

## Section 2

### Planning Process

This section presents the planning process followed by the local governments, tribal governments, agencies, and stakeholders in developing this watershed management plan.

#### 2.1 Initiating Governments

The initiating governments are Asotin, Garfield, Columbia and Whitman Counties, the City of Clarkston, and the Asotin County Public Utilities District (PUD) as the major water purveyor. In accordance with the WMA, the initiating governments for the WRIA 35 basin designated Asotin County PUD as the lead agency for watershed planning. As lead agency, Asotin PUD received grant funding from the State of Washington and contracted with the DOE to conduct this watershed planning effort.

#### 2.2 Planning Unit Mission and Participants

The Asotin PUD convened organizational meetings and established a core Planning Unit and Steering Committee with representation from various agencies and stakeholders in WRIA 35. The mission of the Planning Unit is to treat water as a valuable resource through the development and implementation of a watershed plan consistent with RCW 90.82 for the beneficial management of water resources to balance the present and future needs of local rural and urban communities, agriculture and other industries, fish and wildlife, and tribal communities and treaty rights.

In addition to the initiating governments listed above, the following entities are also participating as voting members of the Planning Unit:

- City of Asotin
- City of Pomeroy
- City of Starbuck
- Columbia Conservation District
- Asotin County Conservation District
- Pomeroy Conservation District
- Whitman Conservation District
- Washington Wheat Growers Assn.
- Washington State University Ag. Extension
- Tri-State Steelheaders
- Asotin County Sportsmen
- Blue Mountain Land Trust
- Washington State Caucus (represented by Washington Dept. of Ecology)
- Nez Perce Tribe
- Confederated Tribes of the Umatilla Indian Reservation
- Port of Clarkston
- Port of Whitman
- 12 Community Members

Stakeholders in the watershed, including local, state, and federal agencies, are represented on the Planning Unit in a voting capacity. Agency representatives also provide assistance and guidance. In addition to the voting members listed above, the following non-voting stakeholders involved in watershed planning for WRIA 35 include:

- Private landowners and land managers
- Asotin County Department of Emergency Management (DEM)
- Washington Department of Fish and Wildlife (WDFW)
- Snake River Salmon Recovery Board (SRSRB)
- U.S. Forest Service (USFS) – Umatilla National Forest
- U.S. Fish and Wildlife Service (USFWS)
- National Oceanic and Atmospheric Agency (NOAA) Fisheries
- Natural Resource Conservation Service (NRCS)

The Asotin PUD hired Economic and Engineering Services, Inc. (now part of HDR Inc.) to provide technical support in preparation of the watershed management plan and supporting documentation. The forward of this document includes a list of planning participants.

## 2.3 Planning Process

Voluntary watershed planning under the WMA occurs in three primary phases:

- 1) Phase I: Organization
- 2) Phase II: Conducting Watershed Assessments
  - a. Level 1: Summarize Existing Data and Identify Data Gaps
  - b. Level 2: Gather Additional Information to Fill Data Gaps
  - c. Level 3: Long-term Monitoring
- 3) Phase III: Developing a Watershed Plan

### 2.3.1 Planning Goals

Under Phase 1 of the Watershed Planning Process (RCW 90.82), the Planning Unit and Committee Organization for WRIA 35 – Middle Snake River Basin was formed in April 2003. During that process, the Planning Unit decided to address the required water quantity component of watershed planning along with the all three of the optional components including instream flow, water quality, and habitat. The habitat assessment component is being addressed under the concurrent Salmon Recovery and Subbasin Planning efforts. Information from these planning efforts is accounted for in the Watershed Plan.

### **2.3.2 Planning Elements**

The Watershed Management Act (WMA) identifies one required element (water quantity) and three optional elements (water quality, instream flows, and habitat) of watershed planning, Chapter 90.82 RCW– Watershed Planning Act. While developing its mission and planning goals in 2003, the Planning Unit determined that all four elements would be included in the Middle Snake Watershed Plan.

#### ***Water Quantity***

This element involves assessing water supply and use in the management area, and developing strategies for future use. It involves items such as assessment of available water, inventory of water rights, projections for future water demand, and methods for increasing available water. The planning unit develops alternatives for meeting current and future needs for both in-stream and out-of-stream objectives.

#### ***Instream Flow***

The planning unit may request that the DOE modify rules/regulations concerning existing minimum instream flows, or adopt new minimum instream flows for streams that do not have them. RCW 90.82.080 describes specific procedures for proposing instream flows.

