



State of Washington
**REPORT OF EXAMINATION
 FOR WATER RIGHT CHANGE**

PRIORITY DATE May 1, 1926	WATER RIGHT NUMBER 504-D
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ADDRESS City of Spokane 914 E. North Foothills Drive Spokane, WA 99207	
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Total Quantity Authorized for Withdrawal

WITHDRAWAL RATE 56,000	UNITS GPM	ANNUAL QUANTITY (AF/YR) 38,000
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Purpose

PURPOSE	WITHDRAWAL RATE (GPM)	ANNUAL QUANTITY (AF/YR)	PERIOD OF USE
Municipal	56,000	38,000	01/01 - 12/31

Source - Spokane Valley/Rathdrum Prairie Water System

SOURCE	COUNTY	WATERBODY	WATER RESOURCE INVENTORY AREAS
Nineteen (19) wells	SPOKANE	GROUNDWATER	54, 55, 57

Source Locations - Spokane Valley/Rathdrum Prairie Water System

Source Name	Parcel #	Twp	Rng	Sec	QQ	Latitude	Longitude
Well Electric (2 wells)	35111.0001	25N	43E	11	SW¼NE¼	47.68147°N	-117.33214°W
Parkwater (4 wells)	35114.2501	25N	43E	11	NE¼SE¼	47.67754°N	-117.33002°W
Ray Street (2 wells)	35222.0001	25N	43E	22	SE¼NW¼	47.65051°N	-117.36282°W
Central (2 wells)	36311.1406	26N	43E	31	NE¼NE¼	47.71185°N	-117.41408°W
Hoffman (2 wells)	35041.0419	25N	43E	04	NW¼NE¼	47.69993°N	-117.37852°W
Grace (1 well)	35081.2802	25N	43E	08	NE¼NE¼	47.68335°N	-117.39397°W
Nevada (1 well)	35081.2802	25N	43E	08	NE¼NE¼	47.68325°N	-117.39485°W
Corbin Park 1 (new)	35071.1901	25N	43E	07	NW¼NE¼	47.68475°N	-117.41793°W
Corbin Park 2 (new)	35071.1901	25N	43E	07	NE¼NE¼	47.68478°N	-117.41497°W
Faith Bible Church (new)	35064.3611	25N	43E	06	SW¼SE¼	47.68751°N	-117.41727°W
Audubon Park (new)	25013.0004	25N	42E	01	SW¼SW¼	47.68872°N	-117.45236°W
6 th & Havana (new)	35232.4108	25N	43E	23	SW¼NW¼	47.65180°N	-117.34657°W

Datum: WGS84

Place of Use (See Attached Map)

The place of use (POU) of this water right is the service area described in the most recent Water System Plan/Small Water System Management Program approved by the Washington State Department of Health, so long as the water system is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

Proposed Works

Nineteen (19) wells, pumps, reservoirs, distribution system

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
January 1, 2020	January 1, 2035	January 1, 2065

Measurement of Water Use

How often must water use be measured?	Weekly
How often must data be reported to Ecology?	Upon request by Ecology
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm)

Provisions

This change to Ground Water Certificate No. 504-D supersedes previous Certificate of Change recorded as Vol. 1-3, PP. 435 issued September 9, 1985 and Certificate of Change recorded as Vol. 1-3, PP. 52 issued September 21, 1973.

The total amount authorized for withdrawal under Ground Water Certificate Nos. 504-D and 548-A is limited to 119,000 gallons per minute and 89,240 acre-feet per year, continuously, for municipal supply.

This authorization to make use of public waters of the State is subject to existing rights, including any existing rights that may be held by the United States for the benefit of Indians under treaty or otherwise.

Nothing in this authorization shall be construed as satisfying other applicable federal, state, or local statutes, ordinances, or regulations.

Wells, Well Logs and Well Construction Standards

All wells constructed in the state must 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 must be decommissioned.

All wells must 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 must remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

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

Measurements, Monitoring, Metering and Reporting

An approved measuring device must be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173, which describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

Water Use Efficiency

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

Proof of Appropriation

The water right holder must file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. The certificate will reflect the extent of the project perfected within the limitations of the 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.

Schedule and Inspections

Department of Ecology personnel, upon presentation of proper credentials, will 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.

Real Estate Excise Tax

This decision may indicate a Real Estate Excise Tax liability for the seller of water rights. The Department of Revenue has requested notification of potentially taxable water right related actions, and therefore will be given notice of this decision, including document copies. Please contact the state Department of Revenue to obtain specific requirements for your project. Phone: (360) 570-3265. The mailing address is: Department of Revenue, Real Estate Excise Tax, PO Box 47477, Olympia WA 98504-7477 Internet: <http://dor.wa.gov/>. E-mail: REETSP@DOR.WA.GOV.

Findings of Facts

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that a valid right exists; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER approval of Application No. CG3-*00373S@1, subject to existing rights and the provisions specified above.

Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of the Order.

File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.
- You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel Road SW Ste 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

Signed at Spokane, Washington, this 24th day of February, 2015.


Keith L. Stoffel, Section Manager

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://www1.leg.wa.gov/CodeReviser>.

INVESTIGATOR'S REPORT

Gene Drury, Department of Ecology

Water Right Control Number CG3-*00373S@1

Ground Water Certificate Number 504-D (together w/C.Chg 1-3-435 and 1-3-52)

BACKGROUND

This report serves as the written findings of fact concerning Water Right Change Application Number CG3-*00373S@1.

Application and Proposed Changes

An application for change/transfer was submitted by the City of Spokane, to the Department of Ecology, Water Resources Program on August 7, 2014. The City of Spokane proposes to add existing municipal supply wells and five new well sites as additional points of withdrawal authorized under Ground Water Certificate No. 504-D. Future reference in this report to Certificate "504-D" includes the previously issued changes under Certificate of Change Vol. 1-3, PP. 435 and Vol. 1-3, PP. 52). A total of nineteen (19) wells at twelve (12) locations are proposed. This application requests the authorization of a total of fifteen (10) well locations in addition to the two (2) well locations (Well Electric, Ray Street) that are already authorized under this water right.

EXISTING Water Right Attributes

Number	504-D (1-3-435, 1-3-52)
Recorded Name	City of Spokane
Priority Date	May 1, 1926
Source	Well Electric (2 wells) and Ray Street (2 wells)
GPM	56,000 (54,750 gpm - Well Electric; 1,250 gpm - Ray Street)
AF/YR	38,000 (36,000 af - Well Electric; 2,000 af - Ray Street)
Purpose of use	Municipal supply
Place of Use	Area served by the City of Spokane
County	Spokane
WRIA	57 - Middle Spokane

Source Name	Parcel #	Twp	Rng	Sec	QQ	Latitude	Longitude
Well Electric (2 wells)	35111.0001	25 N.	43 E.	11	SW¼NE¼	47.68147°N	-117.33214°W
Ray Street (2 wells)	35222.0001	25 N.	43 E.	22	SE¼NW¼	47.65051°N	-117.36282°W

GPM = Gallons per minute; AF/YR = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian

REQUESTED Water Right Attributes

Application Number	CG3-*00373S@1
Applicant Name	City of Spokane
Date of Application	August 7, 2014
Source	Nineteen (19) wells
GPM	56,000
AF/YR	38,000
Purpose of use	Municipal supply
Place of Use	Area served by City of Spokane (RCW 90.03.386)
County	Spokane
WRIA	54, 55, 57

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GPM = Gallons per minute; AF/YR = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing the proposed change.

Public Notice

RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted and used. Notice of this application was published in the Spokesman Review on October 8 and 15, 2014. No protests were received.

A letter of concern was received from Rachael Osborn on behalf of The Center for Environmental Law & Policy (CELP) on January 22, 2015 after a first draft Report of Examination was posted on the internet. The issues raised in the letter are addressed below in this report.

State Environmental Policy Act (SEPA)

This application is not exempt from the provisions of the State Environmental Policy Act (SEPA) of 1971, Chapter 43.21 RCW, due to the fact that the cumulative quantities of water for this project and those under existing water rights constitute a withdrawal of more than 2,250 gallons per minute. A final Determination of Non-Significance was issued by the City of Spokane on December 1, 2014, stating that

the proposed change will not have a probable significant adverse impact on the environment. An Environmental Impact Statement (EIS) will not be required. The Water Resources Program has reviewed the SEPA checklist and concurs with the City's determination.

Water Resources Statutes and Case Law

RCW 90.03.386(2) states that a municipal water supplier may change its service area through the water system plan approval process administered by the Washington Department of Health. As long as the municipal water supplier is in compliance with the approved plan, and other requirements prescribed under RCW 90.03.386(2), the place of use for the water right is the service area authorized under the plan. Since the subject water right is for municipal supply purposes, the applicant is not requesting any change of place of use through this application.

RCW 90.44.100 allows Ecology to amend a groundwater right to (1) allow the user to construct a replacement or additional well at a new location outside of the location of the original well , if:

- (a) The additional or replacement well taps the same body of public ground water as the original well. RCW 90.44.100(2)(a),
- (b) Where a replacement well is approved, the user must discontinue use of the original well and properly decommission the original well. RCW 90.44.100(2)(b),
- (c) Where an additional well is constructed, the user may continue to use the original well, but the combined total withdrawal from all wells shall not enlarge the right conveyed by the original permit or certificate. RCW 90.44.100(2)(c),
- (d) Other existing rights shall not be impaired. RCW 90.44.100(2)(d),
- (e) The change will not be detrimental to the public welfare (RCW 90.44.100(2) ("findings as prescribed in the case of an original application" are required).

