The Hangman (Latah) Creek Water Resources Management Plan

APPENDICES

May 19, 2005

Appendix P

WRIA 56 EIS Alternative References

All EIS Alternative References are from The Washington State Department of Ecology's *Draft Environmental Impact Statement for Watershed Planning Under Chapter 90.82 RCW, March 2003.* Shorelands and Environmental Assistance Program. Ecology Publication # 03-06-013.

Recommendations and Strategies	Alternative Reference
ISSUE 1: PROJECTED FUTURE GROWTH **According to current data collection efforts and reports, some municipal water systems may not have enough water to meet projected future growth.**	
R1.a. Evaluate the potential to purchase or lease, valid current water rights for municipal supply.	**WP-7**
Strategy Research and develop a mechanism for this process.	**WP-7**
R1.b. Reclamation, conservation and reuse strategies shall be encouraged to increase water available for beneficial uses in the watershed.	**WP-5**
Strategy Further investigate opportunities.	**WP-5**
ISSUE 2: GROWTH MANAGEMENT **Projected growth over the next 20 years could have severe impacts on the water resources in the basin. Growth should be managed to minimize impacts**	
R2.a. Separate watershed management units may be identified and managed differently for water rights if future studies indicate a disparity between sub-basins and their groundwater/surface water relationships.	**WP-18**
Strategy Identify funding sources and develop studies to better understand groundwater/surface water interactions within the sub-basins of the watershed.	**WP-18**
R2.b. All proposed changes in GMA Comprehensive Plans, that affect housing density and require new withdrawals and/or the issuance of new water rights from the watershed should be strongly dependent on water availability.	**WP-16**
Strategy Further development of water availability information is required to assist local jurisdictions with future land use planning.	**WP-16**
Strategy: Local jurisdictions should develop a better understanding of the aquifer and water availability before conducting land use planning in the basin.	**WP-16**
Strategy: Request Counties, Cities, and/or Regional Health Districts to evaluate the quantity of water necessary (currently 1 gallon per minute), from a domestic exempt well before a building permit is issued.	**WP-16**
R2.c. Land use regulators should utilize water availability estimates described in the Watershed Management Plan. Minimum parcel size should be based on sub-basin estimates in areas where exempt wells will be the main source of domestic water.	**WP-16**
Strategy: All new domestic exempt wells should be regulated by any future Minimum Instream Flow Ruling developed by Ecology.	**WP-16**
Strategy: Policies that will limit the maximum daily withdrawals of domestic exempt wells to less than 5000 gallons per day should be investigated.	**WP-16**

Strategy: Request Counties, Cities, and/or Regional Health Districts to evaluate the quantity of water necessary (currently 1 gallon per minute,), from a domestic exempt well before a building permit is issued.	**WP-16**
ISSUE 3: PRIORITIES OF FUTURE WATER ALLOCATION **It is important to ensure adequate water supplies for instream and out-of-stream uses within the basin. Priorities need to be set for the watershed.**	
R3.a. Future allocation of water rights should be apportioned accordingly. **1. Municipal** **2. Domestic (group, domestic exempt)** **3. Stock water (requiring less than 5,000 gallons per day for ranging cattle)** **4. Light Industrial** **5. Commercial (retail, commercial livestock)** **6. Stock water (requiring greater than 5,000 gallons per day)** **7. Agriculture (irrigated)** **8. Heavy Industrial**	**N/A**
R3.b. Initiate a watershed based negotiation to achieve a cooperative agreement to address cross state line availability of water (both surface and groundwater).	**N/A**
Strategy: A process should be initiated to develop collaboration between appropriate multi-state stakeholders and agencies.	**N/A**
ISSUE 4: WATER CONSERVATION, RECLAMATION, AND RE-USE **The Planning Unit recognizes that the watershed may be fully allocated. Water savings will occur from implementing water conservation measures. Communities may want to consider instituting a plan to prevent shortages in the future.**	
R4.a Work with water purveyors to implement conservation programs required by the new Municipal Water Law.	**WP-1**
Strategy: A coordinated effort should be initiated between the State Department of Health and the water purveyors. A process should be facilitated to convene local purveyors to develop coordinated conservation provisions. These can take the form of individual plans.	**WP-1**
Strategy: Assess the need for additional conservation measures in the basin (aside from Municipal Water Law)	**WP-1, WP-4**
R4.b. Identify funding sources for small town infrastructure upgrades (*i.e.* leak detection, repair, storage, metering).	**WP-1**
Strategy: Funding sources should be identified.	**WP-1**
R4.c. Develop new legislation to prevent water saved by improved irrigation efficiency or conservation from being subject to relinquishment (systems who are not municipal water suppliers).	**WP-7, 8**