#### ***Water Quality***

The Water Quality element includes items such as the degree to which existing standards are being met, the causes of water quality violations, consideration of total maximum daily loads (TMDL), and recommendations for monitoring. The planning unit is not authorized to set water quality standards, but can provide input as Ecology establishes and implements TMDLs. The planning unit may wish to develop its own change of goals for each water quality parameter, in addition to those contained in state water quality laws and regulations.

#### ***Habitat***

The Habitat element involves “coordination and development of the watershed plan to protect or enhance fish habitat in the management area.”(RCW 90.82.100). The law emphasizes integration with other laws and programs that address habitat restoration and recovery, particularly, the Salmon Recovery Act. Setting and restoring instream flows and managing demand and hydraulic continuity effects are among the key elements of habitat protection and restoration.

These elements or issues are typically interconnected and some overlap should be expected during their discussion. The following sections address the four key planning issues as they relate to the five individual implementation areas. Varying levels of detail are available for each area; as a result, the descriptions of key planning issues also vary between implementation areas.

Key factors in addressing aquatic habitat needs in WRIA 35 are the identification of major and minor spawning areas (MSA and mSA respectively), imminent threats, and priority protection and restoration areas. Projects and programs benefiting habitat were prioritized, during the Snake River Salmon Recovery planning process, based on their intrinsic ecological improvement potential. This prioritization targeted projects and programs that would show a “likely value in ...recovery” of the key species and have an “ability to protect, restore, or enhance treaty reserved resources of the affected Indian Tribes.”(Snake River Salmon Recovery Board, 2006).

### **Major and Minor Spawning Areas (MSA/mSA)**

Prioritization of streams was based on delineation between Major Spawning Areas (MSAs) and Minor Spawning Areas (mSAs). MSA’s are the highest priority for protection and restoration actions to quickly (within 2 to10 years) achieve the highest potential fish production in the basin. Actions in mSA’s will increase fish production and ensure spatial distribution but the potential is lower in these areas, therefore actions in these areas are a slightly lower priority than those in MSA’s.

### **Imminent Threats**

In addition, projects are prioritized based on imminent threat and designation as priority restoration and protection areas. Imminent threats are considered first priority projects, and include passage barriers that might delay migration, non-compliant fish screens and unscreened diversions that might entrain migrating fish or prevent passage, and dry stream reaches that prevent passage or cause stranding in spawning and rearing reaches.

### **Priority Protection and Restoration Areas**

Priority protection areas are stream reaches that, if allowed to degrade, represent substantial decline in abundance, productivity and life history diversity. Priority restoration areas are those that, if restored show greater gains in abundance, productivity and life history diversity when compared to other areas. Some stream reaches are considered as a high priority for both protection and restoration because they currently support high productivity but, with improvement, have the capacity to increase fish production. A complete explanation of priority protection and restoration is given in the SRSRP.

### ***Basin-Wide Goals***

The Planning Unit also developed the following basin-wide goals for WRIA 35 watershed planning:

- Protect existing water rights, private property rights and tribal treaty rights
- Emphasize voluntary and incentive-based management solutions
- Maintain and enhance the regional economy and provide future economic opportunities associated with the watershed hydrology, including but not limited to potable water, agriculture, industry, recreation and tourism

- Establish and maintain ongoing education and public involvement programs
- Establish a detailed funding plan for implementation, including: projects, programs, long-term monitoring and evaluation of watershed plan implementation
- Ensure fairness in distributing costs and burdens of water resource management actions
- Obtain local, state and federal agencies (regulatory and management) and tribal buy-in and cooperation for recommended management strategies
- Provide long-term reliable and predictable water supplies for human uses
- Identify minimum and target stream flows, and manage stream flows to enhance habitat conditions for salmonids, with emphasis on steelhead and Chinook
- Protect surface and ground water quality needed for public, private drinking water supplies, agriculture, recreation, fish and other uses
- Improve certainty, timeliness and efficiency in water right decisions
- Improve scientific basis for understanding baseline conditions
- Identify and implement water conservation and efficiency strategies
- Maintain productive riparian habitat and enhance degraded habitat for salmonids in all life stages

The Planning Unit started the Phase II assessment work in October 2003 and has since completed the water quantity, instream flow, and water quality assessments. The Phase II – Level 1 Assessment was completed in January 2005.

