10. ADDITIONAL DOCUMENTS

10.1 SEPA Checklist

The SEPA Checklist can be found on the following pages.

10.2 Comments from Agencies and Adjacent Purveyors

The City received the following comments from the public, agencies, and adjacent purveyors:

- **DOH ODW Comment Letter on WSP, October 20, 2009.** All comments in this letter have been incorporated into the WSP. Responses to specific comments are included in Appendix 10A.
- Cascadia Law Group Comment Letter, August 19, 2009. This letter has been included in Appendix 10A. Where applicable, comments have been addressed in the final WSP.

Determination of Non-Significance File Number ENV-09-0125-YL

Description of Proposal: Adopt an updated Water System Plan for the City of Yelm.

Proponent: City of Yelm, Washington

Location of the Proposal: The City of Yelm water service area, which includes portions of the existing Yelm City limits and portions of the Yelm Urban Growth Area. Located in a portion of Township 17 North, Ranges 1 East and 2 East, W.M.

Lead agency: City of Yelm

The City of Yelm as lead agency for this action has determined that this proposal does not have a probable significant adverse impact on the environment. Therefore, an Environmental Impact Statement (EIS) will not be required under Section 43.21C.030 (2) (c) RCW. This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

This DNS is issued under WAC 197-11-340 (2); the lead agency will not act on this proposal for 14 days from the date below. Comments must be submitted by July 24, 2009.

Responsible Official: Grant Beck, Community Development Director

105 Yelm Avenue West

Yelm, WA 98597 (360) 458-8408

grantb@ci.yelm.wa.us

Grant Beck, Community Development Director

There is no agency appeal.

DO NOT PUBLISH BELOW THIS LINE

Published: Nisqually Valley News, July 17, 2009

Posted in public areas: July 10, 2009

Copies to: All agencies/citizens on SEPA mailing list and adjacent property owners

Dept. of Ecology w/checklist



STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

PO Box 47775 · Olympía, Washington 98504-7775 · (360) 407-6300
711 for Washington Relay Service · Persons with a speech disability can call 877-833-6341

July 24, 2009

Mr. Grant Beck Community Development Director City of Yelm 105 Yelm Avenue West Yelm, WA 98597

Dear Mr. Beck:

Thank you for the opportunity to comment on the determination of nonsignificance to Adopt an Update Water System Plan for the City of Yelm (File No. ENV-09-0125-YL). The Department of Ecology (Ecology) reviewed the environmental checklist and has the following comment(s):

AIR QUALITY: Qing Chen (360) 407-0278

Olympic Regional Clean Air Agency (ORCAA) will issue the necessary notice of construction approval for this project.

TOXICS CLEANUP: Laura Klasner (360) 407-6265

No map was provided in order to determine if the proposed wells were within the vicinity of any cleanup site(s).

WATER RESOURCES: Vicki Cline (360) 407-0278

Ecology's Water Resources staff is currently reviewing the City of Yelm 2009 Water System Plan.

Ecology's comments are based upon information provided by the lead agency. As such, they may 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.

If you have any questions or would like to respond to these comments, please contact the appropriate reviewing staff listed above.

Department of Ecology Southwest Regional Office

(AW: 09-4073)

cc: Qing Chen, AQP
Vicki Cline, WR
Laura Klasner, TCP
Stephanie Ray, City of Yelm (Contact/Applicant)



City of Yelm

Fee	
Date Received	
Ву	
File No.	

Community Development Department ENVIRONMENTAL CHECKLIST

Instructions:

The State Environmental Policy Act (SEPA) requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. The purpose of this checklist is to provide information to help identify impacts from your proposal, to reduce or avoid impacts from the proposal if it can be done, and to help the City decide whether an EIS is required. An environmental impact statement (EIS) must be prepared for any proposal with probable significant adverse impacts on environmental quality.

This environmental checklist asks you to describe some basic information about your proposal. The City will use this checklist to determine whether the environmental impacts of your proposal are significant and require preparation of an EIS. You must answer each question accurately, carefully and to the best of your knowledge. Answer the questions briefly, but give the best description you can. In most cases, you should be able to answer the questions from your own observations or project plans without the need for experts. If you do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply". Complete answers to the questions now may avoid delays later. If the space provided is too small, feel free to attach additional sheets.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the city staff can assist you.

The checklist questions apply to all parts of your proposal even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. You may be asked to explain your answers or provide additional information for determining if there may be significant adverse impacts.

Nonproject Proposals Only:

Complete both the checklist (even though many questions may be answered "does not apply") and the **Supplemental Sheet for Nonproject Actions** (part D). For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

CITY OF YELM CITY USE ONLY

ENVIRONMENTAL CHECKLIST

FEE:	\$150.00	
DATE	REC'D	
BY:		
FILE N	Ю	

- A. BACKGROUND
- 1. Name of proposed project, if any:

City of Yelm 2009 Water System Plan

2. Name of applicant:

City of Yelm

3. Address, phone number and email address of applicant and of any other contact person:

Stephanie Ray, Project Manager City of Yelm 105 Yelm Avenue W. Yelm, WA 98597 (360) 458-8414

4. Date checklist prepared:

May 14, 2009

5. Agency requesting checklist:

City of Yelm

6. Proposed timing or schedule (including phasing, if applicable):

Yelm has developed the 2009 Water System Plan (Plan) to propose changes to existing policies regarding provision of water service, identify future infrastructure projects that are necessary to improve the reliability of the existing water system and provide additional capacity to serve future growth, develop a new water rate structure, and implement new operations and maintenance (O&M) activities for Yelm's drinking water system for the period from 2009 through 2029. Yelm's plan is updated every six years to meet state regulatory requirements. The anticipated schedule of capital projects to be constructed over the next six years, prior to the next Water System Plan Update, is shown below in Table 1.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Yelm engages in a number of activities related to its water system, including planning, engineering, operation, maintenance, financial planning, and customer service. Yelm will continue to focus on programs and initiatives to address water infrastructure and O&M needs and will periodically review and update the 2009 Water System Plan, as needed. DOH requires an update of Yelm's water system plan every six years.

