

Ecology Grant G0800436

WRIA 1 Bertrand Creek Water Management Implementation Project

Final Progress Report

July, 2009

Component #1

Bertrand Creek Instream Flow Meeting Facilitation and Work Group Coordination

TASK 1: BERTRAND INSTREAM FLOW POLICY GROUP MEETINGS:

Task 1.1: Bertrand instream flow policy group meeting facilitation

Deliverables: The contractor will provide local facilitation support services for up to 14 facilitated meetings of the Bertrand ISF negotiators to move the process forward as necessary. These services include agenda development and meeting logistics and pre and post meeting communications. The contractor will assist in the acquisition and compilation of technical reports, data and other information that will assist the work group in decision-making. The meetings will be scheduled and conducted in accordance with the process agreements developed as part of the ISF Negotiations. The contractor will complete quarterly reports summarizing meetings facilitated and progress made toward completion of an instream flow regime and monitoring plan.

Progress Report: Following the June 2008 merger of the Bertrand Creek and Middle Fork Nooksack ISF Pilots, progress was made toward completion of an instream flow regime and monitoring plan for the revised agreement area under See Component #1, Task 2.1 and Task 2.2. sections for more information on work progress.

Task 1.2: Bertrand watershed cooperative water management Memorandum of Understanding (MOU)

Deliverable(s): Approved Bertrand Watershed Cooperative Water Management MOU, or summary report of progress and remaining items requiring facilitated negotiations.

Progress Report: No activity was conducted under this task during this contract period. Current proposals under discussion are not focused on active Bertrand Watershed Improvement District water management. Further development of an MOU outlining Ecology/Bertrand WID water management roles and responsibilities will be needed in later stages of the ISF Pilots as discussions move toward flow recommendation achievement and enforcement.

Information developed under Component #4 Task 2 will provide resources to support future work on this task. Briefly, in 2008, the Bertrand WID commissioned an initial economic analysis of the relative value of Bertrand WID-proposed flow augmentation and water management projects for increasing water supply in the Bertrand Watershed. This initial assessment of the WID projects' relative values, along with the outcomes of Bertrand WID-member interviews conducted in 2008 regarding perceived risk and benefits of contracted services with the Bertrand WID, provide foundation information for Task 1.2.

Task 1.3: Instream Flow Proposal Development Interviews

Deliverables: Meetings with Lummi Nation, Nooksack Tribe, Bertrand Watershed Improvement District, Whatcom County PUD No. 1, City of Bellingham, Dept. of Ecology, Dept. of Fish and Wildlife and Whatcom County. Site visits to Middle Fork of the Nooksack River, Lake Whatcom, Bertrand Creek and Whatcom PUD No 1.

Progress Report: Jean Baldrige conducted interviews with WRIA 1 ISF Pilot Negotiations participants to develop list of framework for recommendation development and identify conceptual approaches to consensus-based instream flow recommendations that meets the interests of all parties; resolves outstanding conflicts in a manner that avoids controversy or litigation regarding flows necessary to meet the needs of fish, aquatic habitat, domestic water use, and irrigation supply, and meet the WRIA *ISF Selection and Adoption Action Plan (ISF Action Plan)* criteria.

Task 1.4: Develop Conceptual Agreement

Deliverable: Draft conceptual agreement, final approved conceptual agreement

Progress Report: Following the June 2008 merger of the Bertrand Creek and Middle Fork Nooksack ISF Pilots, progress was made toward completion of an instream flow regime for the revised agreement area under See Component #1, Task 2.1 and Task 2.2. sections for more information on work progress. A monitoring plan and accountability frameworks will be explored during the next phase of negotiations.

TASK 2: BERTRAND INSTREAM FLOW WORK GROUP MEETINGS:

Task 2.1: Meeting facilitation and management

Deliverable(s): Grant Summary Report documenting number of meetings facilitation and follow-up activities.

Progress Report: Following the June 2008 merger of the Bertrand Creek and Middle Fork Nooksack ISF Pilots, progress was made toward completion of an instream flow regime for the revised agreement area under discussion. During the grant period, negotiating parties explored multiple approaches to flow recommendation development, selection, adoption, and achievement, as well as potential instream and out of stream water resource needs associated with the proposed agreement areas.

