

Meeting Summary
WRIA 54 - Lower Spokane River Watershed
January 23, 2013

Location: Spokane County Water Resource Center

Planning Unit members and guests in attendance / recorded on the sign-in sheet were:

Mike Hermanson, Spokane County
Rob Lindsay, Spokane County
Doug Greenlund, City of Spokane
Bill Rickard, City of Spokane Water Department
Brian Crossley, Spokane Tribe
Rusty Post, Department of Ecology
Charlie Peterson, Spokane Conservation District
Linda Kiefer, Avista
Amanda Parrish, Lands Council
Charlie Kessler, Stevens County Conservation District

CALL TO ORDER / INTRODUCTIONS

Rusty Post opened the meeting at 10:00 am. Participants introduced themselves. The group approved the November 28, 2012 meeting summary.

PUBLIC COMMENT/WIT MEMBER UPDATES

The Lands Council is about to launch a program with the Geiger Correction Facility to use work crews to do riparian restoration work. The project will be funded by local contributions rather than grants. They are also planning a native plant nursery at the Geiger facility and the Lands Council outreach coordinator will be teaching there twice a month about riparian restoration.

PHASE IV PROJECT UPDATES

Amanda Parrish provided an update on the Deep and Coulee Creek Restoration project. They are evaluating different methods for new planting protection from wildlife. They are also collecting willow whips and meeting with landowners.

Charlie Kessler provided an update on the Stevens Conservation District Lake Spokane Water Quality project. They have not sampled since the fall and plan to begin sampling in the spring.

Charlie Kessler also provided an update on the Stevens County Education project. Lake Spokane High School will begin their 2nd semester shortly and they are scheduling staff from Avista, the Lands Council, Ecology, etc. to give water quality related presentations.

Mike Hermanson provided an update on the projects Spokane County Water Resources is involved in. Water level monitoring is ongoing and a significant amount of work has been completed on the West Plains Recharge Estimate project. The Water Availability Advisory group draft final report is completed and the final meeting is on January 24th, at which the report will be finalized.

WRIA 54 IMPLEMENTATION PROGRESS

Mike Hermanson distributed a matrix and project summary sheet detailing progress on implementing the WRIA 54 DIP (the matrix and summary are provided with this summary). The matrix and project summaries focused on projects funded by Watershed Planning grants. The group discussed the possibility of including work done

in the community not funded by Watershed Planning grants into the summary. The group recognized this would be beneficial because it demonstrates the local resources directed toward activities detailed in the watershed plan, but it was also recognized that this type of effort is not currently funded. Approaches to integrating these additional efforts into an implementation progress summary were discussed.

WEST PLAINS RECHARGE ESTIMATE WITH USGS DEEP PERCOLATION MODEL

Mike Hermanson gave a presentation on the West Plains Recharge Estimate using the USGS Deep Percolation Model project. The project is part of the West Plains Groundwater Elevation Monitoring and Mapping grant project.

REGIONAL WATERSHED PLANNING APPROACH

Rusty Post reported on activities occurring in the WRIA 55/57 and 56 groups. They are currently evaluating different approaches to a regional watershed planning framework, which could include WRIA 54. The purpose and goals of a regional watershed planning group were discussed.

ADJOURN

Rusty Post adjourned the meeting shortly after 12:00 pm.

