
Title: Technical Support and Database Management for the Alsea Watershed Study Revisited

Investigators: PI: Dr. Jeffery Hatten, OSU FERM; Co-PI: Amy Simmons OSU FERM

Project duration: July 1, 2014 – June 30, 2015

Objectives:
The overall objective of this proposal is to support the development, maintenance, and long-term stewardship of the Alsea Watershed Study Database.

1. **Reconcile and formalize metadata**, making it consistent with Hinkle and Trask data sets. In order to have a database that retains its value into “perpetuity” we will need to develop metadata for each component of the research from collection, QA/QC, and processing. We propose to make this data similar to the other databases in the Watershed Research Cooperative.

2. **Reconcile spatial and naming differences in each of the various data sets** (e.g. DO and temperature). As a result of various activities in the Alsea the naming and location information sometimes do not correspond. We will reconcile those differences and record that process in the metadata.

3. **Support QA/QC of contemporary and historical discharge data and incorporate this data into the database**. Drs. Stednick, Hale, and a graduate student are performing a USGS QA/QC of stage and discharge data so that there is a robust data-set from 1959-1973 and 2006 to the present. This data will be used in nearly all current and future manuscript preparation.

4. **Develop custom queries for each discipline** (e.g. hydrology, sediment, nutrients). Currently there are at least six manuscripts being developed from this data-set. Discipline specific queries will be developed so that data of the appropriate resolution is used to meet the objectives of each manuscript.

5. **Transition long-term storage and serving of data-set**. The current plan is to transition the database management to NCASI and retain the physical database on OSU servers. This transition will take place by the end of this proposal.

6. **Merge smaller researcher specific data sets** with the larger data-set.

7. **Explore integrating biological data-sets** into the larger hydrological data set.

8. **Continue to add hydrological data**! We estimate there are 3-5 million entries in the database with more being added weekly. Long term plans are needed to preserve this active and valuable resource.

Summary of accomplishments toward objectives over past year:

Problems, barriers, proposed changes to objectives:
Significant problems have been discovered in the discharge data. These data are currently being QA/QC’d by Dr. John Stednick and a graduate student and will be made available to other researchers during late Fall, 2015.

Planned work:
- Receive and incorporate QA/QC’d discharge data from John Stednick by late Fall, 2015
- Continue process of data analysis and writing manuscripts that depend on discharge data.

**Comprehensive summary of project results and impacts over life of project:**
- Metadata are consistent with Hinkle and Trask data sets.
- Spatial and naming differences have been reconciled
- Hydrology data are nearing completion of QA/QC efforts
- Custom queries for each discipline have been developed
- Database is being managed by NCASI while the physical database is on OSU servers.

**List of names and brief overview of graduate and/or undergraduate engagement in project:**
None at this time.

**List of presentations, posters, etc.:**
None to report.

**List of publications, thesis citations:**
None to report.