to Ed Wiltsie Comment 2.A.1.

2.A.3 The City of Yelm measures and records daily rainfall at the City Wastewater Treatment Plant, which is the most representative data for the Yelm Area.

Response to Ed Wiltsie Comment 2.A.3: See the response to Ed Wiltsie Comment 2.A.1. The WWHM3 stormwater analyses use the Olympia gauge with a gauge factor of 0.8 for Yelm. In order to maintain consistency, the same data were used for the stormwater, surface water and groundwater modeling.

2.A.4 Comparison of daily rainfall at the Olympia gauge site and Yelm gauge site shows significant differences in rainfall patterns and amounts.

Response to Ed Wiltsie Comment 2.A.4: See the response to Ed Wiltsie Comment 2.A.1.

2.A.5 The fact that City of Yelm rainfall data has not been used to perform the analyses and studies introduces significant inaccuracies into this delicate process.

Response to Ed Wiltsie Comment 2.A.5: See the response to Ed Wiltsie Comment 2.A.1.

2.B Thompson Creek Hydrologic, Hydraulic and Shallow Groundwater modeling as described in the DEIS has been performed using generalized area hydrology, groundwater flow considerations developed for the McAllister Springs Watershed (City of Lacey) and Thompson Creek flow monitoring performed above and below the Tahoma Terra Bridge from 29 December 2007 through 06 March 2008. Hindcast hydrologic performance parameters from these 2 months of data were applied to Olympia Airport rainfall data to calculate/estimate Thompson Creek flood depth and flood area performance for 1981 and 1997 rainfall data.

Response to Ed Wiltsie Comment 2.B: See the response to Ed Wiltsie Comment 2.A.1.

2.B.1 Again Olympia gauge rainfall data was used not Yelm data.

Response to Ed Wiltsie Comment 2.B.1: See the response to Ed Wiltsie Comment 2.A.1.

2.B.2 Performance of an estimated average rainfall year and an extreme rainfall year was calculated/estimated from 2 months of flow data collected upstream and downstream of a significant creek flow restriction, which is not a bridge, but a grouping of culvert sections set in the creek flow channel above two significant hydraulic restrictions, the Berry Valley Road culvert and the 93 Avenue culvert. These culverts were discussed extensively during the January 2006 post-flooding meeting at WSDOE. As such, the hydraulic performance predicted is highly suspect with respect to accuracy and general representation of creek performance.

Response to Ed Wiltsie Comment 2.B.2: This comment refers to the estimated change in base flow to Thompson Creek. The change in base flow was computed through a combination of geological mapping, observation wells, and hydrogeological modeling. The change in base flow was not determined from the wintertime flow monitoring near the Tahoma Terra bridge. The average and extreme rainfall years were evaluated to determine how much year-to-year variations in rainfall would affect the change in base flow to Thompson Creek attributable to the Thurston Highlands development.

The hydraulic model of Thompson Creek was derived from stream channel and floodplain topographic survey on all accessible properties along Thompson Creek. The model incorporates the culvert hydraulics at Berry Valley Road. The model predictions were consistent with field observations made during the preceding winter.

2.B.3 The Thompson Creek tributary basin, per the DEIS and personal research is highly dependent on antecedent rainfall/groundwater recharge conditions. The analyses performed and use of the 2 months of data does not describe having taken into account the 03/04 December 2007 storm that in some areas of Thurston County and Mason County was nearly 100 year/24 hour rainfall events. This event would have had the impact of providing early and extensive recharge of the shallow groundwater system during the stream flow data collection period raising the creek flow rates and stages above the levels that would have been representative for the 29 Dec 2007 to 06 March 2008 collected data. As such, the analyses performed would appear to strongly favor an over estimation of monitoring period flows and stages and under estimation of the 1981 and 1997 calculated/estimated values.

Response to Ed Wiltsie Comment 2.B.3: See the response to Ed Wiltsie Comment 2.B.2 with regard to flow monitoring.

Monitoring of groundwater levels available through Fall 2007 and into early 2008 showed that groundwater response significantly lags precipitation (see the *Final Infiltration Effects Assessment*, Pacific Groundwater Group, October 2008). Thus, the stream flow data collected from late December onwards will have included the effects of recharge from the early December storm event. The purpose of the hydraulic modeling reported in the Draft EIS was to estimate how much the water surface elevations would change in Thompson Creek due to the increased Thurston Highlands recharge reporting to Thompson Creek. Tables 3.3-3 and 3.3-6 in Draft EIS Section 3.3 listed the simulated change in water levels.

