



## **TECHNICAL MEMORANDUM**

**TO:** Rob Lindsay, Spokane County Water Resources      **DATE:** April 17, 2007  
**FR:** Bryony Stasney, L.HG.      **OUR REF:** 053-1001.100  
Golder Associates Inc.  
**RE: INTERIM CONSOLIDATED LIST OF WRIA 54 ISSUES**

This memorandum presents a second consolidated list of the water resources issues identified by those present at the WRIA 54 Planning Unit meetings on August 23, September 27 and October 25, 2006. A verbatim list of the issues was presented to the Planning Unit members for review and comment in November 2006. The first consolidated list was presented to the WRIA 54 Planning Unit members for review and comment in November 2006. This second consolidated list was presented to the WRIA 54 Planning Unit at the February 28, 2007 Planning Unit meeting. This issue identification and consolidation work was completed by the WRIA 54 Planning Unit within Phase II of Watershed Planning in fulfillment of subtask 1.2 of Amendment No. 4 of the grant between Ecology and Spokane County (Grant No. G0400096). These issues will be further consolidated, revised / added to, and prioritized in Phase III of Watershed Planning in WRIA 54.

### **Over-arching Guidance**

- ❑ All categories/sections/ areas of the WRIA Plan must be guided, whenever and wherever applicable, by the principles of sustainability and quality.
- ❑ Apply test of reflecting on consequences of plans and strategies and recommendations seven generations into the future.
- ❑ This watershed planning process should provide clear statement of goals and guidelines to achieve these goals.

## **SURFACE WATER AND INSTREAM FLOWS**

- There is a need to establish realistic instream flows for the Spokane River that protect instream and out-of-stream uses in WRIA 54 (i.e., fisheries, recreation, existing water rights, hydropower, and aesthetics) and consider instream flows in WRIA 57 and at Post Falls Dam. Instream flows should accommodate return of salmon and protect residential fish (e.g., rainbow trout).
- There is a need to establish instream flows for the tributaries to the Spokane River to protect instream needs (i.e., fisheries, recreation, water rights).
- There is a need to meet instream flows on Chamokane Creek and yet maintain water use for residents and the Spokane Tribe.
- There is a need to understand the relative contribution of tributary flows to Spokane River flow.
- There is a need to consider the economic value of instream flow (i.e. hydropower, fisheries, recreation, and aesthetics) vs. out of stream uses (domestic supply, irrigation).
- There is a need for more streamflow gaging.
- There is a need to understand the causes of low summer streamflows and augment summer streamflows. Low summer streamflows cause increased algal growth and inhibit many tributaries from being productive fisheries.

## **HYDROGEOLOGY AND GROUNDWATER SUPPLY**

- There is a need to better understand the hydrogeology of the watershed, including the connection between surface water and groundwater.
  - There is a need to identify available groundwater resources and understand the impacts of utilizing those resources on surface water. Currently, development is being permitted without really knowing the capacity of the aquifer(s) to provide groundwater supply.
  - Existing groundwater withdrawals on the West Plains are causing groundwater table declines and reduced flows in Deep Creek.
  - There is a need to complete a hydrogeologic study to determine if the aquifer in Stevens County (Camas and Ford) comprises one aquifer unit or two separated aquifer units.
  - *Add other specific issues here.*

## **STORAGE**

- Consider water storage as a means to balance high flows that occur during times of lesser water use and low flows that occur at times of high water demand.
  - Groundwater should be stored underground during the winter to support community and individual wells during the summer. Unused, spare capacity during the off-season could be utilized to replenish groundwater levels. This concept is known as Aquifer Storage and Recovery (ASR).
  - There is a need to consider water storage for Chamokane Creek to meet instream flows and to provide water for the Tribe, residents and projected growth.
  - DNR has 4,000 acres in the immediate Suncrest - Lake Spokane area that will be up for land exchange with developers. Consider for water storage?
  - Develop a water storage plan. *Being addressed by the multi-purpose storage assessment.*

## **HABITAT**

### Policy statements / goals for habitat in WRIA 54 include:

- Protect existing and plan for future habitat needs.
- Restore and protect water quality and quantity in WRIA 54 to protect and enhance habitat (including rainbow trout and salmon – where applicable and looking ahead to the future).

### Habitat issues in WRIA 54 include:

- There is a need to support the limited wetlands in the watershed for both habitat (e.g., migratory water birds) and water storage.
- Effect of streamside development on habitat both in stream (fishery) and terrestrial (wildlife).
- There is a need for a strong yet flexible riparian element.
- Need help with beaver problem. Can Fish & Wildlife relocate at a reasonable cost?

