STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

TRUST WATER RIGHT
REPORT OF EXAMINATION
Change of Purpose of Use to Instream Flow and Water Banking
WRTS File No.: CS4-02223CTCLsb2@1

PRIORITY DATE	CLAIM NO.	PERMIT NO.	CERTIFICATE NO.
July 31, 1903	CS4-02223CTCL	N/A	N/A

NAME OF PARTY CONVEYING RIGHT TO TRUST WATER RIGHTS PROGRAM

Meadow Springs, L.L.C.

ADDRESS/STREET	CITY/STATE	ZIP CODE
206 West First Street	Cle Elum, WA	98922

TRUST WATER RIGHT ATTRIBUTES

SOURCE

Unnamed Spring[1]

TRIBUTARY OF (IF SURFACE WATERS)

Spex Arth Creek and the Yakima River

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE FEET PER YEAR
1.01		101

QUANTITY, TYPE OF USE, PERIOD OF USE

0.99 cubic feet per second, 99 acre feet per year for the purpose of instream flow and water banking from April 15 through September 30.

0.02 cubic feet per second, 2 acre-feet per year for the purpose of instream flow and water banking year round.

Instream Flow in Secondary Reach

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Avg. Qi (cfs)	0.0*	0.0*	0.0*	0.0*	0.07	0.19	0.26	0.23	0.15	0.0*	0.0*	0.0*	---
Qa (ac-ft)	0.01	0.01	0.01	0.09	4.18	11.5	15.9	14.0	9.22	0.01	0.01	0.01	55.0

*Approximately 0.0002 cubic feet per second.

HISTORIC POINT OF DIVERSION OR WITHDRAWAL

APPROXIMATE LOCATION OF HISTORIC DIVERSION / WITHDRAWAL

800 feet north and 100 feet west from the southeast corner of Section 2, T. 19 N., R. 14 E.W.M.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP	RANGE E.W.M.	WRIA	COUNTY
SE¼SE¼	2	19 N.	14 E.W.M.	39	Kittitas

PARCEL NUMBER	LATITUDE	LONGITUDE	DATUM
18199	47.164	-121.049	NAD 27

AFFECTED REACHES -- DESCRIPTION OF PLACE OF USE
[See Attachment 1 for map of the trust water right location]

PLACE OF USE: Unnamed Stream, Spex Arth Creek, and the Yakima River.

Primary Reach: Begins at a point approximately 800 feet north and 100 feet west from the southeast corner of Section 2, T. 19 N., R. 14 E.W.M.

Secondary Reach: Begins at a point on an Unnamed Stream approximately 2,390 feet west and 250 feet south of the NE¼of Section 12, T. 19 N., R. 14 E.W.M., and ends at the confluence of the Yakima River and the Columbia River.

TRUST WATER RIGHT TERM

BEGIN DATE	END DATE
Permanent	N/A

PROVISIONS

Provisions related to the Trust Water Right:

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 wells or diversions and associated distribution systems for compliance with water law.

Northland Resources, Inc. is responsible for the following provision: Northland shall measure and record the discharge of the unnamed spring noted in Acquavella Court Claim 02223, for the purpose of demonstrating that said unnamed spring provides flow in quantities that equal or exceed the monthly instantaneous quantities necessary to satisfy the purposes identified in this Change Authorization. For the purposes of this provision, 'monthly instantaneous quantities necessary to satisfy the purposes identified in this change authorization' are as follows:

Month	April	May	June	July	August	September
Avg. Qi (cubic feet per second)	0.003	0.130	0.375	0.501	0.441	0.299

The study shall consist of: Measuring and recording flow from the unnamed spring noted in Acquavella Court Claim 02223 for an irrigation season. An approved measuring device shall be installed and maintained for the said source in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173. The measuring device and installation shall be approved by the Department of Ecology prior to recording. Flow data shall be recorded once a month during the irrigation season (April 15 through September 30). Flow measurements shall be recorded at least 14 days apart. Flow data shall be made available to the Department of Ecology upon request. Upon completion of the study, the Department of Ecology shall review the results and determine the extent to which this Trust Water Right may serve as mitigation in a water bank for purposes of offsetting new uses. In the event that direct measurements show that discharge from the spring equals or exceeds the instantaneous quantity noted above, continued monitoring of spring discharge will not be required. In the event that direct measurements do not show that discharge from the spring equals or exceed the instantaneous quantity noted above, Northland Resources shall perform this measurement and recording study the following irrigation season.

