

## ModelBuilder Exercise using LOJIC data

In this exercise, you will create a tool that allows you to select a Metro Park, create a buffer area around the selected park(s) and clip the parcels within that buffer area. You will be able to select the parks, select a buffer distance and name the final clipped parcel layer.

The work directory for this exercise is the ModelBuilder directory that should be copied into your workspace from the J:/ArcTutor directory. (If you have already completed the Executing Tools in ModelBuilder and Creating Tools in ModelBuilder, the ModelBuilder directory should already be in your workspace.)

### Create an mxd:

Open ArcMap and add the **Current Parcel Polygon** and **Louisville Metro Parks** layers. Save it as **LOJICModelBuilder.mxd** in the ModelBuilder directory.

### Create a toolbox:

Open ArcCatalog from within ArcMap and navigate to the ModelBuilder directory. Right click on the **ModelBuilder** directory, select **New** and then select **Toolbox**. A toolbox called **Toolbox.tbx** will be created in the ModelBuilder directory. Rename it to **ParcelToolbox.tbx**.



Open ArcToolbox from within ArcMap. Right click on **ArcToolbox**, **Add Toolbox**. Navigate to the ModelBuilder directory and add the **ParcelToolbox.tbx**. Right click on the **ParcelToolbox** in the ArcToolbox window and select **New, Model**.

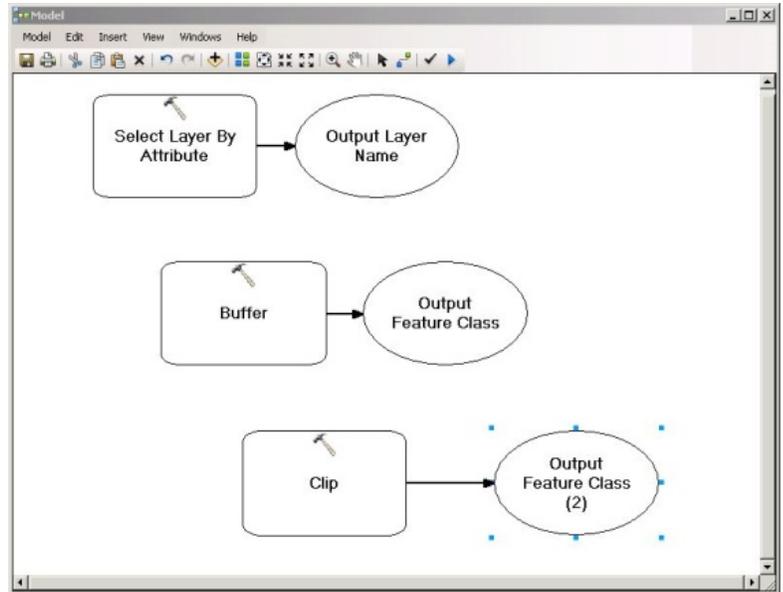


## Start building a Model:

The following tools will be used in this model:

- Select Layer By Attribute (Data Management)
- Buffer (Analysis)
- Clip (Analysis)

Using the **Search**, find each tool and drag them one by one into the Model window.



## Setting up the Select Layer By Attribute tool:

Right click on the **Select Layer By Attribute** tool and click **Open**. Complete it as follows:



Click OK when done.

Right click on the **Select Layer By Attribute** again and select **Make Variable>From Parameter>Expression**. Move the new “**Expression**” oval so that it is not on top of anything. Right click on the **GREEN** “**Louisville Metro Parks**” oval and **Rename** it “**Selected Park(s)**”.

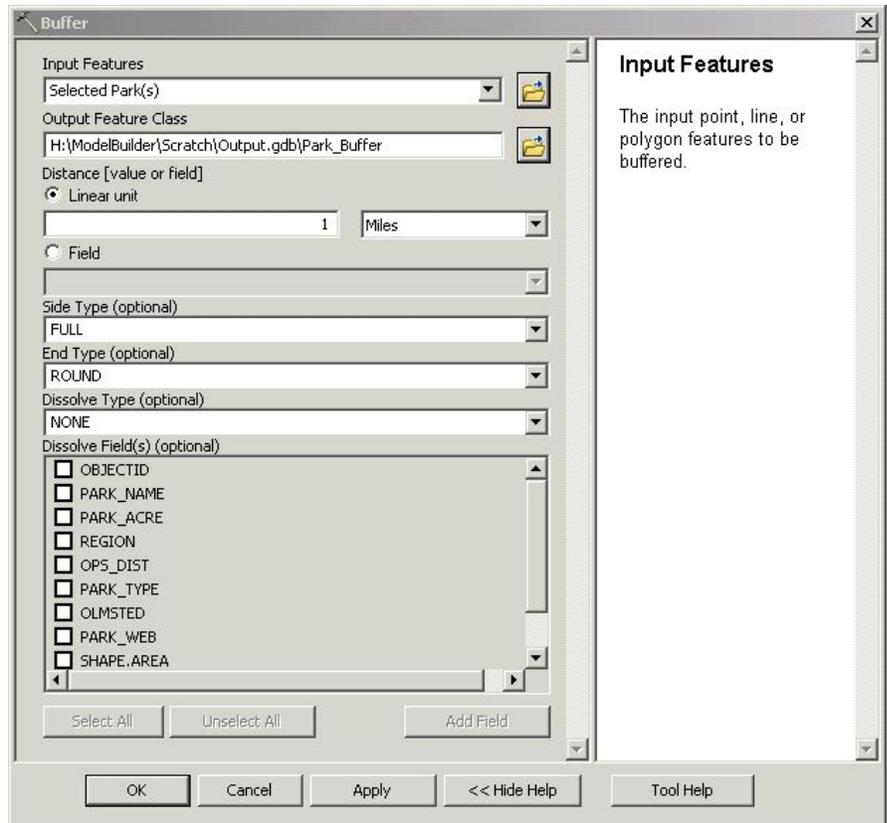
### Setting up the Buffer Tool:

Right click on the **Buffer** tool and click **Open**. Complete it as follows:

Notice that the Output Feature Class is at  
ModelBuilder\Scratch\  
Output.gdb\Park\_Buffer.

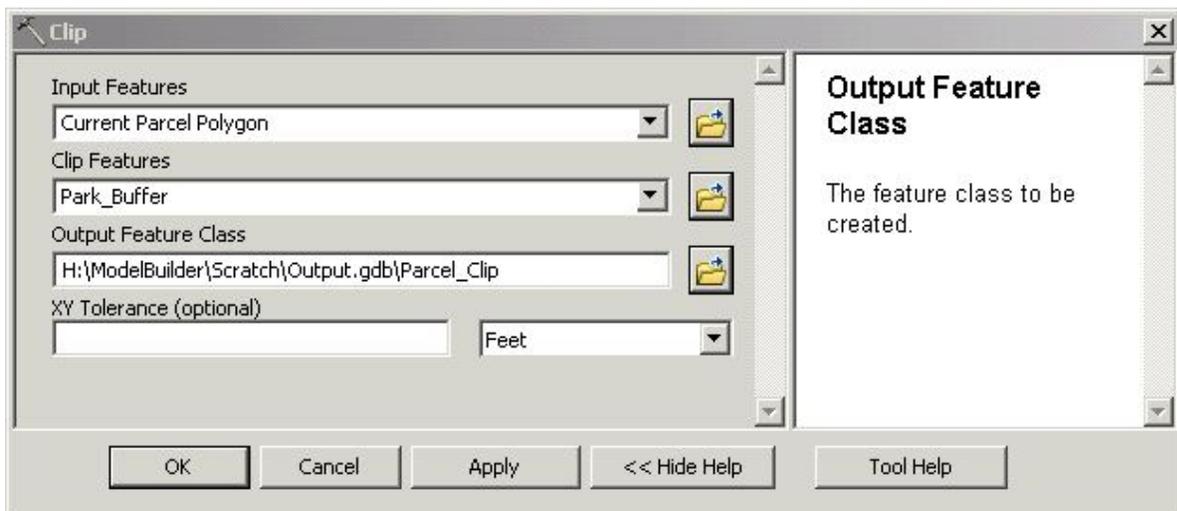
Click OK. Right click on the **Buffer** again and select **Make Variable>From Parameter>Distance [value or field]**. Move the new “**Distance [value or field]**” oval so that it is not on top of anything.

Click OK when done.



