



**ECOLOGY WATERSHED PROGRAM  
QUARTERLY PROGRESS REPORT**

Grant # G0600328 Amendment # (if applicable) \_\_\_\_\_ WRIA # 1

Grant Title Bertrand Storage Project

Grant Recipient Bertrand Watershed Improvement District

Grant Start Date: 3/1/2006 Grant End Date: 6/30/2008

FY 08 July 1, 2007-June 30, 2008

FY 09 July 1, 2008-June 30, 2009

Please circle applicable quarter:

JUL – SEP

OCT – DEC

JAN – MAR

**APR – JUN**

**I. A description of work performed throughout the quarter**

**A. Task #1 Feasibility Studies**

The WID, along with Project Manager Reichhardt and Ebe (R&E) and subconsultants Hydrologic Services and Associated Earth Sciences Incorporated (AESI), has identified the DeVries property as a potential site to explore groundwater augmentation of Bertrand Creek and to explore possible surface storage. Test pits were dug on the DeVries property and a site for a test well identified. Water quality samples taken from the test pits indicated no significant problems for flow augmentation. Test wells were drilled and a pump test conducted. The tests conducted in the fall of 2006 indicated that the original site is not capable of supplying groundwater in an amount that would create a significant impact to the in-stream flow.

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However, the results of the drilling have provided us with additional information that is being utilized to perform a preliminary design and cost estimate of a surface storage facility. The WID transferred \$9,000 of the remaining Task #1 budget to Task #2 to continue work based on the knowledge obtained in the Task #1 activities.

R&E has performed a preliminary pond design to determine the maximum capable surface storage on the DeVries site. They have met with a local contractor who has performed work previously on the site to determine the construction feasibility and cost. Furthermore, R&E has conversed with an environmental permit consultant on the ease and cost of permitting the preliminary pond design. These results will be discussed in the final project report submitted to the DOE.

**B. Task #2 Engineering Studies**

A test well was installed and tested on the DeVries site in the fall of 2006. The results indicated that that the site was not conducive to providing the quantity of water required. See published report.

The WID, along with Project Manager Reichhardt and Ebe and sub consultants Hydrologic Services and Associated Earth Sciences Incorporated (AESI), identified a location to the east of the DeVries site, adjacent to the Jackman Road branch of Bertrand Creek which has greater

potential to produce significant groundwater that could be utilized for in-stream flow augmentation. This location, on DeHaan's property, has an existing private well, which consistently produces 350 gpm throughout the summer. A pump test was performed on the DeHaan well in the spring of 2007. The test results, see published report, were positive.

Following this effort 6 bore holes were drilled in the region of the DeHaan well to identify the extent of the water bearing structure and help identify the best potential for a test/production well. This work was completed in the fall of 2007. The indications are that although not as extensive as hoped the water bearing structure seems to have good potential for a test/production well and several good drilling sites were identified. A Report is available from the BWID.

The next step in this effort is to drill a test/production well and test it for a full season. Depending on the location of this well it will need to be assessed whether the water will need to be piped to the appropriate reach of Bertrand Creek, or if a channel extension would be capable of conveying the water to the appropriate reach. Because the idea of a channel relocation for Jackman Ditch is of significant interest for fisheries habitat a survey effort is underway to determine the feasibility of this option.

In the late spring of 2008 a test well was constructed on the DeHaan property and was run through a stepped rate pump test. It was found from the results of this test that it is likely that a properly developed well screen would allow the production of approximately 1 cfs from said well. The next step is to coordinate the extension of temporary power, design of a temporary outfall, and the rental of a test pump to pump this well for several months in the late summer of 2008. It is thought that the late summer is the best time due to the fact that the aquifer will be at its lowest stage, and the effects on nearby wells can be monitored. This test will be performed under a different funding source.

A reconnaissance survey of potential surface storage sites was conducted in early 2007 and 7 sites were identified. See published report. The next step with the surface storage sites is to meet with all of the property owners to assess feasibility and rank the potential of the sites. This hopefully will lead to identification of the most feasible two or three and then basic engineering design can be preformed and costs determined. Upon further discussion, and local interaction, it is becoming apparent that many of the property owners may not be amenable to surface storage. Furthermore, the cost to perform a wetland reconnaissance of each site to determine associated permitting and mitigation requirements is very costly. Therefore, the board has decided to narrow down the reconnaissance to one or two potential surface storage sites. This investigation will continue under a different funding source.

**II. Status of project schedule**

**A. Effective date** 3/1/2006                      **Expiration date** 6/30/2008

**B. Overall % activities complete**              100%

**C. Status by task**

	<b>Budget</b>	<b>Spent</b>	<b>% complete</b>
<b>Task # 1</b>	50,000.00	41,077.69	82.16%
<b>Task # 2</b>	150,000.00	158,922.31	105.95%
<b>TOTAL</b>	<b>\$200,000.00</b>	<b>\$ 200,000.00</b>	<b>100%</b>

**III. Personnel changes**

Project contractors remained as before. Major responsibilities are carried by Henry Bierlink, Project Administrator, Tom Anderson, HydroLogic Services, and Dale Buys of Reichhardt and Ebe Engineering.

**IV. Any difficulties encountered during the quarter**

No significant challenges within the project.

**V. Financial and funds disbursement status**

	<b>Current Quarter</b>	<b>Project to Date</b>
<b>Salaries</b>		
<b>Benefits</b>		
<b>Overhead</b>		
<b>Contracts</b>	38,519.55	200,000.00
<b>Goods/Services</b>		
<b>Travel</b>		
<b>Equipment</b>		
<b>Total</b>		

**VI. Cash Flow Projections**

<b>Time Frame</b>	<b>Projected</b>	<b>Actual</b>	<b>Difference</b>
Prior years	100,000	103,999.31	- 3,999.31
FY 08 Quarter 1 July 2007-September 2007	12,500	26,401.74	-13,901.74
FY 08 Quarter 2 October 2007–December 2007	12,500	15,862.10	- 3,362.10
FY 08 Quarter 3 January 2008-March 2008	12,500	15,217.30	- 2,717.30
FY 08 Quarter 4 April 2008-June 2008	12,500	38,519.55	- 26,019.55
FY 09 Quarter 1 July 2008-September 2008	0		
FY 09 Quarter 2 October 2008-December 2008	0		
FY 09 Quarter 3 January 2009-March 2009	0		
FY 09 Quarter 4 April 2009-June 2009	0		
<b>Total</b>	<b>\$200,000</b>	<b>200,000</b>	