When changing or adding points of withdrawal to groundwater rights, the wells must draw from the *same body of public groundwater*. Indicators that wells tap the *same body of public groundwater* include:

- (a) Hydraulic connectivity.
- (b) Common recharge (catchment) area.
- (c) Common flow regime.
- (d) Geologic materials that allow for storage and flow, with recognizable boundaries or effective barriers to flow.

Under RCW 90.44.100, the point of withdrawal of an inchoate groundwater right documented by a certificate may be changed. *Cornelius v. Department of Ecology*, Washington Supreme Court No. 88317-3 (February 12, 2015).

The Washington Supreme Court has held that Ecology, when processing an application for change to a water right, is required to make a tentative determination of the extent and validity of the right. This is necessary to establish whether the right is eligible for change. *R.D. Merrill Co. v. Pollution Control Hearings Bd.*, 137 Wn.2d 118, 969 P.2d 458 (1999); *Okanogan Wilderness League v. Town of Twisp*, 133 Wn.2d 769, 947 P.2d 732 (1997). Thus, in reviewing the subject water right change application, Ecology must first determine the extent and validity of the water right that is eligible for change. Then, Ecology must determine whether the requested change would cause impairment of other existing water rights or be detrimental to the public welfare.

INVESTIGATION

In considering the proposed change, the investigation included, but was not limited to the following:

- Appropriate Washington State RCW's and WAC's
- Ground Water Certificate No. 504-D (together w/C. Chg 1-3-435 and 1-3-52)
- Ground Water Certificate No. 548-A (together w/C. Chg 1-3-439)
- City of Spokane DRAFT Water System Plan dated May of 2014
- Information submitted by the City of Spokane in support of this application
- Meetings/discussions with Jesse Cowger -Varela & Associates, Dan Kegley - City of Spokane; Bill Rickard - City of Spokane
- Ecology's Water Rights Tracking System (WRTS) and Well Log Database
- USGS topographic maps and aerial photography
- State Environmental Policy Act (SEPA) Checklist dated November 17, 2014
- Department of Health, Office of Drinking Water letter dated November 21, 2014
- Ralston Hydrologic Services SVRP Aquifer Pumping Effects Spreadsheet tool, Nov-2014 version
- GSI Water Solutions letter dated December 5, 2014
- Review by Department of Ecology regional program staff and hydrogeologists

A field investigation was conducted by Gene Drury and John Covert on December 3, 2014 with Dan Kegley, Director of Water & Hydroelectric Services for the City of Spokane and Jesse Cowger of Varela & Associates. The City of Spokane proposes to change Ground Water Certificate Nos. 504-D and 548-A by adding up to five new wells under these water rights and integrating its existing wells. No other changes are proposed.

The proposed locations of the new wells are: 1) Corbin Park-1: within the NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 7, T. 25 N., R.43 E.W.M.; 2) Corbin Park-2: within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 7, T. 25 N., R.43 E.W.M.; 3) Faith Bible Church: within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Sec. 6, T. 25 N., R. 43 E.W.M.; 4) Audubon Park: within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Sec. 1, T. 25 N., R. 42 E.W.M.; 5) 6th and Havana: within the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Sec. 23, T. 25 N., R.43 E.W.M. Each of these sites was visited on the day of the field investigation.

Tentative Determination of Extent and Validity of Certificate No. 504-D

The City of Spokane is the second largest city in the State of Washington. The City provides municipal water through a total of 7 well pumping stations, 14 existing wells, 27 well pumps, 25 booster pumping stations, 72 booster pumps; 22 pressure zones with 34 reservoirs, 16 pressure reducing valve stations and over 1,000 miles of water pipe.

The 14 existing wells are located at the following pumping stations: 1) Well Electric (S02) - Two wells within the SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 11, T. 25 N., R. 43 E.W.M.; 2) Parkwater (S03) - Four Wells within the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Sec. 11, T. 25 N., R. 43 E.W.M.; 3) Nevada Street (S01) - One well within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 8, T. 25 N., R.43 E.W.M.; 4) Grace Avenue (S06) - One well within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 8, T. 25 N., R.43 E.W.M.; 5) Ray Street (S04) - Two wells within the SE $\frac{1}{4}$ NW $\frac{1}{4}$ of Sec. 22, T. 25 N., R. 43 E.W.M.; 6) Hoffman Avenue (S05) - Two wells within the NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 4, T. 25 N., R. 43 E.W.M.; 7) Central Avenue (S08) - Two wells within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 31, T. 26 N., R. 43 E.W.M.

All of the City's wells pump water from the Spokane Valley-Rathdrum Prairie Aquifer, which was designated a "sole source" aquifer in 1978. The City also has interties with five other nearby water purveyors. They are Spokane County Water District #3, Whitworth Water District #2, City of Airway Heights, Fairchild Air Force Base, Vel View Water District and North Spokane Irrigation District #8 (emergency use only).

Ground Water Certificate No. 504-D was issued to the City of Spokane based on the installed system capacity at the time ("pumps and pipes") and has been exercised to provide water for municipal use as the population of the area has increased. At the time Certificate No. 504-D was issued, it was a common practice of the State of Washington to issue certificates to public water purveyors that were quantified based on system capacity rather than actual beneficial use of water. In *Department of Ecology v. Theodoratus*, 135 Wn.2d 582, 957 P.2d 1241(1998), the Washington Supreme Court held that state statutory and common law did not allow the State to issue a vested water right certificate based on water system capacity. However, although the *Theodoratus* decision did not involve a municipality, the Court recognized that under Washington's statutes there are significant differences between municipal water use and other water uses. The Court stated in this decision that municipal water rights often receive separate treatment under water law. Notwithstanding this distinction, the *Theodoratus* decision cast uncertainty over the status of water right certificates that were issued to public water suppliers based on the "pumps and pipes" standard. In response to the *Theodoratus* decision, the legislature enacted Washington's Municipal Water Law (MWL), which became effective on September 9, 2003. In 2010, the Supreme Court upheld the constitutionality of the MWL in *Lummi Indian Nation v. State of Washington*, 170 Wn.2d 247, 241 P.3d 1220 (2010).

Under the MWL, the City of Spokane qualifies as a "municipal water supplier" as defined under RCW 90.03.015(3), and Certificate No. 504-D qualifies as a water right for municipal supply purposes under RCW 90.03.015(4) because it has been continuously exercised to provide municipal water service.

RCW 90.03.330(3) provides that water rights for municipal water supply purposes documented by "pumps and pipes" certificates issued prior to September 9, 2003 are "rights in good standing." These water rights may include inchoate quantities that have not yet been exercised. Such rights may continue to be exercised to serve the municipal water supplier's reasonably anticipated future needs.

RCW 90.03.330(2) provides that Ecology cannot revoke or diminish certificated water rights for municipal water supply purposes, except under certain limited circumstances. One such circumstance is "for the issuance of certificates following the approval of a change, transfer, or amendment under RCW 90.03.380 or 90.44.100." Thus, Ecology may revoke or diminish a water right during the process of evaluating a groundwater right change application under RCW 90.44.100, based on the tentative determination of extent and validity of the water right, or to prevent impairment of other water rights or detriment to the public welfare.

Accordingly, in reviewing the City's application, Ecology must perform a tentative determination of the extent and validity of Certificate No. 504-D and, first, determine, what quantity of water has been perfected through actual beneficial use. Then, Ecology must determine how much of the remaining inchoate quantity remains "in good standing" through the City's reasonable diligence in perfecting the water right. *Cornelius v. Department of Ecology*, Washington Supreme Court No. 88317-3 (February 12, 2015).

Analysis of Historical Beneficial Use of Water Under Certificate No. 504-D

Ground Water Certificate 504-D currently authorizes withdrawal from the Well Electric and Ray Street wells. This certificate, with a priority date of May 1, 1926, was originally issued to the City of Spokane on April 19, 1948. Ground Water Certificate 504-D was issued pursuant to RCW 90.44.090 based on Ground Water Declaration Nos. 372 and 373, both dated February 19, 1947. RCW 90.44.090 authorized the filing of declarations to support claims to groundwater rights established prior to the enactment of the Groundwater Code, RCW 90.44, in 1945, and the issuance of groundwater right certificates based on such declarations. The certificate authorizes withdrawal of 56,000 gallons per minute and 38,000 acre-feet per year, continuously, for municipal supply from two pump wells (aka “Well Electric”) located within the SW¼NE¼ of Sec. 11, Township 25 N., Range 43 E.W.M. in Spokane County, Washington. At the time, the population of Spokane was around 142,000 and this quantity of water would provide for future growth of the area. In 1973, Certificate of Change Vol. 1-3, PP. 52 authorized two new points of withdrawal to be added to this certificate. The two “Ray Street” wells were added and 1,250 gallons per minute and 2,000 acre-feet per year was authorized at this location. The Ray Street wells are located within the SE¼NW¼ of Sec. 22, Township 25 N., Range 43 E.W.M. Another change was filed by the City in 1985 to change the place of use to the area served by the City of Spokane. This change is recorded under Vol. 1-3, PP. 435.

