

DRAFT
Meeting Summary
WRIA 54 - Lower Spokane River Watershed
September 27, 2006

Location: Airway Heights Community Center, Airway Heights, WA.

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

Lloyd Brewer, City of Spokane	Rob Lindsay, Spokane County
Keith Holliday, WA State Dept. of Ecology	Reanette Boese, Spokane County
Doris Dietrich, Landowner	Jim DeGraffenreid, Lincoln County Planning
Hank Nelson, Avista Corporation	Dick Price, Stevens PUD
Brian Crossley, Spokane Tribe	Bart Haggin, Lands Council
Jay Landreth, Landowner	Stan Miller, Citizen
Judy Kaufman, Spokane Flyfishers	Jon Rudders, GeoEngineers
Cynthia Carlstad, Tetra Tech/KCM	Bryony Stasney, Golder Associates Inc.
Wes McCart, Landowner, Stevens County Farm Bureau and Stevens County Water Conservancy Board	
David Luders, Fairchild Airforce Base and Indian Village Estates Water Assoc.	
Jeanne Barnes, Spokane Association of Realtors and Lake Spokane Park Homeowners Association	

Call to Order

Bryony opened the meeting at 1:02 pm, noting that this is the first of two advertised WRIA 54 Public Meetings. Attendees introduced themselves and the interest / organization they represent. Bryony requested that each attendee complete the sign-in sheet.

Review of Meeting Summaries

The two items that remained unconfirmed following the July 26, 2006 meeting were addressed.

1. Cynthia confirmed via email that individual water rights are not accounted for within the population-based assessment to estimate permit-exempt well water use. The last paragraph on page 5, under Permit-Exempt Wells will be changed to read, "Using a population-based assessment and subtracting out the areas that are served by public water systems ~~or by individual water rights~~, it is estimated that approximately 3,600 permit-exempt wells serve households in WRIA 54."
2. The third paragraph on page 6, under Agricultural Uses will be changed to read, "Information on agricultural irrigation was obtained directly from the Hutterian Brethren for their five operations within WRIA 54 (i.e., the Spokane Reservation, Little Falls, West Plains, Long Lake and Espinola operations)." This provides a general overview of the areas farmed by the Hutterian Brethren. Details on crop water duties for these areas are available in a memo within the project file at Spokane County.

With these two changes, those present accepted the July 26, 2006 meeting summary as final.

The draft August 23, 2006 WRIA 54 Planning Unit meeting summary was reviewed page by page with the following request for change: 1) Brian Crossley asked that his first name be corrected from Brain to Brian on page four. With this change, those present accepted the August 23 2006 meeting summary as final. The final summaries will be posted on the County's web site at <http://www.spokanecounty.org/wqmp/wria54.htm>.

Public Comment

Rob Lindsay passed out copies of the groundwater sampling draft report that was completed by Ecology and Environment Inc. on behalf of the US Environmental Protection Agency (EPA) for the water well contamination in the area of the former NIKE missile site on the West Plains in the Deep Creek area. Spokane County staff will provide electronic version of the draft report upon request.

Rob Lindsay said that at the last Steering Committee there was discussion about transitioning into Phase 3 planning. The Steering Committee considered overlapping between Phase 2 and Phase 3 to keep the process moving. The Steering Committee requests approval from the Planning Unit for two items: 1) to prepare a Phase 3 grant application; and, 2) to consider and provide a recommendation to the Planning Unit for a Phase 3 consultant. The Planning Unit provided approval by consensus on both items. Rob noted that the two current Phase 2 contracts (one with TetraTech/KCM and the other with Golder Associates) identified the option for the Planning Unit to retain either Phase 2 consultant to continue to work on Phase 3. Rob encouraged those present to attend the Steering Committee meeting since they are open to everyone.

WRIA 54 Multi-Purpose Storage Work Group Meeting Update

Rob noted that the group met on September 13, 2006 and reviewed edits to the scope of work for the Multi-Purpose Storage project. The deadline for submission of further comments was September 22. No comments were received. Rob said that he would send out the scope of work to the Planning Unit today for their review with an October 6 deadline to submit comments to Rob Lindsay / Bill Gilmour at Spokane County.