All of the cultivated land irrigated under Acquavella Court Claim No. 02223 (approximately 34 acres) must remain fallow. In this case, fallowing means to leave unseeded, unplowed, uncultivated, or for the purpose of growing or harvesting a crop. If the subject land is not left fallow, this trust water right cannot be protected and will fail to serve as mitigation for new uses.

Future stock water or domestic use under this Change Authorization No. CS4-02223CTCL or Acquavella Court Claim No. 02223 is not authorized.

FINDINGS OF FACT AND ORDER

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 change of water right as recommended will not be detrimental to existing rights or detrimental to the public interest.

Therefore, I ORDER the requested change of place and purpose of use under Trust Water Right Application No. CS4 02223CTCLsb2@1, be approved subject to existing rights and the provisions specified above.

This decision may be appealed pursuant to RCW 34.05.514(3), RCW 90.03.210(2), and Pretrial Order No. 12 entered in *State of Washington, Department of Ecology v. James Acquavella, et al.*, Yakima County Superior Court No. 77-2-01484-5 (the general adjudication of surface water rights in the Yakima River Basin). The person to whom this decision is issued, if he or she wishes to file an appeal, must file the Notice of Appeal with the Yakima County Superior Court **within thirty (30) days of receipt of this decision**. Appeals must be filed with the Superior Court Clerk's Office, Yakima County Superior Court, 128 North 2nd Street, Yakima, WA 98901, RE: Yakima River Adjudication. Appeals must be served in accordance with Pretrial Order No. 12, Section III ("Appeals Procedures"). The content of the Notice of Appeal must conform to RCW 34.05.546. Specifically, the Notice of Appeal must include:

The name and mailing address of the appellant;
Name and address of the appellant's attorney, if any;
The name and address of the Department of Ecology;
The specific application number of the decision being appealed;
A copy of the decision;
A brief explanation of Ecology's decision;
Identification of persons who were parties in any adjudicative proceedings that led to Ecology's decision;
Facts that demonstrate the appellant is entitled to obtain judicial review;
The appellant's reasons for believing that relief should be granted; and
A request for relief, specifying the type and extent of relief requested.

The "parties of record" who must be served with copies of the Notice of Appeal under RCW 34.05.542(3) are limited to the applicant of the decision subject to appeal, Ecology and the Office of the Attorney General.

All others receiving notice of this decision, who wish to file an appeal, must file the appeal with the Yakima County Superior Court within **thirty (30) days of the date the Order was mailed.** The appeal must be filed in the same manner as described above.

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

- File your appeal with the Pollution Control Hearings 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).

Signed at Yakima, Washington, this 19TH day of April 2010.

Mark C. Schuppe

Mark Schuppe, Section Manager
Water Resources Program
Central Region Office

BACKGROUND

Description and Purpose of Proposed Change

A declaration from Emil Pasco (Court Claim No. 02223 of the Acquavella Adjudication) was confirmed a right for 0.98 cubic feet per second (cfs) and 98 acre-feet per year (ac-ft/yr) from an unnamed spring for the irrigation of 49 acres, 0.02 cfs and 2 ac-ft/yr for domestic supply, and 0.01 cfs and 1.0 ac-ft/yr for stock water pursuant to the Conditional Final Order issued by Yakima Superior Court on February 13, 1997.

