

**CITY OF WALLA WALLA  
Public Works/Water Division**

**REQUEST FOR PROPOSALS (RFP)  
AQUIFER STORAGE AND RECOVERY (ASR) REPORTING**

The City of Walla Walla is seeking proposals, from qualified consulting companies with experience in Aquifer Storage and Recovery Project data collection and reporting. The proposals are due by 4:00 p.m., on Tuesday, July 26, 2016, at the office of the City Engineer, Attn. Frank Nicholson, P.E., 55 E. Moore Street, Walla Walla, Washington 99362. Proposals shall be in a sealed envelope and clearly marked "ASR Reporting."

The City of Walla Walla recently received a Reservoir Permit R3-30526, dated June 2, 2016, for the City's Aquifer Storage and Recovery (ASR) project, from the Department of Ecology. The City of Walla Walla has operated an Aquifer Storage and Recovery (ASR) type system using well #1 since 1999 and well #6 since 2003.

The selected company will prepare an annual ASR report of operations and monitoring required by the Department of Ecology, as outlined in the permit. The company shall also develop a project Monitoring Plan, including a Quality Assurance Project Plan (QAPP).

The RFP can be viewed at the City's website at <http://www.wallawallawa.gov/bids-rfps>. Project information can be obtained by contacting Frank Nicholson, P.E., City of Walla Walla, 55 E. Moore Street, Walla Walla, WA 99362, or by phone at 509-524-4510, or e-mail to [fnicholson@wallawallawa.gov](mailto:fnicholson@wallawallawa.gov).

Advertised Walla Walla Union Bulletin and Seattle DJC

**CITY OF WALLA WALLA  
Public Works/Water Division**

**REQUEST FOR PROPOSALS (RFP)  
AQUIFER STORAGE AND RECOVERY (ASR) REPORTING**

**PROJECT DESCRIPTION AND HISTORY**

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**PROJECT DETAIL**

Reservoir Permit R3-30526 is attached to this RFP. The intent of the proposal is to provide the Department of Ecology with all required reporting requirements outlined in the Permit. Three key deliverables that the consultant will be preparing for the City are:

1. The City shall submit an annual report of operations and monitoring to Ecology by December 1st each year. Table 6 lists the actions required of the City for system monitoring. All monitoring is based on a water year: October 1st through September 30th. The due date for monitoring results is December 1st of each year to allow analysis, evaluation and interpretation of the annual results for the water year.
2. During the first two years the permit, the City shall develop a Monitoring Plan for the project that will be subject to Ecology's review and approval. It will include a Quality Assurance Project Plan (QAPP) for the specifics on monitoring, data quality objectives, sampling, and reporting.
3. The permit requires a lot of water sampling and data collection. Specifically, "sampling and analysis frequency may be modified based on accumulated data, if the City and Ecology both agree based on at least two years of data being collected, submitted and reviewed." The Consultant at the end of two years of data collection shall prepare a report reviewing the water quality data, and if appropriate make a case for reduced monitoring and testing and for raising the recovery rate above the initial 60% level established by the Department of Ecology.

## **TERM OF CONTRACT**

The term of the contract would be five years.

## **SCOPE AND BUDGET**

Prepare a proposed scope of work for the project duration.

## **QUALIFICATIONS**

Required minimum qualifications for firms submitting proposals:

1. Proven experience with ASR on at least three other projects.
2. Sufficient dedicated and qualified staff to work on and operate the project in a professional manner.

## **PROPOSAL SUBMITTAL**

The following information is to be submitted as part of the proposal. Submit five (5) copies of the proposals. The proposal shall have with the following graded categories: cover letter (10 points), scope of work (30 points), relevant experience and three references (30 points), resumes of people assigned to project (30 points). Proposal is limited to 5 double sided pages, not including resumes or cover letter.

The following additional information is required:

1. Insurance General Instructions:
  - a. "General liability insurance of at least \$2,000,000 aggregate, Combined Single Limit (CSL); and Automobile liability of at least \$1,000,000 per accident CSL";
  - b. Name the City as additionally insured.

