



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

**REPORT OF EXAMINATION**  
*To Appropriate Public Waters of the State of Washington*

APPLICATION DATE	APPLICATION NO.	
June 5, 2009	G4-35251	
NAME		
Meadow Springs LLC and Stuart Vista LLC		
ADDRESS/STREET	CITY/STATE	ZIP CODE
206 West First Street	Cle Elum, WA	98922

**PUBLIC WATERS TO BE APPROPRIATED**

SOURCE		
One existing well (Ecology Well ID AKW669) and up to three additional wells		
TRIBUTARY OF (IF SURFACE WATERS)		
MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	180	29.9

QUANTITY, TYPE OF USE, PERIOD OF USE

180 gallons per minute, 14.95 acre-feet per year for year-round multiple domestic supply for up to 89 units, and 14.95 acre-feet per year for the irrigation of 6.04 acres from May 1 through September 30.

**LOCATION OF DIVERSION/WITHDRAWAL**

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL					
2,240 feet east and 1,025 feet south from the northwest of Section 12, T. 19 N., R. 14 E.W.M. – Well ID AKW669 Additional well locations to be determined					
LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP	RANGE	WRIA	COUNTY
NE1/4, NW1/4 (Well ID AKW669); and S1/2, SW1/4 (additional wells); and/or NE1/4, NW1/4 or NW1/4NE1/4 (additional wells)	12 01 12	19 N.	14 E.W.M.	39	Kittitas
PARCEL NUMBER	LATITUDE	LONGITUDE	DATUM		
19-14-12000-0003 (Well ID AKW669)					

**LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED**

[Attachment 1 shows location of the authorized place of use and point(s) of diversion or withdrawal.]

The S $\frac{1}{2}$  of the SW $\frac{1}{4}$  of Section 1, and the NW $\frac{1}{4}$ NE $\frac{1}{4}$  and NE $\frac{1}{4}$ NW $\frac{1}{4}$  of Section 12, all in T. 19 N., R. 14 E.W.M., Kittitas County, Washington;

And

Lot 12-B and Lot 12-C, SP-2003-11 Fowler Creek Large Lot Subdivision, in the County of Kittitas, State of Washington, as per plat thereof recorded in Book 8 of Plats, pages 231 and 232, records of said County;

And

That portion of the E $\frac{1}{2}$  of Section 1, T. 19 N., R. 14 E.W.M., Kittitas County, Washington, which lies south of the Westside County Road and north of the Highline Canal of the Kittitas Reclamation District, and southeasterly of the following described line: Beginning at the east quarter corner of Section 1, T. 19 N., R. 14 E.W.M.; thence north 01°50'57" east along the east boundary of the northeast quarter of said Section 1, 140.93 feet to the south right of way boundary of Westside Road; thence south 88°26'07" west along the south right of way boundary of Westside Road, 84.18 feet to a point of curvature to the right having a radius of 619.92 feet (radius bearing north 01°33'53" west), a length of 380.94 feet, through a central angle of 35°12'30"; thence north 56°21'23" west, 304.04 feet to the true point of beginning of said line; thence south 33°38'37" west, 151.82 feet to a point of the north right of way boundary of the Highline Canal and the terminus of said line.

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**DESCRIPTION OF PROPOSED WORKS**

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One existing well (Ecology Well ID AKW669) was drilled to a total depth of 101 feet in November 2005. Water from this well will be used for domestic supply for a planned 89 unit residential development. Up to three additional wells may also be completed to provide additional instantaneous capacity. The proposed domestic use will be regulated as a Group A, community public water system by the Washington State Department of Health. Domestic wastewater will be discharged to individual septic systems or one or more onsite, engineered community drain fields.