***Note: Consider how the Habitat Section of the Watershed Plan will dovetail with any Salmon Recovery Planning Efforts.***

## WATER QUALITY

Water quality policy statements / goals for WRIA 54 include:

- Improve water quality in WRIA 54.
- Strive to meet State and Tribal water quality standards.
- Maintain and enhance water quality for rainbow trout fishery where applicable.
- Avoid fish advisories. *Clarify – do you mean it is better to deal with the source of the problem as well as issuing a fish advisory?*

Water quality issues in WRIA 54 include:

- Surface water quality standards are not being met for point and non-point pollutants. The pollutants of concern are:
  - Aquatic weeds – *related to low summer flows?*
  - Temperature in the WRIA 54 reservoirs is limiting native fish populations.
  - Total dissolved gas (TDG) in the Spokane River and reservoirs in WRIA 54 during the spring – *related to hydropower operations?*
  - Sediment (clean and/or contaminated) in the Spokane River and in the reservoirs – related to river bank erosion and turbid run-off (e.g., caused by dryland farming).
  - Phosphorus in the Spokane River – related to wastewater discharge and overflow.
  - Dissolved oxygen in the Spokane River - related to wastewater discharge and overflow.
  - Polybrominated diphenyl ether - related to wastewater discharge and overflow.
  - PCBs – related to industry in Spokane.
  - *Pollutant(s)?* – related to historic mining in the Coeur d’Alene mining district and localized mining.
  - *Pollutant(s)?* – related to missile sites.
- There is a need to inventory and assess contaminated sites in WRIA 54: e.g., missile sites and the Midnight Mine.
- There are localized areas of ground water / aquifer quality degradation.
- The severe erosion adjacent to the 25-mile marker, north side of Long Lake, needs to be addressed.
- Need to keep domestic animals out of the river.

- The proposed channeling/pumping of surface runoff in the West Plains to paleochannel(s) needs to be followed by the WRIA 54 group.
- Once the water flows past, it becomes as in the past. **Clarify. Do you mean we need to be sensitive to the waterbodies downstream? Or we need to learn from our past? Reword as a policy / goal?**

Water quality management actions identified for WRIA 54 include:

- Equipment should be installed to oxygenate the Spokane River water entering Lake Spokane. Dissolved oxygen levels are sometimes too low to support fish and lead to algae blooms.

**WATER MANAGEMENT (e.g., WATER RIGHTS)**

- Adjudicate water rights in WRIA 54 and establish instream flow needs to determine whether or not additional water is available for allocation.
- The appropriation process for water rights takes far too long to occur. Request that Ecology process water rights transfers more efficiently. Ensure Ecology has the staff to evaluate and process water right applications for municipalities needing additional allocation of water in WRIA 54.
- WRIA 54 cities need to cooperate to address surface water and groundwater supply. Consider joint mitigation planning for water right applications.
- There is a need to enforce water metering requirements.
- There is a need for water conservation regulations and/ or mandates. Promote water conservation. Provide water conservation credits/rewards.
- Water reuse needs to become a priority.
- Assess the transfer of water from SVRP Aquifer to West Plains.
- Tribal water rights are unquantified. **What is the issue?**
- Develop priorities of importance for water use rights that move away from “first come first serve.” **You cannot do this without changing state law. You can prioritize allocation for future water by closures or setting flows along with a reservation that specifies the uses that qualify for the reservation.**
- Clarify rights of permit exempt well owners to be assured of continued water quality and quantity. Address illegal uses of permit exempt wells and permit exempt wells that impact senior water rights. Increase permit exempt well use for small to medium developments. **The first part is unclear. Do you mean clarify whether exempt well use can be curtailed if there is an instream flow set? Or, do you mean clarify if permit exempt wells are allowed to use 5000 gpd?**

- Keep water rights with the landowner. *You cannot do this without changing state law. Under state law, water rights can be transferred so long as the transfer meets State requirements.*
- Maintain and expand water rights, especially for agriculture and exempt water use due to growth. *What does this mean?? Rewrite as an issue. This contradicts the issue below.*
- Agricultural use of surface water and groundwater needs to be severely curtailed. *Rewrite as an issue. You cannot curtail use of water that has a senior water right.*

## **GROWTH AND LANDUSE**

- Need to consider the effects of development on water quality and habitat (i.e., increased population and lack of water causes degradation of water quality and habitat). The WRIA 54 Planning Unit should be involved in recommending ordinances regarding shoreline development (to the Cities and County). Shoreline development impacts habitat and water quality (e.g., nutrient levels). Also consider ordinances for development in forests (animal habitat). Consider impacts of access (roads).
- Growth and land use must observe growth management and/or other community guidelines to protect and restore fresh water quantity and quality.
- There is a need to ensure wastewater treatment capacity (both soils for septic and treatment plant capacity) to support current and future development.
- There are developed areas in watershed with older and/or inadequate wastewater and stormwater systems.
- There is a lack of linkage between land use regulation / growth and water system development / water availability.
  - Population density limits are too generous.
  - Limited water supply creates limitations for economic growth. Determine the amount of water available for future growth. There is a need to provide water and wastewater infrastructure for projected growth.
  - Stop grandfathering. What is required for new developments should be applied to old developments. Give a 3-year period to conform.
- Timber harvest and roads impact runoff period and velocities.
- Provide public access to important water related recreation areas.

**EDUCATION**

- Watershed Plan should include a public education component including:
  - Indoor and outdoor water conservation;
  - How to keep septic systems in good working order;
  - Haz-mat procedures and disposal of waste products;
  - How all other issues in the watershed (growth, water quality, instream flow, etc.) affect the overall (i.e., the holistic approach);
  - Early education and more education (from first grade to grave);
  - Education of small landowners;
  - Water quality preservation to create a public awareness and will to prevent pollution; and
  - Water quality and quantity problems in all subbasins.
- Brainstorm outreach to grass roots groups during Phase 3 to educate and attract to planning process.