The following table shows the City of Spokane’s annual water use during the period from 2007 through 2013. In 2010, the City used 24,227 acre-feet per year of the authorized 38,000 acre-feet per year under Ground Water Certificate No. 504-D from the Well Electric and Ray Street pumping stations. Water use has varied and has been reduced slightly due to ongoing conservation efforts. Water rights for municipal supply purposes are specifically exempt from relinquishment under RCW 90.14.140(2)(d) if there has been reduced water use or nonuse of all or a portion of a municipal supply water right for a period of five or more consecutive years. Accordingly, 24,227 acre-feet per year has been perfected under Certificate No. 504-D through the actual beneficial use of water.

CERTIFICATE NO. 504-D (1-3-52, 1-3-435) - Annual Water Use in Acre-feet per year (AF):

2007	2008	2009	2010	2011	2012	2013
22,739	17,976	19,251	24,227	22,143	21,951	23,241

Since 24,227 acre-feet per year has been perfected through actual use, Certificate No. 504-D documents a remaining inchoate annual quantity of 13,773 acre-feet per year. A determination of whether the inchoate quantity remaining under Certificate No. 504-D is in good standing requires appraisal of the City of Spokane’s use of water for municipal supply purposes under its portfolio of water rights. The following table summarizes the City of Spokane’s primary municipal supply water rights.

CITY OF SPOKANE – EXISTING WATER RIGHTS FOR MUNICIPAL SUPPLY

Water Right	Priority Date	Station(s) Well Name	GPM (Qi)	AC-FT (Qa)
GW 503-D (Cert. Chg. #592)	1907	GRACE	20,000	1,000
GW 503-D (Cert. Chg. #593)	1907	RAY STREET	7,000	350
GW 503-D (Cert. Chg. #594)	1907	CENTRAL	7,000	350
GW 503-D (SEE Cert. Chgs. #1-3-434, 1-3-434, 592, 593, 594)	1907	-	34,000	1,700
GW 504-D (Cert. Chg. #1-3-52)	5/01/26	WELL- ELECTRIC	54,750	36,000
GW 504-D (Cert. Chg. #1-3-52)	5/01/26	RAY STREET	1,250	2,000
GW 504-D (Cert. Chg. #1-3-435 & 1-3-52)	5/01/26	-	56,000	38,000
GW 505-D (Cert. Chg. #1-3-436)	7/14/37	RAY STREET	14,000	1,870
GW 506-D (Cert. Chg. #1-3-437)	7/01/38	HOFFMAN	11,600	1,280
GW 507-D (Cert. Chg. #1-3-438)	1/12/45	RAY STREET	2,600	520
GW 548-A (Cert. Chg. #1-3-439)	8/24/46	PARKWATER	63,000	51,240
GW 728-A (Cert. Chg. #658)	1/16/50	GRACE	11,000	4,080
GW 728-A (Cert. Chg. #658)	1/16/50	CENTRAL	9,000	4,760
GW 728-A (Cert. Chg. #1-3-440)	1/16/50	-	20,000	8,840
GW 3199-A (Cert. Chg. #1-3-441)	7/02/56	NEVADA	25,000	20,000
GW 3903-A (Cert. Chg. #1-3-442)	6/05/59	CENTRAL	7,000	11,480
GW 4503-A (Cert. Chg. #1-3-443)	3/03/61	CENTRAL	7,900	12,640
***	***	TOTAL:	241,100	147,570

CITY OF SPOKANE – OTHER WATER RIGHTS

Water Right	Priority Date	Well Name	GPM (Qi)	AC-FT (Qa)
G3-27181C	11/30/81	Spokane International Airport	200*	526*
Water Right	Priority Date	Source	Q	
SW Cert. No. 1014	6/12/45	Spokane River	400 CFS	
SW Cert. No. S3-26064C	9/11/78	Spokane River	7,600 CFS	
R3-28402P	10/09/87	Spokane River	4,000 AF	

*Portion transferred to Goodrich Corporation on February 16, 2005 (Goodrich = 250 gpm, 89 af/yr)

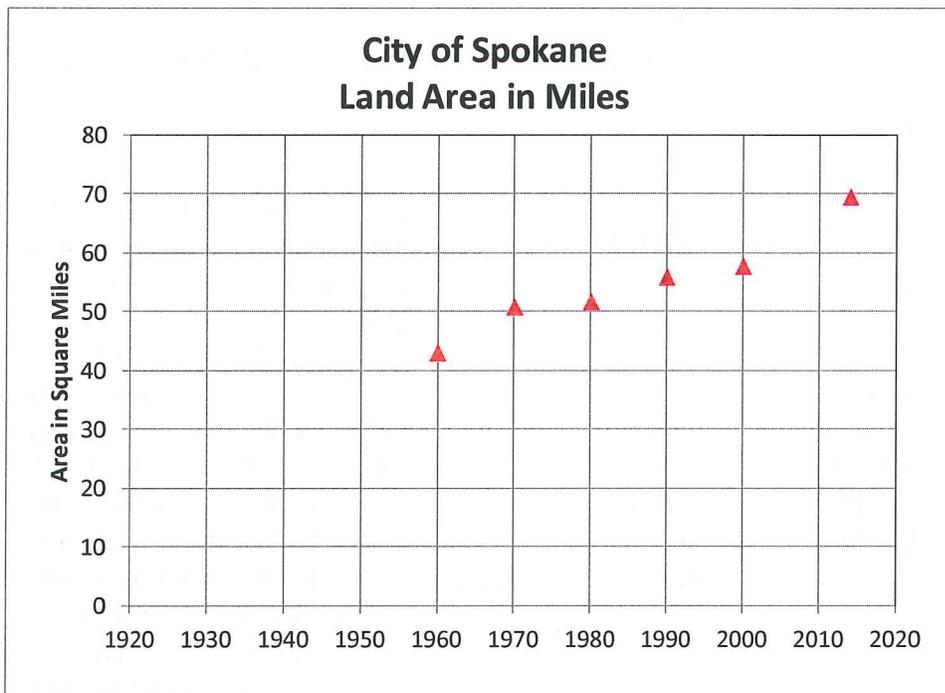
Note: The City may hold additional water rights not listed above.

In considering whether a municipal water supplier like the City of Spokane has exercised reasonable diligence in developing into its water rights, the Department recognizes that cities often grow at uneven rates, and need to be able to serve their growing populations. The actual use of water over time fluctuates due to many factors, which include but are not limited to year-to-year weather patterns, conservation measures, water price and general changes in water use practices. Over time, the population within the City of Spokane service area has grown, often times at considerable rates. In addition, the City's wholesale supply role has increased recently and the City intends to increase wholesale supply agreements to respond to regional needs and growth management planning.

Significant work has been conducted to upgrade the infrastructure of the City’s system and promote conservation by their water users. The City has implemented a Water Use Efficiency Program, which meets the requirements of WAC 246-290-800. In April 2014, the City also adopted new water conservation goals to reduce indoor residential water use, outdoor residential water use, outdoor irrigation for commercial/industrial use and outdoor governmental water use.

As stated earlier, the City’s present pumping capacity from all well stations is 187,300 gallons per minute (based on current operational pumps) of the authorized 241,100 gallons per minute. The City has used just under 70,000 acre-feet per year of the authorized 147,570 acre-feet per year for municipal supply purposes. The City of Spokane serves water to an estimated 208,916 people (2011 U.S. Census) within its city limits and current service area which is about 56,500 acres in size. The existing service area is not yet fully developed. Additional infill growth will occur within the existing service area. The larger “retail service area” has a total population of around 227,455 people. The Spokane County Coordinated Water System Plan (CWSP) defines a future service area for the City of Spokane’s water system of approximately 101,290 acres. When the City reaches build-out of its future service area the City’s water system will serve approximately 44,790 acres (80%) more area than it currently serves.

The City of Spokane has been a growing community for decades. The figure below documents the size of the land area of the City’s boundary over the decades. As the size of the City has grown, so has its water distribution system and its customer base.



Spokane County’s Water Resources Program has done extensive water demand modeling. Their most recent water demand model was released in 2013. It calculates that public water supply water demand growth from wells tapping the Spokane Valley Rathdrum Prairie Aquifer will increase by 33% between 2010 and 2040 (see their Table 5, Spokane County water Demand Forecast Model, Model 3.0 & 2013 Forecast Update). The City of Spokane is the largest water purveyor in the region and supplies all of its

customers with water from the SVRP. Increasing the City's recent average annual pumpage of 65,000 AF by 33% suggests they will be pumping 86,450 AF per year by 2040.

The City anticipates the need to increase regional wholesale supply relationships, interties with other purveyors, and to respond to changes in urban growth areas and population. The City does have existing and planned future wholesale agreements with neighboring water systems. Future demand for wholesale water is expected to increase throughout the County, particularly with existing and future wholesale customers on the West Plains of Spokane, where the basalt aquifer is in serious decline. There are other water short areas in Spokane County that may need water to be delivered by the City in the future. The unused (or inchoate) water under Certificate Nos. 504-D and 548-A will help the City cover expected growth in these areas. The City has and will continue to update its service area description as needed and as allowed under RCW 90.03.386.

The City's 20 year forecasted water right status (with conservation) is that it will use an estimated 211,450 gallons per minute and 80,500 acre-feet per year for municipal supply purposes. Based on this estimate, it's very likely that the City will need additional water well beyond the 20 year planning horizon. Future growth and additional water beyond 20 years will have to come from the available inchoate portions under Certificates Nos. 504-D and 548-A. The remaining inchoate annual quantities under Certificate 504-D are 13,773 acre-feet per year and under Certificate 548-A they are 21,456 acre-feet per year. These two certificates combined total 119,000 gallons per minute and 89,240 acre-feet per year for municipal supply. In 50 years, it is very likely that the City will need the full 89,240 acre-feet per year authorized under these two water rights to cover future growth.