On May 17, 2005, Scatter Creek Resources, L.L.C., under the control of Northland Resources, Inc., submitted an Application for Change with the Kittitas County Conservancy Board (the Board) to change Court Claim No. 02223. The Department of Ecology (Ecology) assigned the Change Application an identifying number of CS4-02223CTCL. The applicant proposed to change the purpose of use, place of use, period of use, and point of diversion of Court Claim No. 02223. The Board conditionally approved the change on January 5, 2006. Ecology modified the Board's decision on March 24, 2006. Ecology affirmed the Board's tentative determination of 98 acre-feet for irrigation and 101 acre-feet total. However, Ecology's modification reduced the Board's tentative determination of irrigation to 34 acres. Ecology added a provision to the Board's decision including; "Consumptive use under this water right shall not exceed 55 acre-feet." Ecology further limited the season of use to "April 15 to September 30 until a Mitigation Plan for out-of-season impact has been approved by Ecology, the Bureau of Reclamation, and the Department of Health". The Board's Record of Decision and Ecology's modification were given much weight during the consideration of the current Application for Change No. CS4-02223CTCLsb2@1.

On July 16, 2009, Dave Blanchard of Northland Resources, Inc., and Meadow Springs, L.L.C. applied to place Change Authorization No. CS4-02223CTCL into the State Trust Water Right Program. The application was assigned the identifying number CS4-02223CTCLsb2@1. This application along with four other Trust Water Right Applications (Nos. CS4-01676(B)CTCL@1, CS4-00365CTCLsb5, CS4-01296CTCsb5@1(A), CS4-01296CTCLsb5@1(B)) were submitted by Northland Resources, Inc. and associated L.L.C.'s for the purposes of water banking in order to offset the consumptive use associated with new groundwater use proposals.

Attributes of Water Right Change Authorization No. CS4-02223CTCL and Proposed Change

Table 1
Summary of Existing Attributes and Proposed Changes to
Water Right Change Authorization No. CS4-02223CTCL

Attributes	Documented	Proposed
Name	Meadow Springs L.L.C.	N/A
Priority Date | Date of Application for Change	Priority Date – July 31, 1903	Application Date – July 16, 2009
Instantaneous Quantity	1.01 cfs	1.01 cfs In Trust
Annual Quantity	101 ac-ft/yr	101 ac-ft/yr In Trust
Source[1]	Well	In Trust
Point of Withdrawal	Approximately 2,240 feet east and 1,025 feet south of the NW¼ of Section 12 T. 19 N., R. 14 E.W.M.	In Trust
Purpose of Use	Municipal Supply	In Trust

[1] The source approved under Change Authorization No. CS4-02223CTCL has not been used, therefore, the source and location confirmed under Acquavella Court Claim 02223 will be the basis of this Trust Water Right.

Period of Use	April 15 through September 30	In Trust
Place of Use	S½SW¼ of Section 1, T. 19 N., R 14 E.W.M. EXCEPT: Right-of-way for Pasco County Road, being described as that portion conveyed to Kittitas County for Pasco Road cul-de-sac by deed recorded September 26, 1994, in Volume 358, Page 1993, under Auditor's File No. 575350, and amended by deed recorded January 9, 1997, under Auditor's File No. 199701090017; and parcels Nos. 19-14-12000-0003, 19-14-0100-0005, 19-14-0100-0006, 19-14-12000-0016 within Section 12; and the E½SE¼ of Section 1, (parcel No. 19-14-01054-0003), ALL within T. 19 N., R 14 E.W.M.	In Trust – See page 1 for POU description

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing the proposed change in CS4-01676(B)CTCL.

- **Public Notice**
  Notice was published by the applicant in *The Daily Record* of Ellensburg for two consecutive weeks, commencing on October 24, 2009, and October 31, 2009.

- **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 that 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**
  - RCW 90.03.380(5)(b) states that applications relating to existing surface or ground water rights may be processed and decisions on them rendered independently of processing and rendering decisions on pending applications for new water rights within the same source of supply without regard to the date of filing of the pending applications for new water rights.
  - RCW 90.38.040(1) states that all trust water rights acquired by the department shall be placed in the Yakima River Basin trust water rights program to be managed by the department. The department shall issue a water right certificate in the name of the state of Washington for each trust water right it acquires.
  - RCW 90.42.100(1) states that the department is authorized to use the trust water rights program in the Yakima River basin for water banking purposes.
  - RCW 90.42.100(2)(a) states that water banking may be used to mitigate for any beneficial use under chapter 90.03, 90.44. or 90.54 RCW, consistent with any terms and conditions established by the transferor, except that return flows from water rights authorized in whole or in part for any purpose shall remain available as part of the Yakima basin's total water supply available and to satisfy existing rights for other downstream uses and users.
  - RCW 90.42.100(2)(b) states that water banking may be used to transfer water rights to and from the trust water rights program.

