State of Washington
REPORT OF EXAMINATION
FOR WATER RIGHT APPLICATION

<table>
<thead>
<tr>
<th>PRIORITY DATE</th>
<th>WATER RIGHT NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 1, 2011</td>
<td>G4-35544</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MAILING ADDRESS</th>
<th>SITE ADDRESS (IF DIFFERENT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. P. &amp; JAN ROAN</td>
<td></td>
</tr>
<tr>
<td>13991 REECER CREEK RD</td>
<td></td>
</tr>
<tr>
<td>ELLENSBURG WA 98926-8866</td>
<td></td>
</tr>
</tbody>
</table>

Quantity Authorized for Withdrawal or Diversion

<table>
<thead>
<tr>
<th>WITHDRAWAL OR DIVERSION RATE</th>
<th>UNITS</th>
<th>ANNUAL QUANTITY (AF/YR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>GPM</td>
<td>61.86 (^1) (21.55 \text{ af/yr of Consumptive Use})</td>
</tr>
</tbody>
</table>

\(^1\) The combined withdrawals from all public groundwater sources authorized under Groundwater Permits G4-35541 through G4-35548 (8 sources, 8 permits) shall not exceed the total quantities authorized above.

Purpose

<table>
<thead>
<tr>
<th>PURPOSE</th>
<th>WITHDRAWAL OR DIVERSION RATE</th>
<th>ANNUAL QUANTITY (AF/YR)</th>
<th>PERIOD OF USE (mm/dd)</th>
</tr>
</thead>
</table>
| Domestic multiple, up to 145 residences, each with 500 sq. ft. of lawn and landscape irrigation. | 1000 | GPM | 61.86 | Domestic: 01/01 - 12/31  
Irrigation: 04/01 – 10/15 |

REMARKS

Up to 100 wells may be constructed to supply the above-described water quantities and uses.

<table>
<thead>
<tr>
<th>IRRIGATED ACRES</th>
<th>PUBLIC WATER SYSTEM INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADDITIVE</td>
<td>NON-ADDITIVE</td>
</tr>
<tr>
<td>1.664</td>
<td>0</td>
</tr>
</tbody>
</table>

(500 square feet of irrigation per residence for 145 residences)
Up to 100 wells within Unit #4, within:

T. 19 N., R. 17 E.W.M., Sections:
The E½ of Section 5; the W¾E½ and the E¾SW¼ of Section 8; the W¼ of Section 17; and the N½ and the N½N½SE¼ of Section 20.

T. 20 N., R. 17 E.W.M., Sections:
The S¾S½ of Section 22; TheS¾SW¼ of Section 23; the NW¼ and the W¾NW¼ of Section 27; the E½ and the SE¾NW¼ and the E¾SW¼ of Section 28; the SE¾SE¼ of Section 32; and the N½N½N½ and the W½ of Section 33.

ALL within Kittitas County, Washington.

Datum: NAD83/WGS84

Proposed Works

The proposed works include a total of up to 100 wells, supplying up to 1,000 gallons per minute (gpm) of water for domestic supply for up to 145 residences, using an average of 350 gallons per residence per day, year-round, and irrigating 500 square feet per residence for a total of 1.664 irrigated acres. The wells and places of use will be within the place of use described above. This describes the total system and total water quantities and development authorized for this Swauk water bank, in sum, utilizing the eight (8) different groundwater sources of supply, under authority of eight permits, G4-35541 though G4-35548.

The place of use is owned by various private landowners. The applicant’s intention is to obtain a permit authorizing the use of public groundwater in the requested amounts, to be mitigated by a portion of the 1877 First Creek Water Users Association water right. The 1877 rights provide water budget neutrality required by chapter 173-539A of the Washington Administrative Code (WAC) for up to 145 new domestic uses within the defined portion of the Swauk Creek subbasin.

A mix of individual and small public water supply systems will be developed.

In sum, the total diversion of water from all 8 different groundwater sources shall not exceed the quantities authorized for the Swauk Creek water bank: up to 100 wells, up to 1,000 gpm of water, domestic supply for up to 145 acres, including up to 500 square feet of irrigation per residence for a total of 1.664 acres of residential irrigation.
**Development Schedule**

<table>
<thead>
<tr>
<th>BEGIN PROJECT</th>
<th>COMPLETE PROJECT</th>
<th>PUT WATER TO FULL USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 31, 2013</td>
<td>October 31, 2021</td>
<td>October 31, 2022</td>
</tr>
</tbody>
</table>

**Measurement of Water Use**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often must water use be measured?</td>
<td>Weekly</td>
</tr>
<tr>
<td>How often must water use data be reported to Ecology?</td>
<td>Annually (Jan 31)</td>
</tr>
<tr>
<td>What volume should be reported?</td>
<td>Total Annual Volume</td>
</tr>
<tr>
<td>What rate should be reported?</td>
<td>Annual Peak Rate of Withdrawal (gpm)</td>
</tr>
</tbody>
</table>

**Provisions**

**General**

You will record with the Kittitas County Auditor a property covenant as required under WAC 173-539A-050 that restricts or prohibits trees or shrubs over a septic drain field.

You will record with the Kittitas County Auditor an appropriate conveyance instrument under which the applicant obtains an interest in Trust Water Right Nos. CS4-00648(AA)sb4-b and CS4-00648(AA)sb4-c(A) to offset consumptive use.

Any valid priority calls against the source Trust Water Right Nos. CS4-00648(AA)sb4-b and CS4-00648(AA)sb4-c(A), based on local limitations in water availability, will result in temporary reduction or curtailment of the use until the priority call for water ends, or until other mitigation is supplied as provided in the water monitoring and management plan.

Ecology cannot ensure that “a formation, a group of formations, or part of a formation that contains sufficient saturated permeable material to yield economical [domestic] quantities of water to wells...” will be encountered.

The applicant and each landowner (mitigation credit purchaser) shall submit an assignment form to Ecology describing the specific interest of the mitigation credit purchaser in this permit.

Prior to assignment of any portion of this water to a third party, the permittee must submit and Ecology must approve a water monitoring and management plan consistent with the plan required for the two mitigating trust water rights, CS4-00648(AA)sb4-b and CS4-00648(AA)sb4-c(A).