Strategy: Appropriate legislation should be drafted and submitted.	**WP-7, 8**
R4.d. Options for keeping current water rights and place of use in the watershed should be explored.	**WP-7, 8**
Strategy: Further investigation is needed to develop alternatives	**WP-7, 8**
R4.e. Funding should be requested from the Legislature to purchase or lease saved water (from R4.d.).	**WP-7, 8**
Strategy: A formal request should be developed and submitted to the Legislature.	**WP-7, 8**
R4.f. The potential to utilize the Conservation Futures Program for purchasing water rights should be explored.	**WP-8**
Strategy: The Conservation Futures Program should be explored to investigate this opportunity.	**WP-8**
R4.g. A coordinated water conservation education/information program should be developed and implemented. This program may be coordinated with a larger regional effort.	**N/A**
Strategy: A program should be developed. This program may also be developed in coordination with a larger regional program.	**N/A**
R4.h. Encourage the use of water conserving programs, actions, and technology (*i.e.* xeriscaping, low flow toilets and shower heads) for domestic (group, domestic exempt), light industrial, heavy industrial, commercial, agriculture, irrigation, and municipal uses.	**WP-1, 2, 3, 4, 5**
Strategy: This program should be developed and coordinated with appropriate agencies and departments.	**WP-1, 2, 3, 4, 5**
R4.i. A watershed drought management plan should be developed. This plan will initiate specific actions to be taken to conserve and preserve water in the basin.	**WP-1, 2, 3, 4, 5**
Strategy: A plan should be developed. This plan may be coordinated with a larger regional effort.	**WP-1, 2, 3, 4, 5**
ISSUE 5: GROUNDWATER/SURFACE WATER INTERACTIONS **Groundwater withdrawals from the deep basalt aquifer system in the upper basin do not have an immediate, direct impact on stream flows in the upper basin (Buchanan 2003). However, groundwater withdrawal in the upper basin may indeed have an impact on surface water flows in the lower basin, but it may be delayed by many years or decades. Furthermore, the impact may be so small that it would not be measurable in the lower basin.**	
R5.a. The groundwater connections between sub-basins should be studied and better defined.	**WP-18**
Strategy: A scope of work should be developed and funding for this study should be identified.	**WP-18**

R5.b. Groundwater levels need to be monitored to determine if aquifer mining is occurring within the basin.	**WP-18**
Strategy: A scope of work should be developed and funding for this study should be identified.	**WP-18**
R5.c. A study should be conducted to evaluate whether groundwater from adjoining watersheds is being utilized by municipalities on the edge of watershed (Tekoa, Cheney, Spangle). The addition of a dedicated monitoring station (well) should be established.	**WP-18**
Strategy: A scope of work should be developed and funding for this study should be identified.	**WP-18**
R5.d. A new permanent gaging station should be developed between the upper and lower watershed. This will help determine water interchange rates, instream flow levels (regulatory and recreational)	**WP-18**
Strategy: A real time gaging station should be established and maintained. Funding for the station should be identified to help support this.	**WP-18**
R5.e. Encourage the establishment of a new permanent gaging station near the stateline.	**WP-18**
Strategy: This station should be established and maintained. This station may be implemented through joint entities/stakeholders.	**WP-18**
ISSUE 6: ACTUAL WATER USE/ALLOCATION IN THE BASIN **The total certificated water rights in the basin are approximately 48 cfs. However, the actual use in the basin is not known.**	
R6.a. Determine the need for addressing compliance and enforcement of water rights and claims. Required resources should be identified.	**WP-13, 14, 15**
Strategy: The Watershed Implementation Team should determine the need and requirements for compliance and enforcement issues.	**WP-13, 14, 15**
R6.b. Determine the need and support for adjudication in the watershed. If supported, the appropriate sub-basins should be prioritized for adjudication.	**WP-12**
Strategy: The Watershed Implementation Team should determine the need and support for adjudication and then prioritize sub-basins as needed.	**WP-12**
R6.c. If appropriate, a petition should be filed with the State of Washington for general adjudication of water rights in the basin.	**WP-12**
Strategy: File a petition (if necessary).	**WP-12**