City of Spokane - Annual Water Use in Acre-feet per year (AF) - All Well Stations:

2007	2008	2009	2010	2011	2012	2013
66,005	65,178	68,915	63,250	63,533	64,520	65,078

In sum, the remaining inchoate portion of water authorized under Certificate No. 504-D (13,773 AF) is in good standing and eligible for change because the City has demonstrated reasonable diligence in perfecting the water right by continuing to upgrade its infrastructure and supply water for new customers in a service area with a growing population.

Existing Wells – City of Spokane:

The source name, current capacity and location of the City of Spokane pumping stations are as follows:

1) Well Electric (S02) – 39,300 GPM

Two wells within the SW¼NE¼ of Sec. 11, T. 25 N., R. 43 E.W.M.

2) Parkwater (S03) – 62,000 GPM

Four Wells in Lots 1, 2, 3 & 4, Block 33 of Parkwater Addition, within the NE¼SE¼ of Sec. 11, T. 25 N., R. 43 E.W.M.

3) Nevada Street (S01) – 31,000 GPM

One well in Lot 7, Block 37 of Wolverton and Conlan Addition, within the NE¼NE¼ of Sec. 8, T. 25 N., R.43 E.W.M.

4) Grace Avenue (S06) – 19,000 GPM

One well in Lot 8, Block 37 of Wolverton and Conlan Addition, within the NE¹/₄NE¹/₄ of Sec. 8, T. 25 N., R.43 E.W.M.

5) Ray Street (S04) – 18,700 GPM

Two wells located in Block 1, 3rd Addition to Eureka, in the SE¹/₄NW¹/₄ of Sec. 22, T. 25 N., R. 43 E.W.M.

6) Hoffman Avenue (S05) – 5,400 GPM

Two wells located in Lots 27, 28, 29 & 30, Block 4 of Arlington Heights, within the NW¹/₄NE¹/₄ of Sec. 4, T. 25 N., R. 43 E.W.M.

7) Central Avenue (S08) – 11,900 GPM

Two wells in Lot 17 and Lot 20, both in Block 14 of Byrne Addition, within the NE¹/₄NE¹/₄ of Sec. 31, T. 26 N., R. 43 E.W.M.

EXISTING WELL DATA

SOURCE	ECY ID#	Year	Depth ¹	Diam.	Elevation ²	Static Water Elevation ³		Pump Capacity (gpm)	Pump HP	Pump Type
Well Electric	AHC996	1927	33.3'	48'	1895.7	1889.2'		8400	900	CFP
Well Electric	AHC995	1927	33.3'	48'	1895.7			7500	900	CFP
	AHC995				1895.7			8400	900	VT
	AHC995				1895.7			15000	1000	VT
							TOTAL:	39,300		
Parkwater	AHC722	1949	126.1'	18'	1964.1			8000	600	VT
	AHC722							8000	600	VT
Parkwater	AHC999	1949	126.1'	18'	1964.1			8000	600	VT
	AHC999							8000	600	VT
Parkwater	N/A	1949	126.1'	18'	1964.1			8000	600	VT
	N/A							8000	600	VT
Parkwater	AHC998	1949	126.1'	18'	1964.1	1891.8'		7000	1000	VT
	AHC998							7000	900	VT
							TOTAL:	62,000		
Nevada	AHC725	1958	120'		1954.0	1867.7		5700	400	SUB
	AHC725							5700	400	SUB
	AHC725							9800	800	VT
	AHC725							9800	800	VT
							TOTAL:	31,000		
Grace	AHC724	1950	124.0'	18'	1963.0	1871.4		9500	900	VT
	AHC724		124.0'	18'				9500	900	VT
							TOTAL:	19,000		
Ray Street	ABR602	1935	71.75'	24'	1922.75	⁴		7150	900	VT
	ABR602							7200	900	VT
Ray Street	AHC723	1935	71.75'	24'	1922.75			4350	900	VT
							TOTAL:	18,700		
Hoffman	ABR551	1935	204.2'	16'	2055.75	1872.6		5400	600	VT
Hoffman	AHC728	1935	218.75'	16'	2055.75			n/a ⁵	n/a	n/a
							TOTAL:	5,400		
Central	N/A	1960	265.0'	7'	2074.00	1860.6		n/a ⁶	n/a	n/a
	N/A							3500	450	SUB
Central	AHC726	1960	265.0'	7'	2074.00			4200	450	SUB
	AHC726							4200	450	SUB
							TOTAL:	11,900		

TOTAL Present pumping capacity: 187,300 gpm

CFP= centrifugal pump; VT= vertical lineshaft turbine; SUB = submersible pump

¹ Depth – distance between Pump Floor to Well Bottom (some Pump Floors are below grade)

² Elevation of Pump Floor – City Datum

³ One hour average on 3/24/14 at 0954. All production pumps were off.

⁴ Ray St. Water Elevation instrument was out-of-service for an extended period during the time.

⁵ Hoffman Pump #2 is removed. Replacement timeframe is unknown.

⁶ Central Pump #1 is removed. Replacement timeframe is unknown.

EXISTING WELLS - DESCRIPTION AND CONDITION

The following information was provided by the City of Spokane and was taken from the updated Water System Plan (Section 3.3) for the City of Spokane dated May, 2014. The information was updated on December 16, 2014 based on recent data provided by the City. It provides a detailed description and condition for each water source:

Well Electric Well Station (DOH Source #S02)

The oldest operating Well Station in the water system, Well Electric Well Station is located adjacent to the Spokane River within the Upriver Complex. The Well Station consists of two large 48 foot diameter wells. The wells are adjacent to each other in a north-south orientation. The City identifies the north well as Well No. 4 and the south well as Well No. 5

Well No. 4 contains a single 900 horsepower (hp) horizontal centrifugal pump that provides water to the North Hill Pressure Zone. Well No. 5 supplies water to three pumps. One pump, another 900 hp horizontal centrifugal, also pumps water to the North Hill Pressure Zone. The second pump, a 900 hp vertical turbine pump lifts water to the Intermediate Pressure Zone. The third pump is a 1,000 hp vertical turbine pump that lifts water to the Low Pressure Zone. In 2005, the Well Electric station provided 26.7 percent of the entire water system supply. Typical outlet pressures for the station are 180, 140, and 80 psi for the Intermediate, North Hill, and Low systems, respectively. Pump inlet suction elevations at this station are approximately elevation 1865.7 feet. The minimum recorded water level in the well during pumping is 1887.5 feet, which leaves sufficient submergence of the pump intakes. The two vertical turbines, high efficiency pumps were installed in 1996 as replacements for two less efficient horizontal centrifugal pumps.

The maximum total instantaneous withdrawal rate for the well station is 39,300 gpm, which is the total nameplate capacity of the pumps. The total capacity of the wells exceeds the pumping capacity, but the actual potential yield of the well station is unknown to the City. The water right allows 54,750 gpm.

Due to its close proximity to the Spokane River, from 1998 through 2001 Well Electric was intensively studied to determine if it was ground water under the influence of surface river water. The study concluded with monthly samples taken throughout 2001 for Microscopic Particulate Analysis. The conclusion is there is no river influence during normal operation. However, during certain flood stages in the river the well is flooded by the river at which times the well is shut down until normal operations can again resume.

As mentioned above, this is the oldest well in the system. However, it is in good condition. Historically, there have been no significant variations in source capacity or water table levels at or near this site. The well and pumps are in good condition, showing no signs of diminished performance. The well station piping also shows no signs of deterioration and is in good condition.

Parkwater Well Station (DOH Source #S03)

The Parkwater Well Station is located 1/2 mile south and east of the Well Electric Well Station. Completed in 1949, the Parkwater Well Station houses eight pumps in four 18 foot diameter hand dug wells. The wells are adjacent to each other in an east-west orientation. The City identifies the east well as Well No. 1 and continues the numbering scheme westward with the west well being Well No. 4. All of the pumps are vertical lineshaft turbine pumps. Six pumps are 600 hp and supply water to the Low Pressure Zone with typical outlet pressures of 68 psi. The two remaining pumps include a 900 hp unit, and a 1,000 hp unit that supply water to the Intermediate Pressure Zone at an outlet pressure of 145

psi. The 1,000 hp pump was installed in 2003 replacing a less efficient low system (600 hp) pump to improve energy efficiency and pumping redundancy to the Intermediate Pressure Zone. Pump inlet suction elevations at this station are approximately elevation 1870.0 feet. The minimum recorded water level in the well during pumping is 1887.5 feet, which leaves sufficient submergence of the pump intakes. The Parkwater Well Station in 2005 supplied 33.1 percent of the entire water system demand.

The maximum total instantaneous withdrawal rate of the well station is 62,000 gpm, which is the total nameplate capacity of the pumps and also the maximum allowed according to the water right. The total yield of the wells exceeds the pumping capacity, but the actual potential yield of the well station is unknown to the City.

Historically, there have been no significant variations in source capacity or water table levels at or near this site. The well and pumps are in good condition, showing no signs of diminished performance. The well station piping also shows no signs of deterioration and is in good condition.