### ***Target Assessments***

The following Level 2 target assessments were completed in June 2006 and are discussed in more detail in Section 2.3.4 (supporting documents are listed after the description of each project):

- Final Level 1 Assessment (HDR 2005a)
- Multi-Purpose Storage Assessment – evaluation of the feasibility of using water storage to improve low flow conditions.
  - Water Storage Availability and Needs Assessment (HDR 2005b)
  - Wetland Water Storage Sites and Screening Criteria (HDR 2005c)
  - WRIA 35 Wetland Project, Preliminary Storage Sites (HDR 2005d)
  - Hydrogeologic Assessment of the Tucannon River, Pataha Creek and Asotin Creek Drainages, WRIA 35, Columbia, Garfield, and Asotin Counties, Washington (Kennedy/Jenks Consultants 2005)
  - Conceptual Design Report, WRIA 35 Wetland-Water Storage Project (HDR 2006k)
- Water Quality Assessment

- Patah Creek Fecal Coliform – Compliance with Water Quality Standards (HDR 2005e)
- Asotin Creek Fecal Coliform Assessment of Existing Data (HDR 2005f)
- Tucannon Temperature Conditions (HDR 2005g)
- Tucannon Temperature Assessment, Middle Snake Watershed, WRIA 35 (HDR 2005h)
- Tucannon River – Comparison of Water Temperature and Elevation (HDR 2005i)
- Middle Snake Watershed (WRIA 35), Tucannon River Temperature Study Investigation (HDR 2006a)
- Middle Snake Watershed (WRIA 35), Tucannon River Temperature Investigation–Model Results (HDR 2006b)
- Tucannon River Temperature Study, Draft (HDR 2006c)
  
- Instream Flow Assessment<sup>1</sup>
  - Stream Flow Management Framework, Draft (HDR 2005j)
  - Minimum Instream Flow Framework, Draft (HDR 2005k)
  - Proposal for Administrative Closures (HDR 2005l)
  - Proposed Flow Enhancement Targets for WRIA 35 Streams, Draft (HDR 2005m)
  - Tucannon River Minimum Instream Flow Recommendations (HDR 2006d)
  - Tucannon River Minimum Instream Flow Charts (HDR 2006e)
  - Stream Closure Analysis and Basis for Proposed Restrictions, Table A-2 (HDR 2006f)
  - Stream Closure Analysis Presentation (HDR 2006g)
  - Proposed Instream Flow Levels – Tucannon and Asotin Subbasins (HDR 2006h)
  - Stream Flow Management, Final Memorandum (HDR 2006i)
  - Response to Stream Flow Comments (HDR 2006j)
  
- Grande Ronde Assessment
  - Grande Ronde Level 1 Assessment Addendum, Draft (HDR 2005n)
  
- Water Storage

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<sup>1</sup> Note: The WRIA 35 Planning Unit conducted additional discussions with state agencies after the Level 2 instream flow assessment memoranda were submitted and developed revised recommendations from those documented in the memoranda. The final recommendations are documented in this Watershed Plan document.

- Conceptual Design Report, WRIA 35 Wetland-Water Storage Project (HDR 2006k)
- Water Storage Project-Options to Continue Project (HDR 2006l)
- Limited Evaluation of Aquifer Storage Options for Lower Pataha Creek (HDR 2006m)
- Watershed Plan
  - Middle Snake Watershed Plan, Draft (HDR 2006n)
- Other documents of relevance
  - Minimum Instream Flow Study of Tucannon River at Marengo (Washington State University 2004)
  - Storage Pre-Construction Grant – collect baseline information and develop conceptual design for one or more storage opportunities.

Information from both the Level 1 and Level 2 assessments has been used to support the Phase III – Planning. For purposes of the planning process, the basin has been divided into five “implementation areas” comprised of: Asotin Creek, Middle Snake, Pataha Creek, Grande Ronde and the Tucannon River implementation areas. These areas, as discussed in Section 1, were delineated based on land use, fish habitat and hydrologic characteristics of the different areas in the WRIA and do not imply priorities.

This document represents the culmination of the Phase III planning process, the WRIA 35 Watershed Plan.