WRIA 54 Detailed Implementation Plan-High Priority Projects	Rankings ¹	Early Action	Year 1	Year 2	Years 3-5	Years 6 +	Phase IV Implementation Grant	Watershed Planning Project Implementation Grants
Recommendation WRA-4 —Conservancy Boards in Stevens, Spokane and Lincoln Counties should develop and maintain a public database of willing water rights buyers and sellers within their respective Counties. The Conservancy Boards will need to make statements that the extent and validity of water rights in the database are not guaranteed. (This is currently being implemented by the Stevens County Water Conservancy Board.)	1, 2, 2	X	X	X	X	X		
Recommendation TI-3 —Develop Water Supply and Demand Forecast for Prioritized Areas <ul style="list-style-type: none">• Utilize growth projections, zoning, building/permit activity• Relate to parcel data, water service areas• Identify existing water sources and capacity• Determine unit water needs and conservation/infrastructure assumptions	1	X	X	X	X	X	• Spokane County Water Use Inventory & Demand Forecast <i>(funded by Phase IV and Project Grants)</i>	
Recommendation WFN-7 —The state Legislature should amend current law to allow water banking throughout the state.	2	X						
Recommendation WFN-3 —Recommend formation of a Chamokane Basin Watershed Council to resolve water-related issues in the Chamokane Basin. This Watershed Council may consist of, but not be limited to, residents of the Chamokane Basin and the Spokane Tribe. (Note: This early implementation action was not included in the original list, but was already ongoing and considered high priority.)		X	X	X	X	X	• Chamokane Creek Watershed Council Support	• Chamokane Watershed Council Outreach & Education (part of Stevens County Education Project year 2)
Recommendation WUE-3 —Recommend that counties, cities and water purveyors develop and implement indoor and outdoor water conservation incentives.	5		X	X	X	X		
Recommendation WS-3 —Promote and support water storage projects initiated by individual entities throughout the watershed to meet instream flows and to provide water for residents, business and projected growth in Spokane, Lincoln and Stevens Counties and the Spokane Indian Reservation. Several projects have been identified in the Chamokane Creek watershed.	4, 4		X	X	X	X	• Bradford Water Storage Project Study	
Recommendation TI-2 —Identification of Areas of Strained Water Resources—Identifying potential and existing areas of strained water resources, where water supply is not currently available to meet growing water demand for out-of-stream water needs, is a major data need for WRIA 54. Stevens, Lincoln and Spokane Counties all have begun developing more proactive methodologies to identifying these areas within their jurisdictions, and enacting programs to address the challenges associated with these areas. Development of methodologies to accurately identify areas of strained water resources and tools to manage land use needs associated with these areas. Elements of this work may include the following: <ul style="list-style-type: none">• Conduct buildout analysis for subbasins and study areas according to current zoning and projected water needs. Note that Ecology guidance suggests using 20-year projections from the state Office of Financial Management for setting instream flows and allocating water for future out-of-stream uses.• Develop water supply and demand forecasts for subbasins and study areas.• Compile well information, including number, location, construction specifications, and use.• Develop estimates for actual water use• Hydrogeologic study to understand the available water resources	3, 4		X	X	X	X	• Spokane County Water Use Inventory & Demand Forecast <i>(funded by Phase IV and Project Grants)</i> • West Plains Geologic Map • West Plains Hydrogeologic Database Development and Analysis • West Plains Ground Water Age Dating • West Plains Geologic Structures and Surficial Geology Mapping	• West Plains Groundwater Elevation & Monitoring <ul style="list-style-type: none">○ West Plains Recharge Estimate○ Deep Creek & Coulee Creek Seepage Runs○ Subsurface Projection of the Stratigraphy of the CRBG and Paleochannel units • WRIA 54 & 56 Hydrogeologic Characterization & Monitoring Well Drilling Project • West Plains Delineation of Aquifer Zones within Basalt Formations • West Plains Geophysical Study