**Well Construction Requirements**

Because Groundwater Units 1 (G4-35541) and 2 (G4-35542) are marginal in nature, it is recommended that wells be located as far from each unit’s western outer boundaries as possible. A minimum 100 foot spacing from existing wells is required.

Wells drilled through Groundwater Unit 3 (G4-35543) and into underlying Groundwater Unit 2 (G4-35542) shall be required, at minimum, to have a solid casing through Unit 3. The location and construction of any well proposed within the E½SW¼ of Section 34, T. 20 N., R. 17 E. W.M. must receive specific prior review and written approval from Ecology to ensure that water levels within Unit 3 in the vicinity of the Dunford and McCallum Springs will not be lowered by pumping from the new well.

Wells drilled through Unit 4 and into an underlying unit shall be required, at minimum, to have a solid casing through Unit 4. A minimum 100 foot spacing from existing wells is required.
Within the Unit 4 boundaries, specifically from the southern extent of Hidden Valley in the NW¼ of Section 33, T. 20 N., R. 17 E.W.M., north to the northern boundary of the proposed place of use for these eight permit applications in the S½ of Section 22 and extending into the SW¼ of Section 23, T. 20 N., R. 17 E.W.M.:

Wells drilled through Unit 4 into underlying groundwater units shall be cased and sealed a minimum of 100 feet into the underlying unit or to a depth identified by Ecology technical staff during consultation prior to drilling.

Groundwater Unit 5 has regions where wells will encounter significant clays and likely result in low yield and slow recovery wells. Additionally, Unit 5 has areas of perched and thin saturated thicknesses. Therefore, a minimum 100 foot spacing from existing wells is required. If new water users are not able to successfully develop a well in Unit 5, they may instead consider drilling into an underlying groundwater unit, which depending on location may be Unit 7 (central and north), Units 1 or 2 (south and southeast) or Unit 8 (north). Such wells shall be required to have a solid casing through Unit 5.

**Wells, Well Logs and Well Construction Standards**

All wells constructed in the state shall meet the construction requirements of WAC 173-160 titled “Minimum Standards for the Construction and Maintenance of Wells” and RCW 18.104 titled “Water Well Construction”. Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard shall be decommissioned.

All wells shall be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag shall remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Installation and maintenance of an access port as described in WAC 173-160-291(3) is required for all wells.

**Measurements, Monitoring, Metering and Reporting**

An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173. [http://www.ecy.wa.gov/programs/wr/measuring/measuringhome.html](http://www.ecy.wa.gov/programs/wr/measuring/measuringhome.html).

You must measure and report your water use in accordance with the “Upper Kittitas Groundwater Rule”, WAC 173-539A-070. [http://www.ecy.wa.gov/biblio/wac173539A.html](http://www.ecy.wa.gov/biblio/wac173539A.html) Water use data shall be recorded weekly and maintained by each property owner for a minimum of five years. The maximum, individual and combined rates of withdrawal and the annual individual and combined total volume for each residence shall be submitted to the Department of Ecology by January 31st of each calendar year.

Recorded water use data shall be submitted via the Internet. To set up an Internet reporting account, contact the Central Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Central Regional Office for forms to submit your water use data.
WAC 173-173 describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

**Easement and Right-of-Way**
The water source and/or water transmission facilities are not wholly located upon land owned by the applicant. Issuance of a water right authorization by this department does not convey a right of access to, or other right to use, land which the applicant does not legally possess. Obtaining such a right is a private matter between applicant and owner of that land.

**Water Use Efficiency**
The water right holder is required to maintain efficient water delivery systems and use of up-to-date water conservation practices consistent with RCW 90.03.005.

**Proof of Appropriation**
The water right holder shall file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. The certificate will reflect the extent of the project perfected within the limitations of the permit. Elements of a proof inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

**Schedule and Inspections**
Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

**FINDINGS OF FACT**
Upon reviewing the investigator’s report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest. Therefore, I ORDER approval of Application No. G4-35544, subject to existing rights and the provisions specified above.

**YOUR RIGHT TO APPEAL**
You have a right to appeal this decision to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this decision. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. “Date of receipt” is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of this decision:
- File your appeal and a copy of this decision with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this decision on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.
<table>
<thead>
<tr>
<th>Street Addresses</th>
<th>Mailing Addresses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Department of Ecology</strong></td>
<td><strong>Department of Ecology</strong></td>
</tr>
<tr>
<td>Attn: Appeals Processing Desk</td>
<td>Attn: Appeals Processing Desk</td>
</tr>
<tr>
<td>300 Desmond Drive SE</td>
<td>PO Box 47608</td>
</tr>
<tr>
<td>Lacey WA  98503</td>
<td>Olympia WA  98504-7608</td>
</tr>
<tr>
<td><strong>Pollution Control Hearings Board</strong></td>
<td><strong>Pollution Control Hearings Board</strong></td>
</tr>
<tr>
<td>1111 Israel Road SW, Ste 301</td>
<td>PO Box 40903</td>
</tr>
<tr>
<td>Tumwater WA  98501</td>
<td>Olympia WA  98504-0903</td>
</tr>
</tbody>
</table>

For additional information visit the Environmental Hearings Office Website:  [http://www.eho.wa.gov](http://www.eho.wa.gov)
To find laws and agency rules visit the Washington State Legislature Website: [http://www.leg.wa.gov/CodeReviser](http://www.leg.wa.gov/CodeReviser)

Signed at Yakima, Washington, this __________ day of _________________________________ 2012.

________________________________________
Mark Kemner, LHG, Section Manager
Water Resources Program/CRO
BACKGROUND

This report serves as the consolidated written findings of fact concerning Water Right Application Nos. G4-35541, G4-35542, G4-35543, G4-35544, G4-35545, G4-35546, G4-35547, and G4-35548 (eight permit applications).

Priority Processing

These applications are being priority processed because they qualified under the criteria under which an application may be processed prior to competing applications [WAC 173-152-050(2)(g) and WAC 173-539A-060].