### 2.3.3 Review of Existing Data

A Level 1 assessment of water quantity/instream flow and water quality in WRIA 35 was completed in January 2005 (HDR 2005). The assessment reviewed existing data and made a determination as to the adequacy of the information in quantifying the resources in the WRIA, in terms of water quantity/instream flow, water quality, and habitat. Habitat assessment was completed primarily with information from Snake River Recovery and Subbasin Planning. The Level 1 assessment for water quantity concluded:

- Agricultural (irrigation) use is the most prominent in the basin<sup>2</sup> but there is no readily available metered data for this type of use. Most of the agricultural use is derived from surface water sources. The largest single use is associated with urban irrigation and industrial/municipal use by areas served by the Asotin County Public Utility District (PUD), which utilizes ground water sources to meet these demands. Based on the water projection estimates through the planning period (2025), total demand in the basin is expected to be ~18,300 acre-feet per year, which includes both surface and ground water use. This is based on limited population growth and the assumption that irrigation use will not change significantly from current usage.

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<sup>2</sup> There are also large commercial/industrial and municipal uses in the Clarkston area based on water rights.

- There is a need to further examine the stream flow data in assessing the baseflow component from ground water returns, as well as to potentially identify gaining and losing reaches within the major basins in the WRIA.
- No formal minimum instream flows have been set in WRIA 35 by State rule. However, surface water source limitations closing or defining low flow limits have been established in several streams.
- Ground water discharge to streams is significant in the basin, ranging from approximately 30 percent in the winter months to over 90 percent of stream flow in the summer.
- Based on a rough estimate of the watershed-wide water balance, the net demands are less than 1 percent of the net precipitation in the basin.

### **2.3.4 New Studies Performed for Watershed Plan**

Supplemental studies and assessments were conducted to develop necessary data, and where applicable, define projects regarding instream flow, water quality, and multi-purpose storage in WRIA 35. This section briefly describes these studies.

#### ***Tucannon River Temperature Assessment***

Several reaches of the Tucannon River have been found to exceed the state water quality standards for temperature and have been included on Ecology's 303(d) list of impaired waters. In an effort to better understand the causes and extent of high instream temperatures, HDR staff compiled an extensive review of existing data, as well as conducted supplemental field studies within the Tucannon River Basin. The three major elements of this study included:

- Obtaining recent stream flow data from long-term flow monitors and augmenting available data with other short-term flow monitoring devices.
- Performing seepage studies (water inputs and outputs) throughout the Tucannon River basin and collecting other background data (i.e., WDFW stream temperature data, water rights data, irrigation withdrawal data, etc.).
- Conducting a riparian survey to calculate total potential for stream shading by measuring riparian canopy cover and riparian density.

These efforts were designed to provide enough information so that a comprehensive temperature model might be developed and the causes for high instream temperatures might be identified. As of November 2005, the data collection and field studies have been completed. A final report, summarized in Section 3.5.4 was completed in the June 2006 Tucannon temperature report (HDR, 2005h).