WRIA 54 Instream Flow (ISF) Assessment Update

Rob noted that Pete Rittmuellor of EES Consulting (a subconsultant to TetraTech/KCM) returned on September 12 to collect low flow measurements in the transects below the rifle club. Avista lowered the Ninemile pool elevation over 6 feet to get the Spokane River down to a low flow condition. Pete was able to collect the information and feels that the data is defensible. The WRIA 54 instream flow field work is now complete. Cynthia noted that January would be a reasonable time to expect a draft report. Cynthia said that she would confirm this with Pete Rittmuellor.

Drainage Basin Prioritization

Bryony asked for a show of hands for those present who did not attend the August 2006 meeting in Lakeside. She requested that these attendees take part in the WRIA 54 drainage basin prioritization exercise. The purpose of this exercise is to poll the Planning Unit members at this early stage of the project to understand where people's priorities lie geographically in WRIA 54. This exercise will be repeated once the Planning Unit has had an opportunity to become familiar with the technical assessment information and become involved in the supplemental projects (i.e., instream flow, storage and water quality). Bryony passed around stickers and asked each person present who did not complete this exercise in August 2006 to place one sticker on the subbasin map of the watershed at the location they feel is their highest priority in terms of watershed planning issues. Bryony noted that this exercise will be repeated at the October 2006 Planning Unit meeting.

Watershed Issue Development

This exercise was also completed at the August 2006 meeting and is being repeated at this meeting and the October 2006 meeting to give those interested in the WRIA 54 watershed planning process plenty of opportunity to identify their watershed issues. Bryony noted that a watershed issue can be defined in a number of ways, including a risk area within the watershed, a watershed concern, a problem or a challenge.

Bryony brought people's attention to the large white paper sheets at the back of the room with issue category headings. Bryony asked those present to write their watershed issues on the sticky paper provided and to post them anonymously on to the large white sheets under the appropriate category. The exercise was opened to all those present – so that those who posted issues at the August 2006 meeting were able to post any additional issues. The categories presented on the large white sheets included:

- Surface Water and Groundwater Supply
- Instream Flow
- Water Quality
- Water Management (e.g., Water Rights)
- Habitat
- Growth and Land Use
- Education

The purpose of this exercise is to poll the Planning Unit members at this early stage in the project to obtain a baseline record of the Planning Unit's watershed issues. The results of this exercise will be recorded word for word in Spokane County's project file. A summary of the issues, in which similar issues will be combined, will be presented to the group once the exercise is complete. At this stage the group will have an opportunity to comment on how their issues have been represented. As with the subbasin prioritization exercise, this exercise will be repeated at the October 2006 meeting to allow others to participate. This issue identification exercise represents initial work for Phase 3 Planning and will be repeated again in six months to a year, after the Planning Unit has become more familiar with the watershed technical information.

After the group had completed the exercise, those present took part in reading aloud the issues posted.

WRIA 54 Mission Statement

Bryony asked those present to review the August 2006 version of the draft WRIA 54 Mission Statement:

Draft WRIA 54 Mission Statement (August 2006): The WRIA 54 Planning Unit will create a living watershed management plan providing implementation strategies striving to balance current and future water uses while improving water quality. The Plan will support economic well-being while protecting and enhancing the natural environment by creating collaborative partnerships among the populace, industry and regulatory agencies.

After consideration of recommendations provided by Randy Connolly and Brian Crossley via email and further discussion, those present agreed to revise the draft WRIA 54 Mission Statement to:

Draft WRIA 54 Mission Statement (September 2006): The WRIA 54 Planning Unit will create a living watershed management plan providing implementation strategies to manage water resources while improving water quality. The plan will support economic well-being, and protect and enhance the environment through collaborative citizen, business and government partnerships.

This draft will be emailed to the group and considered again at the October 2006 WRIA 54 Planning Unit meeting. Bryony noted that the Mission Statement can be reviewed and revised periodically to make sure that it reflects the mission of the group.