Table 1 Summary of Requested Water Rights

<table>
<thead>
<tr>
<th>Applicant Name:</th>
<th>J. P. &amp; Jan Roan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Application:</td>
<td>December 1, 2011</td>
</tr>
<tr>
<td>Place of Use (See Maps in Appendix 1)</td>
<td>Within Sections 1, 2, 12, and 13, of T. 19 N., R. 16 E.W.M.; Sections 3, 4, 5, 6, 7, 8, 9, 10, 16, 17, 18, 19, and 20, T. 19 N., R. 17 E.W.M.; Section 36, of T. 20 N., R. 16 E.W.M.; Sections 13, 14, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 34, and 35, T. 20 N., R. 17 E.W.M.; Sections 19 and 30, T. 20 N., R. 18 E.W.M., Kittitas County, Washington.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>County</th>
<th>Waterbody</th>
<th>Tributary To</th>
<th>WRIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kittitas</td>
<td>Groundwater – 8 different bodies of public groundwater, each managed under its own separate groundwater permit application, totaling eight applications: G4-35541 through G4-35548.</td>
<td>39-Upper Yakima</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Rate</th>
<th>Unit</th>
<th>Ac-ft/yr</th>
<th>Begin Season</th>
<th>End Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic multiple</td>
<td>1000</td>
<td>GPM</td>
<td>56.89</td>
<td>01/01</td>
<td>12/31</td>
</tr>
<tr>
<td>Irrigation</td>
<td></td>
<td>GPM</td>
<td>4.97</td>
<td>04/01</td>
<td>10/15</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1000</td>
<td>GPM</td>
<td>61.86</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Source Name and Description for Each of the Eight Applications:

Up to 100 groundwater wells in total within the authorized place of use described above; each well withdrawing water from one of the following 8 units or sources of public groundwater supply (see maps in Appendix 1) and assigned to that unit’s associated groundwater permit application number.

<table>
<thead>
<tr>
<th>Application No.</th>
<th>Unit No.</th>
<th>Abbreviated Unit Name</th>
<th>Units Identified Within Mitigation Suitability Area (MSA) Boundary</th>
</tr>
</thead>
<tbody>
<tr>
<td>G4-35541</td>
<td>1</td>
<td>MCRB-West of Swk Crk</td>
<td>Marginal Columbia River Basalt-West of Swauk Creek: Marginal Columbia River Basalt flows of the Mid-Miocene Grande Ronde Formation and the Miocene Ellensburg Formation sandstones/shales occurring west of Swauk Creek.</td>
</tr>
<tr>
<td>G4-35542</td>
<td>2</td>
<td>MCRB-East of Swk Crk</td>
<td>Marginal Columbia River Basalt-East of Swauk Creek: Marginal Columbia River Basalt flows of the Mid-Miocene Grand Ronde Formation and the Miocene Ellensburg Formation sandstones/shales occurring east of Swauk Creek.</td>
</tr>
<tr>
<td>G4-35543</td>
<td>3</td>
<td>HC ALV</td>
<td>Horse Canyon Alluvium: Holocene alluvial fan deposits and Pleistocene alpine glacial drift, pre-Fraser, occurring within the Horse Canyon Area east of Swauk Creek.</td>
</tr>
<tr>
<td>G4-35544</td>
<td>4</td>
<td>Swk Creek ALV</td>
<td>Swauk Creek Alluvium: Quaternary alluvial sediments occurring along and adjacent to Swauk Creek below its confluence with First Creek.</td>
</tr>
<tr>
<td>G4-35545</td>
<td>5</td>
<td>W. Swk Creek Unc</td>
<td>West Swauk Creek Unconsolidated sediments: Holocene-Pleistocene mass wasting, Holocene alluvial fan deposits and Pleistocene alpine glacial till, pre-Fraser, occurring west of Swauk Creek and north of Unit 1.</td>
</tr>
<tr>
<td>G4-35546</td>
<td>6</td>
<td>E. Swk Creek Unc</td>
<td>East Swauk Creek Unconsolidated sediments: Holocene-Pleistocene mass wasting and Quaternary alluvial sediments occurring east of Swauk Creek, north of Unit 1 and south of First Creek.</td>
</tr>
<tr>
<td>G4-35547</td>
<td>7</td>
<td>TW?/Roslyn</td>
<td>Tabor’s Wenatchee? Formation / Roslyn Formation: Eocene Roslyn Formation and Oligocene Wenatchee (?) Formation sandstone/shale outcrops.</td>
</tr>
<tr>
<td>G4-35548</td>
<td>8</td>
<td>Teanaway Formation</td>
<td>Teanaway Formation: Eocene Teanaway Formation basalt and mixed volcanics outcrops.</td>
</tr>
</tbody>
</table>

Legal Requirements for Approval of Appropriation of Water

The place of use for these eight permit applications, G4-35541 through G4-35548, is located wholly within the area covered by the Upper Kittitas Groundwater Rule, Chapter 173-539A of the Washington Administrative Code (WAC), and these eight permit applications are subject to the provisions of this rule, which provides that all new groundwater withdrawals in the area must be water budget neutral.

Public Notice

RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted and used. Notice of this application was published in the Ellensburg Daily Record on March 15, 2012 and March 22, 2012. No one submitted a protest to these applications.
Consultation with the Water Transfer Working Group (WTWG)

Ecology discussed the concept of creating a Swauk Creek water bank with the Yakima Basin WTWG participants at the May 7, 2010 WTWG meeting, seeking discussion, comments, and concerns from the water stakeholders present at that meeting. WTWG requested Ecology return to WTWG and describe the details of the Swauk Creek water bank once the concept becomes a defined proposal.

Ecology presented WTWG a description of this current Swauk Creek water bank proposal at the May 7, 2012 WTWG meeting. The group did not give this proposal a full ‘thumbs up’ recommendation; choosing instead to give it a ‘no recommendation’, while encouraging Ecology to move forward with posting the draft report of examination (ROE) on Ecology’s website for further review. The group asked Ecology to also post the draft Lower Swauk Basin hydrogeologic report to the website to assist potential reviewers, and Ecology agreed to do so. The group further noted that Ecology did not need to bring this proposal back to the WTWG for future review.

State Environmental Policy Act (SEPA)

Ecology’s SEPA checklist and threshold determination for the upper Kittitas Groundwater Rule (WAC 173-539A) was published on June 16, 2010.