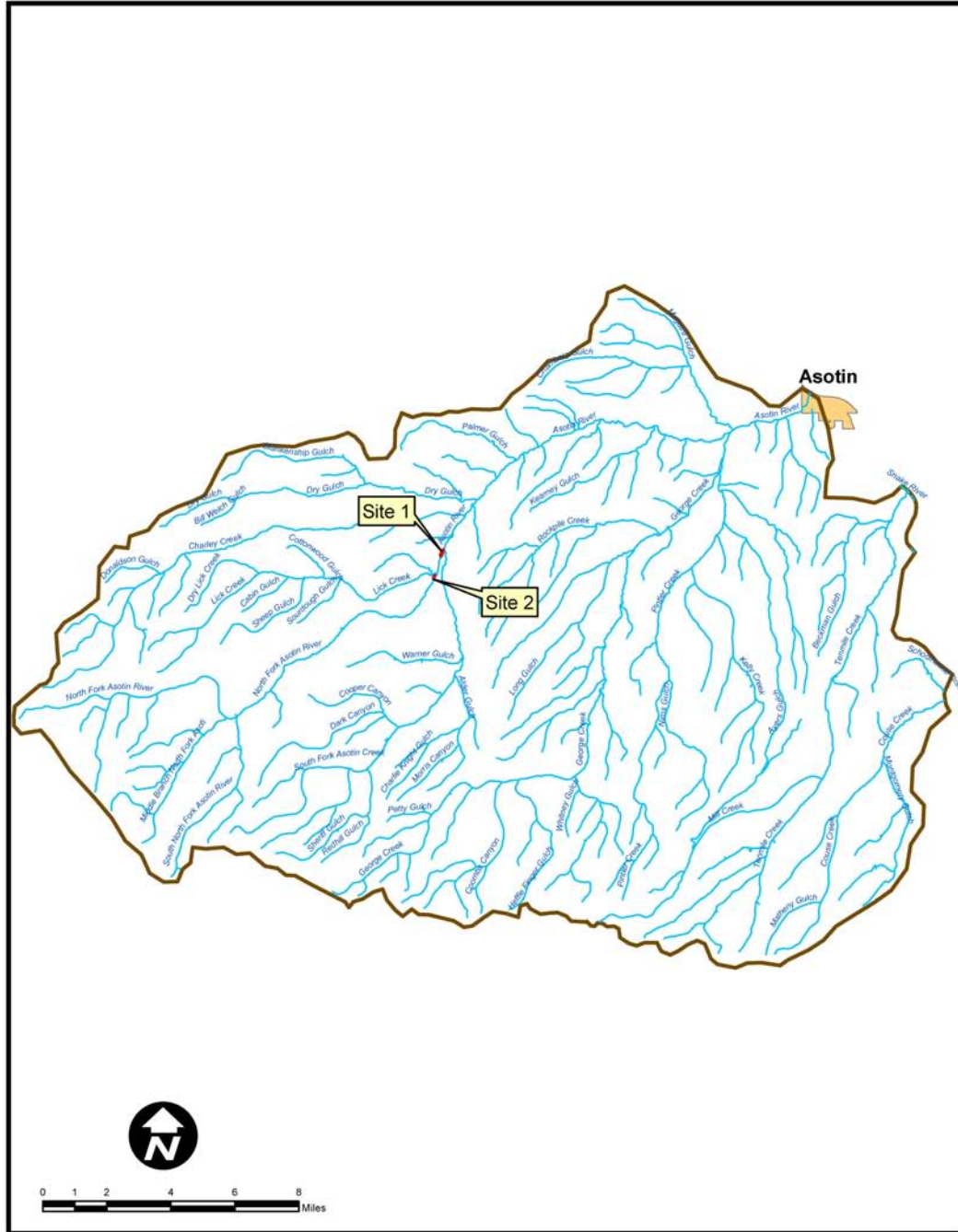


## ***Multipurpose Storage Assessment***

A multipurpose water storage project was conducted to identify a method that would provide additional water storage capacity for the WRIA 35 watershed. The project was funded through a Level 2 assessment and pre-construction grant from Ecology. The project was expected to increase stream flows during the summer months and help to reduce high instream temperatures for fish. The general scope of the project included:

- Initial project consultation with Planning Unit, land owners, and agencies
- Preliminary site review
- Agency consultation
- Site investigations
- Site design
- Scoping of permitting and construction specifications