The 2009 Water System Plan also includes ongoing water programs, construction, and maintenance activities such as infrastructure replacement and the design and construction of new wells and reservoirs. This SEPA checklist focuses on projects to be implemented over the next six years. Refer to Response A11 below. The Plan also identifies additional capital projects to be constructed beyond the six-year planning horizon.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

City of Yelm Water Rights Mitigation Plan. Golder Associates, October 2008.

Environmental Checklist and Determination of Nonsignificance for the Thurston County Comprehensive Plan Update as amended by Resolution number 14034 and Ordinance number 14035, November 2007.

Environmental Checklist dated 12/17/08 and Mitigated Determination of Nonsignificance dated 5/1/09 for the allocation of new water rights for the City of Yelm.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

Thurston Highlands Conceptual Master Plan Site Approval

10. List any government approvals or permits that will be needed for your proposal, if known.

Governmental approvals required for the approval of the 2009 Plan include a concurrency determination by Thurston County related to the population projections, service areas, and service area policies presented in the Plan. Additionally, the Department of Ecology (Ecology) must review the Plan and comment on water rights issues, and the Yelm City Council must approve and adopt the Plan before the final approval of the Plan by the Department of Health (DOH).

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

The Plan encompasses a number of projects that will increase the capacity and reliability of the City of Yelm water system. These projects will take place between 2009 and 2015. The below table describes the individual projects.

Table 1. Water System Projects					
Project Project Desc		Description	Project Start	Project Complete	
	Golf Course Well	See Figure 1. GC Well in service 2009-2010	2009	2010	
W-1	New Well #1	See Figure 1. Well #1 in service in 2012	2009	2012	
W-2	New Well #2	See Figure 1. Well #2 in service in 2016.	2014	2016	
RES-1	New Reservoir #1	Located at Thurston Highlands. Will take water from SW Yelm Wells #1, #2, #3.	2009	2012	
WTS-1	Water Treatment System #1	Disinfection at a minimum. Since water will come from different aquifer, treatment of manganese may be needed as well.	2009	2012	
WTS-2	Expansion of Water Treatment System #1	Expand system built for Well #1 to increase capacity when Wells #2 and #3 are on line.	2014	2016	
T-1	New Transmission Mains #1	From Well #1 to Reservoir #1 and from Reservoir #1 to connection with existing 16"line to connect to existing service area.	2009	2012	
T-2	New Transmission Mains #2	Extension of Main from SW Yelm Well #2 to SW Yelm Well #1.	2014	2016	
	SCADA	Upgrade system to provide remote monitoring and control.	2009	2009	
D-1	Railroad St Distribution Replacement	Replace 4" and smaller AC pipe with 10" PVC on Railroad St and SW Washington Ave.	2010	2010	
D-2	SW Washington Ave & Rice St Distribution Replacement	e St Distribution Replace 4" and smaller AC pipe with "10" PVC on SW washington Ave and Rice		2012	
D-3	Van Trump Dist. Replacement	Replace 4" and smaller AC pipe with 10" PVC on Van Trump Ave and 2nd St	2014	2014	
	Mitigation Projects	Annual projects identified as part of mitigation plan. Might include monitoring, purchase of water rights in the Deschutes River basin, possibly reclaimed water projects.	2009	Ongoing	
	O&M System	New programs potentially include computerized maintenance system, WUE implementation, update to emergency plan.	2009	2012	

¹See Water System Plan for detailed project descriptions

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. You need not duplicate maps or detailed plans submitted with any permit applications related to this checklist.

Projects will be located throughout the City of Yelm. In general, proposed infrastructure projects will occur in two general vicinities: downtown (central) Yelm, and Southwest Yelm. The SW Yelm wellfield is located in the southwest quadrant of the City of Yelm in the area of the Thurston Highlands Master Planned Community. The property is approximately 1,240 acres and is located in the south ½ of Section 23, the east ½ of Section 26, and Section 27,

Township 17 North, Range 1 East, W.M. Approximate project locations are shown on Figure 1.

The Yelm water system service area is identified in the Plan. This service area consists of the existing service area, the retail service area where the City has a duty to provide service provided certain thresholds are met, and the future service area. These service areas are shown on a map included in the Plan and the thresholds that must be met before the City has a duty provide service are also described.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one):
flat, rolling, hilly, steep slopes, mountainous, other

Site topography for the service area is generally rolling in nature, with average grades of as much as 30 percent.

b. What is the steepest slope on the site (approximate percent slope)?

The maximum slope on project sites is not greater than 15 percent.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Surficial soil conditions were evaluated in the Thurston Highland Environmental Impact Statement by reviewing the U.S. Department of Agriculture Soil Survey of Thurston County, Washington dated 1979. According to the soil survey report, the following soils are located within the Yelm water system service area:

- Alderwood gravelly sandy loam (15 to 30 percent slopes);
- Everett gravelly sandy loam (15 to 30 percent and 30 to 50 percent slopes);
- Indianola loamy sand (15 to 30 percent slopes);
- Mukilteo Muck;
- Tenino gravelly loam (3 to 15 percent slopes and 15 to 30 percent slopes); and
- Yelm fine sandy loam (3 to 15 percent slopes).

