Cascadia Law Group ENVIRONMENTAL ATTORNEYS

May 15, 2009

VIA HAND DELIVERY and EMAIL

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

RE: Comment on Mitigated Determination of Non-Significance File Number ENV-08-0397-YL

Dear Mr. Beck:

This letter is intended to provide formal comments regarding the City of Yelm's Mitigated Determination of Non-Significance, File Number ENV-08-0397-YL ("MDNS"). The MDNS is issued pursuant to the following water right applications No. G2-29084, No. G2-29085, and No. G2-29086 (collectively referred to as the "Applications"). I request that the City consider these comments and include these in the City's file and record regarding the City's action in issuing the MDNS.

These comments are provided on behalf of JZ Knight, pursuant to WAC 197-11-340 and -500, et. seq. As you are aware, JZ Knight owns and operates a Group A water system, Zebras Aqueous Substance, DOH No. 61131N, and several ground water wells just outside the City of Yelm. The water system is authorized to withdraw ground water under water right certificate no. 5866, as amended. The right authorizes the withdrawal of water from six wells in the Thompson Creek/Nisqually River basin. JZ Knight also holds surface water right no. 7053 from Thompson Creek, which flows through the property. JZ Knight has not been able to exercise this right from the creek as believed to be historically done because the creek becomes dry earlier in the irrigation season.

The City of Yelm *Water Rights Mitigation Plan*, was issued in October 2008, and attaches supporting documents titled *Report on Groundwater Modeling of New Water Right and Transfer Applications City of Yelm, Washington* ("Modeling Memo"), dated January 29, 2008, and the *Technical Memorandum, Future Demand/Supply Forecast and Groundwater Modeling for Mitigation Planning* ("Technical Memo"), dated October 10, 2008 (collectively, the "Mitigation Plan" or "Plan").

The threshold determination of the MDNS relies on two proposed "mitigation measures" identified in the January 2008 Modeling Memo. These are the mitigation of impacts to the Nisqually Valley, Deschutes Valley, and McAllister Valley hydrologic areas, and the mitigation of impacts to the Woodland Creek hydrologic area, which are both described as a "phased, adaptive management approach" outlined in the Water Rights Mitigation Plan.

Upon review of the MDNS and Mitigation Plan, we request that the City withdraw the MDNS pursuant to WAC 197-11-340((3) (a). This is based on the following information and analysis.

The Mitigation Plan is not final or complete.

The City of Yelm as the lead agency must make its threshold decision based upon information reasonably sufficient to evaluate the environmental impact. WAC 197-11-335. The threshold determination is to be made when the Mitigation Plan, as the supporting documentation for the Applications and MDNS, is final and complete. See WAC 197-11-310(3).

Yelm's Mitigation Plan is not final or complete. It is still under review by the State agencies. In fact, Yelm, with the Cities of Olympia and Lacey, and the Department of Ecology, recently held (on April 28, 2009) an open house on the Cities' respective mitigation plans for applications for water rights. In a joint report with all these entities, including Yelm, the public was invited to provide comments on the mitigation plans until May 28, 2009. Until this comment period is complete, the Mitigation Plan has not been accepted as complete for mitigation purposes by the Department of Ecology. See attached Technical Fact Sheet, Attachment A. It is our opinion that Ecology will agree the Mitigation Plan is not final for the purposes of mitigation of the impacts and effects of the Applications. Ecology must find that the water requested in the Applications will not impair other water rights, there is available water for the intended purposes, and the Applications are not detrimental to the public interest. See RCW 90.03.290; 90.44.060.

The MDNS and Mitigation Plan rely on agreements with other entities and agencies which are not final and remain in "discussion". The MDNS also relies on the approval by the Department of Health of an updated water system plan which, based on our information, has not been drafted. Further, the MDNS and Mitigation Plan rely on Yelm's right to exercise current water rights that have not been and may not be approved by the Department of Ecology for transfer to Yelm and have not been approved as sources of potable supply by the Department of Health under a water system plan. Both the golf course water right and the McMonigle water rights referenced in the Plan have these deficiencies as they are not fully approved by Ecology and/or Health as potable water supply sources for Yelm. These examples show that the MDNS is based on highly speculative promises and do not form an acceptable basis for issuing any threshold decision at this time.

The MDNS fails to even consider all required adverse impacts and provide adequate mitigation for these impacts and effects of the Applications.

The law clearly provides that Yelm must consider and make specific determinations regarding the proposal and its impacts, which is defined as the effects or consequences of the actions. WAC 197-11-330(2) and (3), -752. In assessing the significance of an impact, Yelm must consider all direct and indirect effects, and short and long-term effects. WAC 197-11-060(4)(b) and (c). The effects to consider also include those resulting from the Applications, including cumulative impacts over time, and including "growth caused by a proposal" and the "precedent for future actions". WAC 197-11-060(4)(d) and (e).

The MDNS fails to adequately address the impacts and effects on the groundwater resource, and the environmental impacts that will result from the Applications including the cumulative impacts of growth. In turn, the Mitigation Plan does not address these impacts and effects in violation of SEPA. See WAC 197-11-340, -350, and -768.

It is undisputed that the Mitigation Plan is limited to mitigation proposals for effects on certain surface waters. See Environmental Checklist, Item 11, page 3. In regard to other effects such as resulting growth from the Applications, the Mitigation Plan provides no proposed mitigation of the impacts, and clearly does not address the effects from the Applications on the growth that will result from the Applications.

<u>The Mitigation Plan is wholly inadequate to provide an environmental assessment</u> as required under SEPA for the Applications.

For the Applications to meet the requirements of SEPA, Yelm acknowledges that either an environmental impact statement is required or a mitigation plan must be developed that would address the probable adverse environmental impacts. Yelm's acknowledgment is based in part on the fact that water is simply not available for the quantities requested in the Applications. The City of Yelm does not dispute this conclusion. Rather, the City has sought to address this problem with the Mitigation Plan. The Plan acknowledges that the Applications will result in a large amount of withdrawal from the aquifer, affecting the ground water and the surface waters in both the Nisqually and Deschutes River basins. While these effects are undisputed, Yelm makes unreasonable if not unconscionable allegations that the Applications will have no significant adverse environmental impacts.

A MDNS requires mitigation that avoids or minimizes the impacts from the proposal such that the lead agency can find that there are no probable significant environmental impacts. WAC 197-11-340, -766, -768. However, in this case, the Mitigation Plan concludes that there will be unprecedented detrimental impacts to the aquifer and surface waters. These findings are even more alarming because they rely on a baseline that assumes a full change of the McMonigle water right that might not be approved for the quantities requested. Of particular concern to JZ Knight are the significant impacts to the aquifers and the ground water flow in the local area of Yelm's proposed well field.

The Mitigation Plan is unfortunately dismissive of the ground water impacts. *See* Technical Memo (at 5.2, page 19) and Modeling Memo (at 4.4.2, page 20). This is not a surprise based on the Environmental Checklist that states at Item 11, page 3: "The mitigation plan provides a template for mitigating the short and long term impacts to in-stream flows attributable to additional groundwater withdrawals by the City of Yelm."