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**DEVELOPMENT SCHEDULE**

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BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
December 31, 2011	December 31, 2021	December 31, 2025

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**PROVISIONS**

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**Wells**

1. The water supply wells shall be drilled and completed in the unconsolidated alluvial deposits in hydraulic continuity with Spex Arth Creek.
2. In accordance with WAC 173-160, wells shall not be located within certain minimum distances of potential sources of contamination. These minimum distances shall comply with local health regulations, as appropriate. In general, wells shall be located at least 100 feet from sources of contamination. Wells shall not be located within 1,000 feet of the boundary of a solid waste landfill.
3. 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.
4. Flowing wells shall be constructed and equipped with valves to ensure that the flow of water can be completely stopped when not in use. Likewise, the well shall be continuously maintained to prevent the waste of water through leaky casings, pipes, fittings, valves, or pumps -- either above or below land surface.
5. 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.
6. Required installation and maintenance of an access port as described in WAC 173-160- 291(3).
7. In order to maintain a sustainable supply of water, pumping must be managed so that static water levels do not progressively decline from year to year. Static water level is defined as the water level in a well when no pumping is occurring and the water level has fully recovered from previous pumping. Static water levels shall be measured and recorded monthly, using a consistent methodology. Data for the previous year shall be submitted by January 31 to the Department of Ecology.
8. Static water level data shall be submitted in digital format and shall include the following elements:
  - a. Unique Well ID Number
  - b. Measurement date and time
  - c. Measurement method (air line, electric tape, pressure transducer, etc.)
  - d. Measurement accuracy (to nearest foot, tenth of foot, etc.)
  - e. Description of the measuring point (top of casing, sounding tube, etc.)
  - f. Measuring point elevation above or below land surface to the nearest 0.1 foot
  - g. Land surface elevation at the well head to the nearest foot.
  - h. Static water level below measuring point to the nearest 0.1 foot.

**Metering and Reporting**

9. An approved measuring device shall be installed and maintained for each of the sources authorized 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>

10. Water use data shall be recorded weekly and maintained by the property owner for a minimum of five years. The maximum monthly rate of diversion/withdrawal and the monthly total volume shall be submitted to the Department of Ecology by January 31st of each calendar year.
11. 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.

### General

12. 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.
13. The water right holder shall file the notice of Proof of Appropriation of water (under which the permit 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. A certificate will reflect the extent of the project perfected within the limitations of the water right. 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.
14. The water source and/or water transmission facilities are not wholly located upon land owned by the applicant. Issuance of a water right change 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.
15. Use of water under this authorization shall be contingent upon the water right holder's maintenance of efficient water delivery systems and use of up-to-date water conservation practices consistent with established regulation requirements and facility capabilities.
16. Use of water under this authorization shall be contingent upon the Department of Ecology's acceptance and compliance with a storage and release plan, which addresses historic out-of-irrigation season (October 1 to March 31) impacts associated with the withdrawals under this permit.
17. Per Chapter 173-539A WAC consumptive use authorized under this permit is water budget neutral. Consumptive use quantities (total withdrawal minus return flow) must be fully offset by debit of an equal consumptive use quantity of seasonal irrigation water rights placed into permanent trust in the Washington State Trust Water Right Program (TWRP) by Northland Resources LLC.
18. Water use under this authorization is contingent upon the conveyance of an equal (18.0 acre-feet per year) or greater amount of consumptive use from a suitable instream flow right (see trust water right agreement) to the Washington State Trust Water Right Program.
19. The connection limit (89 units) is contingent upon the approval of a Group A Water System by the Washington State Department of Health.

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### FINDINGS OF FACT AND ORDER

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Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I find the appropriation of water as recommended: is physically and legally available, is a beneficial use, will not impair existing rights and is not detrimental to the public interest.

Therefore, I ORDER the approval of Application No. G4-35251 subject to existing rights and the provisions specified above.

You have a right to appeal this decision. To appeal this you must:

- File your appeal with the Pollution Control Hearing Board within 30 days of the "date of receipt" of this document. Filing means actual receipt by the Board during regular office hours.
- Serve your appeal on the Department of Ecology within 30 days of the "date of receipt" of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). "Date of receipt" is defined at RCW 43.21B.001(2).

Be sure to do the following:

- Include a copy of this document that you are appealing with your Notice of Appeal.
- Serve and file your appeal in paper form; electronic copies are not accepted.