INVESTIGATION

The water right change investigation was conducted by Kurt Walker, an Ecology Permit Writer. A site investigation was conducted on September 8, 2009, and was attended by Joseph Morrice of Aspect Consulting. Additional information regarding the use of water was obtained through:

- Ecology Records including documents from Change Application No. CS4-02223CTCL.
- Documentation submitted by the applicant, their consultants (Aspect Consulting and Washington Rivers Conservancy), and their attorney (Tom McDonald) including:
  - Project overview Memorandum by Aspect Consulting dated June 1, 2009.

- Technical Memorandum regarding Evapotranspiration by Aspect Consulting dated July 29, 2009.
- Conversations with:
  - Joseph Morrice.
  - Timothy Flynn.
  - Lisa Pelly.
- Review of digitized topographic maps and aerial photographs.
- Yakima County Superior Court *Reports of Referee* on the Yakima River Basin Water Rights Adjudication for Subbasin No. 2 (Easton).

History of Water Use

Court Claim No. 02223 from the Acquavella Adjudication is appurtenant to the Meadow Springs, L.L.C. land. The unnamed spring noted in Court Claim No. 02223 has been used for irrigation, domestic supply, and stock water. The *Report of Referee* for Subbasin No. 2 notes that at the time of the evidentiary hearing, approximately 49 acres of hay and pasture were being flood irrigated from an unnamed spring and up to 25 head of cattle were being raised on the property.

See Background section above for Court Awards.

The spring does not appear to have a distinct point from which water is expressed, but rather a broad area of discharge or seepage. Seepage is controlled and managed for irrigation by means of a series of open ditches which distribute water easterly along the southern boundary of the cultivated land. To irrigate the land, the ditches are temporarily dammed causing sheet flow across the field. Limited furrowing is utilized to regulate the application of water once a ditch overflows. The terrain of the irrigated ground is characterized by irregular to flat topography which slopes general to the north and northeast. As a result, the irrigation efficiency is very low (approximately 50%), but within the range typical of flood irrigation.

While cattle have always been allowed to drink freely from open ditches, the method of domestic supply delivery under this right has changed over time. Initially, water used for domestic purposes was hauled by hand because gravity flow delivery was not possible. Sometime after the Pasco family purchased the property, a pump house was built and a pump installed to deliver water from the spring directly to the house as it is today.

On May 17, 2005, Scatter Creek Resources, L.L.C., under the control of Northland Resources, Inc., submitted an Application for Change (CS4-02223CTCL) with the Kittitas County Conservancy Board (Board) to change the purpose of use, place of use, period of use, and point of diversion of Court Claim No. 02223. The Board conditionally approved the change on January 5, 2006 and Ecology modified the Board's decision on March 24, 2006. See Background section above for water right attributes and limitations associated with Change Authorization No. CS4-02223CTCL.

See Attached Map (Attachment 1) for POU and POW locations

To this day, water has not been used from the new point of withdrawal or for municipal purposes to which it was changed. However, it appears that water has been used from the historic point of diversion for irrigation. Because no additional information was presented regarding the use of water under this right for domestic supply or stock water, the amount authorized under the Board's modified decision will be relied upon for consideration of this change application.

Future Land Use

If this Change Application is approved, the land historically irrigated under Court Claim No. 02223 will likely be fallowed as provisioned. The subject field is described and delineated by Environmental Science Associates Adolfson (Adolfson) as a Category II wetland (Adolfson, 2007.) During a 2007 field investigation, Adolfson scientists noted that the subject wetland soils were saturated within 12 inches of the soil surface throughout the field. It appears that a variety of natural and planted vegetation utilize this seasonally high water table. Because the spring authorized under Court Claim No. 02223 currently flows across the subject field through natural and unnatural means (ditches and rills), cultivation of the land historically irrigated under Court Claim No. 02223 must remain fallow to assure that water placed into the Trust Water Rights Program is not appropriated and available for the purposes of water banking in order to offset the consumptive use associated with new groundwater use. If the land is not followed, the trust water right cannot be protected and it will fail to serve as mitigation for new uses.