The Modeling Memo in particular shows changes in ground water levels that are substantial for the local ground water resource. The Modeling Memo concludes that there will be a material predicted change of local ground water levels of up to 23 feet:

The future groundwater level in Yelm's downtown Well 1 will increase by up to 2 feet in response to Case A, and decrease by up to 1 foot from Case D. Neither case is expected to cause local groundwater problems in terms of flooding (for Case A) or excessively low levels in other wells (for Case D).

The predicted changes in water levels in the deep aquifer in the planned wellfield area range between 10 and 23 feet for Case A, and from 6 to 13 feet for Case D. This long-term drawdown is expected to be manageable in terms of well construction and operation. The predicted water level changes in the City of Rainier well range between 1.7 and 2.6 feet for Case A, and between 1.3 and 1.9 feet for Case D. The predicted water-level changes in the Schoepfer Well range between 0.8 and 1.2 feet for Case A, and between 0.7 and 1.0 feet for Case D. These long-term drawdowns are not expected to significantly impact the operation of either well.

Modeling Memo at Section 4.4.2, page 20. These impacts are best illustrated in the Appendix A Figures attached to the Mitigation Plan.

It is now undisputed that all aquifers are hydraulically connected in this region, and accordingly the ground water resource that is relied upon by many entities in the region, including JZ Knight's water system, are likely to be substantially impacted by Yelm's proposed ground water withdrawals. This assumption is supported by the Aspect Consulting Memorandum that analyzes the Modeling Memo that Yelm provides in support of its Mitigation Plan. See Aspect Consulting Memorandum.¹ Aspect Consulting finds that the City of Yelm's wells are hydraulically up-gradient of JZ Knight's wells and are completed in the same aquifer as JZ Knight's wells, and further concludes:

Based on our understanding of hydrogeological conditions, the City of Yelm's withdrawal of potable water from its existing wells and/or the withdrawal of groundwater from a well on the Tahoma Valley Golf Course location are expected to adversely impact JZ Knight's wells and adversely impact the instream flow of Thompson Creek.

Aspect Consulting Memorandum at page 5.

The Mitigation Plan does not address these local ground water impacts. The Mitigation Plan clearly documents that the ground water aquifers to be accessed by the City's proposed well field are hydraulically connected to the other aquifers as well as the surface waters. The protection of these ground water rights is not only legally required but, as a matter of policy, these water rights are primarily for year-round drinking water uses that cannot be compromised. Unless and until Yelm submits a Mitigation Plan to address the impacts to both ground and surface water, the SEPA process is not complete and Yelm must withdraw the MDNS.

¹ The Aspect Consulting Memorandum is attached to a letter to Tom Loranger dated April 17, 2009. This letter is attached as Attachment B.

In addition to the lack of analysis on impacts on local ground water rights, there is an inadequate analysis of impacts on small tributaries to the Nisqually River. There are water rights on these tributaries that must be identified and analyzed. Additional impacts should not be allowed on the tributaries such as Thompson Creek and on the main stem Nisqually River, both of which have minimum instream flow requirements under the local regulations, provided in WAC 173-511.

It may well be that the deficiencies of the MDNS are partially due to the gross inaccuracies and inadequacies of the Environmental Checklist.

Finally, even if the Applications and documents are complete, which we dispute, Yelm may not have timely made the threshold determination under WAC 197-11-310(3).

JZ Knight has been very concerned during the past two years about the City of Yelm's failure to comply with applicable legal requirements related to water planning and water availability determinations for proposed residential and commercial development. In this regard, she has recently provided comments to Ecology on the Mitigation Plan and on the City's MDNS. I am attaching those and ask that you please also make these part of your file and record in the matter. See letter to Tom Loranger dated April 17, 2009, Attachment B, and letter to Jay Manning dated May 13, 2009, Attachment C.

Conclusion

The MDNS purports to be a determination that the proposed action (approval of 3,233.73 acre-feet of new water rights and transfer of 952.57 acre-feet per year for municipal purposes in four phases between 2010 and 2037) will not have a probable significant adverse impact on the environment. This determination is not in compliance with SEPA.

The City's proposed MDNS fails to address these major environmental impacts and is based on the City's significantly flawed water mitigation plans that have yet to be reviewed and approved by Ecology. In light of these substantial deficiencies, and in accordance with the provisions of WAC 197-11-340(3)(a)(ii) and (iii), the City of Yelm should immediately withdraw the proposed MDNS issued on May 1, 2009.

In light of the significant environmental impacts to ground water and surface waters that have been identified by the City and my client but have not been addressed in the City's mitigation plan, additional mitigation measures must be provided for the Applications or an EIS be initiated for the City's water rights

applications before any further actions are taken on the project as indicated in WAC 197-11-330.

Sincerely,

Thomas McDonald Direct Line: (360) 786-5039

Email: tmcdonald@cascadialaw.com

Office: Olympia

TM:en

Attachments:

A - Technical Fact Sheet (The Cities of Lacey, Olympia, and Yelm Water Right Mitigation Plans)

B – Letter to Tom Loranger dated April 17, 2009 (with attachment, Aspect Consulting Memorandum)

C - Letter to Jay Manning dated May 13, 2009

cc: Via U.S. Mail, w/attachments:

Jerrod Davis, Deputy Director, Field Operations, Department of Health Bonnie Waybright, P.E., Assistant Regional Manager, SW Regional Office of Drinking Water

Regina Grimm, P.E., Regional Engineer,

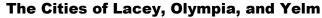
Thomas Loranger, Manager, Water Resources, Southwest Regional Office Phil Crane, Water Resources, Ecology Southwest Regional Office

ATTACHMENT A









Water Right Mitigation Plans For impacts to Long Lake, Pattison Lake, **Hicks Lake and Woodland Creek**

TECHNICAL FACT SHEET



The Cities of Lacey, Olympia, and Yelm are addressing the needs of our communities in an innovative way...they are addressing them together.

Each city is in need of new water rights;

Each city has asked the Washington State Department of Ecology for new water rights; Each city has examined the impacts of withdrawing new water;

...and the cities have come together to develop a proposal to mitigate for the predicted impacts.

Frequently Asked Questions

What are the water needs of our community?

Along with the rest of the country, the cities of Lacey, Olympia, and Yelm are projected to experience population growth. As our communities grow, the need for water also grows. We all need clean water to drink and water available to wash our clothes and dishes.

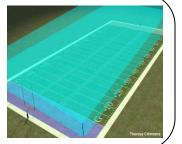
The cities are looking ahead to the lives of our children and grandchildren, and have applied for water rights to meet the water demands over the next 40-50 years.

How much water is being requested by Lacey, Olympia, and Yelm?

The City of Lacey is requesting to pump an additional 3,000 gallons per minute, or 7,392 acre-feet per vear, from six wells. Four of these wells will be located in the Hawks Prairie area north of Interstate 5. The other two wells are along Marvin Road east of Long Lake. These two wells already pump into the Lacey water system but have additional capacity beyond what is currently permitted with

water rights.

1 acre-foot is roughly equal to the amount of water sufficient to cover a football field in 1 foot of water



The City of Olympia is requesting to transfer the city's existing water rights from McAllister Springs and Abbot Springs to their McAllister wellfield located southeast of

McAllister Springs. Their applications are for transferring a total of about 18,100 gallons per minute and about 29,200 acre-feet per year.