WWT submitted an Environmental Checklist (WAC 197-11-960) on June 29, 2010 describing the transfer of winter stock water to instream flows and adding points of diversion in the First Creek Basin. Based on this checklist, Ecology acted as lead agency and issued a Determination of Non-Significance (DNS) on June 29, 2010 and published a notice on July 2, 2010 in the Ellensburg Record with a 14 day comment period that ended on July 13, 2010. No protest letters were received during the SEPA comment period.

On January 5, 2011, Mentor Law Group submitted an updated SEPA checklist on behalf of Suncadia and J.P. Roan to reflect changes to the First Creek Restoration Project. The checklist described changing a portion of their rights to instream flows for mitigation and water banking purposes which may be used to offset out of priority water users in the Yakima Basin. These updates had been considered and described in Ecology’s earlier DNS, therefore no additional action was taken.

INVESTIGATION

Proposed Use and Basis of Water Demand

The Swauk Creek subbasin is located within the Upper Kittitas Basin and is subject to the provisions of Chapter 173-539A of the Washington Administrative Code (WAC). No new groundwater use within the Swauk Creek subbasin is allowed unless the consumptive use associated with the new groundwater withdrawal is fully mitigated by a pre-May 10, 1905 priority existing water right.

Once all the mitigation credit transactions are complete, the Swauk Creek water bank would provide mitigation required by WAC 173-539A for up to 145 new residences within the portion of the Swauk Creek subbasin shown on the place of use maps [Appendix 1]. A combination of individual and small public water supply systems are expected to serve the 145 anticipated residences.

Through the eight applications, J.P. and Jan Roan are seeking permission to withdraw groundwater on behalf of prospective mitigation credit buyers. The place of use is owned by numerous private landowners. The applications propose new uses of groundwater that would be made water budget neutral by placing a portion of the applicant’s November 2, 1877 water rights in the trust water right program. The applicant has negotiated a trust water right agreement with Ecology.
The applicant and each landowner intending to develop a domestic water supply (i.e., each landowner who purchases a mitigation certificate from the applicant) would jointly sign and submit an assignment form to Ecology. Ecology would, once the well serving the residence or development is completed, then analyze the well construction details and assign the new well to the appropriate one of these eight new groundwater permits, according to the body of public groundwater the well is completed into and withdrawing water from.

The eight proposed new water right permits G4-35541 through G4-35548, will each be specific to a public groundwater body (“aquifer”). Cumulatively, the total groundwater development requested by these eight applications is up to 100 wells supplying up to 1,000 gpm of water for domestic supply and non-commercial irrigation for up to 145 residences. Based on the mitigation package available, each residence is anticipated to irrigate 500 square feet of lawn and landscape. The total irrigated area for 145 residences is 1.664 acres.

WAC 173-539A-050 provides that a new use of groundwater can be approved if the consumptive use loss associated with a new groundwater use is offset by an equal or greater amount of a pre-1905 water right held by ecology in the Trust Water Right Program. The estimated consumptive water requirement for the 145 proposed residences within lower Swauk Creek is as follows:

- Each residence will use an average of 350 gallons per day (gpd) of water for domestic supply, year-round (365.25 days), 30% of which is considered to be consumptively used (lost to the atmosphere as water vapor, or otherwise lost to the basin’s hydrologic system).

- Total annual domestic demand for 145 units is 56.89 acre-feet per year (ac-ft/yr) for domestic supply, year-round. Thirty percent (30%) of this water, or 17.07 ac-ft/yr, is consumptively-used water (CU).

- Each residence will use groundwater to irrigate 500 sq. ft. of lawn and landscape. 145 residences will irrigate 1.664 acres.

- Crop irrigation water requirement (CIR) in the Swauk Creek subbasin is estimated to be 2.391 ac-ft/yr/acre, based on the modified Blaney-Criddle method analysis of Swauk Creek subbasin-specific conditions completed about 10 years ago and used/referenced in the March 18, 2002 MountainStar MPR and Cle Elum UGA Water Supply Technical Report Supplement, in Table 4-1 on page 40. The CIR for 1.664 acres (i.e., for the 145 residences) is therefore 3.98 ac-ft/yr (April 1 – October 15).

- Considering each irrigation system to operate with 80% efficiency, the total irrigation water requirement (TIR) is 4.97 ac-ft/yr. Ninety percent (90%) of this water, or 4.48 ac-ft/yr, is considered to be consumptively-used water (CU).

- The total annual groundwater withdrawal for the 145 residences would be 56.89 ac-ft/yr for year-round domestic supply, plus 4.97 ac-ft/yr for irrigation of 1.664 acres from April 1 – October 15 each year, for a TOTAL ANNUAL withdrawal of 61.86 ac-ft/yr.

- Of the total annual withdrawal, the consumptive amount is 21.55 ac-ft/yr CU. This is the sum of the 17.07 ac-ft/yr CU for the domestic supply (145 units), plus the 4.48 ac-ft/yr CU for the irrigation supply (1.664 acres).
The seasonal total withdrawal and consumptive use quantities for both the proposed domestic and irrigation uses for: 1) irrigation season (4/01 – 10/15; = 198 days), and 2) non-irrigation season/winter (10/16 – 3/31; = 167.25 days):

- **IRRIGATION SEASON TOTAL groundwater withdrawal = 35.81 acre-feet.** This is the sum of the 30.84 acre-feet total domestic withdrawal during the 198-day irrigation season (145 units), plus the 4.97 acre-feet total irrigation withdrawal during the 198-day irrigation season (1.664 acres).

- **IRRIGATION SEASON CU quantity = 13.73 acre-feet.** This is the sum of the 9.25 acre-feet CU for domestic supply during the 198-day irrigation season (145 units), plus the 4.48 acre-feet CU for irrigation during the 198-day irrigation season (1.664 acres).

- **NON-IRRIGATION SEASON/WINTER TOTAL groundwater withdrawal = 26.05 acre-feet CU.** This is the total withdrawal for the domestic supply for the 145 units during the 167.25-day non-irrigation season.

- **NON-IRRIGATION SEASON/WINTER CU quantity = 7.82 acre-feet CU.** This is the CU quantity for the domestic supply for the 145 units during the 167.25-day non-irrigation season.