WRIA 54 Detailed Implementation Plan-High Priority Projects	Rankings ¹	Early Action	Year 1	Year 2	Years 3-5	Years 6 +	Phase IV Implementation Grant	Watershed Planning Project Implementation Grants
<ul style="list-style-type: none"> • Compile complaint database information • Work with area residents to understand their needs so practical solutions can be found. 								
<p>Recommendation WRA-5—Recommend that the Spokane Tribe develop a water code for the Spokane Tribe and Reservation, including fee lands.</p>	1		X	X				
<p>Recommendation WRA-6—Review, discuss, and recommend improvements to the relinquishment law.</p>	1		X	X				
<p>Recommendation LU-11—Evaluate methodologies and the review process used to determine water availability for proposed development projects, in order to better determine that permitted projects have a viable water supply.</p>	1, 5		X	X			<ul style="list-style-type: none"> • Development of a Water Availability and Sustainability Investigation Standard <i>(funded by grants from WRIA 55/57, 56, & 54)</i> 	
<p>Recommendation TI-1—Basalt Aquifer Groundwater Study—The Columbia River Basalt Group aquifers that underlie the West Plains area are used for water supply. Groundwater levels have declined in some areas, indicating the groundwater resource is potentially strained. These aquifers (there are at least three distinct aquifers within this) are not well understood. Elsewhere in the Pacific Northwest, basalt aquifers are used extensively for water supply, indicating that a better understanding of the Columbia River Basalt Group aquifers in the West Plains area would be beneficial to understand how this resource can be used in a sustainable way.</p>	3, 3		X	X			<ul style="list-style-type: none"> • West Plains Geologic Map • West Plains Hydrogeologic Database Development and Analysis • West Plains Ground Water Age Dating • West Plains Geologic Structures and Surficial Geology Mapping 	<ul style="list-style-type: none"> • West Plains Groundwater Elevation & Monitoring <ul style="list-style-type: none"> ○ West Plains Recharge Estimate ○ Deep Creek & Coulee Creek Seepage Runs ○ Subsurface Projection of the Stratigraphy of the CRBG and Paleochannel units • WRIA 54 & 56 Hydrogeologic Characterization & Monitoring Well Drilling Project • West Plains Delineation of Aquifer Zones within Basalt Formations • West Plains Geophysical Study
<p>Recommendation WFN-5—Establish a program to collect data and evaluate where permit-exempt wells are a concern. Develop management options for problem areas. Affected local governments and Ecology should provide technical support and funding; counties, purveyors, Ecology and Regional Health District should coordinate. Program components could include:</p> <ul style="list-style-type: none"> • Conduct buildout analysis for subbasins and study areas according to current zoning and projected water needs. • Develop water supply and demand forecasts for subbasins and study areas, including extending water service into these areas from existing water purveyors. • Consider protecting areas of strained water resources through critical areas ordinance or water supply overlay zones if alternate water supply is not feasible. 	2, 4, 5		X	X	X	X	<ul style="list-style-type: none"> • Spokane County Water Use Inventory & Demand Forecast <i>(funded by Phase IV and Project Grants)</i> • Development of a Water Availability and Sustainability Investigation Standard <i>(funded by grants from WRIA 55/57, 56, & 54)</i> 	
<p>Recommendation WQ-1—Implement the monitoring described in the Quality Assurance Project Plan for the Nine Mile Area Non-Point Source Monitoring Study (Tetra Tech, 2009) and proceed with a study to monitor and assess non-point sources from the surface water and groundwater that drain directly to Lake Spokane.</p>	1, 3, 5		X	X	X	X	<ul style="list-style-type: none"> • Lake Spokane Water Quality Project Phases I & II 	
<p>Recommendation LU-6—Recommend that counties, purveyors and Ecology collaborate to develop flexible local guidelines for demonstration of water supply availability and sustainability. Methods may include but are not limited to hydrogeologic investigation and characterization reports.</p> <p>Recommendation LU-7—Recommend that Ecology provide technical assistance and funding for ongoing support in the implementation of guidelines developed in</p>	2, 3, 4		X	X			<ul style="list-style-type: none"> • Development of a Water Availability and Sustainability Investigation Standard <i>(funded by grants from WRIA 55/57, 56, & 54)</i> 	