1. To file your appeal with the Pollution Control Hearings Board:

Mail appeal to:

OR

Deliver your appeal in person to:

Pollution Control Hearings Board  
PO Box 40903  
Olympia WA 98504-0903

Pollution Control Hearings Board  
4224 – 6th Ave SE Rowe Six Bldg 2  
Lacey WA 98503

2. To serve your appeal on the Department of Ecology:

Mail appeal to:

OR

Deliver your appeal in person to:

Department of Ecology  
Appeals & Application for Relief Coordinator  
PO Box 47608  
Olympia WA 98504-7608

Department of Ecology  
Appeals & Application for Relief Coordinator  
300 Desmond Dr SE  
Lacey WA 98503

3. And send a copy of your appeal packet to:

Mark C. Schuppe, Section Manager  
Water Resources Program  
Department of Ecology, Central Region Office  
15 W Yakima Ave Ste 200  
Yakima WA 98902-3452

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

Signed at Yakima, Washington, this \_\_\_\_\_ day of \_\_\_\_\_ 2010.

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Mark Schuppe, Section Manager  
Water Resources Program  
Central Region Office

**INVESTIGATOR'S REPORT**

**BACKGROUND**

**Project Description**

On June 5, 2009, Meadow Springs LLC and Stuart Vista LLC, of Cle Elum, Washington (the applicant) filed an application with the Washington State Department of Ecology (Ecology) for a water right permit to appropriate public groundwater. The application was assigned Application No. G4-35251. The applicant requested authorization for an instantaneous withdrawal (Qi) of 250 gallons per minute (gpm) and an annual withdrawal volume (Qa) of 41.5 acre-feet per year (ac-ft/yr) for multiple domestic supply for a planned 128 unit residential development referred to as Meadow Springs.

In two memoranda to Ecology, dated October 19 and October 20, 2009, the applicant requested the Qa be increased to 53 ac-ft/yr to serve 135 residential units. Based on current development plans, the number of residential units has been reduced to 89 at full build-out, with a water demand of 29.9 ac-ft/yr. Despite the requests, Ecology determines the maximum instantaneous and annual quantity necessary to satisfy the requirements of the project.

The applicant intends to mitigate for consumptive use under the requested appropriation through creation of a water banking program, referred to as the Northland Water Exchange. The Northland Water Exchange will be established by transferring into the Washington State Trust Water Right Program (TWRP) water rights that divert water from the Yakima River or its tributaries and have a pre-1905 priority date (Trust Water Rights). The Trust Water Rights will be maintained in trust to mitigate for new out-of-priority water right permits, including the subject application. Specific terms of the Northland Water Exchange are described in Attachment 2 – Trust Water Right Agreement between Northland Resources, LLC and the State of Washington, Department of Ecology.

**Table 1**  
Summary of Application No. G4-35251

<i>Attributes</i>	<i>Proposed (as in amended application and Public Notice)</i>
Applicant	Meadow Springs LLC and Stuart Vista LLC
Date of Application	June 5, 2009
Instantaneous Quantity	250 gpm
Annual Quantity	53 ac-ft/yr
Source	One or more wells
Point of Withdrawal	E <sup>1</sup> / <sub>2</sub> of Section 1; AND the S <sup>1</sup> / <sub>2</sub> SW <sup>1</sup> / <sub>4</sub> of Section 1; AND the NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> and NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> of Section 12; ALL in T. 19 N., R. 14 E.W.M.
Purpose of Use	Multiple Domestic
Period of Use	Year-round
Place of Use	As described on page 1 of this Report of Examination

**Legal Requirements for Application Processing**

The following requirements must be met prior to processing a water right application:

- **Public Notice**  
Notice of the application was published in the *Daily Record* of Ellensburg, Washington, on October 24 and 31, 2009. No comments or protests were received by Ecology during the 30-day comment period.
- **State Environmental Policy Act (SEPA)**  
On October 30, 2009, Kittitas County (SEPA lead agency) issued a Mitigated Determination of Non-Significance for the Meadow Springs (LP-07-00015), Starlite Heights (LP-07-00016), and Tamarack Ridge (LP-07-00018) Performance Based Cluster Plats. This decision was made after review of a completed environmental checklist and other information on file with the lead agency. Kittitas County determined certain mitigation measures or conditions were necessary in order issue a Determination of Non-Significance. Those conditions related to: cultural resources and historic preservation, stormwater, transportation, lights and aesthetics, wetlands and wildlife, and noise. No appeals were filed in protest of this decision.