2.B.4 Subsequent to the January 2006 post-flood WSDOE meeting a program to monitor the flow in Thompson Creek was initiated by Thurston County at the 93 Avenue culvert. Monitoring equipment was in place during the 2007/2008 wet season. The data collected for this near by monitoring site has not been mentioned or included in the analyses described in the DEIS. These data should be incorporated into the DEIS analyses.

Response to Ed Wiltsie Comment 2.B.4: Thompson Creek water depths recorded by the Thurston County gauge at 93rd Avenue SE were reviewed to provide a further check of the HEC-RAS model simulations. Thurston County staff were unable to develop a rating curve for this site during the preceding winter, so only water depths and not flow rates were used in the Draft EIS analysis. (A “rating curve” is a graph that relates the flow at a specific location on a water course, to the depth of water at that location.)

2.B.5 It is noted that the Thompson Creek hydrology has been significantly altered by City of Yelm development approvals in the past, specifically the closure of the two WSDOT culverts under SR507 described in the JWMA reference relating to the Ridgeline Trough. The real headwaters of Thompson Creek originally were located well south of SR507. This process should consider this fact and seek to reestablish the pre-1999 hydrologic and hydraulic conditions of the upper Thompson Creek drainway, which included a surface flow path across the Nisqually Valley Golf Course.

Response to Ed Wiltsie Comment 2.B.5: The report referenced in Comment 2.B.5 was used by Brown and Caldwell as an information source during their preparation of the *Surface Water Evaluation of Thompson Creek*. The purpose of an Environmental Impact Statement is to fully disclose the potential environmental consequences of a proposed action along with potential mitigation measures to decision makers, not to seek a certain mitigation outcome. The Draft EIS fully discloses the potential impacts to Thompson

Creek, and identifies appropriate mitigation measures for these impacts. While 'up-basin' restoration may be a worthwhile goal, it is not required to mitigate the identified impacts to Thompson Creek from the Thurston Highlands proposal.

3. Road & Building Slope Setbacks

The Earth Section of the DEIS states that road and building set backs will be established to be equal to the slope height. This criterion is reasonable and should be adopted as the minimum condition to be adjusted upward if necessary based on the slope configuration and soil make up.

Response to Ed Wiltsie Comment 3: Mitigation measures proposed by the applicant in Section 3.1.2 of the Draft EIS (*Incorporated Plan Features*, page 3.1-12) include the following clarification:

Existing steep slopes on the site appear to be stable. However, to minimize potential instability associated with newly-constructed steep slopes as well as existing steep slopes, the proposal includes locating all roadways and building foundations outside a setback from the top of the slope equal to the height of the slope. Where additional geotechnical and engineering analyses show that safety requirements can be met, the width of this setback may be reduced. Drainage would be directed away from steep slopes to areas where infiltration would not impact stability.

4. Infiltration Information

Figure 3.1-4 Test Pit Locations and Infiltration Rates is noted as presenting infiltration rates in its title and in the DEIS text. The included figure does not show infiltration information of any sort. This figure should be reissued in a revised version of this DEIS.

Response to Ed Wiltsie Comment 4: The legend for soil types includes the infiltration rate in inches per hour. This unit of measure has been clarified in the legend, and Figure 3.1-4 is reproduced in Chapter 3 of this Final EIS.

5. Reclaimed Wastewater

The DEIS proposes the disposal of 1.5 million gallons of reclaimed wastewater, which is about 2 times the amount of wastewater that would be generated by the full build out of the Thurston Highlands development. This means that about 50% of the reclaimed wastewater would be imported from other areas of the City of Yelm.

5.A This water would be transferred from the area of generation, which in large part would be the Yelm Creek Drainage Basin to the Thompson Creek Drainage Basin. Transfer of water from one basin to another has serious repercussions.

- It changes the hydrology of both the basin it is withdrawn from and the basin it is transported to.
- It changes the water balance in both basins, impacting water rights.

Neither of these issues have been raised or discussed in the DEIS. As this is a major environmental impact item, it should be included in this study.

Response to Ed Wiltsie Comment 5.A: See the response to GordonDerr Comment II.2.5.2.4.