WRIA 54 Detailed Implementation Plan-High Priority Projects	Rankings ¹	Early Action	Year 1	Year 2	Years 3-5	Years 6 +	Phase IV Implementation Grant	Watershed Planning Project Implementation Grants
<p>Recommendation LU-6 to demonstrate sufficient water availability and sustainability for proposed and existing uses for comprehensive plan amendments and associated zoning changes.</p> <p>Recommendation LU-8—Recommend that Spokane County require applicants to demonstrate sufficient water availability and sustainability for proposed and existing uses for comprehensive plan amendments and associated zoning changes.</p>								
<p>Recommendation LU-12—Recommend Spokane County add the following condition for the approval of a final plat: “Prior to filing the final plat, the applicant will demonstrate provision of adequate potable water supply by providing one of the following:</p> <ul style="list-style-type: none"> • A letter from a water purveyor stating they will serve the proposed subdivision. If a plat is not developed for a specified amount of time, this commitment may need to be reconfirmed. • A copy of a water right permit from the Department of Ecology with adequate quantity to serve the proposed subdivision; • A plan to supply the proposed subdivision within the groundwater exemption specified in RCW 90.54.050 that complies with the 1997 Attorney General Opinion, Washington State Supreme Court Decision Department of Ecology vs. Campbell and Gwinn, LLC and Washington State Department of Health guidelines for residential water use.” 	1, 3, 4		X					
<p>Recommendation WUE-2—Recommend that local governments work toward improved water use efficiency in landscaping and other outdoor water uses.</p>	1, 2, 5, 5		X	X	X	X		
<p>Recommendation WFN-1—Consider a regional management and coordination organization for water supply on the West Plains. The West Plains bridges WRIAs 54, 43, 56 and 34, Spokane and Lincoln Counties, and several cities, making a planning/management area specific to the West Plains necessary. This organization should encourage improvement of connectivity between water systems, as allowed by cost and water right constraints.</p>	1, 2, 4, 4		X	X	X	X		
<p>Recommendation EDU-2—Conduct a water resources education needs assessment in WRIA 54.</p>	3				X			
<p>Recommendation WRA-3—Consider prioritizing hydrologic subbasins for Ecology to process water rights applications. Note that all subbasins in a priority area would need to be included and that Ecology has to follow state laws to process water rights in order of application date, but can do so within a subbasin or watershed.</p>	3, 5, 5					X		
<p>Recommendation WFN-4—Local governments, the Spokane Tribe, and water purveyors should assess subarea water supply needs, identify appropriate measures from a range of options, and facilitate options that are economically viable and provide long-term sustainability.</p>	2					X	<ul style="list-style-type: none"> • Spokane County Water Demand Forecast (<i>funded by Phase IV and Project Grants</i>) 	
<p>Additional Projects</p>							<ul style="list-style-type: none"> • Spokane River Forum Support • Deep & Coulee Creek Watershed Restoration Phase II 	<ul style="list-style-type: none"> • Deep & Coulee Creek Watershed Restoration • Stevens County Education Project

1-Rankings Assigned by Individual Scorers (1-5)

Grant Project Summaries

Spokane County Water Use Inventory & Demand Forecast

Amount: \$195,000

Funding Source: WRIA 55/57 Project Grant, WRIA 54 Phase IV Grant, WRIA 54 Planning Unit Support Grant, WRIA 56 Phase IV Grant

Project Lead: Spokane County

Project Description/Scope of Work:

The objective of this project is to characterize existing water use throughout Spokane County and utilize the characterization to develop a water demand forecast model. The forecast model can then be utilized to analyze anticipated growth, current trends and activities affecting water use, impacts of full build out, impacts of climate change, and opportunities from increased efficiency and conservation.

Task 1: Rural Residential Water Use Survey – A water use survey will be utilized to characterize water use in rural residential areas.

Task 2: Develop Goals and Objectives – Goals and objectives for the water demand forecast model will be developed through an advisory committee.

Task 3: Data Collection and Assessment – Available data sources will be identified; data will be collected and evaluated for use in the model.