MULTIPURPOSE STORAGE	
ISSUE 7: STREAMFLOW AUGMENTATION AND STORAGE **The Hangman Creek Watershed is routinely impacted by low flows during the critical summer months of July through September. Improvements in storage and augmentation may prove to be beneficial to communities and stream flow levels.**	
R7.a. The Cities and Towns of Spangle, Rockford, Tekoa, and Latah should evaluate and investigate the causes for unaccounted water in their Public Water Systems. If high levels are found, actions should be taken to reduce the unaccounted for water.	**WP-1**
Strategy: If necessary, a leak detection program should be developed for these towns.	**WP-1**
R7.b. A streamflow augmentation program should be developed and implemented for Hangman Creek.	**WP-10**
Strategy: New and existing wells should be drilled and/or pumped to augment the streamflow with groundwater. This water may be purchased or leased.	**WP-10**
Strategy: Water rights should be purchased or leased from The City of Tekoa to augment streamflows.	**WP-7**
Strategy: Develop a system to utilize inchoate water rights, on a temporary basis, from appropriate cities and towns within the watershed.	**WP-7**
Strategy: Historic and current wetland sites should be acquired and restored.	**WP-53**
Strategy: Catchment basins should be built to capture and store water.	**WP-21**
Strategy: Balancing basins should be built to capture and store runoff during peak periods.	**WP-21**
Strategy: Dams should be built in the upper watershed to capture and store water.	**WP-21**
Strategy: Beaver ponds should be encouraged and protected throughout non-developed portions of the watershed.	**N/A**
Strategy: An education program on storage activities and benefits should be regionally coordinated and implemented. Funding should be identified.	**N/A**
Strategy: A cost-share program for snow fencing should be developed and maintained.	**N/A**
Strategy: Living and constructed snow fencing should be encouraged and supported throughout the watershed.	**N/A**
Strategy: Vegetated buffer strips should be encouraged and implemented throughout the watershed.	**WP-47**
Strategy: No-till/Direct Seed tillage operations should be encouraged throughout the watershed.	**WP-3**
Strategy: A No-till/Direct Seed Demonstration Program should be initiated and funded.	**WP-3**

Strategy: The Rock Creek sub-watershed should be targeted for reforestation efforts.	**WP-53**
R7.c. Encourage change of source for water rights from surface to ground water where feasible. Additional incentives may help involvement.	**WP-7**
Strategy: This option should be further explored..	**WP-7**
WATER QUALITY	
ISSUE 8: WATER QUALITY (FLOW RELATED) PARAMETERS **Hangman Creek is listed on the 1998 303(d) List of impaired water bodies for four flow related parameters (fecal coliform, pH, dissolved oxygen, and temperature).**	
R8.a. Participate in Lake Spokane D.O. TMDL process related to point and non-point sources in the Hangman Creek watershed.	**WP-38**
Strategy: The Watershed Implementation Team should participate in the Lake Spokane TMDL process	**WP-38**
R8.b. Participate in the Hangman Creek TMDL project.	**WP-38**
Strategy: The Watershed Implementation Team should participate in the Hangman Creek TMDL process	**WP-38**
R8.c. The information (data) gaps for short and long-term water quality needs should be evaluated.	**N/A**
Strategy: Information (data) gaps and needs should be evaluated. An action plan should be developed.	**N/A**
R8.d. The long-term trends of sediment loads should be evaluated.	**WP-52**
Strategy: A coordinated effort should be organized to evaluate trends.	**WP-52**
R8.e. The stream gaging operation throughout watershed should be maintained to assist with the TMDL study. The stations will assist in the determination of pollutant load allocations.	**WP-18**
Strategy: The gaging stations should be maintained	**WP-18**
R8.f. The installation of additional gaging stations to monitor the effects of BMP implementation should be supported. These BMPs should be recommended through the TMDL process.	**WP-18**
Strategy: Additional gages should be established (if necessary)	**WP-18**
R8.g. Stock watering impacts to surface waters should be minimized throughout the watershed.	**WP-34**
Strategy: An action plan should be developed to minimize livestock impacts. This effort should be coordinated with appropriate agencies	**WP-34**
R8. h. Incentives should be developed to encourage off creek watering systems for livestock.	**WP-34**