- **Water Resources Statutes and Case Law**

Chapter 90.44 RCW, specifically 90.44.060 authorizes the appropriation of public groundwater for beneficial use and Chapter 90.03 RCW describe the process for obtaining water rights. RCW 90.42.100(2)(c) authorizes Ecology to issue new water rights using the Trust Water Right Program for water banking purposes. In addition, this application qualifies for expedited processing under WAC 173-539A-060(2).

**INVESTIGATION**

**Site Visit**

A site visit was performed on September 8, 2009, by Kurt Walker from Ecology. Noel Kurtz, a representative of the applicant familiar with the site, and Joe Morrice of Aspect Consulting LLC, the applicant’s consultant, were also present. Relevant features observed during the site visit included:

- The location existing well AKW669. The location of this well was confirmed as the NE1/4NW1/4 of Section 12, T. 19 N., R. 14 E.W.M.
- A former irrigation ditch fed by a diffuse spring system on the west side of the property that discharges to a branch of Spex Arth Creek, a tributary to the Yakima River.

**Domestic Water Use**

The proposed Meadow Springs development does not currently have a Group A water system plan. However, the applicant has presented water demand estimates by month (see Table 2). Average daily demand (ADD) for indoor water use purposes is estimated at 150 gallons per day (gpd) per equivalent residential unit (ERU). Outdoor water use is expected to primarily consist of lawn and garden irrigation, and is estimated using methods and assumptions found in Ecology’s GUID 1210, *Determining Irrigation Efficiency and Consumptive Use*<sup>1</sup>, and Chapter 173-539A WAC.

The 2009, *Water System Design Manual*<sup>2</sup> (WSDM) by the Washington State Department of Health (DOH) contains guidance for establishing water demands. The suggested methods (in order of preference) include:

1. Metered water-production and use records.
2. Comparable metered water-production and use data from analogous water systems.  
See WAC 246-290-2321(3)(a) and Section 5.2.3
3. The criteria presented in this chapter.

Analogous water systems are defined in Section 5.2.3 of the WSDM as systems with similar characteristics such as: demographics, housing size, income levels, lot sizes, climate, water pricing structure, conservation practices, use restrictions, soils and landscaping, and maintenance practices.

There is no water use for the proposed development to review, and records for qualifying analogous systems are not available. Currently, the proposed water demand estimates are not consistent with the WSDM. As a result, Ecology’s connection approval (89 units) is only tentative and is contingent upon DOH’s approval of a Group A water system which remains within the other limitations of this permit (i.e. Qi, Qa, irrigated acres, ect.) DOH has full discretion and authority to limit the number of connections to less than the proposed 89 units.

**Table 2**  
Domestic Water Use

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Indoor (gpd per ERU)	150	150	150	150	150	150	150	150	150	150	150	150
Outdoor (gpd per ERU)	0	0	0	0	70	380	540	480	320	0	0	0
Total (gpd per ERU)	150	150	150	150	220	530	690	630	470	150	150	150

Monthly and annual total and consumptive use at full build-out of the project were calculated based on the planned 89 ERUs, the indoor and outdoor water use per ERU in Table 2, and the consumptive use factors specified in the *Upper Kittitas Emergency Groundwater Rule* (WAC 173-539A). Under WAC 173-539A, 30 percent of domestic indoor use discharged to a septic system is assumed to be consumptively used and 90 percent of outdoor domestic use is assumed to be consumptively used. Calculated total and consumptive use are summarized in Table 3.