The following ISF Pilot negotiations sessions were facilitated during this period. Deliverables under this task include Dumas & Associates, Inc, and Enrix related pre/post work session discussions with negotiating parties regarding session agendas, action items and outstanding questions and information needs.

The following 2 – 2.5 hour group work sessions were facilitated during this period include:

- Oct. 30, 2008
- Nov. 21, 2008
- January 28, 2009
- February 20, 2009
- March 5 and March 20, 2009
- April 10 and April 27, 2009
- May 13, 2009
- June 18 and June 25, 2009

Task 2.2: Meeting follow-up

Deliverable(s): Grant Summary Report reflecting progress made toward completion of instream flow (draft MOU) agreement, and copies of all interim and ancillary documents (proposals, appendices to MOU, monitoring plan, QAPP, etc.).

Progress Report: Progress included acquisition and compilation of technical reports, data and other information to support negotiated work sessions and assist the work group in decision-making. Reports or supporting proposal documents were developed by small work groups comprised of negotiating parties; these work products are covered by the project confidentiality agreement and therefore are not attached to this summary of work.

During this grant period a review of formal processes for engaging affected parties in the instream flow recommendation development, selection, adoption, and achievement processes was conducted. During the next phase of work a small work group will be formed to identify the formal sequence and timing for engaging affected parties under the federal, state and local pathways envisioned by ISF Pilot parties and outlined in the WRIA 1 ISF Pilot formation documents. This small work group will also develop a draft engagement plan for instream flow recommendation review/input during federal, state and local pathways to adoption of proposed flow recommendations.

Additionally work was conducted with Bertrand WID Commissioners and staff concerning distribution and review of technical and policy proposals under discussion in the ISF Pilot negotiation sessions, The Bertrand WID pursued several flow augmentation opportunities to further understanding of WID drainage-based approaches to active water resource management with the goal of improving the quality and quantity of streamflow and habitat in Bertrand Creek. These projects included transfer of surface to groundwater points of withdrawal, conservation and flow augmentation pilot projects, data-sharing and monitoring projects to better understand and report on conditions in Bertrand Creek.

ISF Pilot negotiating parties made significant progress toward development of a draft settlement proposal, including conceptual approach and technical information appendices. During this period interim and ancillary documents were provided to ISF Pilot participants, including the Bertrand Flow Augmentation QAPP Report.

TASK 3: COMMUNICATION WITH LEGAL MEDIATOR

Deliverable(s): Regular updates and coordination as requested by the legal mediator or the Policy Work Group.

Progress Report: Members of the ISF Pilot negotiations mediation/facilitation team hold monthly update session via phone conference to identify key information needs pertaining to technical, policy, and legal questions developed during negotiation sessions. These calls include determination of information for status reports and public updates regarding ISF Pilot negotiations progress, and timing for engagement of other affected parties not currently participating in the small group work sessions.

Monthly updates and pre/post negotiation session coordination on agenda and action items are conducted as requested by the legal mediator or work groups.

Component #2

Bertrand Creek Hydrologic Model Update Assessment and Economic Analysis

TASK 1: DATA REVIEW

Task 1.1: Data collection, review and analysis

Deliverables: Update hydrologic model of Bertrand drainage incorporating all existing data through September 2007

Progress Report: Silver Tip Solutions was engaged as a sub-consultant to Project Manager Reichhardt and Ebe Engineering. A model of the Bertrand basin was completed and presented to the Board in June, 2008. Utah State's David Tarbotten provided review of the hydrologic model.

Task 1.2: Stakeholder meetings

Deliverable: One on-site meeting and one tele- or video-conference to present report

Progress Report: The WID Board hosted a meeting where the model was presented and critiqued. .

TASK 2: SCENARIO ANALYSIS AND COST OPTIMIZATION

Task 2.1: Cost optimization of flow augmentation strategies

Deliverable: Scenario Analysis and Cost Optimization Report

Progress Report: An Interlocal Agreement with WWU was developed and the Final report on the **Review of Water Supply Augmentation Projects in the Bertrand Watershed** was completed and presented in June, 2008.