The City of Yelm is requesting to pump a total of 5,000 gallons per minute, or 4,186 acre-feet per year, from a planned SW Yelm Wellfield. Yelm currently supplies the water system from downtown-area wells, but the long-term goal is for the entire water supply to be provided from a new wellfield.

What are the predicted impacts to the lakes and Woodland Creek?

The highest predicted combined impacts include a one-inch draw down in each of Long, Hicks, and Pattison Lakes which would occur over approximately the next 30 years. This is the time it would take to make full use of the water that is requested in the water rights applications.

Over the same 30-year time period, the highest predicted cumulative impact to Woodland Creek is a 0.26 cubicfeet per second (117 gallons per minute) flow reduction during winter months. This flow reduction to Woodland Creek is roughly equal to the flow that you might see if you turned on 15 garden hoses at the same time.

How were the impacts determined?

The factors affecting the flow of groundwater in the area, such as, depth and location of the wells, the amount of water proposed to be pumped, and seasonal variations in groundwater levels, were entered into a computer model that was then used to predict how additional groundwater pumping would affect the surface water in the Woodland Creek basin. The cities of Lacey, Olympia and Yelm worked together to look at the combined impacts from full use of all of their water right applications. The results were summarized to show which months of the year the highest predicted impacts could occur.

How do the cities propose to mitigate impacts in the Woodland Creek basin?

The cities added up the maximum predicted impacts to the lakes and Woodland Creek. To assure that this impact is completely mitigated, the cities are proposing to allow 150% of this amount to seep into the creek through the infiltration ponds, which will improve the flow in Woodland Creek during the summer months.

The water will be infiltrated in phases over the next 30 years. As more water is used by the cities, the amount of water infiltrated into the groundwater is increased. The maximum amount currently proposed to be infiltrated into the ground near Woodland Creek is 788 gallons per minute, or 1.1 million gallons per day.

How will Woodland Creek be enhanced?

The health of the Woodland Creek basin relies heavily on its ability to support salmon runs by providing plenty of cool, clean water in the creek. Consequently, the cities have proposed to focus all plans for offsetting the impacts to the basin (which includes impacts to the lakes and the creek) on Woodland Creek during the summer low flow period. This is intended to increase flows in Woodland Creek during summer months.

The plans to enhance flows in Woodland Creek include taking reclaimed water and directing it to a site near Woodland Creek Community Park. A series of ponds will be constructed that will allow the clean, reclaimed water to naturally soak back into the ground, or "infiltrate" into the groundwater. Once here, the infiltrated water will naturally travel with the groundwater to Woodland Creek. This will improve the flows in Woodland Creek from this point to the mouth of the creek.

The ponds will also attract wildlife and provide recreational opportunities such as a walking trail, benches, and educational signs which will all be open to the public to enjoy.

Comments?

The three mitigation plans submitted by Lacey, Olympia, and Yelm are currently under review by the Department of Ecology. According to the Department of Ecology's water rights public involvement process, this opportunity is a special case opportunity for you to learn about what the cities of Lacey, Olympia, and Yelm are proposing that may affect some areas in the Woodland Creek basin. In addition to this opportunity, there will be two formal comment periods before any decisions regarding these water rights or mitigation plans are made final.

If you would like to provide comment on the City of Lacey's Comprehensive Mitigation Plan at this time, you can attend a public Open House:

Tuesday, **April 28, 2009** – between **6:30-8:30pm Lacey Community Center** (at Woodland Creek Community Park)
6729 Pacific Avenue S.E., Lacey, WA 98503

In addition, the Department of Ecology will also accept public comments for **30 days** following the Open House, or until **May 28, 2009**. Comments should be mailed to:

Michael Gallagher Department of Ecology's Water Resources Program SW Regional Office PO Box 47775 Olympia, WA 98504

Email will also be accepted if received by May 28, 2009 at: MGAL461@ecv.wa.gov

ATTACHMENT B



Tom Loranger, Manager Water Resources Program Southwest Regional Office Department of Ecology 300 Desmond Drive Lacey, WA 98503

RE: Comment and protest re City of Yelm water right application nos.:

G2-29084 - Priority Date January 10, 1994 G2-29085 - Priority Date January 10, 1994 G2-29086 - Priority Date January 10, 1994

Dear Mr. Loranger:

This letter is sent to provide comments regarding the above-referenced water right applications. I ask that you please consider these comments in processing the applications and make this letter part of the Department's file and record in this matter. I have spoken with Mike Gallagher about the opportunity to comment, and he agreed that a written letter could be provided for the purpose of assisting your office in analyzing and processing these water right applications. I also request that the Department notify me of any action taken by Ecology on these applications.

I am providing these comments on behalf of JZ Knight. JZ Knight owns and operates a Group A water system, Zebras Aqueous Substance, DOH No. 61131N, just outside the City of Yelm. The water system has authorized water right certificate no. 5866, as amended. The right authorizes the withdrawal of water from six wells in the Thompson Creek/Nisqually River basin. JZ Knight also holds surface water right no. 7053 from Thompson Creek, which flows through the property. JZ Knight has not been able to exercise this right from the creek as believed to be historically done because the creek becomes dry earlier in the irrigation season. For your review, I am attaching a memorandum that was completed by Aspect Consulting regarding impacts caused by the most recent water right transfers.¹

¹ The Aspect Consulting Memorandum was drafted for the appeal by JZ Knight of the City of Yelm's approval of several subdivision plats. The Superior Court relied on this Memorandum to find that JZ Knight had standing to challenge Yelm's decisions. *JZ Knight v. City of Yelm, et al.*, Thurston County Superior Court Cause No. 08-2-00489-6; Court of Appeals No. 38581-3-II. If you would like to review any of these court documents, I will provide copies to you. As you know, Ecology filed a brief in this appeal as *Amicus Curiae*.

Tom Loranger April 17, 2009 Page 2

As you may know, several studies have been completed regarding these applications. The studies, which we are aware and we have obtained copies, show that water is simply not available for the quantity of water requested in the water right applications. The City of Yelm does not dispute this conclusion. Rather, the City has sought to address this problem with a mitigation plan that the City hopes will address the impacts and impairment that undoubtedly will be caused by the large amount of withdrawal from the aquifer, affecting the ground water and the surface waters in both the Nisqually and Deschutes WRIAs.

On behalf of Yelm, Golder and Associates issued the <u>Report on Groundwater</u> <u>Modeling of New Water Right and Transfer Applications City of Yelm, Washington</u> ("Modeling Memo"), dated January 29, 2008, and the <u>Technical Memorandum, Future Demand/Supply Forecast and Groundwater Modeling for Mitigation</u> <u>Planning</u> ("Technical Memo"), dated October 10, 2008(collectively, the "Golder Reports"). These were included as attachments and in support of the <u>City of Yelm Water Right Mitigation Plan</u> ("Mitigation Plan"), dated October 2008.

The Golder Reports support the conclusion that there will be unprecedented detrimental impacts to the aquifer and surface waters. These findings are even more alarming because they rely on a baseline that assumes a full change of the McMonigle water right that might not be approved for the quantities requested. Of particular concern to JZ Knight are the significant impacts to the aquifers and the ground water flow in the local area of Yelm's proposed well field.