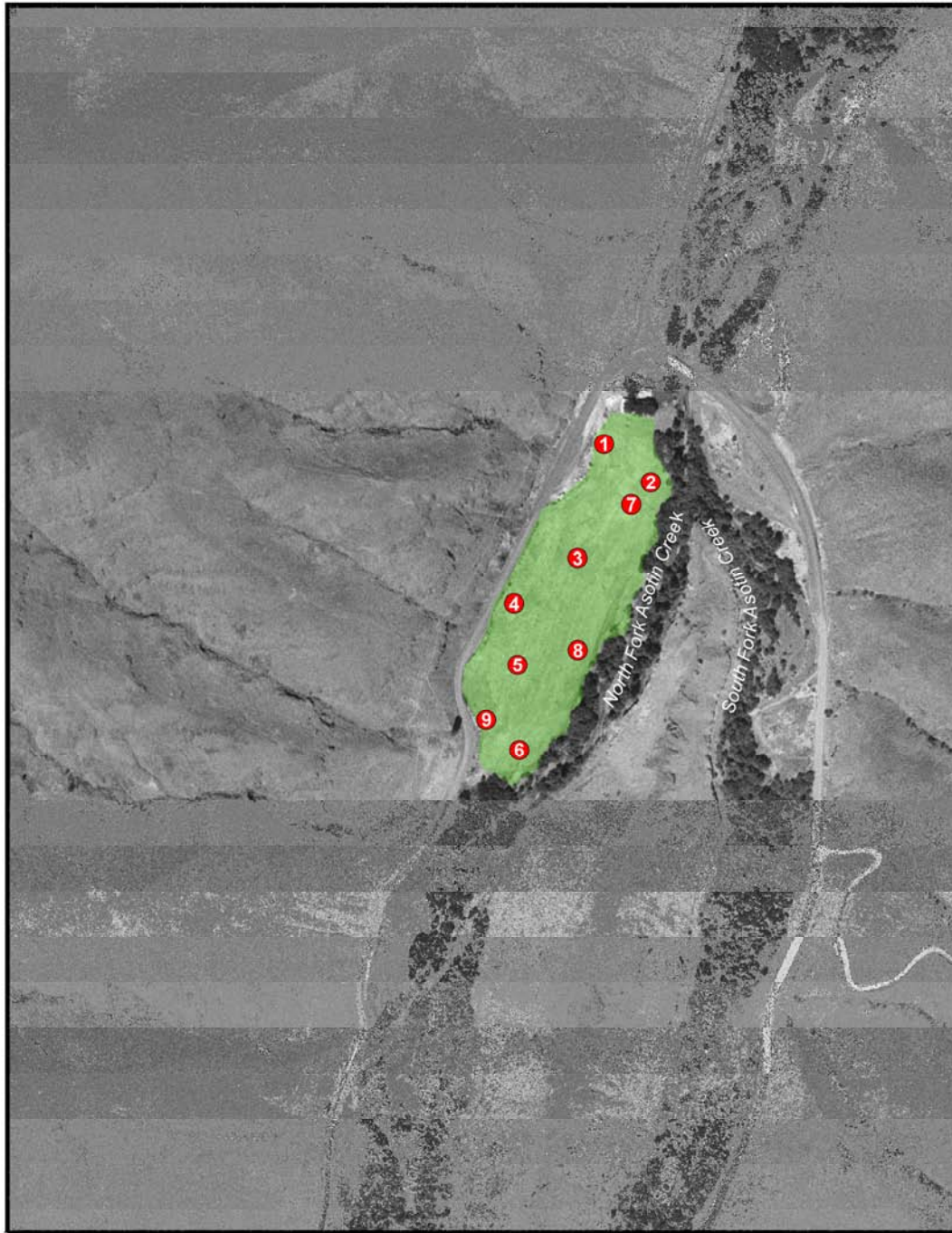
The WRIA 35 Planning Unit directed HDR/EES to further investigate the potential of storing water in shallow wetland basins and infiltrating the water into the aquifer at two WDFW-owned parcels located in the upper portion of the Asotin Creek and to prepare a conceptual design for construction of these wetland basins. These sites are known as the S. Fork/N. Fork Site (Site 1) and the Lick Creek Site (Site 2). The S. Fork/N. Fork Site is located immediately upstream of the confluence of the South Fork and North Fork of Asotin Creek, between Asotin Creek Road and the downstream left bank of Asotin Creek. The Lick Creek Site is located immediately upstream of the confluence of the Lick Creek channel and Asotin Creek, between Asotin Creek Road and the downstream left bank of Asotin Creek. The sites locations are shown on Exhibits 2-1 through 2-3 below.