<sup>1</sup> Ecology’s GUID 1210, *Determining Irrigation Efficiency and Consumptive Use*  
[Hhttp://www.ecy.wa.gov/programs/wr/rules/images/pdf/guid1210.pdf](http://www.ecy.wa.gov/programs/wr/rules/images/pdf/guid1210.pdf)

<sup>2</sup> Department of Health’s *Water System Design Manual* [Hhttp://www.doh.wa.gov/ehp/dw/Publications/331-123.pdf](http://www.doh.wa.gov/ehp/dw/Publications/331-123.pdf)

**Table 3**  
Estimated Total and Consumptive Use at Full Build-Out

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Total (acre-feet)	1.3	1.1	1.3	1.2	1.9	4.3	5.8	5.3	3.9	1.3	1.2	1.3	29.9
Consumptive (acre-feet)	0.4	0.3	0.4	0.4	0.9	3.2	4.5	4.0	2.7	0.4	0.4	0.4	18.0

Ecology's Guidance Document 1210, *Determining Irrigation Efficiency and Consumptive Use*, and the assumptions found in WAC 173-539A were used to calculate the area that could be irrigated with the proposed quantities of 0.17 acre-feet per ERU. A crop irrigation requirement (CIR) for grass in the Cle Elum area of 24 inches was estimated using the ASCE-Penman Monteith method. Assuming the outdoor use is 90 percent consumptive, consistent with the assumptions in WAC 173-539A, and applying the ASCE-Penman Monteith CIR, the assumed outdoor use is sufficient to irrigate approximately 2,950 square feet of grass per ERU or 6.04 acres for the entire development.

**Hydrologic/Hydrogeologic Evaluation**

The project site is located in an east-west trending valley on the north flank of South Cle Elum Ridge and on a low ridge forming the north side of the valley. Surficial geology at the site is mapped as alluvium along the floor and south wall of the valley and Darrington phyllite bedrock along the ridge to the north (Tabor, et al., 2000). Based on the location and topography, the alluvium appears to be alluvial fan deposits formed along the lower elevations of South Cle Elum Ridge.

The valley floor slopes gradually downward to the east. A former irrigation ditch flows west to east through the valley bottom, discharging to a branch of Spex Arth Creek, a tributary of the Yakima River, near the southeast corner of the SW<sup>1</sup>/<sub>4</sub> of Section 1. On the southwestern portion of the site the former irrigation ditch is fed by a diffuse spring system that occurs where the shallow water table in the alluvium intersects the ground surface.

Groundwater at the site is likely recharged primarily by precipitation and snowmelt infiltrating from the higher elevation South Cle Elum Ridge. Additional recharge is also likely derived from infiltration of precipitation and snowmelt falling directly on the site and drainage from the bedrock ridge at the north side of the valley. Groundwater discharges from the site at the diffuse springs feeding the former irrigation ditch. Groundwater likely also flows down valley to the east, supporting flows in Spex Arth Creek.

The applicant has one existing well at the site (Ecology Well ID AKW669), located in the NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> of Section 12. This well was completed in November 2005 to a depth of 101 feet below ground surface (bgs). The driller's log describes layers of gravels, cobbles, and boulders interbedded with layers of clay and silty sand and gravel. Bedrock, described as phyllite, was encountered at a depth of 101 feet bgs. Static water level at time of drilling was 19 feet below the top of casing, or 16 feet below ground surface. About 25 feet of the 85 foot saturated thickness consists of gravels, cobbles, and boulders. An air lift test was performed after well completion, with an estimated yield of approximately 60 gpm.

Based on the relatively shallow depth to water in well AKW669, completion of this well in coarse-grained water bearing zones of the alluvium, and given that the alluvium is the source of water for spring and groundwater discharge that support flows in Spex Arth Creek, this well is determined to be in hydraulically related to the Yakima River.

Should additional wells be required to meet project demand they would be completed in the alluvium, rather than the less productive bedrock. Based on the geologic map (Tabor, et al., 2000), alluvium underlies developable areas of the property in the S<sup>1</sup>/<sub>2</sub>SW<sup>1</sup>/<sub>4</sub> of Section 1 and the NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> and N<sup>1</sup>/<sub>2</sub>NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> of Section 12, T. 19N, R.15 E.W.M. These areas coincide with the valley bottom where springs and groundwater ultimately discharge to the Yakima River.