Phase 2, Level 1 Technical Assessment, Presentation and Discussion - by Cynthia Carlstad (TetraTech/KCM)

Cynthia noted that the purpose of today's presentation is to overview the draft Phase 2, Level 1 Technical Assessment report and provide an opportunity for discussion. The comment period for the draft report is open until October 27, 2006 (two days after the October WRIA 54 Planning Unit meeting). The following paragraphs summarize Cynthia's presentation. A copy of Cynthia's PowerPoint presentation will be posted on the County's web site at <http://www.spokanecounty.org/wqmp/wria54.htm>.

Cynthia described the organization of the document, noting that the Executive Summary at the beginning of the document provides a good and concise summary of the information and conclusions. The main body of the report includes descriptions of the information compiled, sources and assessment methods. The conclusions at the end of the report (Chapter 7) are not a summary but rather a listing of important issues in terms of the Watershed Plan. Cynthia provided a handout version of the conclusions section (Chapter 7) that highlights the points that are very important. The report also includes spreadsheets of the compiled data that are included on CD and not as hard copy.

Overview of the Watershed Planning Process

Cynthia provided an overview of the WRIA 54 Watershed Planning process, including the linkages between Phase 1 – Organization, Phase 2 – Technical Assessment, Phase 3 – Planning and Phase IV – Implementation. WRIA 54 is currently within Phase 2. Adjacent upstream watersheds, including WRIA 55 (Little Spokane), WRIA 57 (Middle Spokane) and WRIA 56 (Hangman Creek), are currently within Phase 4 of the Watershed Planning process. Cynthia noted that work completed in WRIA 54 will likely have to tie in to work completed within the upstream watersheds, particularly in the case of instream flow and water quality work related to the Spokane River. Cynthia noted that about 75% of the length of the Spokane River in Washington State occurs within WRIA 54.

Q: I read something about aeration potentially needed in WRIA 54 to improve water quality in the Spokane River but did not see this mentioned in the report.

A: This is related to the Spokane River TMDL collaboration group and is not related to the Phase 2, Level 1 Watershed Planning work. This could be addressed in the water quality supplemental work for WRIA 54.

What is a Level 1 Assessment?

Washington state law notes that the following is required within a Level 1 Assessment:

- Estimate of surface and ground water present
- Estimate of surface and ground water available
- Estimate of water represented by water right claims, permits, certificates, minimum instream flow rules, federally reserved rights
- Estimate of surface and ground water actually being used
- Estimate of water needed in the future
- Aquifer recharge and discharge areas
- Estimate of surface and ground water available for further appropriation

Ecology Guidance

Current Ecology policy and opinion acknowledges that it is a tall order to expect quantification of all these components within a Level 1 Assessment. Ecology now acknowledges that Planning Units have the discretion to complete a broad-type assessment to support development of policies or to focus on specific areas if the Planning Unit feels this is warranted.

Where did the information in the Level 1 Assessment Come From?

The TetraTech/KCM consultant team and Spokane County staff compiled information from as many existing data sources as we could reasonably obtain. This report compiles the information. No new data collection work was done specifically for this report.

Focus for Today's Presentation – Major Findings and Supporting Data

Previous presentations and discussions have focused on specific data elements:

- April 2006 – Study Area Characteristics
- June 2006 – Water Balance
- July 2006 – Water Use and Water Rights

Today's presentation will focus on findings and conclusions.

Surface Water

The first major conclusion relates to the nature of surface water. In terms of the water balance and managing water, the Spokane River dwarfs the remaining surface water courses. It is also the best understood surface water body in WRIA 54. Of the tributaries to the Spokane River, Chamokane Creek has been studied to support a federal adjudication and other activities. Most of the other smaller water courses, such as Deep Creek, Coulee Creek, Little Chamokane Creek and Mill Creek are also important but we do not know much about them. Some

data is being collected within the ongoing WRIA 54 Instream Flow study. In terms of potential future work, it would be a good thing to understand these tributaries better.

Aquifers

An aquifer is a saturated and permeable geologic unit that is capable of transmitting useable quantities of water. An aquitard is a low permeability unit (such as a clay) that restricts the movement of groundwater.

