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November 8, 2019

Dr. Linda Hardison, Dr. Gerrad Jones
Oregon State University
Corvallis, OR, 97330

Greetings Dr. Hardison and Dr. Jones,

We are pleased to reach out this week with an update on project status. Thank you for being in recent communication with the team regarding scheduling the field visit and providing important documentation about the Lamprey Creek area.

Our team members have spent the last two weeks immersed in research and writing individual reports on essential project topics. The team also created decision matrices to quantitatively weigh options for streamflow sensing and modeling various hydrologic landscape alternatives.

Individual research topics included alternatives for flow measurement sensors and data collection methods; land management methods for livestock grazing on riparian areas; and streamflow modeling in HEC-RAS and HEC-HMS. The team received feedback on the reports and will be revising accordingly to improve the quality and content before compiling the draft technical report by November 15, 2019.

Attached, you will find a memo detailing the key findings of our individual reports, as well as relevant feedback and planned revisions. We have also included our decision matrices for design alternatives and environmental sensor options. We are looking forward to visiting the project site next week.

Cheers,

Derec Chumley

Project Lead

MEMO

To: Dr. Linda Hardison, Dr. Gerrad Jones
From: Derec Chumley
Subject: Research reports and decision matrices
Date: November 8, 2019
CC: Brooke Bennett *(Communications Lead)*, Anna Burton *(Organizational Lead)*, Dr. John Selker

Progress Update:
This week our team created decision matrices regarding landscape model alternatives and sensor options. The landscape alternatives matrix provided insight for understanding the complex aspects of restoration approaches, and how we may advise the client regarding impacts of the selected restoration method. While the sensor matrix was informative, our team ultimately decided that three months of flow data would not be sufficiently robust to inform predictions if the access road, Harrison Boulevard, would overtop during flood stages. Therefore, we have changed our approach to instead collect climate and flow data from the watershed's historical gauges and begin calculating Lamprey Creek's flows during record rainfall when the soil is unsaturated versus saturated. We hope that by calculating and modeling the worst-case scenarios, we can help present a more compelling case for how alterations to the floodplain will affect the surrounding area.

Commitments for the Next Two Weeks:
The team will be producing the interim draft of the technical report by November 15, 2019. This report will include all research topics pursued by individual team members, and will serve to document the term's progress. Each member will be committed to appropriately refining and restructuring their individual research materials as to best serve the clarity and function of the drafted technical report. After two weeks, the team will check in again with another memorandum summarizing the report writing process.

Needs from Client:
We are looking forward to visiting Lamprey Creek with Dr. Hardison, Dr. Jones, and potentially project engineer Ken Elbert. The team is hoping to gain valuable insight regarding field conditions, species present in the area, and updates from last week's field work.