**Planned Mitigation**

The Northland Water Exchange has been created by the transfer of pre-1905 water rights to instream flow and water banking purposes through the TWRP. As a result of these transfers, the Exchange represents mitigation credits based on the consumptive use of these water rights on a month-by-month basis. The mitigation credits will be debited to mitigate for consumptive use under the subject application. The Exchange currently has mitigation credits represented by the following approved applications:

- **CS4-02223CTCLsb2@1 (Pasco).** This application, approved by Ecology on April 19, 2010, permanently changes an unperfected change authorization for year-round domestic supply and seasonal irrigation and stock watering to instream flow for water banking purposes. The historic authorized point of diversion is an unnamed spring, tributary to Spex Arth Creek and the Yakima River. Consumptive use recognized under this Trust Water Right is 55 ac-ft/yr.
- **CS4-01676(B)CTCL@1 (Newton).** This application, approved by Ecology on May 14, 2010, permanently changes the use from seasonal irrigation and stock watering to instream flow for water banking purposes. The historic authorized point of diversion is the Younger Ditch diversion from the Yakima River. Consumptive use recognized under this Trust Water Right is 73.7 ac-ft/yr.
- **CS4-00365CTCLsb5 (Henshaw).** This application, approved by Ecology on May 24, 2010, permanently changes the use of a portion of Acquavella Adjudicated Court Claim No. 00365 from seasonal irrigation to instream flow for water banking purposes. The historic authorized point of diversion is the Younger Ditch diversion from the Yakima River. Consumptive use recognized under this Trust Water Right is 89 ac-ft/yr.

The current mitigation credits represented by the transfer and change of the three above water rights are as follows by estimated total monthly consumptive use:

**Table 4**  
Available Consumptive Use Mitigation Credits

<b>Water Right</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Annual</b>
Pasco	0.09	4.18	11.5	15.9	14.0	9.22	55
Newton	0	15.7	26.6	31.4	0	0	73.7
Henshaw	0	1.4	17.3	28.6	25.2	16.5	89
Total	0.09	21.28	55.4	75.9	39.2	25.72	217.7

**Notes:** Pasco water right includes approximately 0.01 acre-feet per month consumptive use mitigation credits from October through March. Consumptive use mitigation credits under the Newton water right will be used prior to July 29 each year.

The total year round consumptive use associated with proposed use is 18.0 ac-ft/yr. Table 3 presents the estimated monthly consumptive use. The consumptive use impacts to surface water flows in the Yakima River Basin associated with this application will be mitigated on a month to month basis by a combination of assigning consumptive use mitigation from the Northland Water Exchange and providing scheduled releases from storage to address new out-of-season impacts. Specific terms of the Northland Water Exchange, including requirements to provide sufficient storage for release of mitigation water outside the historical irrigation season, are described in Attachment 2.

**Impairment Considerations**

**Groundwater**

Ecology’s water rights and well log databases were searched to identify nearby groundwater rights or water right permit-exempt wells that could be affected by the proposed groundwater appropriation. No groundwater rights were identified within one-mile of well AKW669 or the areas of the property mapped as alluvium that could support additional wells. About 13 well logs are mapped in quarter-quarter sections adjacent to potential well locations on the property; however, the logs indicate that all but one of these wells are completed in bedrock and are unlikely to be affected by pumping from the shallower alluvium. The one nearby well completed in alluvium (Well Tag ID AKO138) is located in the SE¼NE¼ of Section 12, T. 19 N., R. 14 E.W.M. The exact location of well AKO138 is unknown, but conservatively assuming it is located near the northwest corner of the quarter-quarter section, then it would be at least 1,000 feet from any potential well location on the Meadow Springs property.