With the exception of the Mukilteo Muck, site soils generally consist of gravelly and sandy loam formed in areas of glacial till and outwash. These soils are generally well-to excessively drained. The Mukilteo Muck occurs in wetland areas and consists of peat and decayed vegetation.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

There are no known unstable soils in the vicinity of the Yelm water system projects.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Filling and/or grading activity could occur in association with some water system projects. In general, the amounts of grading and filling that would be required will be relatively modest. More specific information regarding quantities of filling and grading will be determined during project-level design. Where native materials are unsuitable for backfill, suitable materials will be imported from nearby sources.

Some projects, such as pipeline projects, will require excavation and back filling.

All projects will comply with the applicable local, state, and federal regulations and permits required for grading and filling activities.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Sedimentation impacts will occur during construction; erosion control will be required and shown on construction plans and specifications.

g. About what percent of the site will be covered with impervious surfaces after project construction such as asphalt or buildings?

New impervious surfaces will be relatively small. Depending on the exact location of the facilities in Southwest Yelm (see Figure 1), access roads may need to be constructed; this would result in the addition of some additional impervious surfaces.

Future reservoirs, wells, and buildings (including well houses and treatment facilities) will be designed with drainage systems that would control any runoff from impervious surfaces.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Construction of future projects will employ Best Management Practices (BMPs) to reduce or control potential project-specific erosion. BMPs could include temporary erosion and control measures, surface water pollution prevention plans, and spill prevention control and countermeasures plans. Other examples of typical BMPs include installing filter fabric fences or hay bales, covering exposed soils, using temporary soil covers such as mulch, diverting stormwater with temporary berms, and using settling ponds or grass-lined swales to prevent sediment from moving into receiving waters and storm drains. Site-specific erosion and sedimentation control provisions will be listed on individual construction plans and specifications. All future water system projects will comply with the applicable erosion control provisions of the local and state jurisdictions.

2. **Air**

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile exhaust, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Air emissions could result from some projects during construction. New facilities to be constructed under the proposal generally will not produce additional air emissions during operation. Temporary, localized emissions of fugitive dust and vehicle emissions could occur during construction of individual projects; however, these emissions are not anticipated to result in any significant impact on the overall ambient air quality in Yelm.

Some phases of construction may cause odors detectable to some people in the area. This may be particularly noticeable during paving operations using asphalt. Odors associated with paving operations would be short-term.

New wells and treatment facilities will be equipped with standby generators, which produce air emissions when in operation.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Projects will include construction mitigation measures in order to reduce construction emissions and will comply with the Olympic Region Clean Air Agency (ORCAA) regulations to minimize fugitive particulate matter. Site-specific measures to reduce construction emissions could potentially include spraying areas of exposed soil with water for dust control, regular street cleaning, and reducing exhaust emissions by minimizing vehicle and equipment idling. Construction activities will comply with ORCAA's requirements for reasonable precautions to minimize fugitive dust. Construction equipment also could include emission-control devices on gasoline and diesel engines to reduce carbon monoxide (CO) and particulate emissions. When applicable, air permits will also be obtained for standby generators installed at new facilities.

3. Water

- a. Surface Water
- 1) Is there any surface water body or wetland on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds)? If yes, describe type and provide names. State what stream or river it flows into?

Water bodies in the vicinity of the Yelm water service area are shown in Figure 2.

The proposed SW Yelm wellfield is located in the northwest quadrant of the Nisqually watershed, within the Yelm Creek sub-basin. The principal surface water features of this sub-basin include Yelm Creek, the Centralia Power Canal, and Thompson Creek. These water features are shown on Figure 2.

Yelm Creek drains most of the Yelm prairie and discharges to the Nisqually River.

The Centralia Power Canal is a man-made diversion used to generate electrical power for the City of Centralia. Surface water is diverted from the Nisqually River, used to power electrical generators at a power generation facility located near the western edge of the Yelm City limits and discharged back to the Nisqually.

Thompson Creek drains the western edge of the Yelm prairie adjacent to the site before discharging to the Nisqually River about one-half mile downstream of the Yelm Creek discharge.

The Nisqually River, sourced by the Nisqually Glacier on Mount Rainier, is located about one mile northeast of the site and flows into Puget Sound at the Nisqually Delta, about 10 miles northwest of Yelm.

The Deschutes River, located about 6 miles southwest of the site, has headwaters in the Cascade foothills and flows into Budd Inlet of Puget Sound in Olympia.

2) Will the project require any work over, in, or adjacent to (within 300 feet) the described waters? If yes, please describe and attach available plans.

No.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Fill and/or dredge activity are not anticipated in association with the proposed water system projects. Additionally, there are no planned river or creek crossings that would require in-water work, and new facilities will be sited so that fill and dredge activities are not required.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note elevation on the site plan.

There are floodplains located within the service area. However, projects described in the 6-year Capital Improvement Plan (CIP) do not lie within any 100-year floodplains.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

- b. Groundwater:
- 1) Will groundwater be withdrawn, or will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

Yelm currently operates two wells in downtown Yelm. Each well has a capacity of 1,200 gpm. The amount of water withdrawn from the ground in 2007 and 2008 was 730.5 acre-feet and 756.3 acre-feet, respectively.