Proposed Use

The applicant proposes to change CS4-02223CTCL to trust for the purposes of instream flow and water banking in order to offset the consumptive use associated with new groundwater uses consistent with Chapter 173-539A WAC (November 25, 2009).

Other Rights Appurtenant to the Place of Use

A review of Ecology's records and database did not reveal any other rights or claims which are appurtenant to the subject property.

Trust Water Right Calculations

Water has been used on the subject property for irrigation, domestic purposes, and stock water under Court Claim No. 02223. While the Board's 2006 modified decision authorized a change in purpose and point of withdrawal, actual water use has not changed. Therefore, the trust water right calculations will be based on recent uses and Ecology's modification of the Board's 2006 decision. In that decision, Ecology affirmed a tentative determination of 0.98 cfs and 98 acre-feet for irrigation from April 15 to September 30, 0.02 cfs and 2 acre-feet for year round domestic supply, and 0.01 cfs and 1 acre-feet for stock water from April 15 to September 30.

In general, water used for irrigation is typically not constantly diverted over the irrigation period. Water use often begins at a lower rate during the beginning of the growing season, ramps up during the warmer part of the season and decreases again in the later part of the season. Irrigation may also be interrupted during repairs and modifications to the irrigation system, or to dry and harvest crops.

Water use on the Meadow Springs land has not been directly measured. In the absence of direct water use records, Ecology uses various methods to estimate the amount of water used and consumed. One source of information frequently use by Ecology to estimate water used for irrigation is the Natural Resources Conservation Service's *Washington Irrigation Guide* (WIG). The WIG data show the estimated average amount of water required by the crop, crop irrigation requirement (CIR), in addition to the existing moisture in the root zone under average climatic conditions.

The WIG data and Ecology's Guidance Document GUID 1210, *Determining Irrigation Efficiency and Consumptive Use,* were used to determine irrigation efficiency (Ea), total irrigation requirement (TIR), and the consumptive use (CU) associated with irrigation on the Pasco property. The WIG CIR value of 18.11 inches per acre of pasture and Ecology's affirmed 98 ac-ft/yr for the irrigation of 34 acres. This represents an Ea of 52% which is reasonable for flood irrigation. Given the local growing conditions and method of application, evaporative losses were estimated at five percent of the TIR. For 34 acres, the total CU associated with irrigation under this right is estimated at 53.8 ac-ft/yr. The remaining portion of used water which is not consumed is considered to be return flow.

Ecology affirmed the Board's tentative determination of two ac-ft for year round domestic supply and one acre-foot for stock water from April 15 to September 30. These values were used in conjunction with Ecology's determination that the total consumptive use under this right has been limited to 55.0 ac-ft/yr (leaving 46 acre-feet as non-consumptive). As a result, collective CU associated with year round domestic use and seasonal stock water appropriation is estimated to 1.2 acre-feet.

Trust Water Place of Use

Ecology typically manages its trust water rights by defining a primary and a secondary reach. The primary reach is the length of stream between the historic point of diversion and where any of the water diverted, but not consumed, returns to the stream. The secondary reach begins at the downstream end of the primary reach and is defined as that length of stream which benefits from a reduction in consumptive use.

The primary reach under this application begins from the historic authorized point of diversion being approximately 800 feet north and 100 feet west from the southeast corner of Section 2, T. 19 N., R. 14 E.W.M. The entire court awarded amounts (1.01 cfs and 101 ac-ft/yr) are being placed into trust and those quantities will benefit the primary reach for the times to which they were prescribed.

The secondary reach begins on an unnamed perennial stream at a point just down gradient from the eastern extent of historic irrigation approximately 2,390 feet west and 250 feet south of the NE¼ of Section 12, T. 19 N., R. 14 E.W.M. This unnamed stream flows into Spex Arth Creek which is a tributary of the Yakima River. The consumptive use associated with this right is eligible for protection as a trust water right in the secondary reach as described in Table 2 below.