The potential effect of pumping a well at the property on water levels at well AKO138 was evaluated using the Theis nonequilibrium equation and the following parameters. A transmissivity of 625 feet squared per day was estimated based on the 25 foot saturated thickness of the gravel and cobble deposits and an assumed hydraulic conductivity of 25 feet per day for these materials. A storativity of 0.2 was assumed, based on typical specific yield for sands and gravels. As a worst case scenario, effects were evaluated assuming pumping of a single well at the requested instantaneous pumping rate of 180 gpm for 38 days, until the annual quantity of 29.9 acre-feet is exhausted. Assuming a distance of 1,000 feet between the pumping well and well AKO138 and applying the above values, the estimated drawdown at well AKO138 would be on the order of 0.2 foot.

### **Surface Water**

No surface water rights were identified as diverting from Spex Arth Creek downstream of the Meadow Springs project. Year round consumptive use impacts to the mainstem Yakima River associated with the project will be mitigated through use of mitigation available from transfer of pre-1905 water rights to the TWRP, including CS4-02223CTCLsb2@1 (Pasco) previously located on-site, and scheduled surface water releases.

### **Water Availability**

Water availability includes legal availability (e.g., closure of basins to further appropriation) and physical availability (e.g., productivity of the aquifer). Under WAC 173-539A all groundwater in upper Kittitas County, including the project site, was withdrawn from further appropriation, except where the new appropriation is water budget neutral. The rule defines water budget neutral as "...an appropriation or project where withdrawals of ground water of the state are proposed in exchange for discharge of water from other water rights that are placed into the trust water right program where such discharge is at least equivalent to the amount of consumptive use." The appropriation proposed under the subject application will be water budget neutral by dedicating 18.0 ac-ft/yr of consumptive use available from the Northland Water Exchange to mitigation purposes. Month-by-month mitigation is offered to account for the project's indoor and outdoor uses during the irrigation season (April 1 – September 30). Out-of-irrigation season (October 1 – March 31) uses will be mitigated through an acceptable storage and release program to address out-of-season impacts.

The existing well is capable of producing a Qi at least 60 gpm, based on an air lift test. It is unclear if this well could sustain higher withdrawals; however, should higher Qi be required to meet project needs additional wells would be completed in the alluvium at the site. Based on the coarse-grained gravels and cobbles, the unconfined conditions, and the saturated thickness of the alluvium it is expected that a total of four wells could produce a Qi of 180 gpm.

### **Public Interest Considerations**

When investigating a water right application, Ecology is required to consider whether the change is detrimental to the public interests. Ecology must consider how the change will affect an array of factors such as wildlife habitat, recreation, water quality, and human health. The environmental amenities and values associated with the area were taken into account during the consideration of this application.

### **Consideration of Protests and Comments**

No protests or comments were received during the 30-day comment period following publication of the public notice.

## **CONCLUSIONS**

- Water is physically available at the quantities requested, although additional wells may be required to achieve the requested Qi. When combined with the proposed mitigation measures, water is legally available under the provisions of WAC 173-539A.
- According to RCW 90.54.020 multiple domestic use is considered a beneficial use.
- Approval of the proposed appropriation, when combined with the proposed mitigation measures, will not result in impairment of existing water right holders.
- Approval of the proposed appropriation, when combined with the proposed mitigation measures, is not detrimental to the public interest.

**RECOMMENDATIONS**

Based on the above investigation and conclusions, I recommend that Application No. G4-35251 be authorized, in the amounts and within the limitations listed below and subject to the provisions beginning on Page 2.

**Purpose of Use and Authorized Quantities**

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.

- 180 gallons per minute
- Year-round multiple domestic supply 89 units
- 29.9 acre-feet per year (14.95 for domestic and 14.95 for irrigation)
- Irrigation of 6.04 acres from May 1 to September 30

**Points of Withdrawal**

Well AKW669 – NE1/4, NW1/4, Section 12, Township 19 North, Range 14 East W.M.

Three additional wells - S1/2 SW1/4, Section 1, Township 19 North, Range 14 East W.M.; and/or NE1/4NW1/4 or NW1/4NE1/4, Section 12, Township 19 North, Range 14 East W.M.

**Place of Use**

As described on Page 1 of this Report of Examination.

Report by: \_\_\_\_\_ Date \_\_\_\_\_  
 Melissa Downes, Water Resources Program

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# Attachment 1