5.B This water would add to the already highly charged hydrologic environment in the Thompson Creek basin. The amount of wastewater proposed for disposal in the Thurston Highlands basin amounts to a constant flow of 2.3 cfs into infiltration areas that will be located relatively close to Thompson Creek and per the DEIS will raise the flow rate and stage of the creek. This water would be contributed to the creek 365 day per year, even during the annual dry season when this intermittent seasonal creek does not flow for 6 to 11 months of the year. As such, this addition of a constant wastewater stream to the creek basin would change the creek hydrology and flow patterns, and even the natural vegetation in the area downstream from the disposal point. This regional change of hydrology is a major issue for downstream/Thurston County property owners. This item is strongly related to all of the issues raised at the January 2006 post-flood WSDOE meeting and is grounds for the formation of a Thompson Creek Water Conservation District.

Response to Ed Wiltsie Comment 5.B: See the response to GordonDerr Comment II.2.5.2.4.

5.C The reclaimed wastewater that is proposed for disposal within the project area generally meets present drinking water standards. However, the present standards are being legally challenged with regard to the level of treatment and appropriate of disposal into active drinking water aquifers. Present wastewater treatment processes do not remove all pathogens from the treated stream and do not remove pharmaceuticals from the wastewater stream. The lack of a suitable aquitard within the project site will introduce the wastewater stream into the local drinking water aquifer in close proximity to numerous private water wells that have been in use for many years, compromising their water quality with regard to organism introduction and medication introduction. No consideration is given to these items in this DEIS.

Response to Ed Wiltsie Comment 5.C: See the response to GordonDerr Comments II.2.5.2.4 and II.3.3.2.d; and to William Hashim Comment 3.1.

5.D At present the City of Yelm reintroduces reclaimed wastewater into the shallow groundwater system via a surface pond system at Cochrane Park in the center of the City. The infiltrated wastewater enters the aquifer in an area where there is no direct contact with the lower drinking water aquifer. Additionally, there are not drinking water wells within about 1 mile of the ponds. This application is performed within the City of Yelm and essentially impacts the City of Yelm. In this case, the introduction area has no to limited aquitard and will introduce wastewater into the drinking water aquifer within less than ½ mile of numerous private well sites and into the aquifer that they draw from. This condition has not been presented or discussed in this DEIS.

Response to Ed Wiltsie Comment 5.D: The current City of Yelm practice of infiltrating reclaimed water in Cochrane Park is discussed in Draft EIS Sections 3.3.2, 3.3.3, and 3.19.3. Also see the response to Ed Wiltsie Comments 5.B and 5.C, above.

6. DEIS Document Length & Complexity

It is noted that Washington State RCW's state that the EIS should be no longer than 150 pages. I applaud the authors for attempting to cover such a large project in a single document and increasing its size to 350 pages to accommodate the Public Information intent of this process. I request that either the project be broken up in to more tractable portions allowing adherence to the RCW requirement of 150 pages or an additional 1 month of review time be provided to allow the more complete study of this extensive and complex document.

Response to Ed Wiltsie Comment 6: See the response to GordonDerr General Comment I.A. The Draft EIS was distributed to everyone on the Distribution List (Draft EIS Chapter 5) in the form of electronic files on a CD. Files were broken down by Chapter. Chapter 3 – Affected Environment, Potential Impacts, and Mitigation Measures, was further segregated into each of the 20 elements of the environment that were evaluated in the Draft EIS. The length of these Chapters and sections ranged from one page to 47 pages (maximum). This was intended to facilitate selection and review of information of specific interest to agencies and members of the general public. It is unclear how the document could have been segregated into more logical, tractable portions than those provided.

7. Thompson Creek Water Conservation District

Many of the hydrologic, hydraulic, shallow groundwater and deep groundwater issues that have been raised in the preceding paragraphs relate back to items discussed at length at the 28 January 2006 post-flood WSDOE meeting. I request that the meeting conclusion that a Thompson Creek Water Conservation District be formed to develop a comprehensive basin/drainway plan prior to the performance of further study or City consideration of this development proposal so that coordinated (City and County) planning can be performed for the Thompson Creek area that will provide adequate representation of all of the stakeholders of the Thompson Creek environment.