**Trust Water Rights to be held as Mitigation**

On June 17, 2011, Ecology issued a Report of Examination [ROE – CS4-00648(AA)sb4-b] authorizing J.P. Roan, Member of the First Creek Water User’s Association, to transfer a portion of his November 2, 1877 First Creek water right to the State Trust Water Rights Program, for the purpose of instream flow and mitigation use from April 1 to October 15, in First Creek below the original diversion point for the water right, and downstream in Swauk Creek and the Yakima River. Specifically, a total of 43.30 ac-ft/yr of water was transferred to the primary reach, including First Creek and Swauk Creek downstream to the confluence with the Yakima River; and 22.81 ac-ft/yr of water was transferred to the secondary reach, in the Yakima River downstream to its confluence with the Columbia River.

On April 17, 2012, Ecology issued an ROE [CS4-00648(AA)sb4-c(A)] authorizing James and Jan Roan to transfer a portion of their November 2, 1877 water right to the State Trust Water Rights Program, for instream flow and mitigation use from October 16 to March 31, in First Creek below the original diversion point for the water right, and downstream in Swauk Creek and the Yakima River. Specifically, a total of 7.9 ac-ft/yr of water was transferred to both the primary and secondary reaches, terminating at the Yakima River’s confluence with the Columbia River.

Both of these trust water right transfer authorizations described above provide that the secondary reach will terminate above the U.S. Bureau of Reclamation’s Parker gaging station near the Sunnyside Diversion Dam for any portions of these trust water rights used for mitigation.

Additionally, both of these trust water right transfer authorizations described above require a water monitoring and management plan, which may be integrated into Suncadia’s water monitoring and management program established in 2003. The purpose of the water monitoring and management plan requirement is to ensure that the amount of water proposed for use under new applications is consistent with the water available in First Creek and that the water supply is suitably reliable for mitigation for new domestic uses. The plan(s) may be modified from time to time, in writing, signed by authorized representatives of the Roans and Ecology.
Historic availability of water under this Roan First Creek water right confirmed under Yakima Adjudication Court Claim No. 00648 was analyzed using a hydrologic model developed by Brown & Caldwell as part of the “Trendwest Properties: Cle Elum UGA Final EIS”, City of Cle Elum, March 2002. A description of the model is contained in the technical memorandum entitled “Water Supply Technical Report Supplement” of the Final EIS. For the EIS, the model was developed to reflect conservative estimates of low flow conditions in the tributaries and main stem of the Yakima River. The model provides an estimate of the percent of the time that water is not physically or legally available to satisfy 100% of the demand under the Roan 1877-priority water right, utilizing actual flow data for several 6 historic years of record (1991-1995 & 2001). The model predicts the greatest shortfall would have been in 1992, considered to be a dry year, with the shortfall of supply that year to be up to 39% of the total annual demand for the 1877 right.

The Brown & Caldwell model shows that 100% of the Roan 1877-priority trust water right is NOT available to provide a full year-round mitigation water supply for new domestic development within the Swauk Creek subbasin. Up to 39% of the water right may not be available during a serious drought year for mitigation use. The period of shortfall will generally be during low flow periods during late summer and early fall. Ecology can authorize new domestic supplies to be developed based on mitigation by only that portion of the Roan 1877 trust water rights that is available on a firm, uninterruptible, year-round basis.

Ecology’s trust water right authorizations CS4-00648(AA)sb4-c(A) and CS4-00648(AA)sb4-b, require the Roans to develop a Water Monitoring and Management Plan, which may be integrated with the Suncadia water monitoring and management program developed in 2003 or may be developed independently. The purpose of the plan is to ensure the amount of water proposed for mitigation use under the eight groundwater applications is available in First Creek and is suitably reliable for domestic purposes. The plan could identify alternative sources of firm mitigation water to make up for any shortfall in firm water supply under the two identified trust water rights: CS4-00648(AA)sb4-c(A) and CS4-00648(AA)sb4-b. For example, the retained portion of the Roan’s irrigation could be subordinated to the portion held in trust for mitigation to address any unreliability late in the irrigation season. Other options could include incorporating a Swauk Creek water right into the mitigation portfolio.

**Existing Rights within the Proposed Place of Use**

A mix of existing surface and groundwater rights is appurtenant to the lands within the proposed place of use for these eight groundwater applications. Ecology staff has extensively analyzed existing Swauk Creek subbasin water rights and also identified the groundwater sources located within the proposed place of use for this set of eight related applications. The analysis identified existing uses of claimed, permitted, and permit-exempt groundwater and also estimated the groundwater availability for each management unit/application.

This analysis also considered provisions that may be needed to ensure protection of the water supplies of the existing water rights in the Swauk Creek subbasin, and in the larger Yakima River basin; and also how much groundwater is available for long-term sustainable appropriation from each of the eight different bodies of public groundwater supply that would be utilized under the eight applications (G4-35541 through G4-35548).
**Surface Water rights**

Several surface water rights exist within the Swauk Creek subbasin that could potentially be affected by the proposed uses of groundwater. Downstream of First Creek’s confluence with Swauk Creek, the Adjudication Court confirmed (in order as one progresses downstream) water rights as follows:

Suncadia, confirmed under Court Claim No. 01685:

1) June 30, 1878 priority, 0.63 cfs, 150 ac-ft/yr, for irrigation of 20 acres from April 1-October 15.

2) September 20, 1889 priority, 2.37 cfs, 562.5 ac-ft/yr, for irrigation of 75 acres from April 1 - October 15.

Pat Deneen, confirmed under Court Claim No. 01475:

1) June 30, 1878 priority, 3.08 cfs (3.0 cfs for irrigation and stock water + 0.08 cfs conveyance loss), 297 ac-ft/yr for irrigation of 39.6 acres, 1 ac-ft/yr for stock water, season of use is April 1-October 31.

2) June 30, 1878 priority, 2.0 cfs (1.75 cfs for irrigation and stock water + 0.25 cfs conveyance loss), 588.6 ac-ft/yr for irrigation of 78.4 acres and 1 ac-ft/yr for stock water from April 1 – October 31; 0.25 cfs from November 1-30 and from February 1-March 31, 1.0 cfs from December 1-January 31, 8.5 ac-ft/yr for non-irrigation season stock water.

3) August 31, 1882 priority (Dunford Spring), 0.067 cfs, 28.25 ac-ft/yr, for irrigation of 5 acres from April 1-October 31; 0.03 cfs, 8 ac-ft/yr for year-round stock water.