The Golder Reports and the Mitigation Plan are unfortunately dismissive of the ground water impacts. See Technical Memo (at 5.2, page 19) and Modeling Memo (at 4.4.2, page 20). The Modeling Memo in particular shows changes in ground water levels that are substantial for the local ground water resource. The Modeling Memo concludes that there will be a material predicted change of local ground water levels of up to 23 feet:

The future groundwater level in Yelm's downtown Well 1 will increase by up to 2 feet in response to Case A, and decrease by up to 1 foot from Case D. Neither case is expected to cause local groundwater problems in terms of flooding (for Case A) or excessively low levels in other wells (for Case D).

The predicted changes in water levels in the deep aquifer in the planned wellfield area range between 10 and 23 feet for Case A, and from 6 to 13 feet for Case D. This long-term drawdown is expected to be manageable in terms of well construction and operation. The predicted water level changes in the City of Rainier well range between 1.7 and 2.6 feet for Case A, and between 1.3

Tom Loranger April 17, 2009 Page 3

and 1.9 feet for Case D. The predicted water-level changes in the Schoepfer Well range between 0.8 and 1.2 feet for Case A, and between 0.7 and 1.0 feet for Case D. These long-term drawdowns are not expected to significantly impact the operation of either well.

Modeling Memo at Section 4.4.2, page 20. These impacts are best illustrated in the Appendix A Figures attached to the Mitigation Plan.

We believe you will find that the analysis provided by Yelm is wholly inadequate to determine and address the localized impacts to water rights, such as JZ Knight's water rights, in the immediate area of the City of Yelm. If, as the reports show, the City of Rainier well is to see a decline of 2.6 feet, the wells supporting JZ Knight's water system wells will clearly see a significant decline if you only consider the relative distance from the City of Yelm's proposed well field.

It is now undisputed that all aquifers are hydraulically connected in this region, and accordingly JZ Knight's water rights and water system are likely to be substantially impacted by Yelm's proposed ground water withdrawals. This is supported by the Aspect Consulting Memorandum that analyzed Golder's Modeling Memo, by several of Ecology's recent approvals of Yelm's applications to change water rights, and by references in Golder's materials. Aspect Consulting finds that the City of Yelm's wells are hydraulically up-gradient of JZ Knight's wells and are completed in the same aquifer system as JZ Knight's wells, and further concludes:

Based on our understanding of hydrogeological conditions, the City of Yelm's withdrawal of potable water from its existing wells and/or the withdrawal of groundwater from a well on the Tahoma Valley Golf Course location are expected to adversely impact JZ Knight's wells and adversely impact the instream flow of Thompson Creek.

Aspect Consulting Memorandum at page 5.

It is imperative that the City of Yelm and Ecology comply with the legal requirement to determine the level of any of these local impacts on existing water rights, including the permit exempt domestic wells, prior to any determination that would allow Yelm to withdraw water under these applications. Ecology's review of JZ Knight's amendment to water right certificate no. 5866 already identified many ground water rights in the area, and this same process must be done with Yelm's applications.

The Mitigation Plan does not address these local ground water impacts. We recognize, as Mike Gallagher stated, that the intent of the Mitigation Plan is to

only address the impacts on surface water. Ecology cannot, however, rely solely on a surface water mitigation plan. Ecology must either deny the applications or also request mitigation for any impairment of ground water rights because, as mentioned above, the reports clearly document that the ground water aquifers to be accessed by the City's proposed well field are hydraulically connected to the other aquifers as well as the surface waters. The protection of these ground water rights is not only legally required but, as a matter of policy, these water rights are primarily for year-round drinking water uses that cannot be compromised. Unless and until Yelm submits a mitigation plan to Ecology to address the impacts to both ground and surface water, these applications cannot be properly processed; and a mitigation plan for ground water impacts cannot be properly developed unless and until the impacts to the aquifers and local ground water rights are known, which the current reports from the City fail to adequately analyze.

As with the lack of analysis on impacts on local ground water rights, there is an inadequate analysis of small tributaries to the Nisqually River. There are water rights on these tributaries that must be identified and analyzed. As stated above, JZ Knight holds a water right on Thompson Creek. This creek has already seen depleted flows over the years, likely from local development. In this regard, Ecology can not allow additional impacts on Thompson Creek and on the main stem Nisqually River, both of which have minimum instream flow requirements under the local regulations, provided in WAC 173-511.

On behalf of JZ Knight, I appreciate the opportunity to comment on these applications. Please do not consider this letter as final comments on the adequacy of the City's applications and, in particular, the City's failure to properly address the ground and surface water impacts and mitigation. We will be supplementing these comments as necessary.

Sincerely.

Thomas McDonald

Direct Line: (360) 786-5039

Email: tmcdonald@cascadialaw.com

Office: Olympia

TM:en

Enclosure



MEMORANDUM

Project No.: 080130-001-02

July 3, 2008

To:

JZ Knight

cc:

Keith Moxon, GordonDerr LLP

Tom McDonald, Cascadia Law Group

From:

Tyson D. Carlson, LHG

Senior Project Hydrogeologist

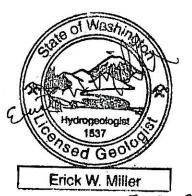
Erick W. Miller, LHG

Senior Associate Hydrogeologist

Re:

JZ Knight Hydrogeologic Assessment

Yelm Prairie Area, Washington



7-03-08

The City of Yelm (City) has recently approved five subdivisions totaling 568 units of residential development. These subdivisions are the subject of an appeal under the Land Use Petition Act ("LUPA") in Thurston County Superior Court. The City of Yelm has stated that it is pursuing new groundwater rights to supply potable water to these and other development projects in the City of Yelm. The proposed subdivisions are located approximately 1,300 feet south of the JZ Knight property (Figure 1). This memorandum addresses the impact of additional groundwater withdrawals from City wells to serve these five subdivisions. In particular, the impact considered is the impact to groundwater and surface water for which JZ Knight has water rights approved by the Washington Department of Ecology. This impact is determined by evaluating the hydraulic connection between the City of Yelm's wells (the source of groundwater to supply the five proposed subdivisions) and the groundwater and surface water resources for which JZ Knight has water rights.

JZ Knight's property is located on the western side of the Yelm Prairie, approximately 1.2 miles from downtown Yelm (intersection of SR 510 and SR 507), as illustrated on Figure 1. Six water supply wells are located on the JZ Knight property. JZ Knight has surface water rights to Thompson Creek, a tributary of the Nisqually River. Thompson Creek traverses the Knight property from south to north. The 568 residential units proposed in the five subdivisions approved by the City of Yelm would require 191 acre-feet per year (afy) of additional potable water, based on the City's Comprehensive Plan standard of 300 gallons per day per connection "for planning and concurrency purposes" (City of Yelm, Comprehensive Plan, p. V-3, 2006).

Information on the future water supply alternatives being considered by the City of Yelm is documented in several reports, including a January 29, 2008 report entitled "Groundwater Modeling of New Water Right and Transfer Applications" prepared by Golder Associates.