## **SELECTION OF THE CONSULTANT**

Proposals will be evaluated by a committee made up of City employees on the basis of the factors noted above and previous work experience for the City. Final selection will be based on the evaluation of proposals unless it is determined necessary by the committee to conduct interviews of closely ranked proposals. Work performed under the contract will be on a time and material basis with a negotiated not to exceed amount. The City may conduct a half-day workshop with the preferred firm to work out a detailed scope of work, then, seek to negotiate a contract, fee, schedule, etcetera. If unable to reach an agreement, the City will terminate negotiations and commence negotiations with the second-ranked firm, and so forth. Ultimately, the contract shall be approved and awarded by the City Council at a regularly scheduled City Council meeting.

The City of Walla Walla, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 USC 2000d to 2000-4 and Title 49, Code of Federal Regulations, Department of Transportation, subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-Assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 26 will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award. The City of Walla Walla is an Equal Opportunity Employer. Minority and women-owned businesses are encouraged to submit proposals.

#### **LIMITATIONS**

The City reserves the right to modify or withdraw the RFP at any time without prior notice. The City reserves the right at its sole discretion to reject any and all proposals received without penalty. The City may reject proposals without providing the reason(s) underlying the declination. The City also reserves the right to not issue a contract as a result of this RFP. A failure to award a contract will not result in a cause of action against the City. The RFP does not obligate the City to contract for services described herein.

#### **PRE-CONTRACTUAL EXPENSES**

The City will not be liable for any costs incurred by applicants in the preparation or submittal of a proposal in response to this RFP, in the conduct of an interview presentation, or any other activities related to responding to this RFP.



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

June 2, 2016

Ki Bealey, Public Works Director  
City of Walla Walla  
55 East Moore Street  
Walla Walla, Washington 99362

Re: Reservoir Permit No. R3-30526

Dear Mr. Bealey:

Enclosed is the City of Walla Walla's reservoir permit to be retained for your records. Please read the enclosed information sheet, as well as your entire permit. Complying with the provisions of the permit will maintain the permit in good standing.

This permit requires development of a monitoring plan and annual reporting. The elements required for the annual report are listed in Table 6 of the permit. The first annual report is due December 1, 2016. The City will need to submit three copies of the annual report for the reservoir permit, one each for: Ecology's Water Quality Program, Ecology's Water Resources Program and one to the Natural Resources Department of the Confederated Tribes of the Umatilla Indian Reservation (CTUIR).

Electronic copies of this letter and the permit have been provided to the staff engaged in this project.

Our information indicates you have begun construction of your project. We are enclosing a *Construction Notice* form. Once you finish construction, submit the completed form to this office. **If the project is not complete by December 31, 2035, the City must contact this office to apply for an extension.**

If you have any questions, please contact Victoria Leuba before June 16<sup>th</sup>, or Eric Hartwig after that date.

Sincerely,

Karen Tusa  
Water Resources Program  
Eastern Regional Office

KT:md

Enclosures: Permit

*Construction Notice*

cc: Eric Quaempts, Natural Resources Director, CTUIR  
Nabiel Shawa, City Manager, City of Walla Walla  
Llyn Doremus [lynn.doremus@ecy.wa.gov](mailto:lynn.doremus@ecy.wa.gov)  
Gary James [gary.james@ctuir.org](mailto:gary.james@ctuir.org)  
Eric Hartwig [eric.hartwig@ecy.wa.gov](mailto:eric.hartwig@ecy.wa.gov)  
Frank Nicholson [fnicholson@wallawalla.wa.gov](mailto:fnicholson@wallawalla.wa.gov)





STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

**RESERVOIR PERMIT**  
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

**APPLICATION DATE**

December 21, 2006, as modified on July 6, 2009

**RESERVOIR APPLICATION NUMBER**

R3-30526

**MAILING ADDRESS**

City of Walla Walla  
15 North 3<sup>rd</sup> Avenue  
Walla Walla, WA 99362

**RESERVOIR LOCATION**

Wanapum and Grande Ronde Basalt Formations underlying the City of Walla Walla and surrounding areas

**Location of Storage Aquifer**

The reservoir, consisting of three fault blocks, is located underground and underlies portions of Townships 6, 7 and 8 North and Ranges 35, 36 and 37 E.W.M. Figure 1, attached, sets forth a surface representation of the storage blocks derived by geo-referencing the reservoir and its block boundaries as portrayed by Golder and Associates in the City of Walla Walla Aquifer Storage and Recovery Reservoir Permit Application (Application of 2009) with township, range, section and City boundary layers. This decision authorizes the use of fault blocks I and II for storage and recovery. Fault block III is not authorized for use without further approval by the Department.