4) May 24, 1884 priority (McCallum Spring), 0.045 cfs, 20 ac-ft/yr for irrigation of 5 acres from April 1-October 31, 1 ac-ft/yr for stock water from April 1-October 31, 2 ac-ft/yr for stock water from November 1-March 31.

5) October 31, 1889 priority, 2.0 cfs (1.75 cfs for irrigation + 0.25 cfs conveyance loss), 150 ac-ft/yr, for irrigation of 20 acres from April 1-October 31.

Bruce Coe, confirmed under Court Claim No. 01146:

1) May 24, 1884 priority, 1.5 cfs, 112.5 ac-ft/yr, for irrigation of 15 acres from April 1-October 15.

2) May 24, 1884 priority, 1.79 cfs, 164 ac-ft/yr, for irrigation of 35 acres from April 1-October 15.

3) April 9, 1901 priority, 0.375 cfs, 37.5 ac-ft/yr, for irrigation of 5 acres from April 1-October 15.

4) June 18, 1974 priority (unnamed spring), 0.06 cfs, 6 ac-ft/yr for group domestic supply, 1 ac-ft/yr for stock water, season of use is year-round.

Swauk Valley Ranch, confirmed under Court Claim No. 00970:

1) May 24, 1884 priority, 0.167 cfs, 65.6 ac-ft/yr, for irrigation of 8 acres from April 1-October 15.

2) September 21, 1892 priority, 0.167 cfs, 65.6 ac-ft/yr, for irrigation of 8 acres from April 1 - October 15.
Groundwater rights
Review and analysis of existing well reports, water right records, and aerial photography provided the following information about, and estimates of, groundwater usage by existing groundwater rights and permit-exempt groundwater uses in each of the 8 groundwater units associated with these eight permit applications:

- **Unit 1**: 4.5 ac-ft/yr of existing groundwater (GW) rights and 20 ac-ft/yr of existing permit-exempt GW uses for a total GW usage of 24.5 ac-ft/yr.
- **Unit 2**: 7.5 ac-ft/yr of existing GW rights and 9.5 ac-ft/yr of existing permit-exempt GW uses for a total GW usage of 17 ac-ft/yr.
- **Unit 3**: 0 ac-ft/yr of existing GW rights and 1.5 ac-ft/yr of existing permit-exempt GW uses for a total GW usage of 1.5 ac-ft/yr.
- **Unit 4**: 61.33 ac-ft/yr of existing GW rights and 6 ac-ft/yr of existing permit-exempt GW uses for a total GW usage of 67.33 ac-ft/yr.
- **Unit 5**: 12.1 ac-ft/yr of existing GW rights and 12 ac-ft/yr of existing permit-exempt GW uses for a total GW usage of 24.1 ac-ft/yr.
- **Unit 6**: 0.5 ac-ft/yr of existing GW rights and 3 ac-ft/yr of existing permit-exempt GW uses for a total GW usage of 3.5 ac-ft/yr.
- **Unit 7**: 2.8 ac-ft/yr of existing GW right and 8 ac-ft/yr of existing permit-exempt GW uses for a total GW usage of 10.8 ac-ft/yr within the mitigation study area; usage from this larger areal unit outside the study area is not quantified.
- **Unit 8**: 0 ac-ft/yr of existing GW rights and 1.5 ac-ft/yr of existing permit-exempt GW uses for a total GW usage of 1.5 ac-ft/yr within the mitigation study area; usage from this larger areal unit outside the study area is not quantified.

Water Availability
For water to be available for appropriation, it must be both physically and legally available.

Hydrogeologic Analysis
Department of Ecology hydrogeologist Anna Hoselton authored the “Lower Swauk Basin Reference Report” in April 2012, analyzing the study area – the proposed place of use for this Swauk Creek water bank ‘general permit’ - in detail. This report is located in each of these eight groundwater right permit files and is available upon request. In her report, Ms. Hoselton:

- Analyzed the geology/hydrogeology of the area;
- Analyzed well logs of existing wells;
- Identified the area’s specific groundwater supply units;
- Analyzed and described the effects that future withdrawals of groundwater would have on groundwater and surface water supplies in the study area;
- Estimated local groundwater availability where data allowed; and
- Considered the potential for impairment between water users.
A full description of each of the eight individual groundwater units that each of the eight permit applications (G4-35541 through G4-35548) would rely on is provided. The groundwater units exist within differing geologic formations across the study area. In some cases they overlap horizontally and are present at different depths underlying the same locations within the study area.

The average annual recharge from infiltration of precipitation to Units 1, 2, 5, and 6 is 561 ac-ft/yr, 350 ac-ft/yr, 772 ac-ft/yr, and 605 ac-ft/yr respectively. This compares to the current request of 61.86 ac-ft/yr of water. In other words, if the entire total of 61.86 ac-ft/yr of water were withdrawn in any one of these units, water availability in that unit is predicted to be sufficient to sustain that entire withdrawal and all existing water uses from that unit.

Units 3 and 4 have smaller precipitation inputs compared to the proposed withdrawal and are predicted to be more limited in their ability to individually sustain the entire 61.86 ac-ft/yr requested.

Units 7 and 8 are Roslyn and Teanaway Formation units. Both units represent large areal aquifers with minor outcrops in the northern part of the study. Unit 7 well yields are typically low. Unit 8 is characterized by fracture flow.

The proposed groundwater withdrawals participating in the Swauk Creek water bank (and any associated impacts to groundwater water levels) are expected to be spread among the eight individual groundwater units as follows:

- Little or no well development is anticipated in Unit 8, as most of the lands in the Unit 8 outcrop area are public lands or are simply not suitable for substantial groundwater development for domestic supply. Unit 8 underlies other study area groundwater units at greater depth. Unit 8 is likely to produce low yield bedrock-source water wells in a fracture flow system with questionable sustainability of yields. The possibility of unsuccessful and expensive wells suggests that few wells will be constructed that would utilize groundwater from within Unit 8.