That report quantifies the impacts of water supply alternatives on local groundwater elevations and regional surface water features. Additional information regarding future water resource, geological, and hydrogeological issues is contained in the Draft Environmental Impact Statement ("DEIS") (City of Yelm, 2008) completed for the Thurston Highlands Master Planned Community. Thurston Highlands is a proposed development on approximately 1,240 acres located in the southwest corner of the City of Yelm Urban Growth Area ("UGA") (see Figure 1).

Based on these documents and other references cited in this technical memorandum, we have developed an understanding of the City's strategies for developing water supply alternatives to meet future demand. These strategies all assume that the City will face a significant increase in water demand and that the City will be required to acquire substantial new supplies of water to serve this increased demand. The proposed 568 units of residential development is part of the significant increase in water demand that the City will have to serve. The City is actively considering the acquisition of new water rights for the SW well-field within the Thurston Highlands Master Planned Community that would total 3,037.88 afy. However, there is no evidence that these water rights will be available in time to serve the five proposed subdivisions. Therefore, this technical memo evaluates the impact of serving the five proposed subdivisions (191 afy) using the City's existing wells, including any additional wells located on the Tahoma Valley Golf and Country Club that may be available pursuant to a recent water right approval of 77 afy.

Background

The following section presents our understanding of the regional hydrogeology based on the review of the background materials cited in this technical memorandum. This discussion is supported by the cross section presented in Figure 2. The cross section location is presented on Figure 1.

Regional Hydrogeology

The hydrogeology of the Yelm Prairie upland is defined by four major water bearing stratigraphic units. The Vashon Drift, with its characteristic large thicknesses of stratified sand and gravel, gives rise to the uppermost aquifer in the recessional outwash (Qvr) deposits. The Qvr aquifer supports numerous shallow water table lakes and wetlands, and contributes perennial base flow to creeks and rivers. End moraine deposits of the recessional outwash are included with the Qvr unit. Below Qvr, low permeable Vashon till (Qvt) often separates the upper recessional and the underlying advance outwash aquifers. The advance outwash (Qva) serves as a significant source of potable water for some municipal and exempt water supply wells. The Qva is often hydraulically confined by the overlying low-permeability Qvt. Few water supply wells are completed in the Qvr due to its limited thickness and the susceptibility to water quality problems. However, the Qva is a significant source of potable water in Thurston County. The City of Yelm's three existing wells are located in the Ova unit.

Below the Vashon Drift sequence are the clay and silts of the interglacial Kitsap formation. This unit typically acts as a regional aquitard, separating the shallow aquifers from the more

regionally extensive deeper aquifers. From our review of well logs, it appears that the Kitsap Formation is thin or absent throughout much of the area of the City's existing wells and the wells on the JZ Knight property.

Underlying the Vashon Drift in the area of the City's existing wells and the wells on the JZ Knight property are deposits from the "penultimate" glaciation (Qc), or more regionally identified as the Salmon Springs Drift, which is present throughout most of the region. The Qc aquifer is typically 15 to 70 feet thick, but has been observed to be in excess of 200 feet thick. The coarse-grained layers within the Qc are a heavily utilized water bearing unit. JZ Knight's wells are completed within the Qva or Qc units.

The deepest known major water bearing unit in this area is the *undifferentiated and unconsolidated Quaternary and Tertiary sedimentary units* (*Qu/TQu*). Although highly heterogeneous, several different water bearing layers have been identified. The proposed SW wellfield described in the City's 2008 Golder report and the DEIS for Thurston Highlands is proposed to be developed in the Qu/TQu unit. Few wells penetrate the entire thickness of these unconsolidated deposits, so information on thickness or extent of deeper regional water bearing zones is limited.

Groundwater Flow

In the shallow Vashon aquifers (Qvr and Qva), groundwater flow directions generally correspond to surface topography, with groundwater divides located near ridgelines, and flow tending toward local saline or fresh water (e.g., upper Thompson Creek, Yelm Creek, and adjacent reaches of the Nisqually River) discharge boundaries. Drost, et al. (1999) mapped local groundwater gradients in the Qva as being north to northwest toward the Nisqually River (Figure 3).

Groundwater flow in the intermediate Qc aquifer exhibits similar flow patterns as the overlying Vashon aquifers, but the effect of local surface water drainages is muted. Drost, et al. (1999) concluded that deeper groundwater discharges principally to regional discharge features like the lower reaches of the Nisqually/McAllister River system and Puget Sound. However, similar to the Vashon aquifers, groundwater divides in the Qc aquifer are near topographic ridgelines, with flow directions toward the regional discharge features described above. An analogous flow pattern is observed in the deeper Qu aquifer. Locally, the groundwater flow in the Qc aquifer is in a northwesterly direction (Figure 4).

The aquifers are recharged by precipitation, streamflow losses, and vertical leakage from shallow units into deeper units. Because of this vertical leakage, Ecology considers surface water to be hydraulically connected and constitute the same source of public groundwater (THUR 07-08).

Thompson Creek

The headwaters of Thompson Creek begin south of the location of the five proposed subdivisions and south of the Tahoma Valley Golf and Country Club. Thompson Creek then drains across the western edge of the Yelm Prairie, through the JZ Knight property, and north

to the Nisqually River. The upper reaches of Thompson Creek are supported by shallow groundwater discharging to the creek. This area is also host to numerous delineated wetlands. Flow is intermittent between the wetland complexes of the upper reaches and Tahoma Terra Bridge with flow typically occurring from October through June. Highest baseflows and groundwater discharge to the creek occur in midwinter to early spring. Monitoring during winter 2008 approximately 100 feet downstream from the Tahoma Terra Bridge indicates a baseflow condition of about 1.5 to 2 cubic feet per second (cfs) (Brown and Caldwell, 2008, p. 6).

Downstream of 93rd Avenue SE, the creek loses water most of the year as it traverses the more permeable outwash deposits (Qvr). This "losing stream" characteristic means that Thompson Creek recharges the underlying groundwater, but when there is not enough flow in Thompson Creek (due to various causes including withdrawal of groundwater from existing City wells), then less water is available for recharging the aquifer. The groundwater-surface water interaction is described in the DEIS for the Thurston Highlands project (Brown and Caldwell, 2008). Thompson Creek is a "losing" stream where it traverses the JZ Knight property. This leakage is a source of recharge to the Qva/Qc aquifer where the JZ Knight's wells are completed. Rongey/Associates (2001) estimated a flow loss from that portion of Thompson Creek between the south and north boundaries of the JZ Knight property as a flow loss to the underlying aquifer at a rate of 0.31 cfs in January 2001.

The Washington Department of Ecology has recognized the direct continuity between the upper reaches of Thompson Creek and the Qva aquifer. This hydraulic continuity was described in the Report of Examination transferring the Tahoma Valley Golf Course water right to the City of Yelm (THUR 07-08).