Yelm has determined that additional supplies of water for its customers will be needed within the six year planning horizon. Yelm is in the process of identifying mitigation measures for new water rights applications and transfers totaling 4,186 acre-feet for the SW Yelm wellfield. Water rights applications for these new water rights were made to Ecology in 1994.

In addition, the City is in the process of developing a new well at the Tahoma Valley Golf Course. It is anticipated that the pumping capacity of this well will be 500 gpm.

Yelm will continue to work with the Department of Ecology to secure additional water rights and develop new wells according to the CIP presented in the Plan. Proposed well locations were previously shown in Figure 1. Actual pumping capacities of future wells will be determined during the development of the individual wells. For planning purposes, a well capacity of 750 gpm is assumed for wells in the SW Yelm wellfield.

The 2009 Plan proposes the construction of two new wells in Southwest Yelm within the next six years, in addition to the well currently being developed at the Golf Course. By 2015, provided water rights are secured, the projected withdrawal will be 1,079 ac-ft. The total projected water withdrawal in 2029 is 1,881 ac-ft. Additional water demand projections can be found in the Plan.

Existing water rights held by the City, including a pending transfer currently being reviewed by the Thurston County Water Conservancy Board and Ecology total approximately 952 acre-feet.

The Plan and the Water Rights Mitigation Plan lay out a proposed sequence of water rights transfers and new water rights acquisitions through 2029 that would result in the City holding a total of 4,186 acre-feet in its portfolio.

2) Describe the underlying aquifer with regard to quality and quantity, sensitivity, protection, recharge areas, etc.

Since 1950, the primary source of water for Yelm has been two wells in the downtown Yelm area. These existing wells are relatively shallow (less than 100 feet deep) and draw water from the highly productive Advance Vashon Outwash (Qga) aquifer.

Proposed wells in the Southwest Yelm wellfield will draw water from deeper aquifers. These deeper wells will draw water from a regional, undifferentiated Tertiary (TQu) aquifer. Testing and modeling performed by Golder in 2006 indicates that the installation of these new wells will allow Yelm to re-distribute the impacts of the City's withdrawals in a way that is more sustainable and beneficial for the overall Nisqually Watershed health (Golder, 2008). This testing, which included a projection of groundwater withdrawals for the next thirty years, is described in detail in the City of Yelm Final Water Rights Mitigation Plan.

The Golf Course Well is planned to be installed in the same shallow aquifer as Yelm's existing wells, but depending on the results of test drilling, this well may be extended into a deeper aquifer.

3) Describe waste material that will be discharged into or onto the ground from septic tanks or other sources, if any (such as domestic sewage; industrial byproducts; agricultural chemicals).

Yelm water system projects will not directly discharge waste materials from animals, humans, or its operational activities to groundwater.

- c. Water Runoff (including storm water):
- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Construction activities could temporarily increase runoff, and associated erosion and sedimentation could affect water quality in the short term.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Operation of Yelm water system projects will not directly discharge waste materials of any kind into ground or surface waters. Construction activities could temporarily discharge materials, which will be controlled with site-specific BMPs and other mitigation measures.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Construction activities will include measures to reduce potential surface water, groundwater, and runoff impacts, such as BMPs and other temporary erosion controls. Yelm will prepare required plans for stormwater pollution control and spill prevention.

All future water system projects will be designed, constructed, and operated to meet applicable local, state, and federal regulatory requirements to protect water resources. All Yelm projects will obtain the necessary permits and approvals concerning surface water, groundwater, and storm water runoff. Future projects will comply with applicable local storm water and drainage codes of the appropriate permitting jurisdictions.

The 2009 Water System Plan includes a number of conservation and water use efficiency goals and measures that will reduce the quantity of water withdrawn from the ground. These goals include increasing reclaimed water use to offset the demand on the potable water system; further reducing distribution system leakage to 6 percent; reducing the average residential consumption to 200 gpd per residential connection; and reducing irrigation usage. The measures that the City has outlined to achieve these goals are described in the Plan.

The City of Yelm has been producing reclaimed water to offset the demand of potable water usage since 1999. In 2007, reclaimed water production reduced potable water use by at least 45.5 acre-feet. Additionally, Yelm provides aquifer recharge through the infiltration of Class A reclaimed water.

Yelm has prepared a mitigation plan (Golder, 2008) that identifies expected impacts to groundwater due to the additional withdrawals that will occur at Southwest Yelm wells. This plan also proposes mitigation measures for impacts at the Nisqually River, McAllister Springs and McAllister Valley, Woodland Creek, and Yelm Creek. These impacts, which are described in the mitigation plan as well as the Mitigated Determination of Non-Significance for the water right application, are summarized below:

In order to mitigate temporary impacts to the Nisqually River, the City is working on an agreement with the Nisqually Tribe. As part of this agreement, the Tribe has committed to require the discharge of an additional 10 cfs as a condition for its approval of any petition by Tacoma Power to the Nisqually River Coordinating Committee (NRCC) for a reduction in the minimum flow requirement. The 10 cfs quantity is double the estimated impact of winter pumping on the Nisqually River by the City of Olympia's McAllister Wellfield and will also mitigate the relatively small impacts by the City of Yelm.

To mitigate impacts to McAllister Springs and McAllister Valley, the City of Yelm will likely transition water right relocations in coordination with the City of Olympia. In this way, the benefits which will occur as a result of Olympia transferring a water source away from the McAllister Springs will offset the demand introduced by the City of Yelm. If Yelm's first SW well is developed and utilized prior to Olympia's transfer to the McAllister Wellfield, the maximum depletion associated with the first SW well is predicted to be minimal and would be temporary.