Nevada Well Station (DOH Source #S01)

At the intersection of Nevada Street and North Foothills Drive is the Nevada Well Station. The Nevada Well Station supplies water to the Low Pressure Zone. The Well Station has two 400 hp submersible pumps that were installed in 1956 and two 800 hp vertical turbine pumps that were installed in 2003 to replace two older less efficient pumps and to improve station redundancy. Typical outlet pressures at this station are 68 psi. Pump inlet suction elevations at this station are approximately elevation 1,846 feet. The minimum recorded water level in the well during pumping is 1,855.37 feet, which leaves sufficient submergence of the pump intakes. In 2005, the Nevada Well Station supplied 15.7 percent of the total water system demand.

The maximum instantaneous withdrawal rate of the well station is 25,000 gpm which is the amount allowed according to the water right. The actual pumping capacity is 31,000 gpm, which equates to the total capacity of the pumps. The total yield of the well exceeds the water right, but the actual potential yield of the well station is unknown to the City.

Historically, there have been no significant variations in source capacity or water table levels at or near this site. The well and pumps are in good condition, showing no signs of diminished performance. The well station piping also shows no signs of deterioration and is in good condition.

Grace Avenue Well Station (DOH Source #S06)

Located directly East of the Nevada Well Station is the Grace Avenue Well Station. It houses two identical 900 hp vertical line shaft turbine pumps that occupy a single 18 foot diameter well. This Well Station supplies water to the North Hill Pressure Zone, at a discharge pressure of 110 psi. The suction bells of the pumps are at elevation 1,849.87 feet, whereas the lowest observed low water level in the well was 1,859.37 feet, which leaves sufficient submergence of the pump intakes. The Grace Avenue Well Station in 2005 supplied 4.0 percent of the total water system demand.

The maximum instantaneous withdrawal rate of the well station is 19,000 gpm, which is the total nameplate capacity of the pumps. The total yield of the well exceeds the pumping capacity, but the actual potential yield of the well station is unknown to the City. The water right allows 31,000 gpm.

Historically, there have been no significant variations in source capacity or water table levels at or near this site. The well and pumps are in good condition, showing no signs of diminished performance. The well station piping also shows no signs of deterioration and is in good condition.

Ray Street Well Station (DOH Source #S04)

The Ray Street Well Station is located at the intersection of Ray Street and Hartson Avenue at the base of the South Hill. The Ray Street Well Station pumps water to the Intermediate Pressure Zone. The Well Station houses two 24 foot diameter wells. The wells are adjacent to each other in a north-south orientation. The City identifies the north well as Well No. 1 and the south well as Well No. 2. The Station contains three 900 hp vertical turbine pumps, two pumps in Well No. 1 and a single pump in Well No. 2. The suction bells of the pumps are positioned at approximate elevation 1,858 feet. Maximum observed drawdown has been to elevation 1,868.37 feet, which leaves sufficient submergence of the pump intakes. The pressure normally observed at the outlet of the Ray Street well is 157 psi. This well station in 2005 supplied 7.2 percent of the total water system demand.

The maximum instantaneous withdrawal rate of the well station is 18,000 gpm, which is the total nameplate capacity of the pumps. The total yield of the wells exceeds the pumping capacity, but the actual potential yield of the well station is unknown to the City. The water right allows 24,850 gpm.

Historically, there have been no significant variations in source capacity or water table levels at or near this site. The well and pumps are in good condition, showing no signs of diminished performance. The well station piping also shows no signs of deterioration and is in good condition.

Hoffman Well Station (DOH Source #S05)

Hoffman Well Station is located on Hoffman Avenue at the intersection of Crestline Street on the north side of the City. The Well Station houses two 16 foot diameter wells, 40 feet apart, in an east-west orientation. The City identifies the west well as Well No. 1 and the east well as Well No. 2. Hoffman #1 well contains a 600 hp vertical line shaft turbine pump. Pump suctions are at elevation 1,843.37 feet. The maximum observed drawdown pumping level has been to elevation 1,859.37 feet, which leaves sufficient submergence of the pump intakes. Normal outlet pressure for the pumps is 55 psi. Hoffman Well Station in 2005 supplied 1.0 percent of the total water system demand. The maximum instantaneous withdrawal rate of the well station is 5,400 gpm, which is the total nameplate capacity of the pumps. The total yield of the wells exceeds the pumping capacity, but the actual potential yield of the well station is unknown to the City. The water right allows 11,600 gpm.

Historically, there have been no significant variations in source capacity or water table levels at or near this site. The pumps and west well are in good condition. The well station piping also shows no signs of deterioration and is in good condition. Currently, one pump has been removed from service for well lining repairs on the east well and is listed in the capital improvement plan.

Central Avenue Well Station (DOH Source #S08)

Pump inlet suction elevations at this station are approximately elevation 1,846 feet. The minimum recorded water level in the well during pumping is 1,855.37 feet, which leaves sufficient submergence of the pump intakes.

The Central Avenue Well Station is the most northerly Well Station in the system, being located on Central Avenue two blocks west of Division Street. The Well Station has two 7 foot diameter wells. The wells are approximately 130 feet apart in a southwest-northeast orientation. The City identifies the southwest well as Well No. 1 and the northeast well as Well No. 2. Each well contains two 450 hp submersible pumps. Normal outlet pressure is 55 psi. In 2005 Central Avenue Well Station provided 12.3 percent of the total annual water system demand.

The maximum instantaneous withdrawal rate of the well station is 11,900 gpm, which is the total nameplate capacity of the pumps. The total yield of the wells exceeds the pumping capacity but the actual potential yield is unknown to the City. The water right allows 30,900 gpm.

Historically, there have been no significant variations in source capacity or water table levels at or near this site. The well and pumps are included on the capital improvement plan for future rehabilitation.

Proposed New Well Locations

The City has proposed five locations for new source wells. They are Corbin Park (2 sites), Faith Bible Church, Audubon Park and at 6th and Havana. The City will probably not be drilling at all of these sites and is currently evaluating which one is best. At the time of this investigation, the City was leaning toward construction at either the Corbin Park or Faith Bible Church locations in Northwest Spokane. The City owns the property at the Corbin Park and Audubon sites. Faith Bible Church owns the Faith Bible Church site and Glad Tidings Assembly of God owns the 6th and Havana site. The City plans on drilling 24-48 inch diameter wells and will need about five years to begin construction.

The City has received support from the Washington State Department of Health (DOH), Drinking Water Division for a new well field. On November 21, 2014, Dorothy Tibbetts, Regional Manager for DOH stated that, *"The proposed well field will provide the City with increased capacity to respond to emergencies and protect public health. The new well field can be used to serve customers, if other well sites, especially two of the City's largest well sites located near an oil pipeline, should become unusable because of a pipeline break. In addition, the new well field will provide options for replacing groundwater that's under the influence of surface water with lower groundwater sources in northwest Spokane, further protecting public health."*

The Yellowstone Pipeline, owned and operated by Conoco Philips, conveys petroleum products and is located within 75 feet of the City's Parkwater Well Station and within 1,000 feet of the Well Electric Well Station. The Parkwater and Well Electric Stations provide almost 60% of the drinking water for the City of Spokane water system. According to the City, a leak from the Yellowstone Pipeline would have devastating consequences for the Parkwater and Well Electric wells and Spokane's drinking water supply. The proposed new well sites will help mitigate these contamination risks by dispersing the pumped volume over a larger geographical area. The pumping from the new well sites would help optimize system performance, use less energy to produce the same volume of water, and provide a more reliable service to its citizens.

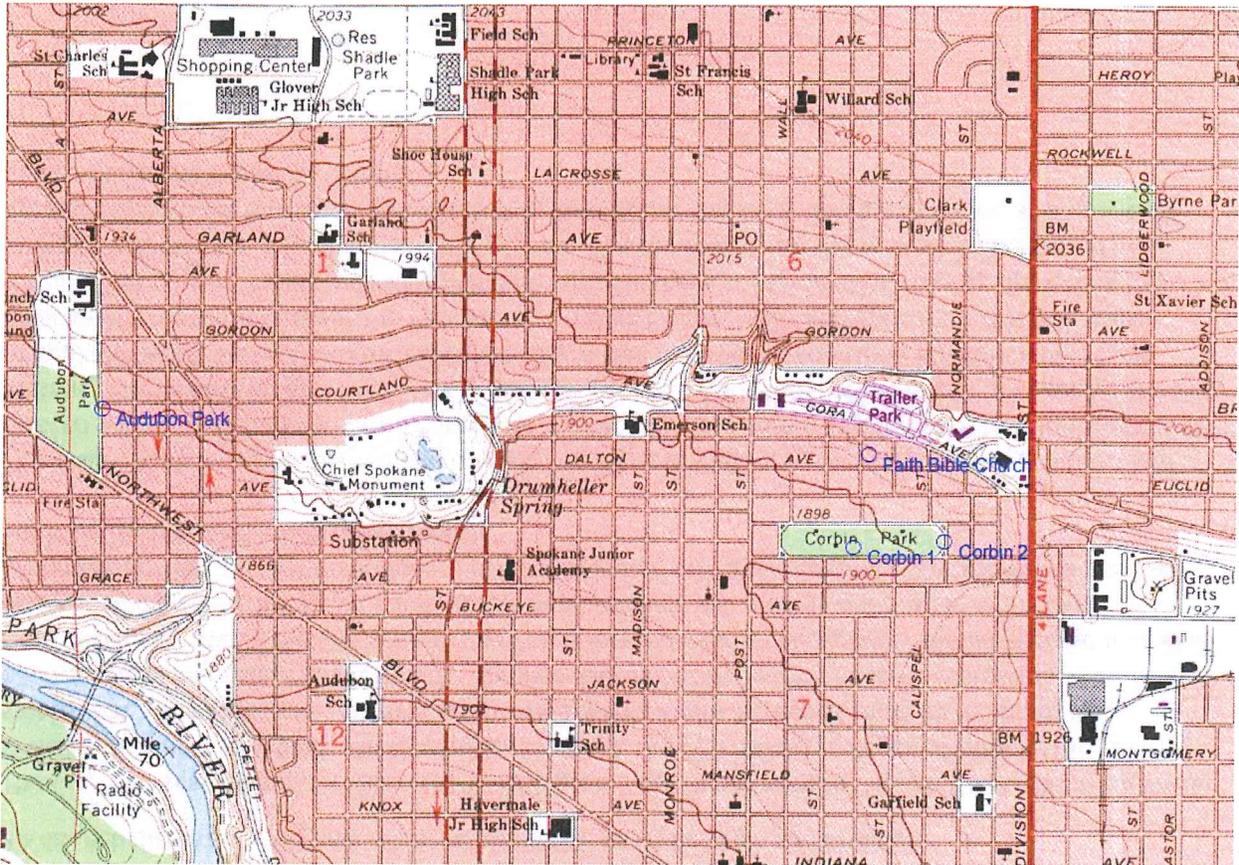
PROPOSED NEW WELL SITES (CORBIN PARK, FAITH BIBLE CHURCH, AUDUBON PARK)