According to Golder's report concerning the development of the SW wellfield, Alternative D, which would concentrate the City's water rights into the City of Yelm's downtown wells and a new well at the Tahoma Valley Golf Course, is predicted to decrease Yelm Creek surface water flows by 0.28 cfs. Similar analysis was not available for the impacts to Thompson Creek under this alternative, but in our opinion similar impacts to Thompson Creek (i.e., decrease of surface water flows) would be expected. Moreover, the Golder study predicts water levels in the Yelm area will decline up to 1-foot as a result of increased pumping. A water level decline of 1-foot will extend the dry season for Thompson Creek and diminish the wetted reaches during periods of flow.

Minimum Instream Flows

Washington Administrative Code (WAC) Chapter 173-511 outlines an instream resources protection program and specifies minimum instream flows for the Nisqually River watershed. The City's wellfields and JZ Knight's wells are located in this watershed.

The Bypass and Middle Reaches of the mainstem Nisqually River are closed to further appropriation from June 1 to October 15. The JZ Knight property is located adjacent to the Bypass Reach and Diversion Channel. Instream flow regulations apply to Thompson Creek, which has an established instream low flow limit of 1.0 cfs.

The purpose of instream flow limits is to protect surface water bodies such as Thompson Creek. JZ Knight has surface water rights to Thompson Creek.

JZ Knight Property and Water Rights

There are six wells currently located on the JZ Knight property, which are permitted under Certificate No. 5866 for an instantaneous withdrawal rate (Qi) of 160 gallons per minute (gpm) and a cumulative annual volume (Qa) of 26.02 afy for multiple domestic supply and 9.15 afy for irrigation of 5 acres. Wells are located throughout the property, each with its own distribution system. Well 1 is currently authorized as a Group A water supply, while Wells 2 through 5 are used for domestic use, fire flow, and irrigation. Well 6 is the original point of withdrawal for Certificate 5866. The locations of the wells are illustrated on Figure 1 and in cross section on Figure 2.

According to the Amended Report of Examination for Change for Certificate 5866 and the geologic interpretation provided by Drost, et al. (1999), Ecology determined that Wells 1 through 5 are completed in lower portions of the Qva or the upper portions of the Qc (Ecology, 2007).

JZK owns a surface water right from Thompson Creek that traverses her property. Water Right Certificate No. 7053. The right is for 0.3 cfs which is equivalent to approximately 150 gpm, and 90 afy. This water right has a priority date of April 19, 1950.

Impact Analysis

Based on our understanding of hydrogeological conditions, the City of Yelm's withdrawal of potable water from its existing wells and/or the withdrawal of groundwater from a well on the Tahoma Valley Golf Course location are expected to adversely impact JZ Knight's wells and adversely impact the instream flow of Thompson Creek.

The City of Yelm's downtown wells lie hydraulically upgradient of JZ Knight's wells and are completed in the same aquifer system as the six JZ Knight's wells. Any additional ground-water withdrawn from the City wells is expected to adversely affect JZ Knight's ability to withdraw water from Thompson Creek and reduce the recharge flow ("leakage") from Thompson Creek to the aquifer. This recharge flow helps maintain aquifer levels and water levels in the JZ Knight wells.

Increased pumping from the City's downtown wells is expected to adversely impact flows in the upper reaches of Thompson Creek. Diminished flows in any section of Thompson Creek upgradient of the JZ Knight property will lead to diminished flow in Thompson Creek on the JZ Knight property and will also result in reduced recharge to the aquifer at the JZ Knight property. Gaging measurements by Rongey/Associates (2001) indicate that these stream losses are an important source of recharge to the aquifers beneath the JZ Knight property.

In addition to increased pumping in the City wells, Thompson Creek is expected to be further adversely impacted on the JZ Knight property by the establishment of an additional point of withdrawal on the Tahoma Valley Golf Course in the shallow Qva aquifer. This additional point of withdrawal would occur in connection with the proposed transfer of the McMonigle

water right (up to 172.96 afy) to that location and would be in addition to the pumping of the existing Tahoma Valley Golf and Country Club water right (up to 77 afy) recently transferred to the City. The existing McMonigle well is located approximately 2 miles from the City wells upgradient in the Yelm Creek drainage, while the Golf Course well is about 2,000 feet from Thomson Creek and 1,300 feet from wetlands adjacent to Thompson Creek. Transfer of this additional pumping closer to Thompson Creek will have an increased adverse impact on Thompson Creek flows. Thompson Creek flows would be expected to diminish with transfer of the McMonigle water right (172.96 afy) and the corresponding increase in groundwater pumping from the Golf Course wells.

Impacts to shallow aquifer levels and streamflows with increased withdrawals in the City's downtown and Golf Course wells are indicated by groundwater modeling done by Golder Associates (2008). The groundwater model indicates a decline in shallow aquifer water levels of up to 1-foot in the Yelm area. A 1-foot decline in water levels would adversely impact flows, particularly in Thompson Creek, where groundwater levels are already below the base of the stream during much of the year. Although Golder Associates (2008) did not quantify specific impacts to Thompson Creek, they did model results for Yelm Creek and indicated a 0.28 cfs decline in flows. Based on the Golder model and the similar hydrologic setting for Yelm and Thompson Creeks, declining flows are also expected to occur in Thompson Creek.

The direct adverse impact of additional groundwater withdrawal from City wells to that portion of Thompson Creek within the JZ Knight property will be: (1) the number of days that Thompson Creek meets instream flow limits is expected to be reduced, and (2) the extent of the dry reach of Thompson Creek on the JZ Knight property would be expected to increase. Both of these impacts are adverse to the ability of JZ Knight to use her water rights.

References

- Brown and Caldwell, 2008, Thurston Highlands DEIS Surface Water Technical Report, May 13, 2008.
- City of Yelm, 2006, Comprehensive Plan and Joint Plan with Thurston County, p. V-3.
- City of Yelm, 2008, Thurston Highlands, Master Planned Community, Draft Environmental Impact Statement. June 2008.
- Drost, B.W., Turney, G.L., Dion, N.P., and Jones, M.A., 1999, Conceptual Model and Numerical Simulation of the Ground-Water Flow System in the Unconsolidated Sediments of Thurston County, Washington. U.S. Geological Survey Water Resources Investigation Report 99-4165, 1999.
- Golder Associates, 2008, Groundwater Modeling of New Water Right and Transfer Applications, City of Yelm, Washington. Prepared for City of Yelm. January 29, 2008.
- Rongey/Associates, 2001, Hydrogeologic Investigation, Yelm Prairie Area. Prepared for JZK, Inc. February 2001.

July 3, 2008

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- Skillings Connolly, 2002, City of Yelm Comprehensive Water Plan. Prepared for City of Yelm. September 2002.
- THUR 07-08, Application for Change/Transfer, Report of Examination for 5155-A. Prepared by Thurston County Water Conservancy Board. January 28, 2008.
- Washington State Department of Ecology (Ecology), 2007, Amended Report of Examination for Change, Certificate No. 5866. June 20, 2007.
- Watershed Professionals Network (WPN), 2002, Nisqually River Level I Watershed Assessment (WRIA 11), Summary Report. Prepared for Nisqually Watershed Planning Group. July 2002.

Limitations

Work for this project was performed and this memo prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. It is intended for the exclusive use of JZ Knight for specific application to the referenced property. This memo does not represent a legal opinion. No other warranty, expressed or implied, is made.