Response to Ed Wiltsie Comment 7: See the response to Ed Wiltsie Comment 1.B, above. The meeting referenced in Comment 7 did not conclude that a Flood Control District be formed, but suggested that the formation of such a district could fund projects to manage flooding on Thompson Creek. Formation of a Flood Control District is discussed as a possible stormwater mitigation option in the *Infiltration Effects Assessment* (Pacific Groundwater Group 2008), and in Draft EIS Section 3.19.4.

Response to Comments Submitted by Gail Cane

1. This EIS is very extensive. Why are water quality tests for Yelm's existing water supply not included? A show of latest test results would give confidence in Yelm's good intent to provide clean water for existing rate payers as well as this new development.

Response to Gail Cane Comment 1: See the response to William Hashim Comment 3.

2. Yelm residents are currently paying approximately \$70 per month water and sewage rates. The City is obligating residents for local improvement districts without making public the financial terms. An estimated \$22 million one-time tax is referred to in the EIS Fiscal Analysis. These costs seem at the discretion of City decision makers without regard for residents and changing financial markets.

Response to Gail Cane Comment 2: Monthly utility bills provide revenue for the operation and maintenance of current facilities, while connection fees contribute to the funding of new facilities.

The Fiscal Analysis in the Thurston Highlands Draft EIS (Section 3.20) discusses the use of a local improvement district as a possible funding mechanism for park facilities, along with other funding opportunities.

The comment regarding “a \$22 million one-time tax” appears to refer either to the cost range of park facilities from \$10.9 million to \$12.8 million on page 3.20-17, or to a reference on page 3.20-9 that reports that the City would receive an estimated \$2.4 million in tax revenues generated by construction activities in Phase 1, and \$11.3 to \$15.5 million at full build-out of the Thurston Highlands Master Planned Community, depending on the development alternative selected for implementation. If the comment is in regards to park funding, the \$10.9 million to \$12.8 million is a cost range based on the development alternatives, not added together. The \$2.4 million and \$11.3 to \$15.5 million refer to tax *revenue* (not expense) that would be collected by the City as part of the taxable construction value and property sales of the project.

The comment regarding “an estimated \$22 million one-time tax” referred to in the EIS Fiscal Analysis appears to be a mis-quote of a statement made on page 3.20-9 of the Draft EIS, which reports that the City would receive an estimated \$11.3 to \$15.5 million in tax *revenues* generated by construction and property sales activities over the course of full build-out of the Thurston Highlands Master Planned Community.

3. Yelm and the County make repeated assurances they will abide by State and County requirements. Does this promise relieve the developer of financial responsibilities for pollution to existing county wells? Health and financial problems for residents will become more apparent as this development progresses, if the underground aquifer is polluted.

Response to Gail Cane Comment 3: The State, County, and City have specific regulations for groundwater protection during construction and in the final built-out condition of a development. These regulations were created for the safety of all residents and their property. Groundwater contamination is enforced as a civil or criminal penalty of violation of the Washington Administrative Code and/or the Revised Code of Washington. It is assumed in this Draft EIS that all applicable State, County and local

regulations will be followed, and therefore that no adverse impact to groundwater would occur. Also see the response to the following comments: GordonDerr II.3.4.b; William Hashim 3.1, 3.4, and 4.3; and Ed Wiltsie 1.A.

Response to Comments Submitted by Carolyn GiaMarco

I read through the EIS and have several concerns. They are as follows:

1. The EIS itself is too long & complicated for the average person to understand and has left out some key issues in my opinion and should be redone – it has not dealt to my satisfaction with several issues.

Response to Carolyn GiaMarco Comment 1: See the response to GordonDerr General Comment I.A.

1.A 3X the flow in Thompson's Creek does not consider the impact on all those downstream. There are 4 roads currently crossing Thompson's Creek, whose culverts cannot handle current flows. The culverts on 93rd, 89th, Anderson Lane & Yelm Hwy would require enlargement to 4X the current flow to not create devastating impacts on those roads and the landowners around them.

Response to Carolyn GiaMarco Comment 1.A: See the response to Ed Wiltsie Comment 1.D.

1.B Said creek does have fish (salmon) living, breeding, spawning in the lower areas across Yelm Hwy, in the area of where it joins the Nisqually River. These would absolutely be affected by a 3 fold increase in flow, as would the Nisqually River itself and the Centralia Power Co. land it flows across & the park therein.