Strategy: A coordinated effort to develop incentives for off creek watering systems should be organized. This effort should be coordinated with appropriate agencies.	**WP-34**
R8.i. Incentives should be developed to improve riparian zones.	**WP-47**
Strategy: An action plan to improve riparian zones should be developed. This effort should be coordinated with appropriate agencies.	**WP-47**
ISSUE 9: SEPTIC SYSTEMS **Septic systems that are failing, improperly maintained or non-functioning can provide contaminants to surface and ground water.**	
R9.a. An education/information program should be initiated for septic system construction, care and maintenance.	**N/A**
Strategy: A program should be initiated and supported.	**N/A**
R9.b. A septic maintenance program should be established. Inspections should take place every three years. Septic system pumping should occur every six years.	**N/A**
Strategy: A program should be initiated and maintained	**N/A**
R9.c. Incentives should be developed for replacement and/or upgrades of substandard septic systems.	**N/A**
Strategy: A coordinated effort to develop incentives should be organized.	**N/A**
ISSUE 10: WELLHEAD PROTECTION **Wellhead protection is lacking in the smaller communities throughout the watershed.**	
R10.a. The needs for wellhead protection in smaller communities should be identified.	**N/A**
Strategy: The needs should be identified. An action plan should be developed	**N/A**
R10.b. Potential funding sources for wellhead protection in smaller communities should be identified.	**N/A**
Strategy: Potential funding sources should be identified	**N/A**
R10.c. The impacts of storm water handling in smaller communities should be identified.	**WP-40**
Strategy: Impacts of storm water handling should be identified. An action plan should be developed.	**WP-40**
R10. d. Identify potential funding sources for storm water system plans with wellhead protection program.	**WP-40**
Strategy: Potential funding sources should be identified	**WP-40**
HABITAT AND LAND USE	

ISSUE 11: LAND USE PLANNING, SHORELINES, AND DEVELOPMENT **The types and extents of land uses appropriate for the watershed should be compatible with the Watershed Management Plan's goals. These plans include both water quantity and water quality issues (future TMDL Plan). Riparian area and flood plain encroachment continues to occur throughout the basin (rural and urban).**	
R11.a. All development and construction proposals within the watershed should have a SEPA review and be reviewed by the Watershed Implementation Team for compatibility with the watershed management plan.	**N/A**
Strategy: The Watershed Implementation Team should request to be on review lists of all relevant agencies.	**N/A**
R11.b. All County and City Land Use Planning intended for WRIA 56 should be reviewed/coordinated with the Watershed Implementation Team for compatibility with the watershed management plan.	**N/A**
Strategy: A coordinated effort should be made with local planning departments to review land use planning proposals within the basin.	**N/A**
R11.c. The local Shoreline Management Plans and/or Critical Areas Ordinance should include a restriction on commercial, residential, and industrial development along streams, within the 100-year flood plain, and the associated channel migration belts.	**WP-49**
Strategy: The Spokane County Conservation District, the local jurisdictions, and Ecology should provide technical assistance to the extent possible.	**WP-49**
Strategy: The Watershed Implementation Team should make recommendations to land-use authorities for Shoreline Management Plans and Critical Area Ordinances.	**WP-49**
R11.d. If new commercial, residential, and industrial development within the 100-year flood plain occurs, then mitigation should be required for fish and wildlife impacts.	**WP-49**
Strategy: A coordinated effort should be made to review policies and provide comments.	**WP-49**
R11.e. All streamside/shoreline land uses (eg. Agricultural, urban, residential) subject to the jurisdiction of local regulations should implement Best Management Practices and establish appropriate riparian buffers to protect streamside habitat and water quality.	**WP-49**
Strategy: Work with appropriate landowners to inform and educate.	**WP-49**
R11.f. Technical assistance should be available for landowner consultation	**N/A**
Strategy: Technical assistance should be available through various sources	**N/A**
R11.g. Shoreline Management Plan regulations and Critical Area Ordinances should be enforced to the extent possible.	**WP-54**

