Meeting Summary
WRIA 54 - Lower Spokane River Watershed
July 28, 2010

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

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

Mike Hermanson, Spokane County
Brian Crossley, Spokane Tribe
Rob Lindsay, Spokane County
Bob Derkey, Retired Geologist
Craig Volosing, Palisades Neighborhood
Linda McCollum, Eastern Washington University
Dick Price, Stevens County P.U.D
Larry Guenther, Stevens County
Bill Rickard, City of Spokane Water Department
Rusty Post, Department of Ecology
Rick Noll, Spokane Conservation District
Linda Kiefer, Avista
Cynthia Carlstad, Tetra Tech
J.D Marshall, Forest Capital Partners
Meghan Lunney, Avista
Doug Greenlund, City of Spokane
Jeanne Barnes, Spokane Association of Realtors, Lake Spokane Park Homeowners Assoc.
Kelly Williquette, City of Airway Heights
David Luders, Indian Village Estates Water Association
Charlie Kessler, Stevens County Conservation District
Jon Jones, Department of Ecology

CALL TO ORDER / INTRODUCTIONS

Cynthia Carlstad opened the meeting at 10:00 am. Participants introduced themselves.

REVIEW OF MAY 2010 MEETING SUMMARY

Cynthia asked for corrections and edits needed on the draft June 23 meeting summary. Three corrections were made:

- Page 4 – Recommendation WQ-1, Approach and Action Items, paragraph 1, last line – change word "coordinate" to "coordination."
- Page 7 - MOA is not yet signed by all governments. Wording changed to "MOA is complete and ready to be signed . . ."
- Page 7 – regarding recommendation WRA-1, Linda Kiefer corrected her role as participant rather than lead.

PUBLIC COMMENT

No public comment.

USGS CHAMOKANE WATERSHED HYDROGEOLOGIC STUDY UPDATE

Sue Kahle of the USGS opened the presentation and provided an overview of the project. The study was initiated in 2007, and was prompted by concerns about the possible impacts of increased groundwater use on surface water in the Chamokane Creek basin. It is a two phase study with the following objectives:

- Phase 1 – Characterize the hydrogeologic setting and ground- and surface-water interactions in the basin and obtain an adequate data set to be used in the computer flow model.

- Phase 2 – Construct and calibrate an integrated groundwater/surface-water flow model and simulate the effects of different ground-water withdrawal and recharge conditions. The 1979 adjudication requires that junior water rights be regulated based on instream flow in Chamokane Creek. The USGS was asked to look at how additional permit-exempt well withdrawals may affect streamflow, and also whether withdrawals from the lower aquifer may affect streamflow.

The bulk of the data collection and characterization tasks were completed between 2007 and early 2010. The peer and cooperator reviews for the Phase 1 report are complete. Model development began in 2009; model calibration and simulation will continue into early 2011, with the final evaluation and report planned for completion in August 2011.

The data set collected to develop and calibrate the model consists of three data categories: groundwater levels, stream discharge, and meteorological (climate) data. Approximately 100 existing wells were monitored. Six wells were instrumented with pressure transducers to record water level at hourly time increments. The project team is currently following up on a few remaining data needs such as a seepage run between Ford and the falls on Chamokane Creek.

A hydrogeologic framework was developed based on the available geologic data. This framework from a representative cross section shows the following geologic units:

- Upper outwash aquifer
- Landslide unit – talus present along the valley side in some areas
- Valley confining unit – primarily clay
- Lower aquifer
- Basalt – present along the western valley side
- Bedrock – the lowermost unit, and eastern valley side

The thickness of the upper aquifer is generally 50-100 feet, with thicker areas up to 150 feet or more in the main Chamokane Valley. Thinner areas occur primarily in the Camas Valley and along the valley margins throughout the basin. Thickness of the confining unit follows a generally similar pattern, with over 300 foot thicknesses present in areas, particularly in the northern portion of the watershed. There is currently not enough data available to evaluate the thickness of the lower aquifer.

Groundwater flow directions in both the upper and lower aquifer generally align with Chamokane Creek. A groundwater divide exists between WRIA 54 and WRIA 59 near Springdale. Land use is primarily forest, with some agriculture. Estimated well pumpage from permit-exempt wells and public water supply wells has also been quantified.

Matt Ely of the USGS described the modeling approach and showed some early calibration results. The project team is using a coupled groundwater/surface water model called GSFLOW. It uses PRMS for surface water and MODFLOW for groundwater. They will calibrate the model to simulate 1980-2009 conditions, and then use it to simulate effects of various climate and management scenarios.