However, this water right is proposed to be changed to instream flow and water banking. As such, this trust water right is intended to serve as mitigation for new water rights from surface water sources and/or sources hydraulically related to the Yakima River consistent with Chapter 173-539A WAC. These new appropriations, if approved, will be water budget neutral with respect to the "total water supply available," but the trusting of this right may not derive a specific reach benefit eligible for protection after the new appropriation(s) are authorized.

Table 2
Instream Flow in Secondary Reach

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Avg. Qi (cfs)	0.0*	0.0*	0.0*	0.0*	0.07	0.19	0.26	0.23	0.15	0.0*	0.0*	0.0*	---
Qa (ac-ft)	0.01	0.01	0.01	0.09	4.18	11.5	15.9	14.0	9.22	0.01	0.01	0.01	55.0

*Approximately 0.0002 cfs.

Trust Water Management

CS4-02223CTCL is proposed to be changed to instream flow and water banking. As such, the consumptive portion of water placed into trust may be available as mitigation to address the issue of impairment with respect to the consumptive use associated with new out-of-priority water rights as allowable under Chapter 173-539A WAC.

Impairment Considerations

Under RCW 90.38.040(5)(a), a trust water right may be exercised only if Ecology first determines that the authorization will not impair or injure any other water right. An attempt was made to identify any third parties who may be potentially affected by an approval of this change application.

Public Interest Considerations

When investigating a change 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 change application.

Consideration of Protests and Comments

No protest or comments related to this change application were received for consideration.

CONCLUSIONS

- Change Authorization No. CS4-02223CTCL is appurtenant to the subject property, the subject land has been historically irrigated, stock have historically used the water allocation for that purpose and domestic water has been appropriated – all from the unnamed spring confirmed in Acquavella Court Claim No. 02223.
- The author makes a tentative determination that Change Authorization No. CS4-02223CTCL represents a valid right to divert water from a well in quantities up to 1.01 cfs and 101 ac-ft/yr for the purpose of municipal supply, from April 15 through September 30.
- No water rights will be impaired or injured by no longer diverting 1.01 cfs from the unnamed spring confirmed under Acquavella Court Claim 02223.
- Changing the purpose of this water right to instream flow and water banking are not contrary to the public interest.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that the request for change to Change Application No. CS4-02223CTCL be approved in the amounts and within the limitations listed below and subject to the provisions listed above.

Place of Use:

Unnamed Stream

Trust Water Right Attributes:

Primary Reach:
0.99 cfs, 99 ac-ft/yr from April 15 to September 30 for instream flow purposes in the primary reach.

0.02 cfs, 2 ac-ft/yr for year round instream flow purposes in the primary reach.

The primary reach begins at a point approximately 800 feet north and 100 feet west from the southeast corner of Section 2, T. 19 N., R. 14 E.W.M.

Secondary Reach:
55.0 ac-ft/yr for instream flow purposes in the secondary reach as follows:

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Avg. Qi (cfs)	0.0*	0.0*	0.0*	0.0*	0.07	0.19	0.26	0.23	0.15	0.0*	0.0*	0.0*	---
Qa (acre-feet)	0.01	0.01	0.01	0.09	4.18	11.5	15.9	14.0	9.22	0.01	0.01	0.01	55.0

*Approximately 0.0002 cfs.

The secondary reach begins at a point on an unnamed stream approximately 2,390 feet west and 250 feet south of the NE¼ of Section 12, T. 19 N., R. 14 E.W.M., and ends at the confluence of the Yakima River and the Columbia River.