Attachments

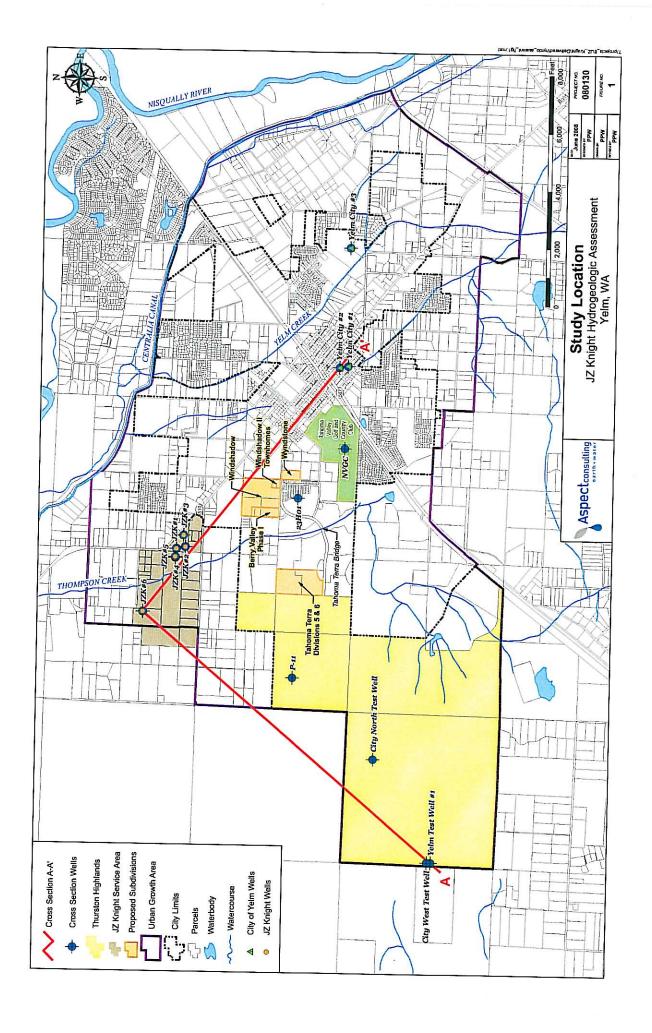
Figure 1 - Study Location

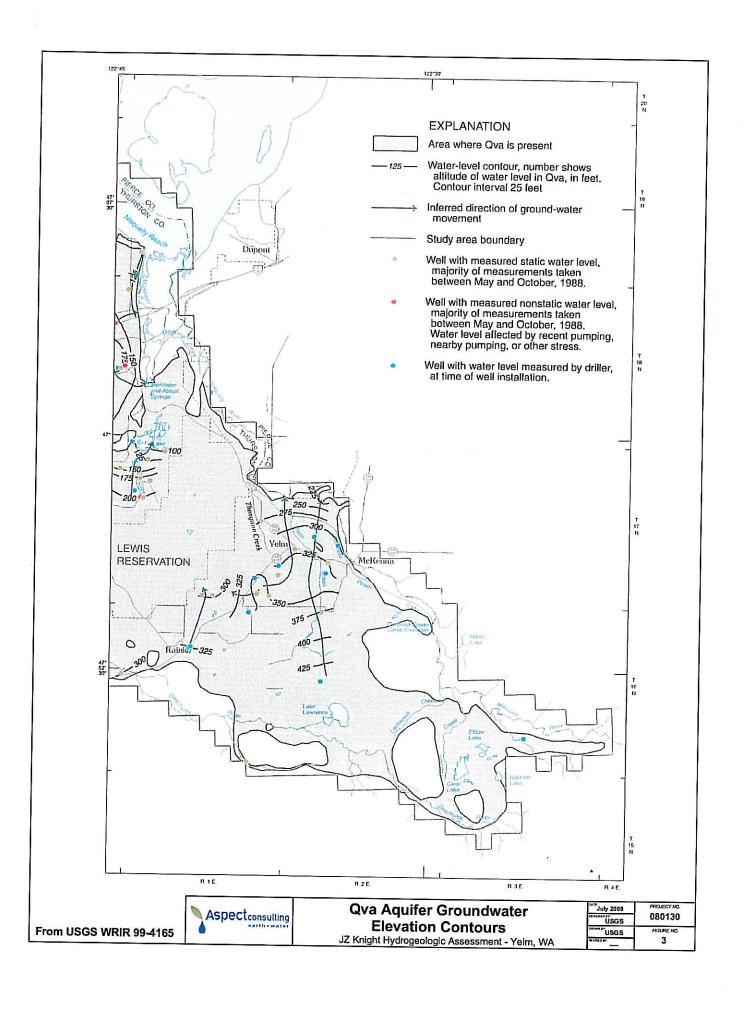
Figure 2 - Cross Section A-A'

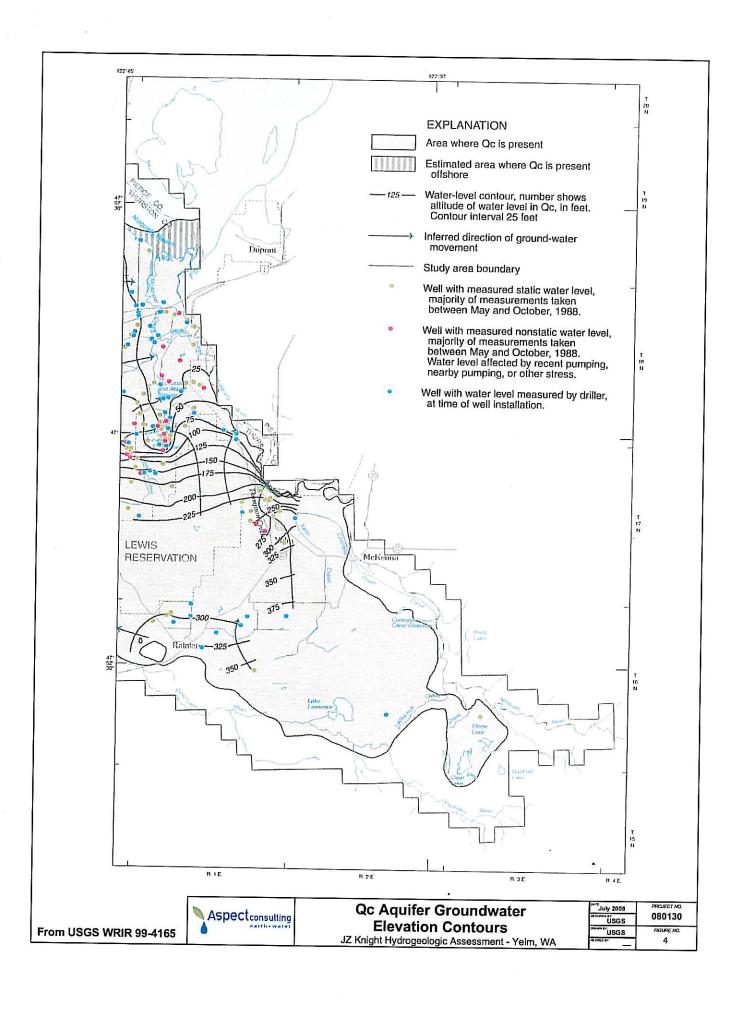
Figure 3 – Qva Aquifer Groundwater Elevation Contours

Figure 4 – Qc Aquifer Groundwater Elevation Contours

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ATTACHMENT C



May 13, 2009

VIA EMAIL & U.S. MAIL

Mr. Jay Manning Director, Department of Ecology P. O. Box 47600 Olympia, WA 98504-7600

Dear Mr. Manning:

As you know, my client, JZ Knight, has been very concerned during the past two years about the City of Yelm's failure to comply with applicable legal requirements related to water planning and water availability determinations for proposed residential and commercial development.