Table 1

**Water Source**

**SOURCE LOCATION**

COUNTY	WATERBODY	TRIBUTARY TO	LATITUDE	LONGITUDE
Umatilla County, OR	Mill Creek	Walla Walla River	45.9901	-118.0483

SOURCE PERMIT NUMBERS	MAXIMUM DIVERSION RATE	PRIORITY DATE	PERIOD OF USE
Oregon permit S-54483	10 cfs	3/2/2001	11/01 – 4/15
Oregon certificate 87647	10 cfs	3/2/2001	11/01 – 4/15
Oregon certificate 13276	28 cfs	1866	annual

**SOURCE LIMITATIONS**

Waters to be diverted from Mill Creek pursuant to these rights are restricted: (1) as to permit S-54483 and certificate 87647 to flows measured at the Kooskooskie gauge that do not exceed 525 cfs or fall below the following:

November	December	January	February	March	April 1-15
100 cfs	110 cfs	110 cfs	125 cfs	150 cfs	150 cfs

and (2) as to certificate 13276 no more than to 25.5 CFS between August 1 and September 30.

Table 2

Location of injection wells and Associated Data					
Well	Location	Township, Range, Section	Completion Aquifer	Injection Rate (gpm)	Annual Quantity
Well # 1 (existing)	Block I	SE¼NW¼S13T7NR36E.W.M.	Wanapum and Grande Ronde	1300	1650 acre-feet/yr
Well # 6 (existing)	Block II	SE¼NE¼S22T7NR36E.W.M.	Wanapum and Grande Ronde	1600	2200 acre-feet/yr
Well # 2 (existing)	Block I	SE¼NW¼S13T7NR36E.W.M.	Wanapum and Grande Ronde	Not yet authorized	
Well # 3 (existing)	Block I	SW¼NW¼S13T7NR37E.W.M.	Wanapum and Grande Ronde	Not yet authorized	
MC WTP <sup>a</sup> area (proposed #8)	Block I	SE¼NW¼S13T7NR36E.W.M.	Wanapum and Grande Ronde	Not yet authorized	
Well # 4 (existing)	Block II	SW¼SW¼S22T7NR36 E.W.M.	Wanapum and Grande Ronde	Not yet authorized	
WWCC <sup>b</sup> area (proposed #9)	Block II	SE¼SW¼S14T7NR36 E.W.M.	Wanapum and Grande Ronde	Not yet authorized	

<sup>a</sup>Mill Creek Water Treatment Plant, <sup>b</sup>Walla Walla Community College

Table 3

Location of Recovery Wells and Associated Data					
Well	Location	Township, Range, Section	Completion Aquifer	Withdrawal Rate (gpm)	Annual Quantity of stored water
Well # 1 (existing)	Block I	SE¼NW¼ S13 T7N R36E.W.M.	Wanapum and Grande Ronde	2500	990 acre-feet/yr <sup>c</sup>
Well # 6 (existing)	Block II	SE¼NE¼ S22 T7N R36E.W.M.	Wanapum and Grande Ronde	2600	1320 acre-feet/yr <sup>d</sup>
Well # 2 (existing)	Block I	SE¼NW¼ S13 T7N R36E.W.M.	Wanapum and Grande Ronde	Not yet authorized	
Well # 3 (existing)	Block I	SW¼NW¼ S13 T7N R37E.W.M.	Wanapum and Grande Ronde	Not yet authorized	
MC WTP <sup>a</sup> area (proposed #8)	Block I	SE¼NW¼ S13 T7N R36E.W.M.	Wanapum and Grande Ronde	Not yet authorized	
Well # 4 (existing)	Block II	SW¼SW¼ S22 T7N R36 E.W.M.	Wanapum and Grande Ronde	Not yet authorized	
WWCC <sup>b</sup> area (proposed #9)	Block II	SE¼SW¼ S14T7NR36 E.W.M.	Wanapum and Grande Ronde	Not yet authorized	

<sup>a</sup>Mill Creek Water Treatment Plant, <sup>b</sup>Walla Walla Community College, <sup>c</sup> and <sup>d</sup>plus any carryover of stored water from any previous annual injection quantities (see Provisions beginning on page 4 and the carryover paragraph of pages 5 and 6). Recovery of stored water is in addition to the ground water withdrawals authorized under existing Washington State water rights.