Mitigation of Yelm Creek impacts will be initially required as the first SW Wellfield well is brought online. The long-term impact of the transfer of shallow downtown pumping to the SW Yelm Wellfield is expected to be beneficial. In order to offset initial impacts to Yelm Creek, the City plans to increase reclaimed water recharge at the Cochrane Park facility. Additionally, the City of Yelm has committed to working with the Nisqually Tribe on additional mitigation and restoration opportunities, including creek channel restoration, creating a continuous vegetated buffer, installing a stream gage, and removing riprap weirs at a pipeline crossing.

The City proposes to jointly mitigate predicted impacts of pumping on Woodland Creek and the Tri-lakes Complex by entering into a cooperative cost sharing agreement with the Cities of Olympia and Lacey to directly mitigate through groundwater flow replacement using reclaimed water. The infiltration facility is planned to be constructed and operational by 2012.

As part of a regional mitigation effort, the Cities of Yelm, Olympia and Lacey have entered into an agreement to purchase water rights from within the Deschutes Basin and to use these water rights for mitigation purposes. The three Cities plan to purchase and share mitigation credits for water rights acquired under this agreement. As part of the agreement, the City of Yelm plans to acquire sufficient water rights and/or retire domestic wells in the Deschutes Basin to offset the potential depletions in the upper, middle and lower reaches of the Deschutes River and Silver Creek and Spring. Yelm proposes to mitigate predicted impacts during closure periods at a mitigation ratio of 1:1 or 100 percent through the joint acquisition of water rights with the Cities of Olympia and Lacey. To date, the three Cities have signed two Interlocal Agreements to formalize this coordinated effort (City of Yelm

Mitigated Determination of Non-Significance for water rights applications and transfers, 2009).

As an additional measure, the City of Yelm is consulting with the Squaxin Island Indian Tribe to address fisheries habitat concerns in the Deschutes Watershed. They are currently considering cooperative funding ventures for habitat related improvements including placement of woody debris, removal of invasive vegetation, and possible acquisition of riparian conservation easements or land as buffers to further enhance riparian habitat on the Deschutes River. Much of this work would be conducted in the upper reaches of the Deschutes and near Silver Springs and Creek.

4. Plants

Check	or circle types of vegetation found on the site:
\boxtimes	deciduous tree: alder, maple, oak aspen, other
\boxtimes	evergreen tree: fir cedar, pine, other
\boxtimes	shrubs
\boxtimes	grasses
	pasture
	crops or grains
\boxtimes	wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
\boxtimes	water plants: water lily, eelgrass, milfoil, other
\boxtimes	other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Vegetation could be affected in association with some future water system projects. Some future water infrastructure projects would occur in developed areas, and the amounts of vegetation to be removed or altered likely would be relatively small, localized, and mostly limited to urban-type vegetation. Some vegetation removal will be required in the vicinity of infrastructure projects in undeveloped areas. Vegetation on or adjacent to project sites, where present, could be disturbed by construction activities.

If areas of vegetation are removed or altered, vegetation will be restored following construction.

c. List threatened or endangered species known to be on or near the site.

As part of the Thurston Highlands EIS effort, a comprehensive query of the U.S. Fish and Wildlife Service (USFWS) website was conducted for documentation of any Listed or Proposed Endangered and Threatened Species and Critical Habitat, Candidate Species and Species of Concern occurring within a 1.5-mile radius of the project area. In addition, a thorough search was conducted of the National Marine Fisheries Service, Northwest Regional Office, Office of Protected Resources web pages. Both of these websites were accessed October 4, 2006. No Federally-listed species or critical habitat records were found for the Thurston Highlands property. The prevalence of low-diversity, replanted, mostly young Douglas fir forest does not afford preferred habitat conditions for listed species that could potentially occur, such as Northern spotted owl (Strix occidentalis). Furthermore, the absence of prairie habitat conditions within Thurston Highlands eliminates the potential for listed plant and animal species associated with this habitat type to occur. The only potential Federally-listed species that might occur within Thurston Highlands is an

aquatic plant, water howellia (Howellia aquatilis), that could occur within the sphagnum bog habitat associated with the Wetland A complex.

The Draft Biological Assessment prepared for the SR 510/Yelm Loop Highway Corridor (WSDOT, May 2007) investigated the presence of threatened and endangered species within the same general project area as the Yelm water system service area. Within the project area, it was determined that listed fish species included Puget Sound Chinook salmon and bull trout. Designated critical habitat for the Puget Sound Chinook salmon evolutionarily significant unit (ESU) occurs in portions of the mainstem Nisqually River and the lowest reaches of Yelm Creek (river mile [RM] 0.0 to 0.7). The closest designated critical habitat for the Coastal-Puget Sound bull trout distinct population segment (DPS) is in the Nisqually River. Puget Sound steelhead, proposed for listing as a threatened species, may also occur in the project vicinity. There are no known listed plant species identified in the project; however, a federal species of concern (Aster curtus, white-top aster) may occur in the project vicinity. Bald eagles were the single wildlife species addressed in this BA.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Future water system projects will be designed to minimize potential impacts on vegetation. Where necessary to remove or alter areas of vegetation, vegetation will be restored following construction. Areas will be restored, where possible, with plantings of native species and other appropriate vegetation. Where appropriate, Yelm will prepare a landscaping plan for individual projects, consistent with Yelm development guidelines.