Aquifers are particularly important in terms of managing water availability into the future. There are five major aquifers in WRIA 54 and other smaller / minor aquifers (such as those associated with alluvial aquifers adjacent to streams). The five major WRIA 54 aquifers in terms of current and potentially future water supply are:

- Spokane Valley – Rathdrum Prairie Aquifer (SVRP Aquifer)
- Wanapum Basalt Aquifer
- Grande Ronde Basalt Aquifer
- Palaeochannel Aquifer
- Chamokane Valley Aquifer

A small portion of the Spokane Valley – Rathdrum Prairie Aquifer occurs within WRIA 54. The SVRP Aquifer provides water to a large number of people and significant flow to the Spokane River. Studies indicate that the SVRP Aquifer within WRIA 54 provides about 300 cubic feet per second (cfs) of flow to the Spokane River. This is important in terms of the quantity and quality of this water since it is such a significant portion of flow within the Spokane River, especially at low flow times of the year (when Spokane River flows are 1,000 cfs and sometimes lower).

The Wanapum Basalt Aquifer is stacked on top of the Grande Ronde Basalt Aquifer. It is probable that the Grande Ronde occurs below the Wanapum Basalt in all locations that the Wanapum Basalt is mapped at surface. The basalt aquifers provide water to the cities on the West Plains and to populations in the southwest of WRIA 54. These aquifers are regional to eastern Washington. However, there is insufficient data to understand where and how much water is flowing into and out of these aquifers in WRIA 54. In the West Plains area, the data is clear that more water is being pumped from these aquifers than is being recharged. For the deeper basalt aquifers in the West Plains area, recharge originates from a relatively small area and the transmissivity and hydraulic conductivity of the aquifers are relatively low (so it takes a relatively long time for water to get to these wells). If these wells are pumped at rates greater than the recharge rate, groundwater mining occurs (i.e. long term decline in groundwater levels). Recharge to the basalt aquifers may occur from palaeochannel deposits, from surface water and/or from water percolating from surface. The amounts and origin of water recharge to the basalt aquifers is not well understood within WRIA 54 (and in general recharge to aquifers is a difficult quantity to estimate). The basalt wells may be pumping water that occurs hundreds of feet below ground surface. The basalts include a series of stacked water bearing zones that occur primarily within the basalt flow tops and bottoms in both the Wanapum and Grande Ronde Basalts. To obtain a sizeable water supply, it is likely that a well would need to be drilled 200 feet or deeper to penetrate water bearing zone(s) in the Grande Ronde.

Geographically the basalts occur across the southern portion of WRIA 54, south of the Spokane River. At present, there are few wells in the south western part of WRIA 54 and little existing groundwater information. Therefore, there is a potential that additional groundwater supply from the basalt aquifers may be available in the south western part of WRIA 54 since there is no evidence to suggest that the basalt aquifers are not present in this area.

Q: Are any of these aquifers defined by Ecology as oversubscribed?

A: In most cases, Ecology considers an aquifer oversubscribed if groundwater levels are declining over time and if further extraction has the potential to reduce streamflows below levels needed to protect instream uses. Ecology will also consider impairment of existing water rights holders.

Palaeochannel aquifers comprise sediments that have infilled depressions in the basalt surface. In some cases, these sediments can be up to 200 to 300 feet thick. Information on the aerial extent and thicknesses of the palaeochannel aquifers in WRIA 54 is being improved but there are still areas where these features may not have been mapped or accurately characterized. These aquifers have been considered for groundwater supply development and also for disposal on stormwater and for aquifer storage and recovery (ASR). Based on the geologic mapping that has been completed, there is a significant palaeochannel aquifer that appears to be supplying water to Deep Creek. The palaeochannels may be important in providing baseflow to a number of surface water courses in southern WRIA 54. Bob Derkey of the Washington State Department of Natural Resources (DNR) is currently completing geologic mapping in WRIA 54 that will likely improve delineation of the palaeochannels. Rob Lindsay noted that Spokane County is no longer actively looking at conveying stormwater to the palaeochannel north of the polo grounds due to access issues across Spokane Airport property.

