

## Cookbook 9 December 2013 *ModelBuilder (Part 1)*

### Overview

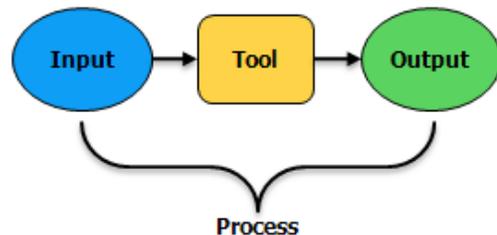
1. A *Simple Model Without* Parameters
2. A *Simple Model With* Parameters



### 1) A Simple Model Without Parameters

**Question:** How many certified or potential vernal pools are located with 200 feet of roads in Westfield?

1. Create a folder on your USB flash drive called \simplemodel to store the model itself, the input data, and its output data.
2. Create a file geodatabase in the \simplemodel folder called simplemodel to store the model output.
3. Download the data layers you need from MassGIS and create a simple map.
4. Draw your analysis procedure as a flowchart to organize your workflow.
5. ***Built the model!***



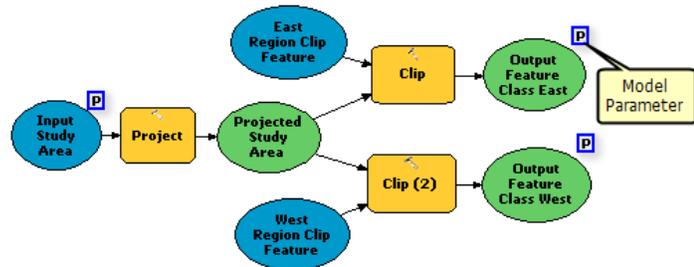
This is great!

But, this would be so much better if we could specify the buffer distance in a model dialog box.

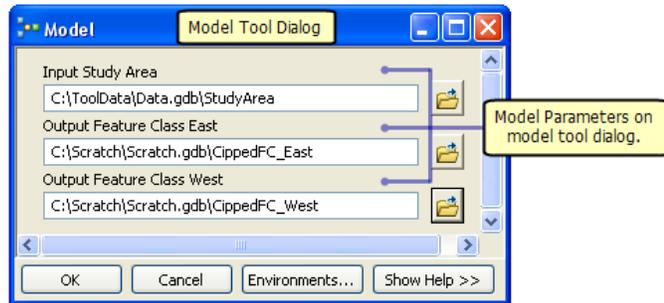
And, even better: if we could choose between certified or potential vernal pools and which town we are performing the analysis for!

## 2) A Simple Model with Parameters

A model *without* parameters is only good in one scenario. Consider the model you just built that used the Buffer and Clip tools. This model was *hard-coded* to use the potential vernal pools, EOT roads for Westfield, and created an output file with a pre-defined name.



If you wanted to run the model with other datasets, you would have to open ModelBuilder, double-click each model element and change the paths. You would have to follow a similar process if you wanted to change the buffer distance, too, since that was hard-coded to 200 feet.



Any model variable can be made into a model parameter. When a variable is made into a model parameter, its value can be specified in the model tool dialog box.

Creating model parameters

[http://resources.arcgis.com/en/help/main/10.1/index.html#/Creating\\_model\\_parameters/002w000003z000000/](http://resources.arcgis.com/en/help/main/10.1/index.html#/Creating_model_parameters/002w000003z000000/)

Nice tutorial!

[http://nrm.salrm.uaf.edu/~dverbyla/nrm435/labs/Lab1\\_Model\\_Builder\\_2013.pdf](http://nrm.salrm.uaf.edu/~dverbyla/nrm435/labs/Lab1_Model_Builder_2013.pdf)

Creating models with interactive input

<http://esriaustraliattechblog.wordpress.com/2013/11/04/creating-models-with-interactive-input-modelbuilder-10-0-10-2/>

### Your Turn!

Enhance your model from Part 1 by turning the buffer distance, the vernal pools data layers, and the roads data layer into model parameters.

Now you can run the model for any desired buffer distance on either certified or potential vernal pools – and all that for any town in that you have road data for!