- Limited groundwater well development is anticipated in Unit 7. Unit 7 does outcrop in limited locations in the northern part of the study area and is capable of providing limited amounts of groundwater for new domestic supplies. Unit 7 also underlies the entire study area below the other groundwater units at various depths from shallow to very deep, depending on location. Similar to Unit 8, the depth to penetrate into Unit 7 and its unpredictable yield generally make it an expensive and possibly unsuccessful groundwater source to explore. However, where Unit 7 is located at a shallower depth as in the Swauk Prairie vicinity, it is a viable source of domestic water for a limited number of new homes. Unit 7 typically produces low yield water wells ranging from less than 1 gpm to perhaps 3 gpm. Where Unit 7 has been folded or faulted, yields in the range of 5 to 20 gpm may be encountered, however, higher yields may not be sustainable.

- Groundwater availability in Units 1, 2, 5, and 6 in sufficient quantity to satisfy the request, and groundwater can be appropriated without significant water level declines.

    - Groundwater Units 3 and 4 represent adequate sources of groundwater supply to satisfy the requested quantity of water, but some potential for well interference or groundwater decline may exist.

The surface water rights and groundwater rights within the study area, including permit-exempt uses, were identified and quantified. This water use information was combined with the estimates of groundwater availability in each of the 8 groundwater units.
Utilizing available geologic reports and data, water well reports, precipitation records, infiltration estimates, existing water rights and water use in each of the 8 defined groundwater units, and other information, Ecology estimated water availability in each of the 8 bodies of public groundwater within the study area.

A worst-case scenario was employed to characterize the impact of theoretically withdrawing 61.86 ac-ft/yr from each one of the 8 units. The requested 61.86 ac-ft/yr represents the following percentages of the worst case water availability:

- Unit 1  12% of the estimated 537 ac-ft/yr of available water
- Unit 2  19% of the estimated 333 ac-ft/yr of available water
- Unit 3  38% of the estimated 165 ac-ft/yr of available water
- Unit 4  42% of the estimated 146 ac-ft/yr of available water
- Unit 5  8% of the estimated 748 ac-ft/yr of available water
- Unit 6  10% of the estimated 601 ac-ft/yr of available water
- Unit 7  not estimated
- Unit 8  not estimated

**Impairment Considerations**

Impairment is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection. A water right application may not be approved if it would:

- Interrupt or interfere with the availability of water to an adequately constructed groundwater withdrawal facility of an existing right. An adequately constructed groundwater withdrawal facility is one that (a) is constructed in compliance with well construction requirements and (b) fully penetrates the saturated zone of an aquifer or withdraws water from a reasonable and feasible pumping lift.
- Interrupt or interfere with the availability of water at the authorized point of diversion of a surface water right. A surface water right conditioned with instream flows may be impaired if a proposed use or change would cause the flow of the stream to fall to or below the instream flow more frequently or for a longer duration than was previously the case.
- Interrupt or interfere with the flow of water allocated by rule, water rights, or court decree to instream flows.
- Degrade the water quality of the source to the point that the water is unsuitable for beneficial use by existing users (e.g., via sea water intrusion).

**Surface Water**

First Creek streamflow in both winter and summer will be increased by the reduction of the historic diversion into the Reecer Creek drainage via the FCWUA ditch. Increased flow at any location along First and Swauk Creek depends on the streams’ gaining and losing behavior and the location of the future uses that would seek mitigation.

Ecology staff has not observed First Creek going completely dry, however, in some years First Creek is predicted to be nearly dry. The losing characteristic of the lowermost portion of First Creek means that the trust water right would be more likely to directly offset the aquifer impacts resulting from the future withdrawals. Even if no flow enters Swauk Creek, the water infiltrating through the bed of First Creek would replace the consumptive loss extracted from the aquifer and mitigate for impacts on Swauk Creek at the downstream location where the Hidden Valley aquifer intercepts lower Swauk Creek.
First Creek, by way of the water right offered as mitigation, is capable of reliably providing mitigation for local stream flow impacts (reductions) for the proposed new uses proposed by the eight groundwater applications.

The primary reach for the mitigation source trust water right begins at the FCWUA point of diversion and extends down Swauk Creek and then downstream in the Yakima River to the confluence of Reecer Creek with the Yakima River. When the consumptive portion of the instream flow trust water right is not being used for mitigation, the unused quantity may be added to target flows at Parker Dam and continue to the confluence of the Yakima and Columbia Rivers. Once the mitigation credits are fully committed, the instream flow right would be water budget neutral to the Parker Gage. The water right’s change from stock water or irrigation to instream flow trust water right purposes, and its use for mitigation, will not impair existing Yakima River mainstem rights.

**Groundwater**

Qualifying groundwater withdrawal facilities are defined as those wells which in the opinion of Ecology are adequately constructed. An adequately constructed well is one that (a) is constructed in compliance with well construction requirements; (b) fully penetrates the saturated thickness of an aquifer or withdraws water from a reasonable and feasible pumping lift (WAC 173-150); (c) the withdrawal facilities must be able to accommodate a reasonable variation in seasonal pumping water levels; and (d) the withdrawal facilities including pumping facilities must be properly sized to the ability of the aquifer to produce water.

Well interference may occur when several wells penetrate and withdraw groundwater from the same aquifer. Each pumping well creates a drawdown cone. When several wells pump from the same aquifer, well density, aquifer characteristics, and pumping demand may result in individual drawdown cones that intersect and form a composite drawdown cone. At any point in an aquifer, the composite drawdown caused by pumping wells will be greatly influenced by the transmissivity (T) of the aquifer. In aquifers with high Ts, composite drawdown will generally be much less than in aquifers with similar properties but with low Ts. Transmissivity is related to hydraulic conductivity (K) and the saturated thickness (b) of an aquifer by the relationship T=Kb.

The author has excerpted a portion of the discussion in the “Lower Swauk Basin Reference Report” (Hoselton, April 2012, pgs. 37-39) and has adapted it for explanatory use in the remainder of this groundwater impairment considerations subsection.

The concepts discussed above come together when potential for impairment is being considered. For example, to claim impairment, a groundwater right holder must have a qualifying groundwater withdrawal facility and be able to demonstrate that withdrawals by another groundwater user is resulting in an inability to satisfy a valid right which is entitled to protection. Consequently when a proposed withdrawal is evaluated, consideration is given to how the withdrawal may affect other existing groundwater users.