Task 4: Data Analysis and Preliminary Model Development – A preliminary water demand forecast model will be developed based on project objectives and available data.

Task 5: Presentation of Preliminary Model and Findings - Delivery and training on using preliminary water demand forecast model will be provided.

Task 6: Advisory Committee Participation – Monthly advisory committee meetings will be conducted to provide regular updates and opportunities for stakeholder participation.

West Plains Geologic Map

Amount: \$4,000

Funding Source: WRIA 54 Phase IV Grant

Project Lead: Bob Derkey

Project Description/Scope of Work:

Geologic mapping of the West Plains at 1:24,000-scale has been completed over the last decade. Some of this mapping has been published by the DNR, while others remain to be published. Published maps exist in the form of a geologic map in PDF format to individual 7.5-minute quadrangles. A compilation of this information into a single geologic map of the West Plains area will be completed. In addition to the geologic map one basalt flow stratigraphic column will be completed.

West Plains Hydrogeologic Database Development and Analysis

Amount: \$50,000

Funding Source: WRIA 54 Phase IV Grant

Project Lead: Spokane County/EWU

Project Description/Scope of Work:

Geologic Database Development

- Develop database framework and nomenclature
- Data Entry: The following data will be entered into an excel spreadsheet for 1,000 wells within the study area selected based on degree of certainty of location, the quality of the drillers log, and representation of the study area.
 - x,y coordinates
 - elevation
 - lithology

- identification of water bearing units
- static water level
- well yield
- well construction – casing, screen
- Create Database: Information from the excel spreadsheet will be imported into Rockworks to create a three dimensional relational geologic database.

Geologic Database Analysis

- Develop a preliminary stratigraphic framework that can be derived from the database.
- Develop cross sections of the study area.
- Develop three dimensional models of the surfaces of the primary geologic units.
- As supported by the data develop three dimensional surface of water bearing geologic units.
- Develop three dimensional model of the static water levels recorded on the drillers log.

Bradford Water Storage Project Study

Amount: \$4,000

Funding Source: WRIA 54 Phase IV Grant

Project Lead: Stevens County Conservation District

Project Description/Scope of Work:

Conduct study and provide conceptual engineering design – Develop acceptable scenarios for storage facility location, size, and discharge system. Contact adjacent landowners and coordinate efforts with Spokane Tribe Culture Department and Fish and Water Program. Provide all data necessary for applying for the appropriate permits.

Chamokane Creek Watershed Council Support

Amount: \$2,000

Funding Source: WRIA 54 Phase IV Grant

Project Lead: Stevens County Conservation District

Project Description/Scope of Work:

Work with the Chamokane Creek Watershed Council to develop an acceptable set of by-laws – The facilitator will work with Council members through a series of meetings to develop by-laws that will allow the Council to function into the future

Spokane River Forum Conference Support

Amount: \$3,000

Funding Source: WRIA 54 Phase IV Grant

Project Lead: Spokane River Forum

Project Description/Scope of Work:

Provide support for the 2011 Spokane River Forum conference, a two day event to be held in spring of 2011 featuring key issues facing the Spokane River watershed. The conference is a unique opportunity to share information, network with others and reach out to the public.

Development of a Water Availability and Sustainability Investigation Standard

Amount: \$51,000

Funding Source: WRIA 54 Phase IV Grant, WRIA 55/57 Phase IV Grant, WRIA 56 Phase IV Grant

Project Lead: Spokane County

Project Description/Scope of Work:

- Select and contract with a facilitation and technical consultant.
- Form Advisory Committee and Conduct 5-7 meetings.
- Review similar water availability and sustainability standards implemented in other locales.
- Develop ground water availability and sustainability policy criteria.
- Determine and evaluate scientific methodologies to assess ground water availability and sustainability.
- Develop preliminary ground water availability and sustainability investigation standard.