Printing Date: September 12, 2005



Exhibit 2-1  
Project Site Overview



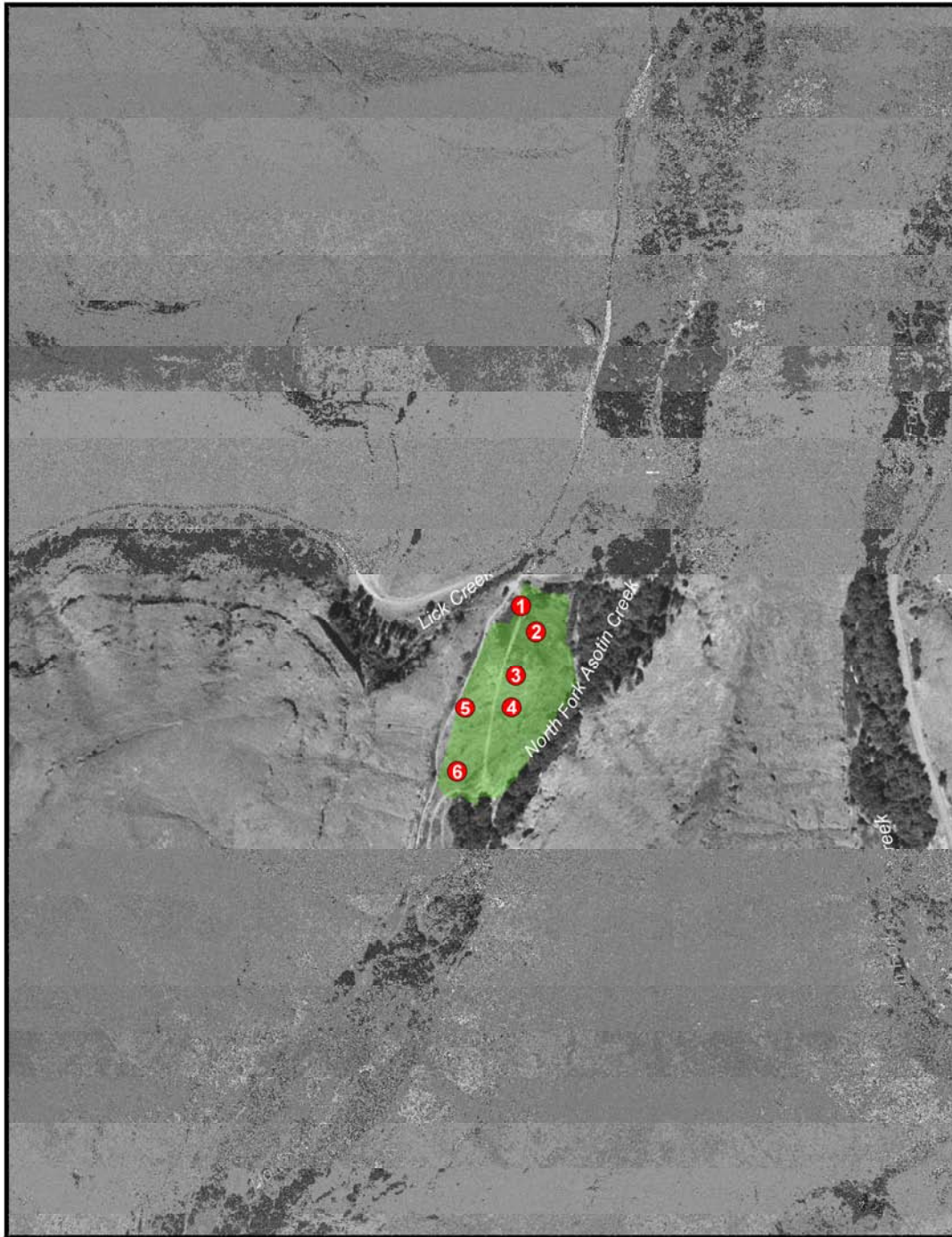
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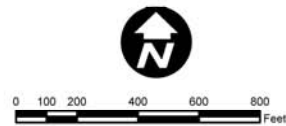
Legend

- Excavation Site
- Site Area

Exhibit 2-2  
Site 1



Printing Date: September 12, 2005



Legend

- Excavation Site
- Site Area

Exhibit 2-3  
Site 2

The results of the site investigation and conceptual design study indicate that it is feasible to construct shallow wetland basins on the site. However, because of the relatively shallow thickness of the alluvial deposits (estimated 20 to 40 ft thickness) overlying impermeable basalt, it is unlikely that a significant quantity of water could be stored at either of the project sites. The site investigation and conceptual design study results (available for review at [www.asotinpud.org](http://www.asotinpud.org)) indicate that water could be stored in shallow wetland basins constructed on the site and the primary benefit of these wetland basins would be to benefit riparian habitat for wildlife.

After the Conceptual Design Report was presented to the Planning Unit in April 2006, the Planning Unit determined that the site(s) studied would not meet the storage goals originally conceived and for which funding was provided. The Planning Unit then directed HDR to conduct a brief geological evaluation of Pataha Creek for possible storage potential.

The potential project location was between the Town of Pomeroy and Pataha Creek's confluence with the Tucannon River, a reach of approximately 20 miles. A limited evaluation was conducted, based solely on a preliminary, general review of previously published materials and limited field reconnaissance. No invasive fieldwork was done for this project.

On June 7, 2006, the Planning Unit was presented with the overall benefits and challenges of constructing a storage project along Pataha Creek. The full memo detailing the limited evaluation is available at [www.asotinpud.org](http://www.asotinpud.org).