Animals

a. Circle any birds and animals that have been observed on or near the site or are known to be on or near the site:

birds: (hawk) heron, (ducks), (eagle) songbirds, other: Passerine	species,
raptors, woodpecker, jays, crows	
mammals: deer bear, elk beaver, other: Cougar	
fish: bass, salmon trout , shellfish, other:	

b. List any priority, threatened or endangered species known to be on or near the site.

Puget Sound Chinook Salmon and bull trout

c. Is the site part of a migration route? If so, explain.

No

d. Proposed measures to preserve or enhance wildlife, if any:

None, no impacts anticipated.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, gasoline, heating oil, wood, solar etc.) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, transportation, etc.

The programs and future projects described in the Plan will not require any major increase in regional long-term energy use. The Plan includes the construction of several wells, treatment buildings, and reservoirs which will require pumping and power. Electrical power will need to be supplied to the SW Yelm wellfield site and the GC Well from existing power lines. The existing electrical infrastructure within the vicinity of the existing water facilities is adequate to handle future loads.

Construction of future water system projects will require energy for construction equipment and vehicles, which would temporarily use electricity and gasoline/diesel fuel. Energy use during construction would be short term and would have a negligible impact on regional energy supplies. Necessary equipment will consist of standard construction equipment.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The Plan does not involve building large, new structures or planting vegetation that would block access to the sun for adjacent properties. The new reservoir that is planned will be constructed in SW Yelm in an undeveloped area that will not affect the potential use of solar energy.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Construction activities and operation of Yelm facilities will include measures to conserve energy, such as selection of energy-efficient equipment and implementation of energy-efficient operational practices, where applicable.

The proposed water conservation program includes some measures that reduce energy by reducing the amount of water that needs to be pumped from the ground. Water conservation measures and an inclined block water rate structure will reduce the amount of water consumed for irrigation and other residential and commercial uses. Reducing the use of water would reduce energy use, which would be a positive impact.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spills, of hazardous waste, that could occur as a result of this proposal? If so, describe.

Implementation of the Plan will protect overall drinking water quality. Taken together, all of the water programs and future projects under the Plan would cumulatively protect public health.

Operation of treatment systems at the GC Well and in the SW Yelm wellfield will entail the use of gaseous chlorine for disinfection and sodium hypochlorite for

corrosion control. Both of these chemicals are already used by the City in the operation of the existing water system but both are classified as hazardous chemicals.

Environmental health hazards could be encountered during construction, but any potential adverse impacts on environmental health would be short term and will be controlled by project-specific mitigation measures.

Construction of individual water system projects to implement the Plan could occasionally release environmental hazards due to leaks and spills from construction equipment. Small amounts of materials likely to be present during construction could include gasoline and diesel fuels, hydraulic fluids, oils, lubricants, solvents, paints, and other chemical products. A spill of one of these chemicals could potentially occur during construction as a result of either equipment failure or worker error. Construction activities would be subject to applicable spill containment and cleanup procedures.

1) Describe special emergency services that might be required.

Emergency services could be required to clean up spills or respond to worker injuries during construction and, possibly, during the operation and maintenance of completed water facilities. However, operation of future water system projects anticipated under the Plan likely would not require special emergency services.

2) Proposed measures to reduce or control environmental health hazards, if any:

Site-specific hazardous material and spill control plans will be developed to provide a response plan in the event of a hazardous chemical spill at a treatment facility. Operation and maintenance information will include procedures for safely handling these materials.

A Construction Contingency Plan and a Health and Safety Plan will be required of the contractor before work commences.

- b. Noise
- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment operation, other)?

Projects planned for implementation as part of the Plan will take place at various locations within the planning area. Existing noise levels in downtown Yelm are typical of what is normally encounter in a small city. The existing noise sources would not affect future water programs and projects under the Plan.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Construction of future projects could result in localized construction noise, which would be a short-term impact and would be reduced with project-specific mitigation measures. The design and operation of new water system facilities would comply with any applicable local noise ordinances.

Potential construction noise would be most noticeable at residences, institutions, and park/public open spaces near construction activities. Short-term noise from construction equipment would be limited to the allowable maximum noise levels established by City code, or the applicable noise codes of other local jurisdictions where projects are located.

After completion of the future water system projects, occasional noise from equipment and vehicles used for on-going routine maintenance and repair may occur. Such noise would be limited to daytime hours, except for noise associated with responses to certain unanticipated emergencies and the operation of standby generators.

3) Proposed measures to reduce or control noise impacts, if any:

Construction of future water system projects will include reasonable mitigation measures, as appropriate, to reduce potential site-specific construction noise impacts. Reasonable construction mitigation could include restrictions on nighttime construction activities, mufflers and enclosures for equipment, turning off idling equipment, and locating equipment farther away from receptors. All construction work will be performed in compliance with the applicable local noise ordinances. Prior to the start of construction, Yelm will coordinate construction activities with affected businesses, institutions, and residences that may be sensitive to construction-related noise, dust, or traffic.

Construction work will be conducted during normal business hours and all future facilities will be located, designed, and operated within applicable local noise ordinance standards.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

In general, the planning area is characterized by urban uses in the central Yelm area, and undeveloped uses in the outskirts of the Yelm City limits. Existing land uses for projects within central and downtown Yelm include single-family and multifamily residences, commercial, industrial, recreation, and open space. Most city properties have been developed at urban densities, and existing uses are often mixed. The area of the proposed SW Yelm wellfield is currently vacant but an application has been made for the Thurston Highlands Master Planned Community on the property.

b. Has the site been used for mineral excavation, agriculture or forestry? If so, describe.