Lake Spokane Water Quality Project

Amount: \$34,625

Funding Source: WRIA 54 Phase IV Grant

Project Lead: Stevens County Conservation District

Project Description/Scope of Work:

Identification of potential nutrient inputs to Lake Spokane County:

- Review GIS data including land use, topography, hydrologic features, and housing/onsite septic system density.
- Conduct a visual assessment of the near shore area and lake bank and document with a photo record.
- Use proprietary satellite data analysis and visualization provided by Blue Water Satellite, Inc. to assess total phosphorus concentrations in Lake Spokane.

Water Quality Monitoring:

- Conduct near shore sampling for fecal coliform and optical brighteners used in most laundry detergents to determine potential septic system contributions to Lake Spokane.

West Plains Ground Water Age Dating

Amount: \$19,000

Funding Source: WRIA 54 Phase IV Grant

Project Lead: Spokane Conservation District/Spokane County

Project Description/Scope of Work:

Collect ground water samples from select wells in the West Plains for isotope analysis (oxygen, deuterium, radiocarbon, and tritium). This task will be coordinated with the Spokane Conservation District that is conducting a larger hydrogeologic study – *WRIA 54 and 56 Monitoring Well Drilling and Ground Water Study*.

West Plains Geologic Structures and Surficial Geology Mapping

Amount: \$15,000

Funding Source: WRIA 54 Phase IV Grant

Project Lead: EWU

Project Description/Scope of Work

- Digital Geologic Maps – Completion of the digital cartography, using ARCMAP, for nine unpublished geologic quadrangle maps covering 450 square miles of the western portion of WRIA 54. This is the final step in making this available to the public.

- Delimit geologic structures within the CRBG that affect the West Plains aquifer system – Graphically depict geologic structures, including faults, fracture zones, and local warping or gentle folding that affects the aquifer flow direction within the CRBG Basin.

Deep and Coulee Creek Watershed Restoration

Amount: \$19,000

Funding Source: WRIA 54 Phase IV Grant

Project Lead: Lands Council

Project Description/Scope of Work

- *Project Planning:* Property owner outreach and selection of planting sites. Property site visits include establishment of baseline photo points, assessment of existing vegetation, and visual assessment of stream flows.
- *Education:* Recruit local schools to participate in restoration activities. In class sessions focusing on restoration will be conducted as appropriate.
- *Restoration Activities:* Plant cottonwood, aspen, and willow at selected sites to enhance water quality, stabilize stream banks, and enhance wildlife habitat.
- *Reporting:* Prepare project memorandum; memo will include maps, photo points, summary of education activities, and an inventory of areas restored and changes in vegetation.

Lake Spokane Water Quality Project Phase II

Amount: \$17,000

Funding Source: WRIA 54 Phase IV Grant

Project Lead: Stevens County Conservation District

Project Description/Scope of Work:

- *Project Planning:* Amend the existing QAPP to include additional sampling events, sampling locations, and the following parameters: temperature, dissolved oxygen, pH, and specific conductance.
- *Water Quality Monitoring:* Water quality monitoring will be conducted in the near shore areas from just downstream of Suncrest to Tumtum. Sixteen of the sampling sites are on the Stevens County side of the lake and 4 are on the Spokane County side. Sampling will include collection of fecal coliform bacteria sample that will be analyzed at the Spokane Tribe's Tshimakain Creek Laboratory. Two field duplicate fecal coliform bacteria samples will be collected during each sampling event. Field measurements will be made of optical brighteners, temperature, pH, dissolved oxygen, and specific conductance.
- *Reporting:* Prepare a final report detailing field activities, sampling results, and findings. Data collected will be provided in a format in accordance with Ecology EIM format, including all of the required information, such as sample location latitude and longitude.