In early 2008, Knight challenged the City's approval of five proposed subdivisions totaling 568 lots based on the City's failure to demonstrate adequate water availability. On November 7, 2008, Thurston County Superior Court Judge Chris Wickham agreed with Knight and entered a judgment reversing the City's approval of these five proposed subdivisions. This reversal was based on the City's refusal to require proof of water availability for final plat approval. Although the City appealed that decision, in its briefing to the Court of Appeals the City now concedes that water availability must be determined at the time of final plat approval. Had the City followed this requirement of state law from the outset, my client and the City could have been spared considerable time, expense, and frustration.

My client believes that private citizens should not be obligated to "police" the City of Yelm regarding water issues. The following is a summary of important issues that demand the immediate attention and active involvement of the Department of Ecology:

- 1. The City of Yelm continues to claim and rely on water rights it does not have and continues to approve new development without a valid and current plan to provide water to existing and new development.
- 2. From 2001 to 2008, the City of Yelm pumped water in excess of its lawful water rights. Ecology and the Department of Health declined to take enforcement action based on the City's promise that it would update its Water System Plan that expired in September of 2008. To date, the City has not updated its Water System Plan, yet it continues to approve new development projects and continues to make commitments that will result in future water demand.

- 3. In 2008, the City issued draft and final Environmental Impact Statements for Thurston Highlands, a proposed 1240-acre master planned community development that would add 5000 residences and over 1 million square feet of commercial development to the City's water demand.
- 4. The City's EIS acknowledged that significant new water rights would be required to serve the Thurston Highlands project. However, the City opted to defer all environmental review of impacts attributable to the City's acquisition and use of such new water rights. The City promised that environmental review of "the impact that additional groundwater withdrawal may have on public and private water systems" would be considered by the Department of Ecology "as part of its review of new water rights applications." DEIS, Section 3.3, p. 37.
- 5. On May 1, 2009, the City of Yelm issued a Mitigated Determination of Non-Significance ("MDNS") under SEPA for a "project" consisting of three water rights applications with a priority date of January 10, 1994, requesting 10,000 acre-feet of water for municipal supply.
- 6. The City's MDNS purports to be a determination that the proposed action (approval of 3,233.73 acre-feet of new water rights and transfer of 952.57 acre-feet per year for municipal purposes in four phases between 2010 and 2037) will not have a probable significant adverse impact on the environment. This determination rests on two proposed "mitigation measures".
 - (1) mitigation of impacts to the Nisqually Valley, Deschutes Valley, and McAllister Valley hydrologic areas (as identified in a January 2008 Golder Associates report) through a "phased, adaptive management approach" (as outlined in the City's "Final Water Rights Mitigation Plan" dated October 2008); and
 - o (2) mitigation of impacts to the Woodland Creek hydrologic area as identified in a January 2008 Golder Associates report) through a "phased, adaptive management approach" (as outlined in the City's "Final Water Rights Mitigation Plan" dated October 2008).
- 7. The mitigation plan documentation relied upon in issuing this MDNS for over 3200 acre-feet of new water rights has not been reviewed or approved by Ecology.
- 8. The City's MDNS fails to acknowledge that the City has not completed the required update of its Water System Plan, which is at least 8 months overdue.
- 9. The City's designation of itself as lead agency for the environmental review of these water rights applications is contrary to a specific purpose of the SEPA regulations applicable to lead agency designations to "identify agencies with environmental expertise." WAC 197-11-900(4).

- 10. SEPA regulations identify the Department of Ecology as an agency possessing "special expertise" regarding "water resources and water quality." WAC 197-11-920(2)(b). The City of Yelm has no such special expertise, and has demonstrated by its past actions that it lacks the commitment to comply with laws and regulations applicable to water rights and water system planning.
- 11. The City's designation of itself as lead agency for the environmental review of these water rights applications is contrary to SEPA regulations specifically providing that Ecology, as the "first agency receiving an application for or initiating a nonexempt proposal shall determine the lead agency for that proposal." WAC 197-11-924(1). Ecology received the City's water rights applications in 1994 and has the authority to determine the lead agency. Given the City's previous promise that Ecology would review environmental impacts "as part of its review of new water rights application," and given Ecology's role in the review and approval of these new water rights, Ecology should assume the role of lead agency for this environmental review.
- 12. Mr. Tom McDonald wrote a letter to Ecology (Tom Loranger) on April 15, 2009, on behalf of JZ Knight protesting some of the glaring shortcomings of the Yelm Water Mitigation Plan, including the City's failure to address significant impacts to the aquifers and groundwater flow in the area of Yelm's proposed well field for example, a predicted change in local ground water levels of up to 23 feet in the vicinity of JZ Knight's property.
- 13. The City's proposed MDNS fails to address these major environmental impacts and is based on the City's significantly flawed water mitigation plans that have yet to be reviewed and approved by Ecology. In light of these substantial deficiencies, and in accordance with the provisions of WAC 197-11-340(3)(a)(ii) and (iii), Ecology should immediately request that the City of Yelm withdraw the proposed MDNS issued on May 1, 2009.
- 14. Ecology should immediately notify the City of Yelm that Ecology intends to assume lead agency status for the proposed water rights applications.
- 15. In light of the significant environmental impacts to ground water that have been identified by the City and my client but have not been addressed in the City's mitigation plan, Ecology should require that additional mitigation measures be required for these three water rights applications or that an EIS be initiated for the City's water rights applications before any further actions are taken on the project as indicated in WAC 197-11-330.
- 16. Ecology must require that the City complete the update to the City's Water System Plan prior to any further review and approval of the City's water rights applications by Ecology.

17. My client and the general public are depending upon Ecology to play a lead role in ensuring that there will be a thorough environmental review of the City of Yelm's proposed water withdrawals for projected future development. Frankly, the City of Yelm has not earned the trust of my client or the general public. The City has attempted to brush aside environmental issues by issuing a proposed MDNS based on an inadequate and unapproved mitigation plan. Ecology must insert itself into this process to protect the public interest.

- 4 -

18. The City's MDNS comment period ends this Friday, May 15, 2009. We strongly urge Ecology to recognize and fulfill its duty to the public to submit comments including, at a minimum, (1) that Ecology will assume lead agency status, (2) that the City should withdraw the proposed MDNS pending further environmental review, and (3) that the City must complete the update of its Water System Plan prior to any further review and approval of the City's water rights applications by Ecology.

Sincerely,

GORDONDERR LLP

Kuth Max

Keith E. Moxon

KEM/aka

cc: VIA EMAIL & U.S. MAIL

Maia Bellon

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