Task 2.2: Documentation and presentation

Deliverable: Two presentations by consultant

Progress Report: Presentation to WID Board in fall, 2008.

Component #3

Implementation of Flow Augmentation From Storage, Wells, Pipeline and Conservation

TASK 1: FLOW AUGMENTATION WELL INVESTIGATION

Task 1.1: Project Management and Coordination

Deliverables: Monthly project status report to Board and Ecology

Progress Report: Reports were submitted each month by the Project Manager to the Bertrand WID Board.

Task 1.2: Issue construction documentation for Test / Production well

Deliverable: Construction documents for test / production well including land owner agreement, water right application, construction specifications, monitoring plan, QAPP and all other applicable permits. Document an agreement among negotiation parties regarding the disposition of the well following completion of the test.

Progress Report: All necessary Permits were obtained. A QAPP was prepared and a land owner easement agreement developed and implemented. Final resolution of the well was pending at the conclusion of the grant as another grant that would make use of the well was likely.

TASK 2: FLOW AUGMENTATION WELL INSTALLATION

Task 2.1: Project management and coordination

Deliverables: Monthly project status and financial reports submitted to Ecology

Progress Report: Project management for pump test.

Task 2.2: Installation contracts for production well and monitoring facilities

Deliverables: Installed production well facilities including monitoring piezometers and water delivery piping.

Progress Report: Communication between project manager and subconsultants for project billing, water testing, well drilling, and Hydro geologic analysis.

Task 2.3: Well installation and testing

Deliverables: Installation of casing (assumed to be 12-inches in diameter to a depth of approximately 640-feet) and a Technical Report summarizing the methodology and results of the initial testing.

Progress Report: Engineering expenses and well drilling. A contract for the use of the property for the purposes of the pilot project was developed and the payment to the De Haans was made.

Well logistics, pump set up and rental. Coordinate pump test. Address turbidity and Dissolved Oxygen challenge. Report to the Bertrand WID board.. Well design, Chuck Lindsay report on augmentation test.

Task 2.4: Operations and monitoring plan

Deliverable: Operations and monitoring plan for the first years of operation, including water quality issues.

Progress Report: Well logs. Testing of water from well. Fuel for pump test.

Task 2.5: Jackman Ditch conveyance channel engineering and construction plan

Deliverable: Engineering report and construction plans for reroute of Jackman Ditch to convey well water and water from Jackman Ditch to Bertrand Creek.

Progress Report: Profiles of potential reroutes. Further work on channel design. Prepared application for funds to the Pioneers in Conservation grant program.

TASK 3: SURFACE STORAGE

Deliverables: Full design and analysis report with cost construction details

Progress Report: Consulted with a wetland biologist, report on storage options, discussion of a Natural Resources Bank concept.

TASK 4: IMPORTATION OF IRRIGATION WATER

Deliverables: Full feasibility analysis, engineering plan

Progress Report: Equipment purchased to be used in communication and education with landowners.

TASK 5: CONSERVATION AND EFFICIENCY

Deliverables: Scope of work, cost share program

Progress Report: Developed Scope of Work for conservation cost share program, surface to groundwater conversions. Explored irrigation efficiency information.

Component #4

Project Administration, Public Education and Involvement, Monitoring and Reporting

TASK 1 - PROJECT ADMINISTRATION\ACCOUNTING

Deliverable(s): Seven quarterly reports (project effective date through June 30 2009) and corresponding vouchers; grant completion report detailing progress toward achieving project goals of developing a negotiated instream flow regime, coordinated monitoring plan, and water management MOU.

Progress Report: Vouchers for payment was submitted regularly. The WID administrator worked with Ecology to insure that all vouchers and reports are set up and delivered properly to insure efficient and full accountability. Participation in Nooksack water negotiations was supported as a necessary element of establishing a negotiated flow regime.

TASK 2 – PUBLIC EDUCATION AND INVOLVEMENT

Deliverable: Public events, educational materials, technical reports

Progress Report: Equipment purchased to be used in communication and education with landowners. Open House held May 28th for local landowners. Public education and involvement activities surrounding the September 30th Low Flow Tour. A cross boundary tour was organized and facilitated by Dumas and Associates to make connections with the upper portion of the watershed.