Corbin Park -1: NW¼NE¼ of Sec. 7, T. 25 N., R.43 E.W.M.

Corbin Park -2: NE¼NE¼ of Sec. 7, T. 25 N., R.43 E.W.M.

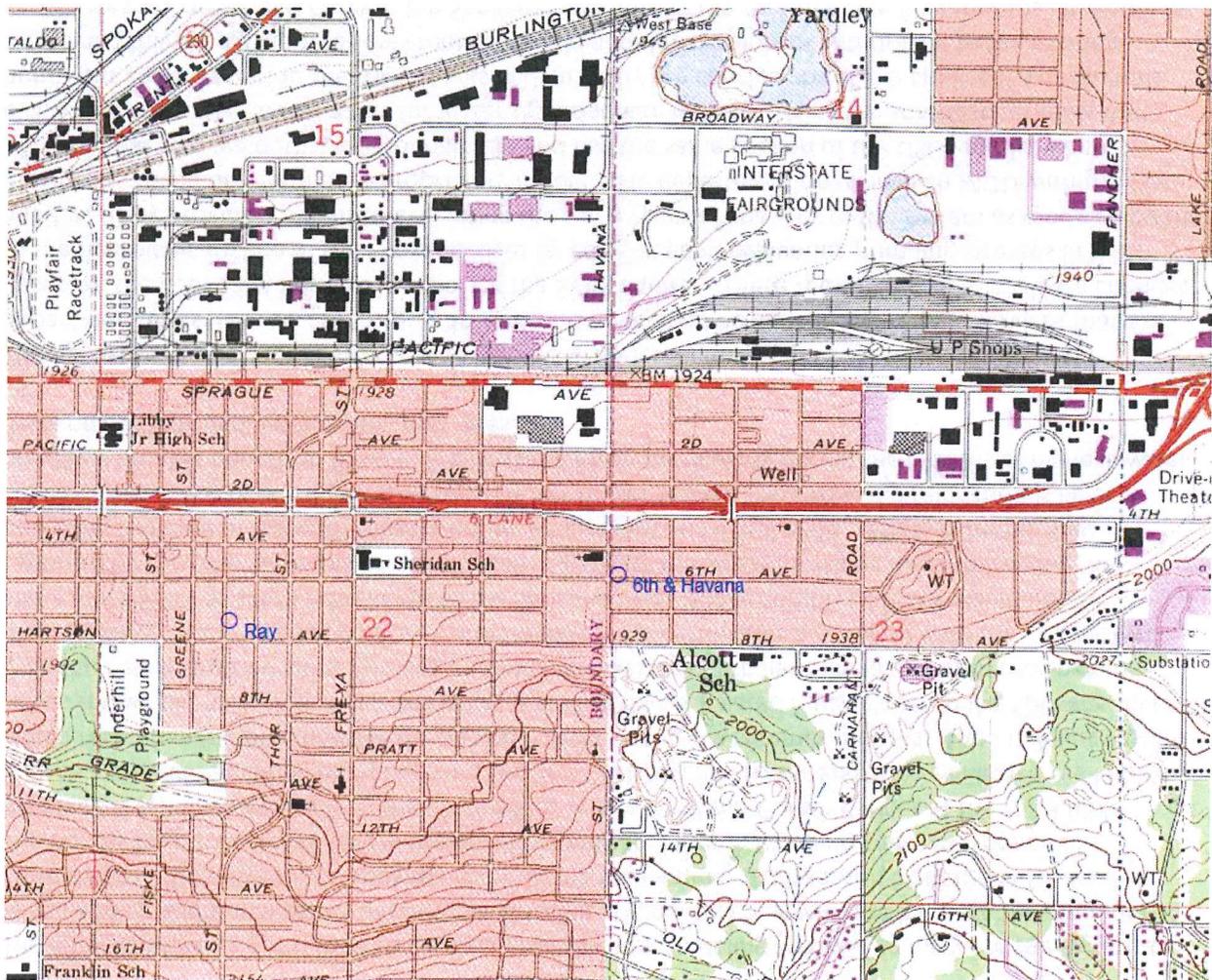
Faith Bible Church: SW¼SE¼ of Sec. 6, T. 25 N., R. 43 E.W.M.

Audubon Park: SW¼SW¼ of Sec. 1, T. 25 N., R. 42 E.W.M.



PROPOSED NEW WELL SITE (6TH and HAVANA)

6th and Havana: SW¼NW¼ of Sec. 23, T. 25 N., R.43 E.W.M.



Hydrogeologic and Impairment Analysis

John Covert, Hydrogeologist with Ecology, provided the following analysis for the proposed change: Applications for change of water right permits and certificates are governed by RCW 90.44.100, which states in part that the holder of a valid right to withdraw public ground waters may, without losing his priority of right, construct wells at a new location in substitution for, or in addition to, those at the original location, or he may change the manner or the place of use of the water. Any amendment shall be issued by the Department of Ecology (Ecology) only under the conditions that (1) an additional or substitute well or wells shall tap the same body of public ground water as the original well or wells; (2) use of the original well or wells shall be discontinued upon construction of the substitute well or wells; (3) the construction of an additional well or wells shall not enlarge the right conveyed by the original permit or certificate; and (4) all existing water rights shall not be impaired. Ecology may specify an approved manner of well construction and shall require a showing of compliance with the provisions of the amendment. In conducting impairment analysis for an application to change a water right that

includes remaining inchoate water, Ecology compares the effects that would occur if the water right is exercised under its existing specifications to the effects that would occur if the water right is exercised under the proposed changed specifications. Accordingly, impairment analysis for this application does not involve comparing the effects that are presently occurring as a result of the City's current exercise of this water right to the effects that would occur under the changes as inchoate water becomes perfected by actual use. Rather, this impairment analysis involves comparing the effects that would occur as a result of increased pumping if the water right is exercised by pumping the existing wells to the effects that would occur from increased water use if the water right is exercised by pumping wells at the proposed additional points of withdrawal. The USGS, Bi-state, Spokane Valley Rathdrum Prairie (SVRP) Aquifer Study publications from 2005 and 2007 identify the footprint of the SVRP aquifer. From the USGS publications, we can see that the City of Spokane's well fields are all completed within the Spokane Valley Rathdrum Prairie aquifer. All of their wells are producing water from this prolific, unconfined, alluvial aquifer. Their wells are completed in unconsolidated sand and gravels. The proposed locations identified within this change application will also be completed within the SVRP aquifer. As such, all the wells authorized under this change application will tap the same body of public groundwater.

The applicant hired a consultant to conduct groundwater modeling analyses to evaluate the extent to which adding additional points of withdrawal to the original certificates might increase the amount of groundwater discharge to the Spokane River during the summer peak season from the SVRP aquifer. The results from this proprietary modeling effort indicates that developing additional points of withdrawal (adding new wells to the City's water system at either Corbin Park or at the Faith Bible Church area and relocating pumping from the City's existing Parkwater and/or Well Electric well fields would result in additional flows in the Spokane River during the summer months. The modeling results tell us this would happen because the existing well fields are located much closer to the Spokane River than the new, proposed sites. Moving pumping stresses downgradient and away from the Spokane River (relative to the existing points of withdrawal on the certificates associated with this change) will allow more SVRP aquifer to discharge to the Spokane River (these additional flows would not be captured by the original points of withdrawal). Changing the stress locations for withdrawing the equivalent volume of water to these more down gradient and distal wells, results in better flow conditions in the Spokane River. The consultant's report states: "the proposed relocation is likely to provide a notable benefit to flows in the Spokane River, particularly during the months of highest water demands and groundwater production rates."