Strategy: All local jurisdictions required to regulate shorelines should maintain adequate staffing for enforcement.	**WP-49**
R11.h. Greenbelts or conservancy corridors should be established to improve and enhance fish and wildlife habitat.	**WP-53**
Strategy: Applications should be coordinated, developed, and submitted to the Spokane County Conservation Futures Program.	**WP-53**
R11.i. A complete channel migration zone delineation project should be funded within the watershed and should be considered in future land use regulations.	**N/A**
Strategy: A scope of work should be developed. Funding sources should be identified.	**N/A**
R11.j. The current delineation of the 100-year FEMA flood plain designations should be reassessed. New boundaries should be determined by a professional engineer.	**WP-51**
Strategy: A coordinated action plan should be developed and submitted to FEMA.	**WP-51**
R11.k. Conduct feasibility study of a land acquisition/relocation program for structures within the 100-year flood plain.	**WP-53**
Strategy: A scope of work should be developed. Funding sources should be identified	**WP-53**
R11.l. Develop and maintain public awareness and education programs for riparian area function, benefits, and flood plain encroachment (This should be inclusive of residents, developers, and a broad range of stakeholders).	**N/A**
Strategy: A coordinated program should be developed. This program should be maintained over the long-term. Funding should be identified.	**N/A**
R11.m. The local jurisdictions should develop a coordinated flood response plan in conjunction with a flood warning system.	**WP-51**
Strategy: A plan should be developed and coordinated with local jurisdictions.	**WP-51**
R11.n. Establish a riparian restoration program for the watershed.	**WP-47**
Strategy: A program should be coordinated, developed and implemented. Funding sources should be identified. This program should be maintained.	**WP-47**
R11.o. Identify high priority riparian habitat to submit for consideration in the Spokane County Conservation Futures Program.	**WP-53**
Strategy: A process to determine high priority habitats should be developed. Priority habitats should be identified. An application should be developed and submitted to the Conservation Futures Program.	**WP-53**

R11.p. Coordinate and continue Riparian Buffer Cost-Share/and or loan programs.	**WP-47**
Strategy: The program should be coordinated and maintained. Funding should be identified.	**WP-47**
ISSUE 12: FISHERIES HABITAT **Fisheries within the Hangman watershed are stressed due to poor habitat, water quality and low water quantity issues.**	
R12.a. Fish barriers should be identified and mapped within the mainstem and tributaries. A feasibility plan to identify the benefits of removal of these barriers and an action plan to remove identified barriers should be developed.	**WP-45**
Strategy: An action plan should be developed to identify, map, and evaluate potential fish barriers.	**WP-45**
Strategy: Further action for identified fish barriers should be developed.	**WP-45**
R12.b. Conduct Proper Function Condition Assessment (PFC) on the remaining tributaries in the Hangman Creek Watershed.	**N/A**
Strategy: An action plan should be developed and coordinated. Funding sources should be identified.	**N/A**
R12.c. Evaluate whether the current hydrology is capable of supporting flows required for returning migratory salmonids.	**N/A**
Strategy: A body of hydrological information should be developed, analyzed, and reviewed.	**N/A**
PHASE IV PLAN IMPLEMENTATION	
ISSUE 13: IMPLEMENTATION PROCESS **The success of the Hangman Creek Watershed Plan depends upon the formation of a Watershed implementation Team, local acceptance of the plan, and participation of local and stakeholders, and coordination of regional efforts.**	
R13.a. An Implementation Plan MOA shall be developed between local governmental agencies and other required stakeholders.	**N/A**
Strategy: The Spokane County Conservation District shall undertake the development and completion of an Implementation Plan MOA.	**N/A**
R13.b. At such time as a Memorandum of Agreement between the Initiating Agencies is complete, a lead agency should be identified to develop the Phase IV grant application and assume administrative responsibility for the grant.	**N/A**
Strategy: The Spokane County Conservation District should be tentatively identified as the lead agency for plan implementation until such time as the Memorandum of Agreement formalizes this position.	**N/A**

Strategy: At such time as the Memorandum of Agreement between the Initiating Agencies is complete, the lead agency shall develop and submit the Phase IV grant application to the Washington State Department of Ecology.	**N/A**
R13.c. The current planning unit shall continue for no longer than one year under the current Operating Procedures or until such time as a completed MOA for Phase IV specifies otherwise.	**N/A**
R13.d. A Detailed Implementation Plan should be developed.	**N/A**
Strategy: A Detailed Implementation Strategy shall be developed for this watershed. The plan may include milestones, timelines, funding mechanisms, and obligations of local stakeholders.	**N/A**