Response to Carolyn GiaMarco Comment 1.B: There is no documented use of Thompson Creek by salmon. The Draft EIS reports in Section 3.5 (page 3.5-4) that anadromous fish (i.e., salmon) have no access potential to Thompson Creek because of the large head-cut barrier within the Thompson Creek channel north of SR 510. The "head-cut barrier" is described in the *Surface Water Technical Report* prepared for the project (Brown and Caldwell 2008) as a canyon with sidewalls extending more than 50 feet high in places, approximately 500 feet downstream of SR 510. Therefore, migratory or resident fish in the Nisqually River cannot enter Thompson Creek.

The Draft EIS does not indicate the Thurston Highland project would generate a three-fold increase in flow. Flow increases would be modest and not detectable downstream of Yelm Highway (SR 510). Under existing conditions, Thompson Creek goes dry before reaching Yelm Highway during most of the winter. Thompson Creek would continue to go dry much of the winter before reaching SR 510 after the Thurston Highlands full build-out was complete. Centralia Power property downstream of SR 510 would not be affected by stream flow changes attributable to the Thurston Highlands project. Also see the response to GordonDerr Comment II.3.19.4.a.

1.C Air quality standards from the addition of 5,000 homes & their auto machines would be significantly reduced especially without proper traffic flow to meet the increase. 1½ cars per household is way underestimating number of potential vehicles unless they're only building small homes for (1-2 bedroom) single people not families, very few families that can afford the homes planned have only one car, the figure would more appropriately be 3-4 per 3b-2a homes & up.

Response to Carolyn GiaMarco Comment 1.C: An Air Quality Assessment was prepared for the project (Geomatrix Consultants, March 2008). This technical report is summarized in Draft EIS Section 3.2. The impact analysis of “criteria pollutants” (those for which there are health-based ambient air quality standards, including ozone, particulate matter, and carbon monoxide) is based on the applicant’s proposal to prohibit woodburning fireplaces in homes to be constructed on the site, and on the trip generation estimates and intersection operations analysis described in the *Transportation Impact Analysis* for the project (prepared by Transportation Engineering Northwest, March 13, 2008). The air quality impact analysis concludes that the developed condition of the project would not be expected to result in more than minor emissions of any pollutants (Draft EIS, page 3.2-4). Further, the analysis concludes that given the ongoing trend for reduction in vehicle carbon monoxide emissions, it is highly likely that future project-related traffic with full build-out would be unlikely to cause significant air quality issues related to carbon monoxide (Draft EIS, page 3.2-6). Also see the response to GordonDerr Comment II.3.2.1.b.

1.D There is no provision for dealing with the potential of land owners surrounding this property who all have shallow wells in the top aquifer that could absolutely become contaminated from the addition of said plans. Possibly a mandatory trust fund set aside to provide them with deeper wells into the lower aquifer if necessary to maintain public health.

Response to Carolyn GiaMarco Comment 1.D: See the response to William Hashim Comment 3.3, and the response to Gail Cane Comment 3.

1.E All areas of said property are in the Thompson Creek drainage basin no matter what way the water flows, a large percentage will make its way there.

Response to Carolyn GiaMarco Comment 1.E: A thorough analysis of the potential surface water and shallow groundwater effects to Thompson Creek of infiltrating stormwater runoff on the Thurston Highlands site was conducted over the course of the past year. These technical studies are described in the *Draft Infiltration Effects Assessment* (Pacific Groundwater Group 2008), and the *Draft Surface Water Evaluation of Thompson Creek* (Brown and Caldwell 2008).⁷ These reports are summarized in Draft EIS Section 3.3. They conclude that approximately 30 percent of stormwater infiltrated on the Thurston Highlands site would make its way to Thompson Creek; however, there are areas on the site where shallow groundwater does not flow toward the creek. As a mitigation option for project stormwater infiltration, these areas of the site are being evaluated for the feasibility of pumping this 30 percent of stormwater to locations that would not impact Thompson Creek.

⁷ Both the Pacific Groundwater report and the Brown and Caldwell report have been updated with additional data collected and analysis performed during the Draft EIS comment period. These reports have been prepared in final form to accompany this Final EIS.

2. Yelm's Comprehensive Plan & Vision plan standards/goals are greatly exceeded by this development. The state requires they be created and followed. They need to reduce numbers to meet those guidelines.

Response to Carolyn GiaMarco Comment 2: See the response to GordonDerr Comment II.1.1.

3. Thurston Counties current standards for rural undeveloped lands are 1 house per 5-10 Acres, that would be 240 homes, not 5,000.