Early settlement in Yelm led to the establishment of several dairies. Subsequent overgrazing of the prairie resulted in the construction of an irrigation system. The first water rights were filed in the late 1890s and the irrigation system was completed in June 1916. Prior to annexation into the City of Yelm in the mid-1990's, the SW Yelm wellfield site was managed for commercial forestry.

Describe any structures on the site.

The Yelm urban area is developed with a wide range of structures, ranging from single-family residences to commercial businesses to large industrial structures. Undeveloped areas in west Yelm have fewer structures. In-town reservoir facilities include two secured, elevated reservoir structures and associated disinfection and maintenance facilities. Most pipelines are below ground and generally have no above-ground structures.

d. Will any structures be demolished? If so, what?

No

e. What is the current comprehensive plan designation of the site?

The Yelm water service area encompasses numerous zoning classifications. Zoning around proposed reservoirs and wells is predominantly residential, while zoning in the vicinity of other infrastructure projects can range from rural to commercial. Pipeline replacement projects will primarily take place in public rights of way. Zoning around the proposed wells and reservoirs is designated as "Master Planned Community;" currently this is undeveloped land which may be developed as a residential master planned community in the future.

f. What is the current zoning classification of the site?

The City has designated a number of zoning classifications for the service area, including residential, commercial, and industrial. The development of the SW Yelm wellfield will be in an area zones Master Planned Community.

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable.

h. Has any part of the site been classified as a "natural resource", "critical" or "environmentally sensitive" area? If so, specify.

The entire City is located in a critical aquifer recharge area. Although the City of Yelm has designated environmentally sensitive areas, projects identified in the Plan will be sited outside of these areas.

i. Approximately how many people would reside or work in the completed project?

None.

j. Approximately how many people would the completed project displace?

None.

Proposed measures to avoid or reduce displacement impacts, if any:

Not applicable.

I. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Prior to construction of any future projects, Yelm will apply for and obtain the applicable land use permits and approvals. Design, construction, and operation of the individual water facilities will follow local zoning and development standards for mitigating potential impacts on adjacent land uses. Future individual permits would include site-specific conditions or mitigation measures to meet the requirements of the applicable land use, zoning, and shoreline codes and policies.

The City has prepared and adopted Yelm's Comprehensive Plan, which was last updated in 2007. The Comprehensive Plan contains policies on utilities and identifies areas for future growth, which have been sources of direction for the Yelm's water planning. The Plan is consistent with the goals and the policies of the Utilities Element of the Comprehensive Plan. Any population growth facilitated by implementation of the Plan generally would occur in areas identified for future development in Yelm's Comprehensive Plan and in the comprehensive plans of other local jurisdictions.

The Plan is consistent with the requirements of the Growth Management Act (GMA) and local and regional land use plans. The City has also updated its Comprehensive Plan in 2009 to adopt population projections consistent with the Thurston County Comprehensive Plan. The County is currently considering amendments to the Joint Plan with the City of Yelm to also adopt the most current population projections, which were used in the development of the Water System Plan.

9. **Housing**

 Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None

c. Proposed measures to reduce or control housing impacts, if any:

Not applicable.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Implementation of the Plan will entail the construction of approximately three water reservoirs over a 20-year period. These reservoirs would be similar in construction to

the City's existing reservoirs and be approximately 175 feet tall. Reservoirs will be constructed out of steel, treatment buildings and well houses will likely be constructed of concrete block with metal roofs.

b. What views in the immediate vicinity would be altered or obstructed?

Below-ground installations will not affect views. Some above-ground water facilities will be constructed. New reservoirs will not substantially obstruct views but will alter views. The proposed reservoirs in SW Yelm will be constructed in an area that is not currently developed, and will therefore not obscure any existing residents' views. Construction activities could result in short-term aesthetic impacts, depending on the future project and the characteristics of the site and adjacent properties.

c. Proposed measures to reduce or control aesthetic impacts, if any:

The design, height, and size of new projects and modifications of the individual water facilities will meet the applicable development regulations of local jurisdictions. Exterior building materials will be selected to be compatible with each project site. Projects may also include additional landscaping to provide a visual buffer between a Yelm facility and adjacent viewers.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Implementation of the Plan would not introduce major new sources of light or glare. Minimal new lighting might be required on a project-specific basis, and its potential effects would be localized. Well and reservoir projects will produce little additional light or glare, except for possible additional lighting for security purposes.

Construction activities could be short-term sources of light and glare; however, because most construction activities would be limited by the local noise ordinances to avoid nighttime hours, most construction would occur during daytime hours. The lighting requirements for future individual projects would be determined during the design phase to comply with current lighting standards and local codes.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

c. What existing off-site sources of light or glare may affect your proposal?

Future Yelm projects under the Plan would not be affected by other existing off-site sources of light or glare.

d. Proposed measures to reduce or control light and glare impacts, if any:

Future Yelm water system facilities will be located, designed, and operated to comply with lighting standards and code requirements that generally require that light fixtures be installed to optimize on-site lighting and minimize off-site impacts.

12. **Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

The primary recreational facility that will be impacted by the Plan is the Tahoma Valley Golf Course, which will be the site of the GC Well. The first facilities to be built at the SW Yelm wellfield will be near an area that is shown to be a complex of recreational fields in the planning documents for the Thurston Highlands.

b. Would the proposed project displace any existing recreational uses? If so, describe.