Report by: _____ 4-19-10
Kurt Walker, Water Resources Program — Date

REFERENCES

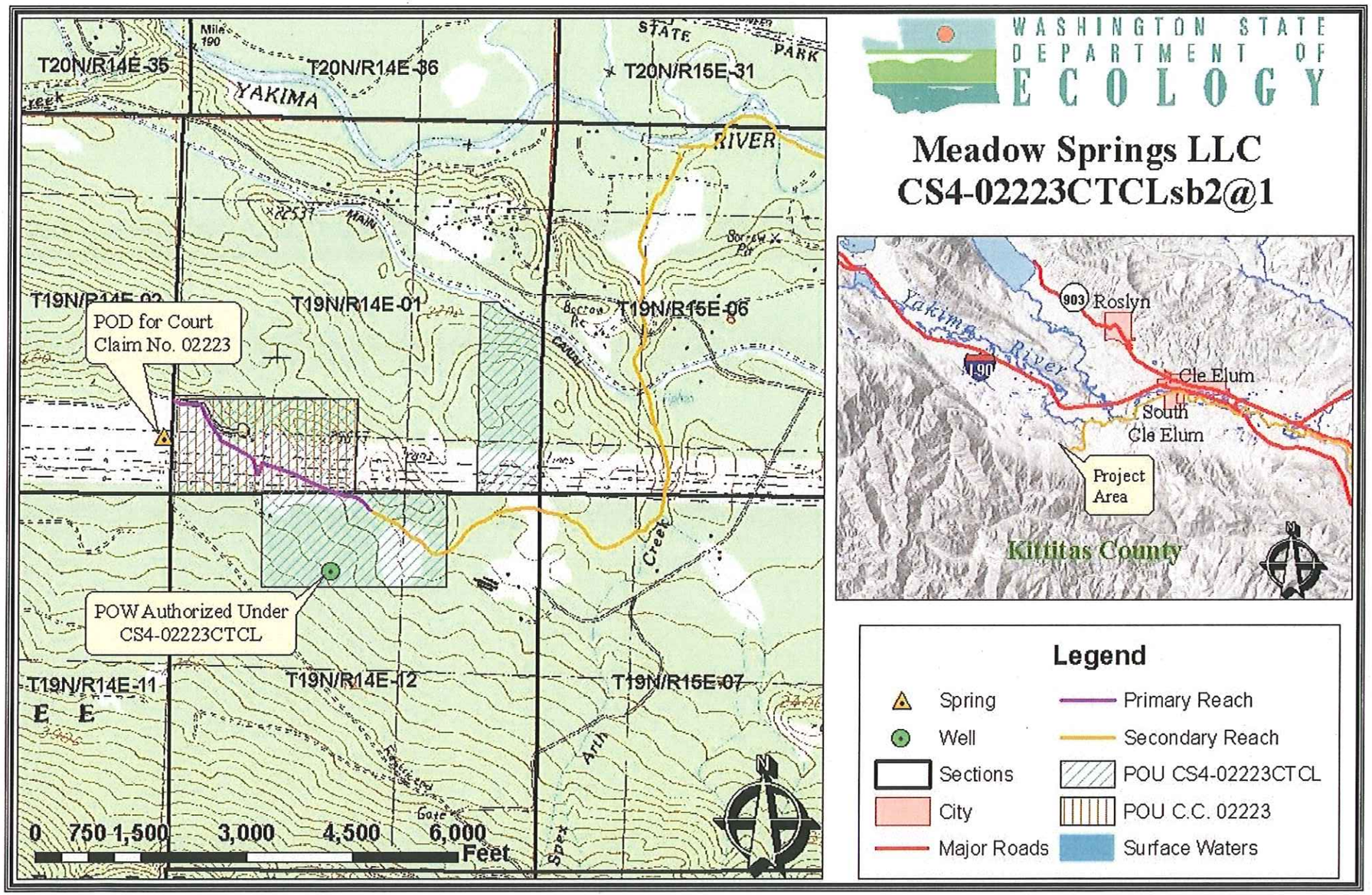
ESA Adolfson, 2007. Technical Report: Meadow Springs, Starlite Estates, and Tamarack Ridge Wetland Report.

Morrice, J. and Flynn, T. 2009. Technical Memorandum regarding Calculation of Evapotranspiration Rates and Crop Irrigation Requirements, Project No. 070207.

Morrice, J. and Flynn, T. 2009. Technical Memorandum regarding Current and Proposed Water Use Estimates Northland Resources, L.L.C. Development Projects, Project No. 070207.

Natural Resources Conservation Service, 1997. *Washington Irrigation Guide. Appendix B: Climatic Station for Consumptive Use (WA 210-VI-WAIG).*

State of Washington, Department of Ecology v. Acquavella, et al., Yakima County Superior Court Case No. 77-2-01484-5, Reports of Referee Subbasin No. 2 (Easton).



Attachment 1