Response to Carolyn GiaMarco Comment 3: The Thurston Highlands site is within the City limits of Yelm, not within rural Thurston County. Very different land use standards apply in these areas. See the response to GordonDerr Comments re: Draft EIS Table 2.8-1, and the response to William Hashim Comment 2.

4. Where are those people going to work? Yelm job market cannot support those already living here.

Response to Carolyn GiaMarco Comment 4: See the response to GordonDerr Comment (2) on Appendix A.

5. State requirements require multiple housing levels, including low income, retired, fixed income. I don't see a large enough ratio of this kind of housing.

Response to Carolyn GiaMarco Comment 5: The Thurston Highlands conceptual land use alternatives described in the Draft EIS include a mix of housing types, from single-family homes and duplexes, to small and large multi-family complexes. This mix of housing types would include units owned or for rent. This mix would result in a range of housing costs. New housing construction usually creates affordable housing within a community as existing aging housing then becomes more affordable.

6. Sustainability is extremely important to the long term survival of any City or Community. Where are the agricultural uses in this plan? Where is their food going to come from, when it is not available from outside the area?

Response to Carolyn GiaMarco Comment 6: The Principles of Sustainable Development adopted by the City of Yelm are explained in Appendix A of the Draft EIS. The purpose of sustainable development within an urban setting is to support the existing population with fewer resources. For example, a community that provides industry and retail services to its population consumes less petroleum per capita than a 'bedroom' community whose citizens have to commute to jobs and for goods and services.

True sustainability is not limited to political boundaries. Regionally, resource lands such as agricultural lands are found in the unincorporated areas of a region, rather than in urban areas such as Yelm. This concept of regional sustainability is mirrored by the Growth Management Act which requires cities to plan for urban growth and counties to plan for rural development and resource lands including agriculture. The conceptual Master Planned Community described in the Draft EIS does contemplate a large farmers market within the development to provide an area for local farmers to offer their agricultural goods for sale (see Draft EIS Section 2.5.1.2, page 2-10).

7. I would like to see an advanced technologies research and development areas incorporated into development plans, ones that do not pollute our air, water, or soil.

Response to Carolyn GiaMarco Comment 7: The City is supportive of these types of uses as well. As with housing demand, the types of professional office and commercial uses within the Master Planned Community are expected to be responsive to market demand.

8. The ingress main entry up 93rd, and across private lands is absolutely not in the public's best interest. I am recommending that any use of that land have its main entrance across the military road north of Southworth elementary & turn down Rathburn Road along the section lines south & west towards Rainier which would not take land & homes from them but would utilize military lands to provide ingress to homes designed to accommodate the anticipated influx of military personnel into the area and also provide an alternate route circumventing Yelm for those commuters living out Rainier way. It is a much better plan than 93rd.

Response to Carolyn GiaMarco Comment 8: Tahoma Boulevard is proposed to be the main thoroughfare for Thurston Highlands. The connection to 93rd Avenue SE is marked "Y-1 Loop" in the Yelm Transportation Comprehensive Plan. It has been in the Plan since the early 1990s. The military lands referred to in this comment are discussed in Draft EIS Section 3.10, Relationship to the Fort Lewis Military Reservation. The military land on the western boundary is a highly used military training area, not available for public roadway construction.

9. There are alternatives to blading the entire construction areas of said planned community. Yes roadways must be bladed but housing should be worked into and around the natural environment. What about the loss of all those trees to air quality and the benefits they offer to cleanse the already unacceptable air quality. The surrounding lands would receive all the animals, wildlife that are able to escape and that could cause problems for them.

Response to Carolyn GiaMarco Comment 9: It is acknowledged that integrating houses with the natural environment of the site would be desirable; however, it would not be possible to achieve the residential density required in the City's Urban Growth Area by the Washington State Growth Management Act. See the response to William Hashim Comment 2.

It is true that the majority of the trees would be eliminated from the site, though under any conceptual land use alternative evaluated in the Draft EIS, a significant amount of natural open space would also be retained on the site (25 percent to 40 percent of the total area of the site – approximately 315 to 500 acres). See the Description of the Proposal and Alternatives in Draft EIS Sections 2.5 and 2.6.