Impacts to the operation and use of the Tahoma Valley Golf Course will be identified and mitigated once the details of the GC well construction are known.

c. Proposed measures to reduce or control impacts or provide recreation opportunities:

Impacts on recreational opportunities will be avoided wherever possible, and would be addressed when individual projects are proposed. Short-term construction impacts would be minimized to the maximum extent possible. Additional landscaping could be provided, if warranted, to provide a visual buffer between a covered/buried reservoir and adjacent recreational users.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

Because this planning area is located within an area used by Native American Tribes in the past, there is a possibility of discovering cultural materials. However, much of the location of the proposed wells and reservoirs have been largely disturbed by past logging practices. Infrastructure construction in other areas generally occur in downtown Yelm and are related to existing water system component upgrades and replacements. Evidence of ancient permanent settlement would not be expected on the project site.

b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on or next to the site.

Communications with staff representatives of the Nisqually Indian Tribe during the preparation of the permitting documents for the Thurston Highlands MPC did not indicate significant likelihood of former Native American use of the site of the proposed wells, reservoirs, and treatment buildings in SW Yelm.

c. Proposed measures to reduce or control impacts, if any:

If it is determined that there is a potential for cultural, historic, or archaeological sites to be encountered during construction, a plan will be included in construction contract documents. This plan would require that if any cultural, archaeological, or historic resources were encountered during excavation, Yelm would immediately consult with the state and local historic preservation offices and with affected Tribes regarding site-specific mitigation measures. Work in that immediate area would be suspended, and the find would be examined and documented by a professional archaeologist or historian. Decisions regarding appropriate mitigation measures and further action would be made before construction in the area of discovery was allowed to resume.

14. **Transportation**

 Identify sidewalks, trails, public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

See Figure 1.

b. Is site currently served by public transit? By what means? If not, what plans exist for transit service?

The existing water system facility sites are not served by public transit. Intercity Transit operates a route through the City along Yelm Avenue, approximately two blocks from the downtown well site.

c. How many parking spaces would the completed project have? How many would the project eliminate?

A minimal number of parking spaces would be created at new well houses and treatment buildings. No parking spaces will be eliminated.

d. Will the proposal require any new sidewalks, trails, roads or streets, or improvements to existing sidewalks, trails, roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

Access roads will be required to provide access for construction, operation, and maintenance of the facilities in the SW Yelm wellfield.

Water pipelines often run within public rights-of-way, and pipeline construction or maintenance could occasionally result in temporary disruptions to local traffic and access to businesses or homes. To reduce construction impacts, individual projects will include appropriate measures to minimize traffic disruptions and maintain accesses. Roads that are impacted will be restored per City of Yelm standards.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Operation of future projects under the Plan would generate relatively few vehicular trips. The number of long-term vehicular trips and peak volumes are not expected to increase substantially as a result of this proposal. Construction activities would temporarily generate vehicle trips for workers and hauling materials. The number of construction vehicles is anticipated to be relatively small compared to traffic on local roadways.

g. Proposed measures to reduce or control transportation impacts, if any:

Construction of individual projects will include measures to reduce short-term impacts on affected roadways and other transportation facilities. Access to affected residences and businesses from local roadways will be maintained during the construction periods as much as possible. Vehicular travel along local roadways also will be maintained to allow passage of emergency service vehicles. For example, construction contracts would stipulate that contractors use flaggers and traffic controls to maintain vehicle access if lanes were temporarily closed during construction.

Traffic control plans for individual projects will ensure continued circulation and access during construction. Plans potentially could include provisions to address worker parking, such as requirements that workers carpool to the job site or that the contractor provide worker shuttles from off-site parking locations. Construction activities will be coordinated with affected landowners, local businesses, emergency service providers, transit services, other local jurisdictions, and the local jurisdictions.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe:

No

b. Proposed measures to reduce or control direct impacts on public services, if any.

Not Applicable.

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а.	Check utilities currently available at the site:				
	None	electricity	natural gas		
	⊠ water	⊠refuse service	★ telephone		
	⊠ sanitary sewer	septic system	igtie other:		

The utilities available at the proposed construction sites vary by location. Currently, areas in downtown Yelm are equipped with the utilities checked above. The sites of the future wells, treatment systems, reservoirs, and transmission mains in southwest Yelm do not presently have utility service.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Infrastructure improvements located in downtown Yelm will not require any additional utility service. Construction of infrastructure in the SW Yelm wellfield will include electricity service from Puget Sound Energy and water service from the City of Yelm.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the City of Yelm is relying on them to make its decision.

Signature:

Date Submitted:

SUPPLEMENTAL ENVIRONMENTAL CHECKLIST FOR NONPROJECT ACTIONS

(Do not use this sheet for project actions.)

When answering these questions, be aware of the extent of the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

It will not

Proposed measures to avoid or reduce such increases are:

N/A

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

It will not

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

N/A

3. How would the proposal be likely to deplete energy or natural resources?

It will not have a significant impact

Proposed measures to protect or conserve energy and natural resources are:

N/A

4. How would the proposal be likely to use or affect critical or environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection, such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or natural resource areas?

It will not

Proposed measures to protect such resources or to avoid or reduce impacts are:

N/A

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

It will have no impact

Proposed measures to avoid or reduce shoreline and land use impacts are:

N/A

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

It will not

Proposed measures to reduce or respond to such demand(s) are:

N/A

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

It will not conflict