### ***Minimum Instream Flow Management Strategy***

In 2005, a series of technical memoranda (available at [www.asotinpud.org/msww/ms\\_documents.htm](http://www.asotinpud.org/msww/ms_documents.htm)) were developed to address the central aspects of managing instream flows within WRIA 35. These memoranda were intended to support an overall stream flow management strategy proposed in Technical Memorandum No. 1: Stream flow management framework (TM-1). This document laid out the Planning Unit's goals for instream flows, as well as discussed significant flow issues and other existing controls on instream flows in WRIA 35. The document presented recommendations for minimum instream flows that would protect significant aquatic species including steelhead, Chinook, and bull trout, while continuing to ensure water availability for human uses. Subsequent supporting documents to TM-1 include the following:

- Technical Memorandum No. 2a: Minimum Instream Flow Framework (TM-2a)
- Technical Memorandum No. 2b: Proposal for Administrative Closures (TM-2b)
- Technical Memorandum No. 3: Proposed Flow Enhancement Targets for WRIA 35 (TM-3)

Technical Memorandum No. 2a focuses on the methodology for setting minimum instream flows (MIF) for two locations on the Tucannon River<sup>3</sup> (MP1-Territorial Road and MP3-Marengo) and Asotin Creek based on habitat needs for steelhead, Chinook, and bull trout using Instream Flow

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<sup>3</sup> Final recommendations from the Planning Unit were made for three locations on the Tucannon River (at the mouth, at Territorial Rd. and at Marengo).

Incremental Methodology (IFIM). Technical Memorandum No. 2b addresses how Ecology's Surface Water Source Limitations (SWSL) and stream closures (to new appropriations of water rights) affect stream flow management in WRIA 35. Technical Memorandum No. 3 proposes preliminary stream flow enhancement targets for the Tucannon River and Asotin Creek at specific management points. Flow enhancement targets were subsequently not included in the final recommendations for the instream flow management strategy.

In June 2006, the Streamflow Management Final Memo was completed. However, the Planning Unit decided that additional work and discussions were needed with Ecology and Washington Department of Fish and Wildlife regarding some of the recommendations made in the Final Memo. Several meetings occurred that resulted in the final recommendations documented in this Watershed Plan for instream flow management. The results are summarized in Section 3.1.2.

## **2.4 Public Involvement Process**

The WRIA 35 Planning Unit directed the public involvement process. The purpose of this work is to help the WRIA 35 Planning Unit identify issues of concern in each sub-basin of the Middle Snake Watershed and to integrate public perception of watershed issues into the early stages of watershed assessment and plan development. Public involvement was sought through direct participation in the Planning Unit and through participation in four outreach workshops. Information on ongoing assessments and plan development was made available to the public through a web site and notices in local newspapers.

From May 21 – 28<sup>th</sup>, 2004, individuals interested in the health of the Middle Snake Watershed (WRIA 35) gathered in public workshops to discuss issues that impact the health of the watershed. Workshops were held in the Tucannon Subbasin (May 21), Pataha & Lower Snake Subbasins (May 22), Asotin Subbasin (May 27), the Lower Snake (Whitman County) Subbasin (May 28), and with the Nez Perce Tribe (May 28). Although sponsored under WRIA 35 watershed planning (HB 2514), the workshops addressed relevant issues for the three primary planning processes in the basin: watershed planning, subbasin planning, and salmon recovery planning. Coordination between these three planning processes is vital for efficiency and to ensure consistency among the plans and their objectives.

The purpose of these workshops was three-fold: 1) to introduce watershed planning, salmon recovery planning, and subbasin planning efforts and report on their current status; 2) to develop a list of specific concerns in the watershed related to low flows, instream habitat, riparian vegetation, upland management, water supply, water quality, and other issues and identify where those issues are of primary concern; and 3) to initiate a continuing dialogue between the various stakeholders in the watershed. Benefits that were realized across all sub-basins included enhanced education and involvement of local stakeholders, development of an information foundation for Phase 2 watershed planning, improved communication/understanding between Nez Perce Tribe staff and local resource managers, and input for subbasin planning and salmon recovery planning goals, objectives and potential strategies.

A second series of workshops was held in September of 2005. They were focused on seeking additional public input on objectives and recommended basin-wide and management area-specific action plans. This was accomplished by conducting workshops in each management

area. Breaking up WRIA 35 into smaller areas gave the opportunity for focused outreach efforts with local stakeholders in each management area.