The Chamokane Valley Aquifer is a major sedimentary aquifer that occurs in the upper and middle Chamokane Valley. Existing information suggests that there may be an upper and lower aquifer separated by a clay aquitard. The upper aquifer is used for groundwater supply and is in hydraulic connection with Chamokane Creek. There may be a potential opportunity to develop the lower aquifer for groundwater supply in the future and/or to consider utilizing the system for groundwater storage and recovery.

Wes McCart noted that there may be another deep aquifer in the upper (i.e., northern) portion of Chamokane Creek, close to the boundary with WRIA 59. Wes said that he would check with the Hydrogeologist that told him about this aquifer and give the information to the consultant team.

Cynthia noted that hydraulic continuity (i.e., the connection and movement of water between shallow groundwater and surface water) occurs throughout the watershed. The interaction between the Spokane River and the SVRP Aquifer is a good example of hydraulic continuity.

Land Use / Land Cover

Current land use / land cover throughout the watershed includes: 49% forest; 25% agriculture; 18% open land; 3% barren; 2% low density residential; 2% water; 1% commercial / industrial / transportation; < 1% high density residential; and, < 1% wetland. Based on zoning information (which provides an indication of what build-out may look like) future land use may result in a significant change of land use / land cover to: 48% agriculture; 38% low density residential; 9% forest; 3% open land; 1% commercial / industrial / transportation; 1% water; and, < 1% high density residential. Brian said that he would provide more applicable GIS information for the Spokane Reservation. Cynthia asked that the representatives from Stevens County and Lincoln County review the zoning information and get back with any comments if the information does not look right.

Water Rights

Understanding of actual water appropriation is clouded by the number of water rights claims. Of all the authorized water uses, there are 1,723 water right claims (which are assertions about use of water prior to 1917 for surface water and 1945 for groundwater). This accounts for 30% of the number of water rights in WRIA 34 and 30% of the water allocation volume.

In terms of number of rights, the following are estimated: 3,600 permit exempt wells; 1,723 water right claims; and, 359 water right permits and certificates. In terms of the allocated annual volume, the following are estimated: 88,188 acre-feet for water right permits and certificates; 37,739 acre-feet for water right claims; and, 5,800 acre-feet for permit exempt wells. Due to potential duplication between paper water rights and permit exempt wells, the estimate of permit exempt well water use is considered to be conservative (i.e. higher than actual permit exempt well water use). Cynthia clarified that the Washington State Department of Health (WDOH) data for maximum daily demand (about 1,028 gallons per day) was used to estimate the annual volume associated with permit exempt wells. Illegal water use was not identified or addressed although it is known to occur. Cynthia asked Keith for guidance on how to address illegal water use in the report.

The information presented in the draft report represents an accounting of water rights using available information and does not attempt to clean up the water rights database in terms of duplication of claims and duplication between claims and permit exempt wells. It is intended to assist the Planning Unit to make planning recommendations.

Water Use

Cynthia presented an overview of the WRIA 54 public water system service areas. Outside of these service areas, people are considered to be self supplied. Annual water use is estimated as: 24,923 acre-feet (43%) by irrigation; 20,587 acre-feet (36%) by Group A water systems; 5,800 acre-feet (10%) by permit exempt wells; 5,752 acre-feet (10%) by Group B water systems; 548 acre-feet (1%) by other uses; 259 acre-feet (0.4%) by stock watering.

Cynthia said that this assessment indicates that less than half the water that is authorized by water rights is being used. Dick Price noted that in WRIA 59 (the Colville River Watershed), the Phase 2 work indicated that actual water use was only about 20% of water allocation.

Reanette noted that in Table 3-10 of the draft report, non consumptive water use for raising fish are included in the allocation volume and should not be. This change will be made before finalizing the report. Rob Lindsay noted that Spokane County has spent significant time reviewing the data provided to the consultant and how this data has been interpreted. Rob noted that this review may result in corrections to some of the numbers that are reported in draft.

Water Balance

Cynthia noted that a water balance is a useful tool to account for water inflow to and outflow from the watershed and to help identify data gaps and/or areas to target more effort in the future. However, there are limitations to developing a water balance – including available data and the scale of WRIA 54, which makes the water balance of limited use as a water allocation tool.

