**Lab #1** – **Building Models for GIS Analysis Using ArcGIS**

(Due date: Feb 1, 2017)

This lab is a general refresher to the concepts and techniques that should have been acquired in previous GIS courses. Please complete the exercises in the lab and answer questions in each exercise as well as following additional questions. Please type your answers together with the questions in this word file and submit this file to Laulima before the stated due date.

**Exercise 1: Explore an existing model**

Type in your answers to questions in the exercise here.

Additional Question 1.1: Describe what does this model do.

Additional Question 1.2 – Please list all elements in this model in the following table. If none, put ‘n/a’.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Geoprocessing operation | Function description | Input variable | Output variable | Parameter |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Exercise 2: Prepare for your analysis**

Type in your answers to questions in the exercise here.

Additional Question 2.1: Following Step 4, please write an expression to select water bodies with an area greater than 100,000.

**Exercise 3: Build a site selection model**

Type in your answers to questions in the exercise here.

Additional Question 3.1: All criteria in this exercise are expressed in a binary form (in/not in), for example, the plant site must be within 3,000 feet of the Cache la Poudre River. Which tool to use to fulfill continuous/fuzzy criteria, for example, the closer to the river the better (more suitable)?

Additional Question 3.2: What is the difference between ‘Run Entire Model’ in the Model menu and the ‘Run’ button (see below).