The *Air Quality Assessment* prepared for the project (Geomatrix Consultants, March 2008), summarized in Draft EIS Section 3.2, reports that existing air quality within the project area is within an "attainment" area for ozone, particulate matter, and carbon monoxide; i.e., within an area where these pollutants are below levels specified in federal and regional air quality standards. Also see the previous response to Carolyn GiaMarco Comment 1C.

10. Nature is not dead, it is life, the trees, the ground, the air and water are life and life giving to us as humans. Our quality of life is dependent on the quality of life in nature around us, we are not separate from nature but one with it, all our building plans and developments, must take this into account if we as a race are to survive into the future and leave our children and grandchildren a place worth to be born & raised in and to live and grow in, to prosper in and to pursue our happiness.

Response to Carolyn GiaMarco Comment 10: No response required.

2.3 GENERAL COMMENTS RECEIVED FROM INDIVIDUALS

Sections 2.1 and 2.2 of this Final EIS responded to specific and detailed comments received from State and Regional agencies, legal counsel representing JZ Knight (GordonDerr), and four individuals (William Hashim, Edward Wiltise, Gail Cane, and Carolyn GiaMarco). The remaining comments submitted by individuals were considerably uniform in the concerns and objections raised, and lacked specific reference to contents of the Draft EIS. For this reason, the City has responded to these comments by issue, below. Bold text reflects the City's response. In most instances, these same issues were raised in the comments responded to in Section 2.2. Therefore, cross-references are given for where these responses can be found.

❖ EIS Style and Size

Twenty (20) letters included statements that the document was not in compliance with Washington Administrative Code Section 197-11 WAC (State Environmental Policy Act Rules) in that it was not written in clear and concise language or that the document was more than 150 pages in length. These letters also typically requested an extension of the comment period.

See the response to GordonDerr Comments I.A.1, I.A.2, and I.A.3 in Final EIS Section 2.2.

❖ Relationship of the Proposal to the City of Yelm Comprehensive Plan and Vision Plan

Twenty (20) letters included statements that the proposal is not in compliance with the *Yelm Vision Plan*, or the *Yelm Comprehensive Plan* due to the amount of commercial floor area proposed. Concern was expressed that a large amount of commercial development within Thurston Highlands would compete with the City's central business district.

See the response to GordonDerr Comment II.1.1 in Final EIS Section 2.2.

❖ Groundwater Quality and Wells

Sixteen (16) letters expressed concern about impacts to groundwater and surrounding wells. One (1) letter suggested that there be mitigating measures in place if the development is found to damage existing wells and drinking water.

See the response to GordonDerr Comment II.3.3.2.d, the response to William Hashim Comments 3.1 and 4.3, and the response to Gail Cane Comment 3 in Final EIS Section 2.2.

❖ Stormwater Infiltration and Reclaimed Water Infiltration

Five (5) letters expressed concern about increased stormwater infiltration, and the release of reclaimed water at the Thurston Highlands site. Specifically, the question was asked where the reclaimed water will be released and if it will impact groundwater quality or increase flooding in Thompson Creek.

See the response to GordonDerr Comments II.2.5.2.4, II.3.3.1.b, II.3.3.1.c, II.3.3.2.a, II.3.3.2.d, II.3.19.3.b, and II.3.19.4.a; and the response to Carolyn GiaMarco Comment 1.E in Final EIS Section 2.2.

❖ Water Supply Requirements in Relation to City Water Rights

Five (5) letters expressed concern regarding the amount of water needed to serve the proposed development, and the current status of the City's water rights.

See the response to GordonDerr Comments II.1.6, II.3.3.3.a, II.3.3.3.b, and II.3.3.3.e in Final EIS Section 2.2.

❖ Thompson Creek Flooding

One (1) comment letter stated that the flooding on Thompson Creek is due to culverts that are undersized.

See Ed Wiltsie Comment 2.B.2, Carolyn GiaMarco Comment 1, and the City's response to these comments in Final EIS Section 2.2.

❖ 93rd Avenue SE Connection

Nine (9) letters expressed concern about the street connection to 93rd Avenue SE, also shown as Y-1. The concerns included the fact that the property is privately-owned, not located within the City limits, and that the map portrays the road as being permitted.

See the response to William Hashim Comment 6.1, and the response to Carolyn GiaMarco Comment 8 in Final EIS Section 2.2.