Table 4

Waters to be stored for beneficial uses			
Source water right numbers	Maximum injection rate	Maximum withdrawal rate	Maximum annual acre-feet storage(including carryover)/recovery
Oregon Permit S-54483	Well #1: 1300 gpm,	Well #1: 2500 gpm,	11,750 acre-feet/7050 acre-feet
Oregon Certificate 87647	Well #6: 1600 gpm	Well #6: 2600 gpm	
Oregon Certificate 13276			

**Legal Description of Property on which Water is to be Used**

The Area Served by the City as described in the Washington State Department of Health, Office of Drinking Water (DOH/ODW) approved City Water System Plan including periodic updates

**Description of ASR Project**

The City has operated an Aquifer Storage and Recovery (ASR) type system using well #1 since 1999 and well #6 since 2003.

The City proposes to divert up to 48 cfs of Mill Creek water at their diversion facility located within the NW¼NE¼ S. 22, T. 6 N., R. 38 E.W.M. in Umatilla County in the State of Oregon. This water diversion is authorized by three State of Oregon water rights: permit number S-54483, certificate number 87647, and certificate number 13276. The authorizations are for municipal supply. Permit number S-54483 and Certificate number 87647 limit water diversion to monthly instream flow restraints from November 1 through April 15. No diversion under S-54483 and 87647 is authorized from April 16 – October 31.

Diverted water is conveyed down the City’s pipeline to its power generation facility and thereafter to its Mill Creek Water Treatment Plant where it will be treated to meet State of Washington and Federal drinking water standards. After treatment, up to 6.4 cfs may be injected through the approved injection wells into the underground reservoir. The injection rate may be increased if and when additional injection wells are approved. Stored water may be recovered for distribution into the City’s water system as needed at rates and locations not to exceed those authorized in this report and any subsequent permit amendments. The City’s existing wells #1, #2, #3, #4, and #6 are points of withdrawal associated with City owned groundwater certificates, issued by the State of Washington, authorizing withdrawal of public waters of the state on a year-round basis for municipal supply purposes. The same wells will be points of withdrawal for water authorized to be withdrawn under the reservoir permit. Wells #2, #3, and #4 are not currently modified to be injection wells. The City may request these wells be added as injection wells (after appropriate well modifications) through change applications, see amendment procedures on pages 7-8. Wells will be maintained by the City by periodic purge pumping. Backwash water will be discharged to existing approved system or to storage or infiltration basins.

Table 5

**Development Schedule**

BEGIN PROJECT	COMPLETE PROJECT	FULL STORAGE DEVELOPMENT
Begun in 1999	December 31, 2035	December 31, 2035

**Proposed Works**

The proposed works for this project consist of the City’s screened diversion facility, pipeline, power generation facility, Mill Creek Water Treatment Plant (WTP), two authorized wells listed above, and municipal water distribution system.

**Remarks**

Unless otherwise specified all monitoring and reporting requirements are based on an annual water year defined as October 1<sup>st</sup> through September 30<sup>th</sup>.

The Department’s decision is based on the capacity of the two existing operational injection wells, and the future operating capacity of the system as reported by the City. The recovery volume is based upon the mass balance data presented in the application which the Department concludes is a maximum annual recovery rate of 60%. The Department authorizes an allowance for annual carryover if less than 60% of the amount injected is recovered during the water year as described on page 4 of this Remarks section, see also provisions section, carryover paragraph on pages 5 and 6.

Block I and Block II as depicted on Figure 1 are the authorized storage reservoir. Any water escaping the reservoir boundaries as depicted on Figure 1 is waters of the state and is available to satisfy existing water rights.

The City's pilot project has been in operation for more than a decade. Water from previous storage years likely remains available for recovery. As there is a need for additional data to make assessments on the amount or percentage of water that has not "leaked" from storage, the Water Resources Program, after consultation with the City, estimates that availability of stored water decreases by 10% annually. The City is allowed to recover these carryover amounts, see Provisions on pages 5-6. These amounts, through the amendment process set forth beginning on page 7, are subject to change when sufficient data has been collected and analyzed to provide a more informed basis for the calculation.

In order to meet the annual storage capacity, additional injection and recovery wells are expected to be used for Blocks I and II. As these wells are brought into service, they will be subject to the 60% annual recovery quantity and carry over percentages until that quantity is changed through amendment (see the amendment process on pages 7-8).