West Plains Groundwater Elevation Monitoring & Mapping

Amount: \$27,000

Funding Source: West Plains Groundwater Elevation Monitoring & Mapping Grant

Project Lead: Spokane County

Project Description/Scope of Work:

Establish and monitor a West Plains ground water level monitoring network to:

- Identify ground water flow paths and map hydraulic gradients for the principal geologic units on the West Plains.
- Identify the connection of water level response to hydrogeologic changes (increase/decrease withdrawal, recharge events, etc) and patterns of water level changes that indicate a common ground water body.
- Collect measurements from wells measured in 1994 as part of the 1995 study Hydrogeology of the West Plains Area of Spokane County, Washington by Deobald and Buchanan.
- Establish a monitoring network that can be used for future assessment of ground water level changes.

Deep Creek and Coulee Creek Seepage Runs

Amount: \$10,000

Funding Source: West Plains Groundwater Elevation Monitoring & Mapping Grant

Project Lead: Spokane County

Project Description/Scope of Work:

Conduct stream flow measurements in multiple locations on Deep Creek and Coulee Creek to determine if stream segments are gaining or losing water. This will identify stream segments that are exchanging surface water and groundwater.

West Plains Recharge Estimate

Amount: \$10,000

Funding Source: West Plains Groundwater Elevation Monitoring & Mapping Grant

Project Lead: Spokane County

Project Description/Scope of Work:

Utilize the United States Geological Survey (USGS) Deep Percolation Model to estimate recharge to the West Plains groundwater system from precipitation.

Subsurface Projection of the Stratigraphy of the CRBG and Paleochannel Units in the West Plains Area

Amount: \$25,000

Funding Source: West Plains Groundwater Elevation Monitoring & Mapping Grant

Project Lead: EWU

Project Description/Scope of Work:

- Expand the existing West Plains database. An additional 200 wellheads, field located with GPS, will be added to the existing West Plains hydrogeologic database.
- Collection and geochemical analysis of basalt samples. Results will be used to discriminate between formations and members of the Columbia River Basalt Group. A QAPP in accordance with Ecology standards will be developed for this subtask.
- Mapping basalt stratigraphy. Develop contour maps of the top of surface of two members of the Grand Ronde Formation – Sentinel Bluffs and Wapshilla Ridge Members.

- Paleo-Drainage identification and mapping. Review previous paleo-drainage mapping, incorporate new data, and develop new maps.

West Plains Delineation of Aquifer Zones within Basalt Formations Grant

Amount: \$33,000

Funding Source: West Plains Delineation of Aquifer Zones within Basalt Formations Grant

Project Lead: EWU

Project Description/Scope of Work:

- Complete the geologic maps of the Deep Creek, Four Lakes, Edwall, Little Falls, Long Lake, Medical Lake, Reardan East, Reardan West and Waukon 7.5-minute quadrangles.
- Detailed surface geologic mapping is essential to providing a factual upper surface of reliable data for projecting subsurface contacts on cross sections and fence diagrams.
- Describe the rock types within the plutonic basement and CRBG in the West Plains.
- Detailed description of rocks types within the CRBG from surface exposures including geochemical and age dating in order to A) establish the regional continuity or discontinuity of lithologic units; B) establish elevations and thickness of the aquifer horizons; and C) serve as a factual template in which to interpret well log descriptions.

WRIA 54 & 56 Monitoring Well Installation and Sampling

Amount: \$125,000

Funding Source: WRIA 54 & 56 Monitoring Well Installation and Sampling Grant

Project Lead: Spokane Conservation District

Project Description/Scope of Work:

Task 1 Compile Existing Data

Task 2 Prepare Preliminary Hydrogeologic Conceptual Model

Task 3 Develop Well Drilling & Construction QAPP and Select Driller

Task 4 Drill, Install, and Test Wells

Task 5 Final Report

Stevens County Education Project

Amount: \$33,000

Funding Source: Stevens County Education Project Grant

Project Lead: Stevens County Conservation District

Project Description/Scope of Work:

- Septic System Maintenance Workshops
- Classroom Presentations, field activities, field trips
- Teach the Teacher activities
- Public information development