Inflows to WRIA 54 include: surface water; groundwater; precipitation; and, imported water. Outflows from WRIA 54 include: surface water; groundwater; evapotranspiration; and, net water demand (i.e., consumptive water use). The water balance equation can be summarized as:

$$\text{Inflows} = \text{Outflows} \pm \text{Change in Storage}$$

Table ES-1 summarizes the WRIA 54 average annual water balance. As indicated on Table ES-1, the inflow of water to and outflow of water from WRIA 54 via the Spokane River dominates the average annual water balance.

Important water balance conclusions include:

- The Spokane River dominates the water balance and is the best understood component.
- Other components are not well understood. These are critical for managing water at the subbasin level.
- The results of the water balance are useful for educational purposes and targeting future detailed studies.
- The water balance resolved to within 3.9%, a very close resolution, and within the anticipated error of the water balance calculations.

Future Water Needs

Cynthia noted that comprehensive plans, population projections and water system plans were reviewed to provide information on future water needs. This review indicates:

- Additional water needs are anticipated for domestic supply and commercial/industrial uses.
- The increase in water demand is expected to be 33% by 2025 (based on population projections and water system plans).
- Water rights and water system infrastructure may not match where water is needed.

By overlaying projected land use (based on zoning) with water system service areas, there are some areas where water system service areas do not align with where water demand is likely to be. This issue (water system planning to provide for future growth) could potentially be addressed through a water storage project.

Q: Is this a function of pre-authorized rights to develop?

A: This information uses two sources of general planning information: County zoning and water system planning. The need to provide water is generally acknowledged but not provided for within comprehensive planning.

Reanette suggested also considering review of the Urban Growth Boundary (UGA) information since water system planning now incorporates consideration of the UGA.

Role of Water Conservation in Future Water Demand

Water conservation could play a huge role in reducing future water demand. As an example, outdoor water use between April and October dwarfs the amount of water used indoors. For the City of Spokane, outdoor water use is about 75% of the total water use.

David Luders noted that water use information for Fairchild Airforce Base does not appear to be included. Cynthia said she would check this and work with David as necessary.

Water Quality

Cynthia noted that this is a very general look at water quality in WRIA 54 and that the intention of the Planning Unit is to do more detailed water quality work as a supplemental project. The information in the draft report provides primarily an overview of water quality activities for the Spokane River.

Water Quality

Cynthia noted that the draft report includes a very general look at water quality in WRIA 54 and that she believes that the intention of the Planning Unit is to do more detailed water quality work as a supplemental project. The information in the draft report provides primarily an overview of water quality issues for the Spokane River, including phosphorus and other nutrients, dissolved metals and polychlorinated biphenyls (PCBs).

Report Review Schedule

Cynthia outlined the following schedule for the Phase 2, Level 1 Assessment:

- July 26, 2006 – Draft report available
- September 27 – Public meeting
- October 25 – Public meeting
- October 27 – Comment period closes
- November 17, 2006 – Final report available

Questions and comments can be directed to:

- Cynthia Carlstad – cynthia.carlstad@tetrattech.com
- Bill Gilmour - (509) 477-7260 bgilmour@spokanecounty.org

Public Comment

Brian noted that the Spokane Tribe is considering contracting the USGS to gage Chamokane Creek. Brian will provide an update at the next meeting.

The Lake Spokane Protection Association will be meeting on October 5 at Lakeside Middle School in the evening.

West Branch of the Little Spokane River group will be hosting a public meeting in Spokane Valley at Riverside High School from 6:30 – 8:30 pm.

General Schedule Announcements

The following meetings are scheduled:

- The next WRIA 54 Steering Committee is scheduled for Wednesday October 11, 2006, 10 am – noon at the Spokane County Public Works Building, Conference Room 4A, 1026 W. Broadway Ave, Spokane, WA 99260. This meeting is open to everyone.

Next Meeting Date and Adjourn

The next Planning Unit meeting, also an advertised public meeting, is scheduled for October 25, 2006, 6:00 – 9:00 pm at the Lakeside High School library. The library is located opposite the cafeteria.

The meeting was adjourned at 3:55 pm.