This project includes injection of chlorinated drinking water from the City's treatment plant. The Department's Water Quality Program has conducted a review of this project and based on the information provided determined that the benefits of the project outweigh the potential risk of adverse impacts. The City must continue to follow DOH/ODW and US EPA guidance and requirements to minimize the formation of disinfection by-products to the maximum extent reasonable.

Use of an additional fault block (Block III) for storage and recovery will require approval through the amendment process on pages 7-8 for both the storage potential of Block III and points of injection/withdrawal. The City will be required to conduct pilot testing of this untested block to gain an understanding of its hydrologic properties and to identify any additional injection and recovery wells. The City may request a pre-application consultation with the Department to identify the detailed information the Department will require to support an application. Upon receipt of the hydrologic testing results and an application for changes to the permit, the Department will determine if and when Block III shall be authorized by a permit amendment. The amendments shall identify the conditions that will govern ASR operations, e.g. percent recovery, injection rate, recovery rate. The Department and DOH/ODW will also review proposed future additions of storage blocks and conversion of additional City wells or newly constructed wells to be used for injection and recovery as those additions are requested by the City through the amendment process on pages 7-8.

The City has requested to have access to stored water above the annual 60% and accumulated carryover recovery amounts in the event an emergency arises. Through filing of an application to use the ASR facilities during any catastrophic or emergency event that renders Mill Creek water unavailable, the City may request access to additional stored water as an emergency supply. The Department would be guided in processing such an application by the Water Resources Program Policy-1045: Emergency Water Source Authorization.

The **Provisions** section below describes the data reporting requirements for the ASR permit. Pertinent information derived through the reporting will be incorporated into a Monitoring Plan, maintenance and implementation of which will become a provision of the permit through an amendment.

### **Provisions**

This authorization is subject to cancellation by the Department if the following provisions are **not** met:

During the first two years of the exercise of the permit, the City shall develop a Monitoring Plan for the project that will be submitted to The Department. It will include a Quality Assurance Project Plan (QAPP) for the specifics on monitoring, data quality objectives, sampling, and reporting. A plan shall be implemented within the first three years of the effective date of this permit. The City will implement the monitoring plan within 90 days after the effective date of the Department's approval.

**Water Quality Provisions**

In addition to the monitoring requirements established by the DOH/ODW, the City shall conduct water quality monitoring in all authorized ASR wells as shown in Table 7. Sampling and analysis frequency may be modified based on accumulated data, if the City and the Department agree and at least two years of data has been collected, submitted and reviewed.

Should the total trihalomethane (THM) concentration of any sample be at or above 50% of the Federal maximum contaminant limit (MCL) for drinking water, all ASR operations shall cease. ASR operations shall not resume until a plan to reduce or eliminate the THM concentrations in the source water and the aquifer has been submitted to and approved by the Department and the plan has been implemented by the City.

**Water Quantity Provisions**

The quantities of water authorized for storage and recovery are maximum limits that shall not be exceeded.

Water for this project is provided under Oregon established municipal water rights as described on pages 1 and 2. Injection of water into the storage reservoir is not authorized as follows:

1. No water shall be injected into the storage reservoir when the Mill Creek flows are (a) above 525 cfs as measured at the Kooskooskie gauge and (b) during a consecutive 61 day period during the critical low flow period of August – November. The start date for the non-injection will be determined by the City unless an alternative written start date request is received by the City prior to July 31 from the fisheries co-managers: the Confederated Tribes of the Umatilla Indian Reservation and the Washington Department of Fish and Wildlife, in which case the start date is the requested date.
2. No water shall be injected into the storage reservoir when the City is diverting more than 24 cfs when Mill Creek flows, measured at USGS Kooskooskie gauge, are less than:

	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sep
cfs	32	35	37	44	53	63	86	64	39	32	31	31

3. No water shall be injected into the storage reservoir when the City is diverting 24 cfs or less when Mill Creek flows, measured at the City gauge located immediately downstream of the existing City diversion dam, are less than:

	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sep
cfs	13	13	15	20	25	30	30	25	15	14	13	13

The City shall analyze recovered water samples for conductivity, alkalinity, and concentrations of sodium, sulfate, fluoride, arsenic, manganese, and iron. The recovered water data will be evaluated in the context of ground water data for these parameters collected prior to 1999. This data will be used to inform chemical mass balance and mixing calculations. These calculations will be used to determine the percentage of stored water that is recoverable. The method to be used for mass balance calculations is described in the application of 2009, attachment B of appendix A.