For Units 1 and 2 impairing conditions between wells are generally not anticipated. Current aquifer conditions and infiltration estimates suggest these units can presently tolerate the entire consumptive and non-consumptive request being considered (61.86 ac-ft/yr) in addition to existing groundwater rights and existing exempt wells.
For Unit 3, because of the unit’s small size, thin saturated thickness and limited recharge, the possibility of impairing conditions between wells appears to be moderate to high (Table 4). While no groundwater rights were found associated with Unit 3, at least two adjudicated surface water rights (S4-83888-J and S4-83935-J) for existing springs would likely require protection from future groundwater withdrawals; the two rights total 59.25 ac-ft/yr. New groundwater users within the boundaries of Unit 3 are consequently encouraged to explore underlying Unit 2 as a more reliable and preferred groundwater source. A maximum upper limit of ac-ft/yr that may be withdrawn from Unit 3 may need to be established.

For Unit 4, because of the unit’s large number of existing groundwater rights, small size and generally thin (west Hidden Valley area is an exception) sediment package, the possibility of impairing conditions between wells and possibly surface water appears to be high. Surface water / groundwater exchange may mitigate effects of Unit 4 wells near Swauk Creek; however, areas of observed and likely seasonal disconnection between the groundwater and the creek have been documented.

Similar to Unit 3, new groundwater users within the boundaries of Unit 4 are consequently encouraged to explore units (1, 2, and/or 7, depending on location) underlying Unit 4 as more reliable and preferred water sources. A maximum upper limit of ac-ft/yr that may be withdrawn from Unit 4 may need to be established.

For Units 5 and 6 impairing conditions between wells are generally not anticipated as current aquifer conditions and infiltration estimates suggest these units should presently be able to tolerate the entire consumptive and non-consumptive request being considered (Table 6 and 7) in addition to existing groundwater rights and existing exempt wells. Unit 5, however, does have regions where wells will encounter significant clays and likely result in low yield and slow recovery wells. Additionally, Unit 5 has areas of perched and thin saturated thicknesses. If new water users are not able to successfully develop into Unit 5, they may instead consider drilling into an underlying unit, which depending on location may be Unit 7 (central and north), Unit 1 or 2 (south and southeast) or Unit 8 (north).

For Unit 7, aquifer characteristics are expected to generally produce narrow and steep drawdown cones and low yielding wells which are likely to be more self-limiting than adversely affected by, or affecting, neighboring wells. Impairment is unlikely due to a low level of groundwater development from this unit versus the large extent of the Formation. Further, an unknown amount of recharge to Unit 7 is derived from sources outside the MSA.

Note: Because of the unit’s complex stratification, structure, and thickness, demonstrating impairing conditions between wells is likely to be extremely difficult.

For Unit 8, Formation characteristics are presently expected to produce more self-limiting issues than adverse affects between neighboring wells. The current low level of groundwater development from this unit and its greater depth underlying more easily accessed units to the South make it an unlikely target for groundwater development. Additionally, an unknown amount of recharge to Unit 8 is derived from sources outside the MSA.

Note: Unit 8 is believed to predominately function as a fracture flow system, demonstrating impairing conditions between wells is likely to be extremely difficult.
Beneficial Use
The proposed use of water is defined in statute as a beneficial use (RCW 90.54.020(1)).

Public Interest Considerations
No protests were filed against this application. The proposed applications rely on mitigation in the form of water rights held in trust by the Dept. of Ecology. When the consumptive portion of the instream flow trust water right is not being used for mitigation, the unused quantity may be added to target flows at Parker Dam and continue to the confluence of the Yakima and Columbia Rivers.

Conclusions
Water is physically and legally available for this appropriation.
The proposed use is a beneficial use of water.
The proposed use is not contrary to the public interest.
The proposed use will not cause detriment or injury to existing rights.

RECOMMENDATIONS
Based on the above investigation and conclusions, I recommend that this request for a water right be approved in the amounts and within the limitations listed below and subject to the provisions listed above.

Purpose of Use and Authorized Quantities
The purposes of use, water quantities, points of withdrawal, and place of use recommended are the maximum combined limits for groundwater permits G4-35541 through G4-35548 (eight permit applications), in sum. The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial.

Combined instantaneous withdrawal limit: 1,000 gpm

Combined annual appropriation limit: 61.86 ac-ft/yr; not to exceed 21.55 ac-ft/yr of Consumptive Use (CU) water.

Specifically:
1) Irrigation season total groundwater withdrawals (April 1 through October 15 each year) are limited to a total of 35.81 acre-feet of groundwater. [This is the sum of the 30.84 acre-feet total domestic withdrawal during the 198-day irrigation season (145 units), plus the 4.97 acre-feet total irrigation withdrawal during the 198-day irrigation season (1.664 acres).]
2) Irrigation season CU quantity (4/01 – 10/15) is limited to 13.73 acre-feet of groundwater. [This is the sum of the 9.25 acre-feet CU for domestic supply during the 198-day irrigation season (145 units), plus the 4.48 acre-feet CU for irrigation during the 198-day irrigation season (1.664 acres).]
3) Non-irrigation season/winter total groundwater withdrawals (October 16 through March 31 each year) are limited to a total of 26.05 acre-feet of CU. [This is the total withdrawal for the domestic supply for the 145 units during the 167.25-day non-irrigation season.]
4) Non-irrigation season/winter CU quantity (10/16 - 3/31) is limited to 7.82 acre-feet of CU. [This is the CU quantity for the domestic supply for the 145 units during the 167.25-day non-irrigation season.]

Construction of up to 100 wells for multiple domestic supply, year-round, for up to 145 residences, including irrigation of 500 square feet of lawn and landscape per residence from April 1 to October 15 each year.
Points of Withdrawal
Up to 100 individual or small-group domestic supply wells, supplying up to 145 residences, to be developed within most or all of the sections listed below in the authorized place of use.

Place of Use
Within Sections 1, 2, 12, and 13, of T. 19 N., R. 16 E.W.M.; Sections 3, 4, 5, 6, 7, 8, 9, 10, 16, 17, 18, 19, and 20, T. 19 N., R. 17 E.W.M.; Section 36, of T. 20 N., R. 16 E.W.M.; Sections 13, 14, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 34, and 35, T. 20 N., R. 17 E.W.M.; Sections 19 and 30, T. 20 N., R. 18 E.W.M., Kittitas County, Washington. [See maps of place of use in Appendix 1.]