**April 7, 2016**

Exhibit A

**Proposal: Upper Couderay River Watershed-Environmental Information GIS Database Development**

This proposal is prepared for the Courte Oreilles Lakes Association (COLA). It describes the activities, deliverables and expenses related to the development of a digital environmental database compatible with GIS. Database development will be executed for the 125 square-mile Upper Couderay River Watershed (UCRW), located in Sawyer County, Wisconsin.

Project Activities

1. Collect, edit, validate, and refine available GIS data for application with the WDNR EVAAL model. Data may include, but are not limited to: Digital Elevation Model, Land Cover/Use, SSURGO Soils, Watershed, Precipitation, Best Management Practices, Hydrology, Farm Compliance, and Tax Parcels.
2. Map and attribute agricultural operations in the watershed. A combination of methods and data will be used to identify agricultural parcels, such as orthophoto interpretation, tax assessment records and farm tracts and fields (Common Land Unit). Operations will be attributed with the following characteristics: Land owner, tax information, tax bill address, and type of operation (e.g. dairy, row crop, and beef). Type of operation will be validated by sending letters and maps asking operators to self-identify agricultural attributes.
3. Execute a preliminary WDNR EVAAL model to identify areas vulnerable to erosion and more likely to export nutrients to COLA water bodies, assessing for sheet and rill erosion and the Universal Soil Loss Equation. Note LiDAR elevation data is not available for Sawyer County. Gully erosion cannot be reasonably assessed using EVAAL without LiDAR.
4. Ascribe EVAAL conditions and preliminary results to the tax parcel database to facilitate land management, evaluation and monitoring at a local scale that can be aggregated at regional scales.
5. Craft maps to share and illustrate project information and results.
6. Formulate ideas for accomplishing similar GIS data base/mapping for forestry management practices, residential/road development and identification of critical preservation areas within the UCRW in the future.

ProjectDeliverables

1. Agricultural Operator Self-Identification. A letter and map will be designed and delivered to solicit information from agricultural operators to self-identify and attribute agricultural parcels. Upwards of 50 letters and maps will be delivered to operators with a self-addressed and postage paid envelope. Data collected will be used to create an agricultural operator database.
2. Watershed and Lake Information System. A compilation of collected and validated GIS data for the project will be assembled and conveyed to COLA, the Regional Planning Commission, Sawyer County, the Natural Resources Conservation Service, the Couderay Waters Regional Land Trust, and other groups.
3. Watershed Atlas. A series of maps will be created to illustrate various project criteria and EVAAL model results. Maps will be generated on a page size anticipated at 11 inches by 17 inches. Maps will be generated in an Adobe PDF digital format suitable for viewing online or printed in hard copy. This proposal does not include the expense or delivery of printed hard copy atlases.
4. Online Maps. Data resources compiled for the project will be hosted on UW-Stevens Point’s ArcGIS Online account for sharing dynamic data publicly. This deliverable is considered beyond the scope of work and will be pursued by UW-Stevens Point GIS Center as resources are available. With COLA, UW-Stevens Point GIS Center will examine the transfer of digital data to a COLA managed ArcGIS Online account.
5. Presentation. At the conclusion of the project, UW-Stevens Point GIS Center will present methods and outcomes to:
	1. The COLA organization,
	2. Two other gatherings of lake associations at two Northern Wisconsin venues,
	3. One statewide venue, such as the Wisconsin Lakes Conference or Wisconsin Land Information Association Annual Conference, and
	4. One national or international venue, such as the ESRI International Users Conference.

Breakdown of Expenses

This is an estimate of expenses based upon current fringe and indirect rates at UW-Stevens Point.

* Student Intern (TBD)
	+ Conduct data collection and validation.
	+ Execute the preliminary EVAAL model.
	+ Develop maps for atlas and for use with ArcGIS Online.
	+ Document project methods, results and metadata.
	+ Assist in preparation and delivery of presentation.

350 hours @ $15/hour         $5,250

Fringe Benefits $292.41

* Senior Education Specialist (Douglas Miskowiak)
	+ Supervise student intern activities.
	+ Validate project data, methods, and results for accuracy.
	+ Edit project deliverables for accuracy, comprehension and quality.
	+ Prepare and deliver presentations.

40 hours (In-Kind) $0.00

Fringe Benefits $0.00

* Travel Expenses
	+ Site visit to Upper Couderay River Watershed

Mileage: 400 miles at $0.352/mile $140.80

Meals (two individuals): $80.00

* + Two presentations at Northern Wisconsin Venues

Mileage: 800 at $0.352/mile $281.60

Meals (two individuals): $160.00

* + Presentation at Wisconsin Conference

Mileage: (TBD) $100.00

Meals (two individuals): $80.00

Conference fee (two individuals) $530

* + Presentation at National Conference

Travel: $500.00

Lodging: $1,000

Meals $480

* + Postage and Supplies

Print letters and maps $30.00

Envelopes and postage $100.00

* UW-Stevens Point Indirect Rate (34.5%) $3113.56

Total Project Expenses $12,138.37