The department does not have access to run this proprietary model to verify these results. The department does have access to spreadsheet tools developed by Ralston Hydrologic Services that are based on the 2007 Bi-state, USGS model for the SVRP aquifer. These tools allow us to evaluate changes to the hydrologic regime of the Spokane River by adjusting and evaluating pumping stresses in the aquifer. They provide a means of evaluating the same types of changes to the system as modeled by the applicant's consultant with their proprietary model. The department does have an MOU with the state of Idaho that says we both agree to maintain and use the same version of the USGS model when evaluating respective water rights for water right decision making. Using the spreadsheet tools that honor our commitment to the MOU, I was able to verify the conclusions of the applicant's consultant. Approving this change application's request to add additional points of withdrawal to the existing certificates will not impair flows in the Spokane River during the summer, low flow months. It would in fact improve flows in the Spokane River if the City utilized these new points of withdrawal to pump an

equivalent volume of water out of the aquifer that would normally be withdrawn from just the original points of withdrawal.

The SVRP aquifer is one of the most prolific and productive aquifers on the planet. It is difficult to conduct an aquifer test and measure drawdown in a nearby observation well because the aquifer's hydraulic characteristics are so favorable that cones of depression are extremely shallow. The aquifer's high permeability eliminates the risk of impairment to any nearby, existing, wells from pumping of any of the City's wells. Approving these change applications will not impair any existing groundwater rights nor impair the flows in the Spokane River.

Impairment Considerations

A review of Ecology records was conducted for existing water rights, permits, and claims within the areas of the proposed new well sites. The review of Ecology WRTS database found the following:

Corbin Park Area: 1 certificate and 1 claim.

This search area included one certificate for Orchard Avenue Irrigation District No. 6

Faith Bible Church Area: No other recorded rights

Audubon Park Area: No other recorded rights

6th and Havana Area: 9 certificates and 7 claims

The search area included rights for Spokane County Water District #3 (six certificates), Carnhope Irrigation District #7 (two certificates) and Spokane Sand & Gravel (one certificate).

As indicated in the Hydrogeologic analysis, it has been determined that moving some of the pumping from the Well Electric and Parkwater well sites and spreading that over the other locations and/or proposed new sites will likely increase flows in the Spokane River, particularly during the months of highest water demands. The search found no existing water rights in the area which would be impaired through issuance of this application for change. It is not anticipated that the proposed changes by the City will cause any impairment.

Letter of Concern

A letter of concern was received from Rachael Osborn on behalf of the Center for Environmental Law & Policy (CELP) on January 22, 2015. The letter included seven comments about the two draft Report of Examinations which were posted online. The following are each comment from the letter, followed by Ecology's response to the comment:

CELP comment (1) *"The intent of the change application is, in part, to facilitate increased groundwater pumping by the City of Spokane to provide water to areas not currently served by the City, thus increasing the City's use of its inchoate (unused) water rights. Granting this water right change will also have the effect of evading protections for the Spokane River that will come with adoption of the instream flow rule (see draft WAC 173-557, presumably to be adopted on or before March 17, 2015)."*

Ecology Response: The intent of this application to change an existing water right is to authorize groundwater pumping from new wells located downstream and at greater distances from the Spokane River than the existing authorized wells. Without the proposed new wells, the City would be able to continue to increase water use and perfect the inchoate portion of this water right. The City will continue to grow and will need to serve future water for municipal supply purposes as previously authorized by this water right. RCW 90.03.386 states in part, *"The effect of the department of health's*

approval of a planning or engineering document that describes a municipal water supplier's service area under chapter 43.20 RCW, or the local legislative authority's approval of service area boundaries in accordance with procedures adopted pursuant to chapter 70.116 RCW, is that the place of use of a surface water right or groundwater right used by the supplier includes any portion of the approved service area that was not previously within the place of use for the water right if the supplier is in compliance with the terms of the water system plan.” Pumping from the new wells will have less direct impact on the flow of the river than pumping from the existing wells. In addition, the existing wells are all located in close proximity to the Yellowstone pipeline. In the event a pipeline leak renders the existing wells unusable, the new wells will provide sources of uncontaminated groundwater for municipal uses served by the City.

The priority dates of Ground Water Certificate No. 504-D (May 1, 1926) and Ground Water Certificate No. 548-A (August 24, 1946) pre-date the effective date of the new Spokane Instream Flow Rule, WAC 173-557 (February 27, 2015). Because this change authorization pre-dates the effective date of the rule, the rule is not applicable. Notwithstanding, even if the instream flow requirements in WAC 173-557 were applicable to this application, pumping water from the suite of wells proposed under this application will cause less impact on instream flows than pumping from the wells that are currently authorized.

CELP comment (2) *“The draft ROEs are inadequate for failure to discuss the increase in pumping that will occur and the consequent adverse impacts to the Spokane River.”*

Ecology Response:

The affects of the groundwater pumping on the Spokane River are addressed under the “Hydrogeologic Analysis” section of this report. Analysis of this change application involves comparing the effects that would occur if the water right is exercised by pumping the existing wells to the effects that would occur if the water right is exercised by pumping wells at the proposed additional points of withdrawal. As the primary regional water purveyor, the City of Spokane continues to provide municipal water supply under these two water rights to a growing population. Moving the groundwater pumping further from the Spokane River than is currently authorized by this water right will reduce impacts on the river.

CELP comment (3) *“The draft ROEs are inadequate for failure to discuss and address the City of Spokane’s lack of diligence in putting its rights to use, and/or the excessive quantities of water that have been granted to the City in excess of its reasonable future needs.”*

Ecology Response:

The City has continued to grow and continues to provide water under its existing water rights for municipal supply purposes to a growing population. The City’s existing service area is not yet fully developed and additional infill growth will occur within this area. The City of Spokane is also the largest water purveyor in the area and anticipates the need to increase regional wholesale supply relationships, interties with other purveyors, and to respond to changes in urban growth areas and population. The City has existing and planned future wholesale agreements with neighboring water systems. Future demand for wholesale water is expected to increase, particularly with existing and future wholesale customers on the West Plains of Spokane, where the basalt aquifer is in serious decline and will not be able to supply future water needs. Other water short areas in the County may need water to be served by the City in the future. Neither the City nor Ecology can predict future population growth or where water may be needed in the future. The City has exercised reasonable diligence to perfect its water

rights through beneficial use, and has reasonable future need for the remaining quantity of inchoate water (13,773 AF) authorized under this water right.

CELP comment (4) *“The draft ROEs are flawed for failure to conduct a tentative determination of the extent and validity of the two water rights, pursuant to RCW 90.03.330(2), and to relinquish or rescind or declare abandoned the unperfected portions of the City’s water rights.”*

Ecology Response:

A determination of the extent and validity of this water right is addressed in the “ Tentative Determination of Extent and Validity of Certificate No. 504-D” section of this report. Under RCW 90.44.100, the point of withdrawal of an inchoate groundwater right documented by a certificate may be changed. *Cornelius v. Department of Ecology*, Washington Supreme Court No. 88317-3 (February 12, 2015). The subject water right includes an inchoate quantity that has not yet been exercised and is therefore not subject to relinquishment.

CELP comment (5) *“The ROEs is inadequate for its failure to discuss and address the City of Spokane’s lack of reasonable efficiency, including the City’s failure to meet its water system plan conservation goals.”*

Ecology Response:

The City has established conservation goals to reduce its water use. The City has implemented a Water Use Efficiency Program, which meets the requirements of WAC 246-290-800. In April of 2014, the City also adopted new water conservation goals to reduce indoor residential water use, outdoor residential water use, outdoor irrigation for commercial/industrial use and outdoor governmental water use. The City met 3 of these 4 goals in 2014. A summary of this conservation goal attainment was provided by the City and can be made available upon request.

CELP comment (6) *“The SEPA documents fail to discuss the impact of increased pumping on surface flows in the Spokane River. Ecology cannot rely on these incomplete environmental documents as a substitute for its own analysis of the impacts of the proposed change.”*

Ecology Response:

Ecology reviewed the SEPA documents provided by the City and concurs with the City’s determination. Analysis of the environmental impacts that would result from approval of this change application involves comparing the effects that would occur if the water right is exercised by pumping the existing wells to the effects that would occur if the water right is exercised by pumping wells at the proposed additional points of withdrawal. The intent of this application is to add new wells located downstream and further away from the Spokane River than the wells currently authorized under this water right. Pumping from the new wells should reduce impacts to the river from pumping authorized by this water right.

CELP comment (7) *“It is improper to issue a permanent water right to the City when it has not yet determined where the new point of withdrawal (POW) will be located. Under these circumstances, the appropriate process is to issue a preliminary permit to allow the City to undertake whatever investigations are necessary to determine where the new POW will be located.”*

Ecology Response:

In their application, the City proposed five locations for new wells. Each site is located over the Spokane Valley Rathdrum Aquifer, so the new wells will all be constructed in and withdraw water from that aquifer. The new wells will all withdraw water from the same body of public ground water as the original authorized wells. Therefore, there is no need for issuance of a preliminary permit under these applications.

CONCLUSIONS

There is a water right available for change under Ground Water Certificate No. 504-D(together w/C.Chg 1-3-435 and 1-3-52).

When considering an application for change to a water right, Ecology must determine that the proposed change can be made without detriment or injury to existing water rights. Factors considered when determining potential impact include the following:

No Impairment to Existing Rights:

It is not anticipated that the proposed change would cause impairment to existing water rights.

No Detriment to the Public Welfare:

There have been no findings through this investigation indicating that there would be any detrimental impact to the public welfare through issuance of the proposed change.

No Enhancement of the Original Right:

No withdrawal of water over and above what has been authorized for beneficial use would be authorized through approval of this change.