A Public education and involvement activities to support NW WA Fair and water budget meeting. Attended Salmon Summit. Mary Dumas work to prepare logistics for North County water meeting in April.

WID newsletter was produced and mailed to Bertrand residents. Mary Dumas work to prepare logistics for North County water meeting April 21st. Presentation of local water issues to Kiwanis Club.

Dumas Deliverables: Public involvement and education consulting services were provided to the Bertrand WID in support of ISF Pilot Negotiations project goals of engaging local drainages in local water resource management, including the following educational forums, tours, data-sharing, and reports:

- 2008 Transboundary Tour Series: Spring 2008 Canadian Tour/ Fall 2008 US Tour
- 2008 State of the Bertrand Watershed Report
- 2009 Technical Forums with WSU re Groundwater Resources and New Data/Tools
- 2009 Interjurisdictional North Lynden Stormwater and Drainage Management Work Session
- 2008-09 Cross Border Data Sharing Agreements between Bertrand WID, Township of Langley and City of Abbotsford
- 2008 and 2009 ISF Pilot Update and Presentations to WRIA 1 Planning Unit

Dumas Progress Report: Education and involvement activities implemented during this period focused on WID-member identified priorities to: 1) address low flow and quality concerns regarding water coming into the U.S. from the Canadian portion of the Bertrand Watershed, and 2) increase WID members understanding of cooperative opportunities to improve water resources in the Bertrand Watershed. A phase II Bertrand WID Instream Flow Public Education and Information Plan was developed to direct 2009-2011 engagement activities.

To further holistic understanding of the Bertrand and Fishtap watersheds, international watersheds with half of the upper watershed located in Canada, free data-sharing agreements were secured to increase exchange of technical resources and identification early cooperation opportunities for water management. Contractors worked with Border Policy Research Institute, WWU interns to support WID-related transboundary work, such as tour logistics, education materials, and design and production of the 2008 State of the Bertrand Watershed Report.

TASK 3 – MONITORING AND REPORTING – GAGE INSTALLATION

Task 3.1 – Establish and conduct a routine water quality monitoring program

Deliverable: Public events, educational materials, technical reports, data, QAPP

Progress Report: A detailed and clearly communicated monitoring plan was developed and put into place. A detailed and clearly communicated monitoring plan has been developed and put into place. Gage installation logistics. Water quality testing and analysis. Gage installation logistics, water quality testing and analysis. Coordination with Department of Ag dairy inspector. Northwest Indian College contract for quality monitoring.

Task 3.2 –Installation of a flow gage at or near the Bertrand Creek confluence with Jackman Creek.

Deliverable: Monitoring site identified, installation of gage, data

Progress Report: A revision of the original grant agreement was approved. Gage installation at mid-Bertrand site. Contract with USGS to maintain two gages on the Bertrand for six months.

Component #5
Fishtrap Creek Comprehensive Watershed Analysis and Plan

TASK 1: PROJECT MANAGEMENT AND SUPPORT

Deliverable: Contract for analysis and plan, manage planning process, public participation, agency coordination

Progress Report: The Bertrand WID drew on its experience to facilitate the North Lynden WID which guided the development of the Fishtrap Watershed Analysis and Plan. John Gillies, retired NRCS District Conservationist, was contracted to provide facilitation services to guide this project. North Lynden WID board meetings occurred monthly. A North County water meeting was organized in April, 2009. Meeting with City of Abbotsford re: Bevan well project.

TASK 2: CONTRACT WITH HYDROLOGIC/ENGINEERING FIRM TO DEVELOP WATERSHED ANALYSIS AND PLAN

Deliverable: Watershed Analysis and Planning Document

Progress Report: A complete outline for plan was developed and work on data collection and writing the Plan occurred throughout early 2009. Cooperation with the Whatcom Conservation District was an essential element of this work. Surveying the area was completed. USDA/NRCS provided valuable assistance and equipment. Silver Tip Solutions used the Bertrand model as a template for the Fishtrap model. Modeling work was completed by Reichhardt & Ebe and Hydrologic Services. Management options were developed and presented to board and public.