❖ Increased Traffic

Five (5) letters expressed concern about increased traffic with the Thurston Highlands Master Planned Community. The concerns included statements that traffic is already bad, that the SR 510 Yelm Loop will not alleviate traffic problems, and that there was no consideration of the increased traffic load.

A comprehensive *Transportation Impact Analysis* was prepared for the proposed action (Transportation Engineering Northwest 2008). Baseline conditions, assumptions, results, and recommendations of this analysis are summarized in Draft EIS Section 3.17 – a 47-page section on this subject alone. Local and regional impacts were identified, and the methods for determining mitigation requirements are described. Also see the response to GordonDerr Comments II.3.17.7.a and II.3.17.7.b in Final EIS Section 2.2.

❖ Water and Sewer Service

One (1) letter asked what has been done about water and sewer issues.

The water and sewer service requirements of the proposed development are described in the *Thurston Highlands Grading, Drainage and Utilities Technical Engineering Report* (KPF Consulting Engineers 2008), and summarized in Draft EIS Sections 3.19.1 and 3.19.2. Also see the response to GordonDerr Comments II.2.5.2.2 and II.2.5.2.3 in Final EIS Section 2.2.

❖ Impression that Project has Already Been Approved

Two (2) letters included statements that the project has already been approved, and that permits have been issued.

This impression is in error, based on hearsay rather than actual review of the Draft EIS. The Conceptual and Final Master Site Plan Approval process will not begin until after the Final EIS is complete. The steps involved in this process are described in detail in Draft EIS Section 2.4 (pages 2-4 and 2-5).

❖ Air, Noise and Light Pollution

One (1) comment letter indicated that air, noise and light pollution already exist in the area.

Technical studies were prepared to describe existing conditions, potential impacts of the proposed action, and mitigation measures for Air Quality (Geomatrix Consultants, Inc., March 2008), and Light and Glare (Robert W. Droll Landscape Architect, October 2007). The results of these studies are summarized in Draft EIS Sections 3.2 (Air Quality), and 3.13 (Light and Glare). Draft EIS Section 3.9 provides a qualitative analysis of the noise environment, potential noise impacts during construction and in the developed condition of the project, and possible mitigation measures. No significant unavoidable adverse impacts were identified for any of these elements of the environment. Also see Carolyn GiaMarco Comment 1.C and the response to that comment in Final EIS Section 2.2.

❖ Quality of Life Concerns

Two (2) comment letters expressed “quality of life” concerns, that Yelm is a rural or country town, and that these commentors moved here to enjoy a country setting.

The City of Yelm is required to plan under the Washington State Growth Management Act, and to accommodate its share of urban growth within Thurston County. To meet this mandate, the City must provide for a certain overall density within the incorporated area. Although residents within the Urban Growth Area may feel that their rural setting would be jeopardized by the proposed Master Planned Community, in many ways it would be protected by reducing suburban sprawl and keeping urban growth within the City. Also see the response to GordonDerr Comment II.1.6 in Final EIS Section 2.2.

❖ Recommended Features to Include within the Master Planned Community

Other comments received included suggestions regarding features existing residents of Yelm would like to see provided within Thurston Highlands.

- Provide a library branch.

The City is supportive of this type of use. A library would be an appropriate use within a commercial area of the Master Planned Community, such as associated with the Regional Sports Complex or the Farmers Market area.

- Senior-friendly homes, one level, affordable, wheel chair-accessible.

See the response to Carolyn GiaMarco Comment 5 in Final EIS Section 2.2.

- Provide bus pull-outs for public transportation and school buses.

Bus stops and pull-outs are indicated in Draft EIS Section 3.17.6.6 as *Incorporated Plan Features* (i.e., proposed by the applicant). Also see the response to Intercity Transit Comment A in Final EIS Section 2.1.

- Provide a swimming pool or YMCA

The City is supportive of including a swimming pool and/or YMCA within the Master Planned Community. The applicant proposes to develop a Regional Sports Complex with more than 400,000 square feet of Recreational Commercial area. A swimming pool or YMCA could be provided within this type of facility.

After issuance of the Final Environmental Impact Statement, the applicant will revise, as appropriate, the Conceptual Master Site Plan and the Final Master Site Plan for Phase 1 of the proposed Master Planned Community. This review process will include a more specific proposal as to what uses would be allowed in various locations within the Master Planned Community, as well as design standards for all structures. This process will include its own public review and comment period, as well as a public hearing before the Yelm Hearing Examiner.