Same Source of Water:

All of the ground water to be withdrawn is supplied by the same body of public water, the Spokane Valley Rathdrum Prairie Aquifer.

RECOMMENDATIONS

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

This change to Ground Water Certificate No. 504-D supersedes previous Certificate of Change recorded as Vol. 1-3, PP. 435 issued September 9, 1985 and Certificate of Change recorded as Vol. 1-3, PP. 52 issued September 21, 1973.

Authorized Quantities and Purpose of Use

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:

Quantities:

56,000 gallons per minute and 38,000 acre-feet per year

Purpose of Use:

Municipal Supply purposes

Points of Withdrawal:

Nineteen (19) Wells located as follows:

Source Name	Parcel #	Well Tag	Twp	Rng	Sec	QQ	Latitude	Longitude
Well Electric 1	35111.0001	AHC996	25N	43E	11	SW¼NE¼	47.68147°N	-117.33214°W
Well Electric 2	35111.0001	AHC995	25N	43E	11	SW¼NE¼	47.68147°N	-117.33214°W
Parkwater 1	35114.2501	AHC722	25N	43E	11	NE¼SE¼	47.67754°N	-117.33002°W
Parkwater 2	35114.2501	AHC999	25N	43E	11	NE¼SE¼	47.67754°N	-117.33002°W
Parkwater 3	35114.2501	N/A	25N	43E	11	NE¼SE¼	47.67754°N	-117.33002°W
Parkwater 4	35114.2501	AHC998	25N	43E	11	NE¼SE¼	47.67754°N	-117.33002°W
Ray Street 1	35222.0001	ABR602	25N	43E	22	SE¼NW¼	47.65051°N	-117.36282°W
Ray Street 2	35222.0001	AHC723	25N	43E	22	SE¼NW¼	47.65051°N	-117.36282°W
Central 1	36311.1406	N/A	26N	43E	31	NE¼NE¼	47.71185°N	-117.41408°W
Central 2	36311.1406	AHC726	26N	43E	31	NE¼NE¼	47.71185°N	-117.41408°W
Hoffman 1	35041.0419	ABR551	25N	43E	04	NW¼NE¼	47.69993°N	-117.37852°W
Hoffman 2	35041.0419	AHC728	25N	43E	04	NW¼NE¼	47.69993°N	-117.37852°W
Grace 1	35081.2802	AHC724	25N	43E	08	NE¼NE¼	47.68335°N	-117.39397°W
Nevada 1	35081.2802	AHC725	25N	43E	08	NE¼NE¼	47.68325°N	-117.39485°W
NEW SITES:								
Corbin Park 1 (new)	35071.1901	N/A	25N	43E	07	NW¼NE¼	47.68475°N	-117.41793°W
Corbin Park 2 (new)	35071.1901	N/A	25N	43E	07	NE¼NE¼	47.68478°N	-117.41497°W
Faith Bible Church (new)	35064.3611	N/A	25N	43E	06	SW¼SE¼	47.68751°N	-117.41727°W
Audubon Park (new)	25013.0004	N/A	25N	42E	01	SW¼SW¼	47.68872°N	-117.45236°W
6 th and Havana (new)	35232.4108	N/A	25N	43E	23	SW¼NW¼	47.65180°N	-117.34657°W

Place of Use:

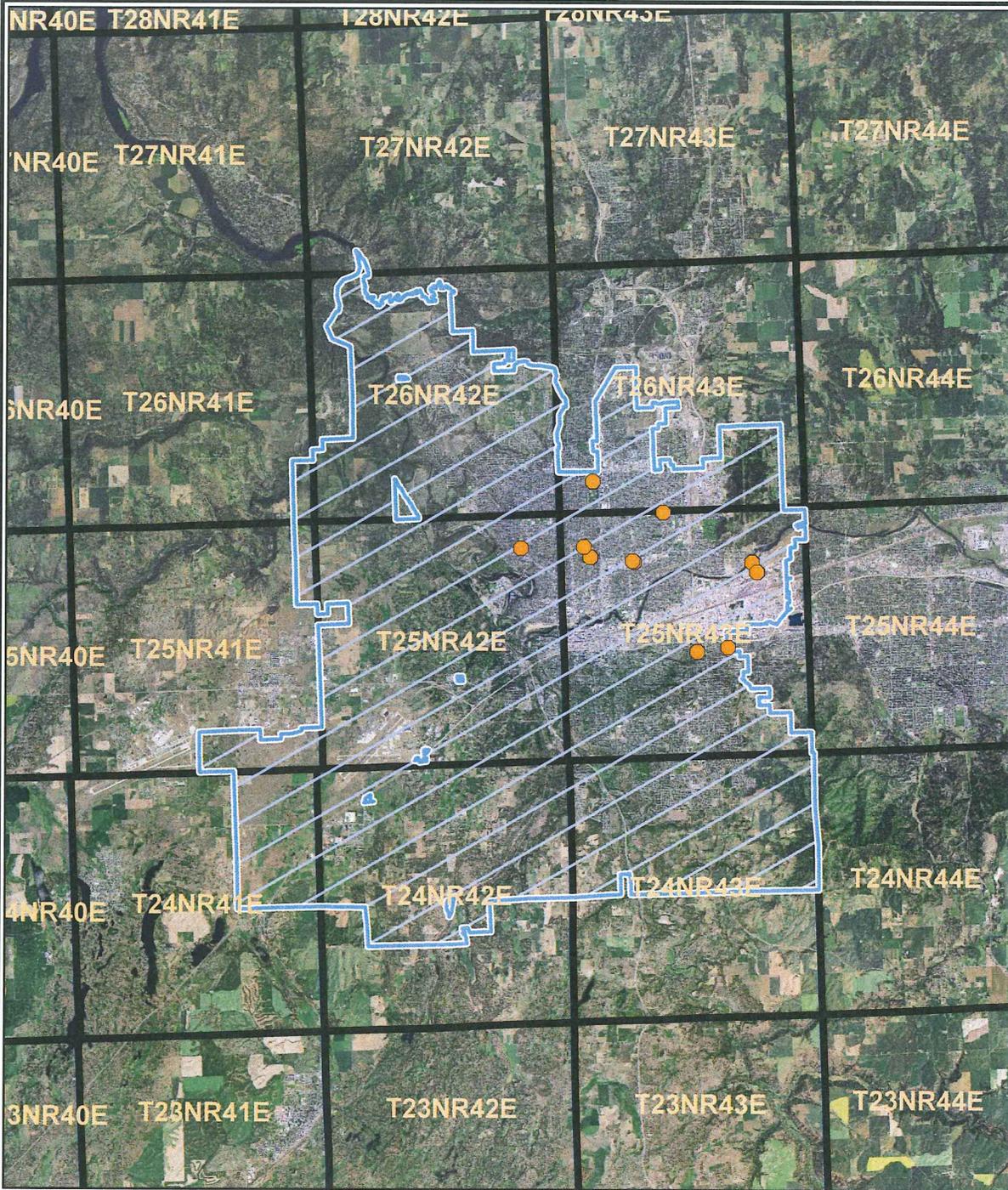
The place of use (POU) of this water right is the service area described in the most recent Water System Plan/Small Water System Management Program approved by the Washington State Department of Health, so long as the water system is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.



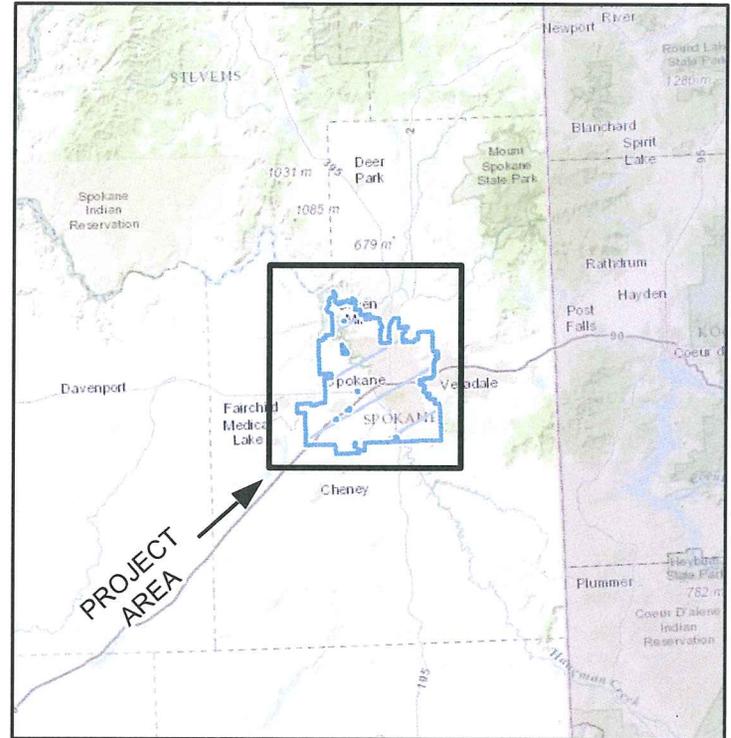
Gene Drury, Report Writer

2-24-2015
Date

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City of Spokane
504-D



Basemap - (ESRI US Topographic Maps)

Legend

-  Authorized Place of Use
-  Townships
-  Authorized Point of Withdrawal
-  Sections

0 600 1200 Feet
Q,69,28010,5605,8401,1206,400
Basemap - (NAIP 2013 1m color)

Map Date: 12/30/2014



Comment:

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