- The maximum quantity allowed for storage within the described aquifer shall not exceed 11,750 acre-feet annually.
  - The City will report to the Department annually a Block-by-Block summary (with a well-by-well breakdown) of the total quantity of water pumped by existing groundwater rights, water stored and recovered, and carryover storage.
  - Each year, recovery wells under the proposed project shall not collectively recover an amount greater than the sum as described below:
    - Total water available for recovery in any one year is 60% of the amount injected during that year plus the carryover amount. Carryover amount is defined as the sum of each year's carry over water reduced by 10% for each successive year that water remains as stored water.
    - If requested by the City, no earlier than two years after the effective date of this permit, the Department shall conduct an analysis of the 60% recovery rate for the purpose of determining whether the rate should be modified. The analysis shall be based on the information contained in reports on the reservoir's operation submitted by the City and other relevant information available to the Department. The determination may be pursued through the amendment process on pages 7-8. Additional modifications of the recovery rate may be requested by the City no earlier than five years after the last determination decision.
- The maximum pumping rate for each of the recovery wells shall not exceed the instantaneous quantity authorized in the City's groundwater right certificates that are independent of this ASR permit, unless otherwise approved by the Department. The City will have to be especially vigilant about the quantities of water pumped from any new recovery wells that are not associated with any of the City's water rights. If additional pumping is desired from new wells, the wells must be added as authorized points of withdrawal to one or more of the City's existing rights through the amendment process on pages 7-8.
  - The pumping rate may be increased subject to Department approval, based upon annual recovery calculations that fully take into account recharge quantities injected and the timing and duration of recovery of stored groundwater. Injection and recovery may not at any time under this permit exceed the limits specified in Tables 2 and 3.
  - Through the amendment process on pages 7-8, the City may request amendment of Tables 2 and 3 when additional wells are retrofitted for injection and shown to penetrate either fault Block I or II.
- Any increases to the storage quantity and/or injection/recovery quantities beyond the maximum quantities herein approved, shall require the City to file an application to amend the permit as described on pages 7-8.
- This authorization is for the use of fault Blocks I and II. If the City proposes to begin storage and recovery in Block III, pilot testing shall be conducted by the City to gather and submit the data on hydrologic properties for this Block. After the City has participated in a pre-application meeting, the City may request a permit amendment pursuant to the amendment provisions listed on pages 7-8.
- Data collected during development of this ASR permit may be used to support future ASR applications.

The reservoir permit for this project authorizes the City to store water in the Wanapum and Grande Ronde formations identified as Blocks I and II. (See description of this aquifer in appendix A of Golder and Associates: City of Walla Walla Aquifer Storage and Recovery Reservoir Permit Application (Application of 2009)).

- The reservoir permit shall remain in effect for a period of twenty (20) years, unless otherwise cancelled by the Department or voluntarily terminated by the City. If the project remains viable as determined by the City, the Department shall grant an extension to the permit subject to review of project results submitted annually and/or as part of an extension request. Extensions beyond the 20 year development schedule

will be governed by the process in RCW 90.03.280 relating to public notice and opportunity to comment. Extensions granted for the development of the reservoir facilities shall not exceed a total of fifty (50) years from the effective date of this permit.

- The City must provide written notification to the City of College Place and the Confederated Tribes of the Umatilla Indian Reservation of any requested amendments to the issued permit contemporaneously with its filing with the Department.

**Reporting**

The City shall submit an annual report of operations and monitoring to the Department by December 1<sup>st</sup> each year. Table 6 lists the actions required of the City for system monitoring. All monitoring is based on a water year: October 1<sup>st</sup> through September 30<sup>th</sup>. The due date for monitoring results is December 1<sup>st</sup> of each year to allow analysis, evaluation and interpretation of the annual results for the water year.

