

Work Breakdown Structure

Task ID	Task Name	Employee Work Hours Per Task	Cost (less MGT, Interest, and Operating Expenses)	Duration	Resources
	Part 1: Data				
1	Drainage Impacts on Agricultural Land Quantities Surrounding the Point Abino Drain Watershed Within Part 1: Data	213	\$15,877.76	2014/02/10 - 2014/06/13	Total Resources Required for Project
1.1	Literature and Data Review	6	\$465.12	2014/02/10 - 2014/02/28	Total Resources Required for Project Segment: Adam, Computer, Operating Expenses
1.1.1	Research USGS land user classes to standardize classification of aerial imagery	5	\$51.02	2014/02/10 - 2014/02/20	Adam, Computer, Operating Expenses (Phone/Internet)
1.1.2	Research online projects for examples of project correspondence	2	\$152.84	2014/02/11 - 2014/02/14	Adam, Computer, Operating Expenses (Phone/Internet)
1.1.3	Research available data for disposal container	1	---	---	---
1.1.1.1	Municipal boundaries (digital)	1	\$51.02	2014/02/17 - 2014/02/21	Adam, Computer, Operating Expenses (Phone/Internet)
1.1.1.2	Temporarily sufficient imagery (intervals of approximately 8-10 years up to present) with additional historic maps pre-dating the imagery	2	\$162.04	2014/02/21 - 2014/02/28	Adam, Computer, Operating Expenses (Phone/Internet)
1.2	Data Collection	51	\$2,450.00	2014/02/03 - 2014/03/07	Total Resources Required for Project Segment: Adam, Operating Expenses
1.2.1	Travel to Brock University	1	\$50.00	2014/03/03 - 2014/03/03	Adam, Operating Expenses (Transportation)
1.2.2	Acquire digital imagery, municipal boundaries, shapefile, and historical maps	50	\$1,000.00	2014/03/03 - 2014/03/03	Adam
1.2.3	Travel to Hagers College and complete data	50	\$1,500.00	2014/03/05 - 2014/03/07	Adam, Operating Expenses (Transportation)
1.3	Create Base Maps	40	\$3,250.80	2014/02/10 - 2014/03/28	Total Resources Required for Project Segment: Adam, Computer, ArcGIS
1.3.1	Compile geodatabase with all necessary project data	10	\$812.70	2014/02/10 - 2014/02/14	Adam, Computer, ArcGIS
1.3.2	Georeference aerial photos and historic maps	30	\$2,438.10	2014/03/17 - 2014/03/28	Adam, Computer, ArcGIS
1.4	Classify Digital Images	25	\$1,336.20	2014/03/31 - 2014/04/11	Total Resources Required for Project Segment: Adam, Computer, ERDAS Imagine
1.4.1	Unsupervised classifications	10	\$514.90	2014/03/31 - 2014/04/04	Adam, Computer, ERDAS Imagine
1.4.2	Supervised classifications	15	\$821.30	2014/04/07 - 2014/04/11	Adam, Computer, ERDAS Imagine
1.5	Classification Analysis	18	\$2,336.72	2014/04/14 - 2014/05/02	Total Resources Required for Project Segment: Adam, Computer, ERDAS Imagine, ArcGIS, Operating Expenses
1.5.1	Conduct accuracy assessment in ERDAS to verify initial classification outputs	10	\$1,601.50	2014/04/14 - 2014/04/25	Adam, Computer, ERDAS Imagine
1.5.2	Georeference classified images over base maps to identify drainage impacts	8	---	---	---
1.5.2.1	Digitize from alignment to each map/image	6	\$441.50	2014/04/28 - 2014/04/29	Adam, Computer, ArcGIS
1.5.2.2	Assign class names to classification output images	2	\$209.72	2014/04/30 - 2014/04/30	Adam, Computer, ERDAS Imagine
1.5.3	Reclassify class outputs to a single class	8	\$992.60	2014/05/01 - 2014/05/02	Adam, Computer, ArcGIS
1.6	Compile Final Deliverables, Draw Conclusion and Complete Final Report	43	\$3,498.00	2014/05/05 - 2014/06/13	Total Resources Required for Project Segment: Employees, Computer, ArcGIS, Microsoft Office, Operating Expenses
1.6.1	Conduct analysis, compile hard-copy maps	40	\$3,254.00	2014/05/05 - 2014/06/06	Employees, Computer, ArcGIS, Microsoft Office, Operating Expenses (Internet)
1.6.1.1	Conduct spatial, temporal, and geometrical interpretations/analysis on classified images vs. base map to assess agricultural land coverage	40	\$3,254.00	2014/05/05 - 2014/06/06	Employees, Computer, ArcGIS, Microsoft Office, Operating Expenses (Internet)
1.6.1.2	Create map layouts in ArcGIS	1	\$61.95	2014/06/06 - 2014/06/06	Employees, Computer, ArcGIS, Microsoft Office, Operating Expenses (Internet)
1.6.2	Complete final conclusions, compile, print and submit hardcopy maps and final report	3	\$482.70	2014/05/09 - 2014/05/13	Employees, Computer, ArcGIS, Microsoft Office, Operating Expenses (Internet)
1.7	*Parallel Recurring Task: Project Management (Project Advisor Meetings)	8	\$1,200	2014/02/10 - 2014/06/13	Project Advisor, Employees
1.8	*Parallel Recurring Task: Bi-Weekly Reports and/or Client/Employee Meetings	Every other Friday for entire project duration	Operating Expenses	2014/02/10 - 2014/06/13	---

Resource Cost Breakdown

Resource Name	Calculated Hourly Rate for Project Duration (Total Resource Cost/2000 (working hrs. per week))	Predicted Cost of Resource by Project's End
Salaries (for Working 11 Generalist Analysts, 10 Analysts + Generalist/Analyst)	\$30.00	\$1,500,000
ERDAS Imagine	\$2,441	\$131,645
ARC Desktop Computer	\$1,500	\$100,000
Microsoft Office	\$400	\$1,600

Employees

Employee	Total Bill-Out Rate Per Hour
Adam Tordella (PM)	\$50.00
Jan Smith (Project Advisor)	\$15.00

Total Contingency Cost (10% of total project cost)

\$1,507.79

PROJECT COST GRAND TOTAL

\$16,585.73