

HOOD RIVER BASIN STUDY STATUS UPDATE

November 1, 2013

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Completed 6

Next Steps 6

CROP AND IRRIGATION SYSTEM INVENTORY (HRC/MATTIE) 6

Completed 6

Next Steps 6

November 1, 2013 Status Update

This document provides an update for work completed after *September 12 (date of the HRC presentation by Reclamation) and for the month of October (recognizing that the government was shut down for nearly three weeks)* on the Hood River Water Planning Group's (HRWPG) efforts associated with the Bureau of Reclamation's (Reclamation) Hood River Basin Study and the Oregon Department of Water Resources (OWRD) Hood River Basin Surface Water Storage Feasibility Study. The objectives outlined in Reclamation's Plan of Study for this effort are:

1. Define current and future basin water supply and demands, with consideration of potential climate change impacts;
2. Determine the potential impacts of climate change on the performance of current water delivery systems (e.g., infrastructure and operations);
3. Develop options to maintain viable water delivery systems for adequate water supplies in the future; and
4. Conduct an analysis and modeling scenarios of the options developed, summarize findings and make recommendations on preferred options.

The Hood River Basin Study is conducted with Reclamation and Hood River County (HRC) through in-kind services and the OWRD study was contracted to Herrera, Watershed Professionals Network (WPN), and Normandeau with coordination of the two studies by HRC. The studies have similar objectives and the key tasks from these studies overlap so Table 1 clarifies each task and the parties involved with completing each task. In the following sections, each task is briefly defined and the to-date progress associated with each task is described.

Table 1. Key tasks associated with the Reclamation and OWRD studies and the responsible parties associated with each].

Key Task	Responsible Party
Groundwater Modeling	Reclamation with assistance by HRC
Climate Change Analysis	Reclamation and WPN
Water Storage Assessment	Reclamation, WPN with assistance by HRC
In-stream Flow Assessment	Normandeau
Water Needs Assessment	Herrera/WPN
Water Conservation Assessment	Herrera/WPN
Water Resources Modeling	Reclamation

OVERALL CONSIDERATIONS

1. Initial results from DHSVM and Modsim work will be presented at the November HRC meeting.

2. Results from the groundwater modeling will be presented on November 19 to the groundwater subgroup and December 4 to the full group.

GROUNDWATER MODELING (JENNIFER JOHNSON, JON ROCHA)

COMPLETED

1. Met with USGS personnel to present preliminary scenario modeling results. No major concerns and received mostly positive feedback on the validity of our approach and modeled results.
2. Finalized scenario and climate change modeling.
3. Produced draft groundwater model design document for USGS review.

NEXT STEPS

1. Iterate through the groundwater model design document revisions with the USGS.

DHSVM (TAYLOR DIXON, BOB LOUNSBURY)

COMPLETED

1. Continue processing climate change data (lots of coding/scripting), etc
2. Bias correct simulated historical natural flows (some to be developed).
3. Use that future flow generated in DHSVM as input to MODSIM model to analyze change scenarios to be finalized in September/October.
4. Reclamation evaluated all five climate characterization scenarios (More Warming/Wetter, Less Warming/Drier, etc) in the DHSVM hydrologic model and selected the three that provided the widest range of annual and season flow changes in the basin.

NEXT STEPS

1. Initial technical memo is being drafted, continue working on documentation.

CLIMATE CHANGE ANALYSIS (JON ROCHA, TAYLOR DIXON)

COMPLETED

1. Presented the climate change selection process at the September 2013 HRC meeting. Input on the selection methodology was taken into account in finalizing the climate change selection process.
2. Finalized the climate change projection selection process (projection selection, uncertainty, climate characterization). Process results are used in DHSVM and MODFLOW to generate modeled future stream flows and to inform change in aquifer recharge and climate change induced pumping demands respectively.

NEXT STEPS

1. Continue working on documentation.

WATER RESOURCE MODELING (TAYLOR DIXON, TONI TURNER)

COMPLETED

1. Completed initial runs of baseline model and comparisons to existing conditions.
2. Initiated results analysis.

NEXT STEPS

1. Finalize baseline model and comparison to existing conditions.
2. Revise model to incorporate change scenarios agreed to by team.
3. Continue working on documentation.

REPORT WRITING (ALL)

COMPLETED

1. Drafted some additional language in the main report.
2. Initiated drafting of the technical memo for the climate change document.

NEXT STEPS

1. Continue working on documentation.

WATER STORAGE ASSESSMENT (DOUG BENNETT AND ROGER WRIGHT)

COMPLETED

1. Task completed.

NEXT STEPS

1. Results from Water Storage Assessment will be used in the water resource modeling effort.

IN-STREAM FLOW ASSESSMENT (NORMANDEAU)

COMPLETED

NEXT STEPS

WATER NEEDS ASSESSMENT (HERRERA/WPN)

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COMPLETED

NEXT STEPS

INTERACTIVE MAP OF HOOD RIVER BASIN (GOOGLE EARTH OR ARC EXPLORER)

COMPLETED

NEXT STEPS

WATER CONSERVATION ASSESSMENT (HERRERA/WPN)

COMPLETED

NEXT STEPS

GROUNDWATER MONITORING PROGRAM (HRC/MATTIE)

COMPLETED

NEXT STEPS

CROP AND IRRIGATION SYSTEM INVENTORY (HRC/MATTIE)

COMPLETED

NEXT STEPS