Matt talked through each of the water balance components that must be modeled, and noted that evapotranspiration is most significant component.

The model utilizes 1000 square-foot cells, and has eight layers:

- Upper aquifer – two layers. Shallow layer is critical for modeling groundwater/surface water interaction.
- Confining unit – two layers
- Lower aquifer – one layer
- Landslide unit – one layer
- Basalt – one layer
- Bedrock – one layer

Streamflow geometry and routing are important to model accurately, and are fairly complex in the Chamokane because of the intermittent nature of the creek. Paired surface water / groundwater measurements provide input on the relationship between groundwater levels and streamflow.

Currently the surface water model and groundwater model work well independently; but are not yet working well together. Timing of flow peaks are slightly off, and overall there is a slight bias toward too much water. Low flow calibration looks pretty good already. Matt will be working to refine the PRMS and MODFLOW models separately, integrate them in GSFLOW, and calibrate the model.

Q - What is the timeframe for data being used for calibration? A – It varies for each component, but tend toward more recent because of better available data.

Q – How is the temperature/precipitation relationship modeled to accurately represent the large variance that can occur from year to year? A – The team seeks to accurately model a variety of extreme events to ensure the model is simulating correctly.

Q – How was elevation of the wells established? A – DEM and differential GPS for some.

Q – Please explain more about the groundwater divide between WRIA 54 and 59. A- Observed groundwater levels are similar on each side, so this indicates that the exact dividing line may have the ability to shift a little. In other words, it is not a "no-flow" boundary like others in the model.

Q – Please explain more about the lower aquifer discharging at the falls. A- The lower aquifer must pinch out as it does not persist downstream from the falls, but is present above. The seepage run will hopefully shed more light on what is going on at that location.

Q – What per capita water consumption rates were used? A – 210 gpd

Q – Were well logs corrected? A – Location corrections were made. Lithologic information was used from logs, and appeared to be of adequate quality for this purpose.

Q – Were any monitoring wells drilled? A – No

Q – How many surface water sites were monitored? A- 28

DETAILED IMPLEMENTATION PLAN

Review timelines and milestones write-up

Cynthia reviewed the schedule for completing the Detailed Implementation Plan (DIP). The DIP must be completed by October 22, 2010, and she plans to have a first draft to present at the next Planning Unit meeting. She referred meeting participants to the June 23 meeting summary, which contains the next steps for each of the high priority projects. Projects are categorized as early action implementation projects (completed or ongoing), immediate-term implementation projects (will be initiated within 1-2 years), medium-term implementation projects (will be initiated within 3-5 years), and long-term implementation projects (will be initiated within 6-10 years). (See June 23, 2010 meeting summary for complete write-up.) This structure will form the basis of the Detailed Implementation Plan. Recommendations that were not identified as high priority projects will be placed in the long-term implementation category. Level of detail will be variable, depending on how many specifics the project lead has developed.

Implementation project teams report-out

Four implementation teams made progress during July, and provided a report to the meeting participants.

West Plains Hydrogeologic Investigation (Watershed Plan Recommendations TI-1, WS-1)

Mike Hermanson reported that the work group held its first meeting on July 21 and developed a draft scope of work for the project (see handout). He indicated that they are using a phased structure for the project, so that it can be implemented in pieces as funding allows, and still be cohesive and work toward the common goal. The following phases have been identified:

- Hydrogeologic database
- Groundwater elevation monitoring network
- Monitoring well installation
- Groundwater age dating
- Limited gravity survey

Hydrogeologic database is a natural first step, and Spokane County has requested funding from Ecology for some work immediately from leftover FY11 funds.

The study area has not yet been completely determined, but preliminary discussion focused on the West Plains area with highest immediate development potential. The work group will likely meet on an as-needed basis as work progresses, more as a technical group than an advisory group.

The City of Airway Heights applied to EPA for a more extensive study, but the status of funding is not known yet.

Dick Price asked about the information in the Phase 2 Level 1 Technical Assessment that suggested water may be available from the basalt aquifers in the western part of the WRIA. No one was sure what feature was referenced. *Follow-up note: Dick was referring to a statement that CRBG aquifers in the southwest portion of WRIA 54 could present an opportunity for significant additional withdrawal in this area.*

Development of Subdivision Water Availability & Sustainability Investigation Standards (Watershed Plan Recommendations LU-6, 7, 8, 11)

Mike Hermanson described this proposed project. He explained that it will address a core weakness in the development review process that there is no guidance for how to determine whether a water supply is available and sustainable for development applications. This project would develop flexible technical guidelines that could be implemented at a site scale. The project would require supplemental funding, and would include an advisory committee to help guide and review the approach, constraints, and preliminary work products.