Table 6

Frequency of sampling and data required to be submitted through an annual report	
ACTION	FREQUENCY
Summarize quantity of water pumped by existing groundwater rights through ASR authorized wells.	Annually
Summarize carryover storage.	Annually
Summarize water injection and recovery volumes for each well.	Weekly and report annually
Analyze recovered waters for Conductivity, Alkalinity, Sodium, Sulfate, Fluoride, Arsenic, Manganese, and Iron; record raw data in annual report.	Weekly during the longest recovery period each year.
Based on the data developed above, provide the chemical mass balance and break through curve calculations for each well on an annual basis and by a percent of recovered water basis (0%, 50% and 100% recovery volumes).	Yearly
Analyze THM concentration of injected water and of recovered water.	Quarterly
Provide quarterly THM concentration from operating municipal supply wells in current use.	Yearly
Record and provide annual groundwater elevation hydrographs for the water year (October 1 – September 30) for each ASR well.	Yearly
Record and provide annual groundwater elevation hydrographs for the water year (October 1 – September 30) for each operating City well.	Yearly

In addition to the "Actions and Frequency" noted above, the annual report shall provide:

- an estimate, based on measurement of native and injected water ratios, of recoverable stored water for the completed recharge/recovery cycle and a forecast for the next water year's water storage cycle;
- descriptions of mitigations required due to any operational or environmental issues that occurred, such as development of flowing artesian wells, wetlands development, flooding or land erosion.

An approved measuring device shall be installed and maintained for each injection and recovery well in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC and WAC 173-157-170.

Installation and maintenance of an access port as described in WAC 173-160-291(3) is required on each well. An air-line and gauge may be installed in addition to the access port.

If it can be shown that the project has a detrimental effect on existing rights or negative impacts to the environment, it shall be the responsibility of the operator to mitigate for any impact and/or alter or cease operation of the ASR project.

In addition, during the first two years of the exercise of the permit and prior to requesting a permit amendment to add new injection and recovery wells or to modify the storage recovery percentage, as described on page 8, the City shall (1) pursue formation of a work group, consisting of representatives of the City, CTUIR and WSWF, for the purpose of addressing near- and long-term issues associated with Mill Creek, including tributaries and distributaries, as hereafter set forth, and (2) develop a comprehensive report or reports in collaboration with the two entities addressing, at a minimum, the following:

- Define near- and long-term municipal water supply and fishery and other instream flow use goals;
- Identify existing issues inhibiting accomplishment of water supply goals;
- Identify, analyze, and recommend near-term options, using existing infrastructure, to augment instream flows during critical timeframes for fish while maintaining and potentially enhancing the City's ability to meet water supply goals;
- Identify, analyze, and recommend long-term infrastructure and management options to augment instream flows during critical timeframes for fish while maintaining and potentially enhancing the City's ability to meet water supply goals; and
- Identify actions necessary to implement any options recommended for pursuit.

#### **Amendments**

Upon a written request by the City, the permit issued subsequent to issuance of this ROE is open to amendments, among other subjects, to the following:

1. **Sampling frequency:**  
The sampling frequency may be changed through an agreement reached by the City and The Department's Water Resources and Water Quality Programs,
2. **Addition of injection and recovery wells for Blocks I and II:**  
Adding additional injection and recovery wells will require the City to file a request with the Department to amend the permit, (Newly added injection wells must be registered with The Department's Underground Injection Control program.)
3. **Addition of Block III to the reservoir permit:**  
Addition of the third storage Block to this permit will require the City to file an application for change to the permit which provides supporting data sufficient to satisfy the standards for review and mitigation of adverse impacts to satisfy the issues enumerated in RCW 90.03.370(2)(a),
4. **Modification of the percentage of injected water that is recoverable:**  
The City may request or the Department may initiate a review of the permit with supporting data for the purpose of amending both annual and carry over recovery percentages. This type of amendment shall follow the process in RCW 90.03.280 relating to public notice and comment period.
5. **Adoption of a Monitoring Plan:**  
The City may request or the Department may initiate a permit amendment when a Monitoring Plan incorporating the above provisions has been developed by the City and approved by The Department.

The City will notify in writing the protestant of and commenters on the ASR application, i.e. City of College Place, and Port of Walla Walla respectively, of any City proposals to amend the permit. The Department will notify the protestant of any amendments made to the permit.

All final decisions of the Department to amend the permit in response to requests filed by the City, or reviews initiated by The Department, shall be issued through decision documents. These decisions are subject to appeal to the Pollution Control Hearings Board as described on this page 8.

This permit shall be subject to cancellation should the permittee fail to comply with the above development schedule and/or to give notice to the Department of Ecology on forms provided by that Department documenting such compliance.

Dated this 2<sup>nd</sup> day of June, 2016, at Spokane, Washington,

Department of Ecology

DATA REVIEW  
OK KT

by



Keith L. Stoffel, Section Manager

KLS/KT:md  
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