Mike described the elements of the project:

- Review similar programs implemented in other jurisdictions. He indicated there is a Texas model that may have promise.
- Develop groundwater availability and sustainability policy criteria
- Determine and evaluate scientific methodologies to evaluate groundwater availability and sustainability criteria
- Develop groundwater availability and sustainability investigation standard
- Pilot test – hire outside consultant to pilot test

Dick Price emphasized that for this to be successful, it is critical that Ecology be involved, otherwise they may not acknowledge and accept it. He also described the overlay zone approach being implemented by Stevens County to address where exempt wells may be a problem. Mike and Rob Lindsay reported that they are meeting with Clay White of Stevens County next week, and hope that there is transferability in the methodologies that Clay is using.

There was discussion about the technical versus policy aspects and applications for this project. Mike emphasized that it is envisioned to be primarily technical, to provide the foundation for future policy. It is also intended to be for a site-level scale that could be expanded to a larger area if needed. He indicated that the health district has a hydrogeologic study protocol that may serve as a starting point, but that protocol has no focus on off-site impacts and sustainability.

Request for Watermaster (Watershed Plan Recommendation WRA-1)

Dick Price updated the group that he sent a letter to Rusty Post requesting that Ecology request funding for a watermaster for WRIAs 54, 55, 57, and 59. Rob Lindsay followed up with a support letter to Bill Zachman. Dick emphasized that in his view the watermaster would have a primary role in active water management, which may include shutting off those without water rights, coordinating and adjusting water delivery to adapt to current conditions and need, potentially issuing temporary permits, policing overuse of exempt wells, and education. Linda Kiefer commented that the education component is a significant role for the watermaster because that person is out in the field interacting with water users on a regular basis.

Rusty Post reported that he had discussed the request with the Ecology Water Resources Program. They are supportive of the request, but are still recovering from staff reductions during the recent budget cuts, so may have higher priority staffing needs that must be addressed first. This was discussed further, and creative approaches such as local partnership funding may warrant further exploration. Rusty indicated that he will follow up with Keith Stoffel, and specifically discuss with Keith how the WRIA 54 WIT could elevate the priority of this within the agency's budget requests by providing additional information for the request. Dick and Linda will draft a job description that Rusty can use in his discussions with Keith Stoffel.

Craig Volosing suggested that WRIA 54 also consider a smaller scale water master request, perhaps as part of the job description for an existing staff person. This may also help push ahead on additional technical

studies that are needed in WRIA 54.

Bradford Storage Project (Watershed Plan Recommendation WS-3)

Charlie Kessler described this project. Private landowners Lee and Renee Bradford are willing to allow construction of a storage pond on their property in the Camas Valley portion of Chamokane Creek. The pond would capture runoff from an intermittent stream on their property. The pond size is yet to be determined, but concept would be approximately 10 acres in area. The purpose of the storage pond would be to (1) mitigate flood flows and the streambank erosion caused by these high flows; (2) low flow augmentation; and (3) wildlife habitat enhancement. Charlie indicated that the Bradfords are not necessarily seeking irrigation water from the pond.

Update on Chamokane Watershed Council

Charlie Kessler reported that there has been good participation, including representatives from Forest Capital. Forestry issues are a major focus for participants, and their August 24 meeting will be dedicated to this topic.

LOOK-AHEAD TO AUGUST PLANNING UNIT MEETING

Cynthia announced that the August planning unit meeting will be scheduled for 10:00 to noon on August 25. The draft DIP will be presented at the meeting and hard copies will also be available.

PUBLIC COMMENT

Mike commented that he will send out the MOA to all who need to sign it.

Cynthia suggested, and everyone agreed that the group transition to the name "Watershed Implementation Team"

Brian Crossley announced that the Spokane Tribe will be hosting a dinner for Spokane River Forum paddlers on Saturday, July 31. Rob Lindsay added that there is more information about paddling the river with the Spokane River Forum on the Forum's website: http://www.spokaneriver.net/

Rob Lindsay thanked Sue and Matt for providing an informative update on the Chamokane groundwater study.

ADMIN & GENERAL SCHEDULE ANNOUNCEMENTS

The following schedule items were announced:

- Next Watershed Implementation Team meeting is August 25th, from 10 to noon, same location
- Chamokane Watershed Council meeting is Tuesday, August 24, 5:30 pm at the Springdale Town Hall

ADJOURN

The meeting was adjourned at 11:50 am.