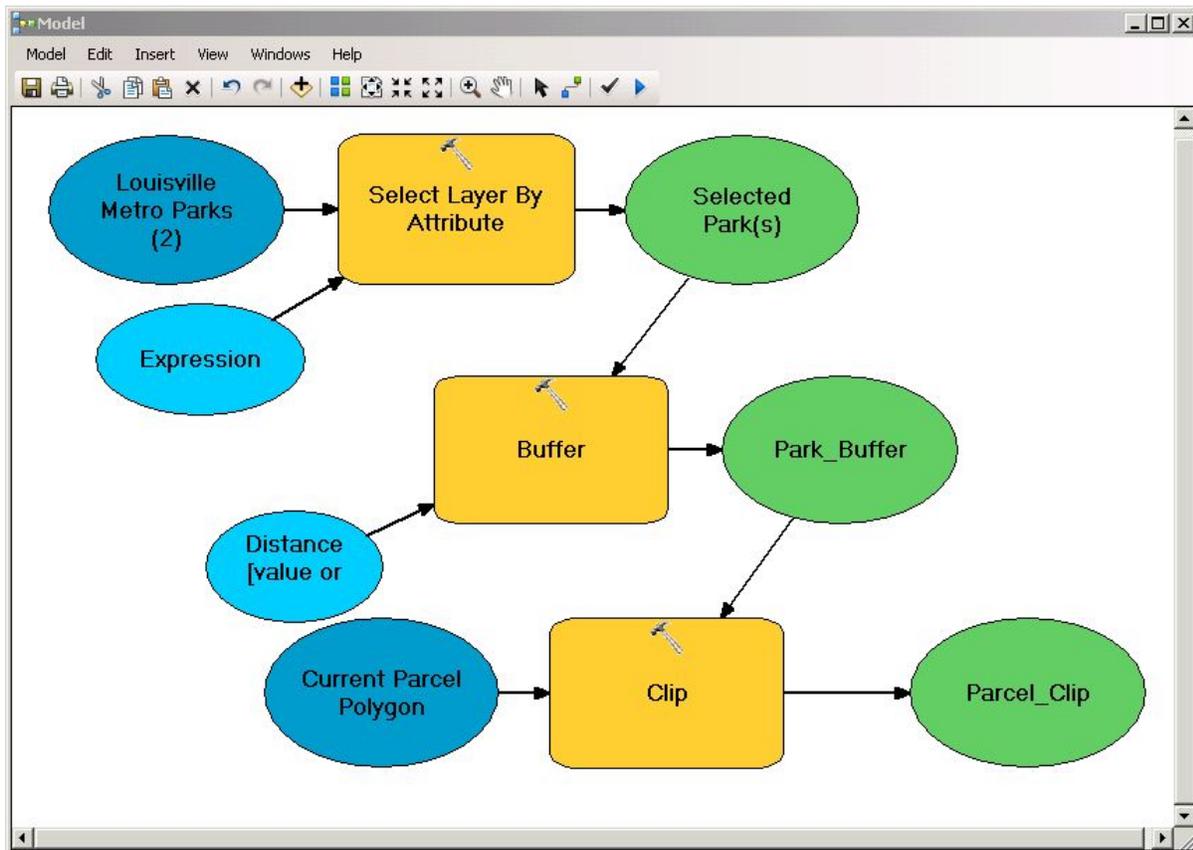
### Setting up the Clip Tool:

Right click on the **Clip** tool and click **Open**. Complete it as follows:



Click **OK** when done. Right click on the Green “**Parcel\_Clip**” oval and click **Add to Display**.

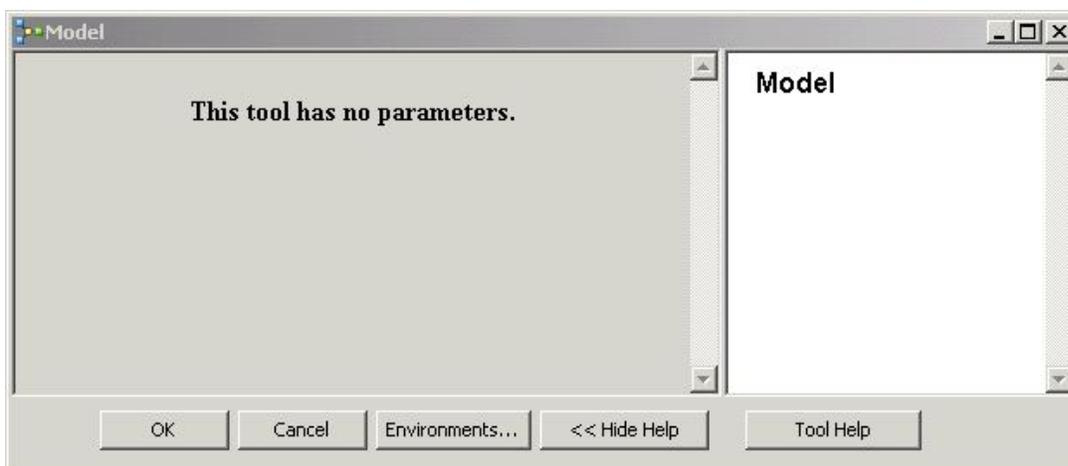
It should look similar to this:



**Save the Model.**

Go to **Model>Run Entire Model** to run the model from within the **Model** editor window. **Close** the Run window when it is done. Notice that the Parcel\_Clip layer has been added to the project.

Now **close** the Model Editor window. In the **ArcToolbox** window, **Double click** on **ParcelToolbox>Model**. The Parameter Window will appear.



This means that the Park Selection, Buffer Distance and Parcel Clip layer name are set in the Model and are not yet set for a user defined parameter. We will do that a little later.

Click **OK** and the tool will run. **Close** the Run window when it is done. Notice this time that the Parcel\_Clip layer is not added to the display. **Add** the Parcel\_Clip layer at from the **ModelBuilder/Scratch/Output.gdb** geodatabase.

### Adding Model Parameters:

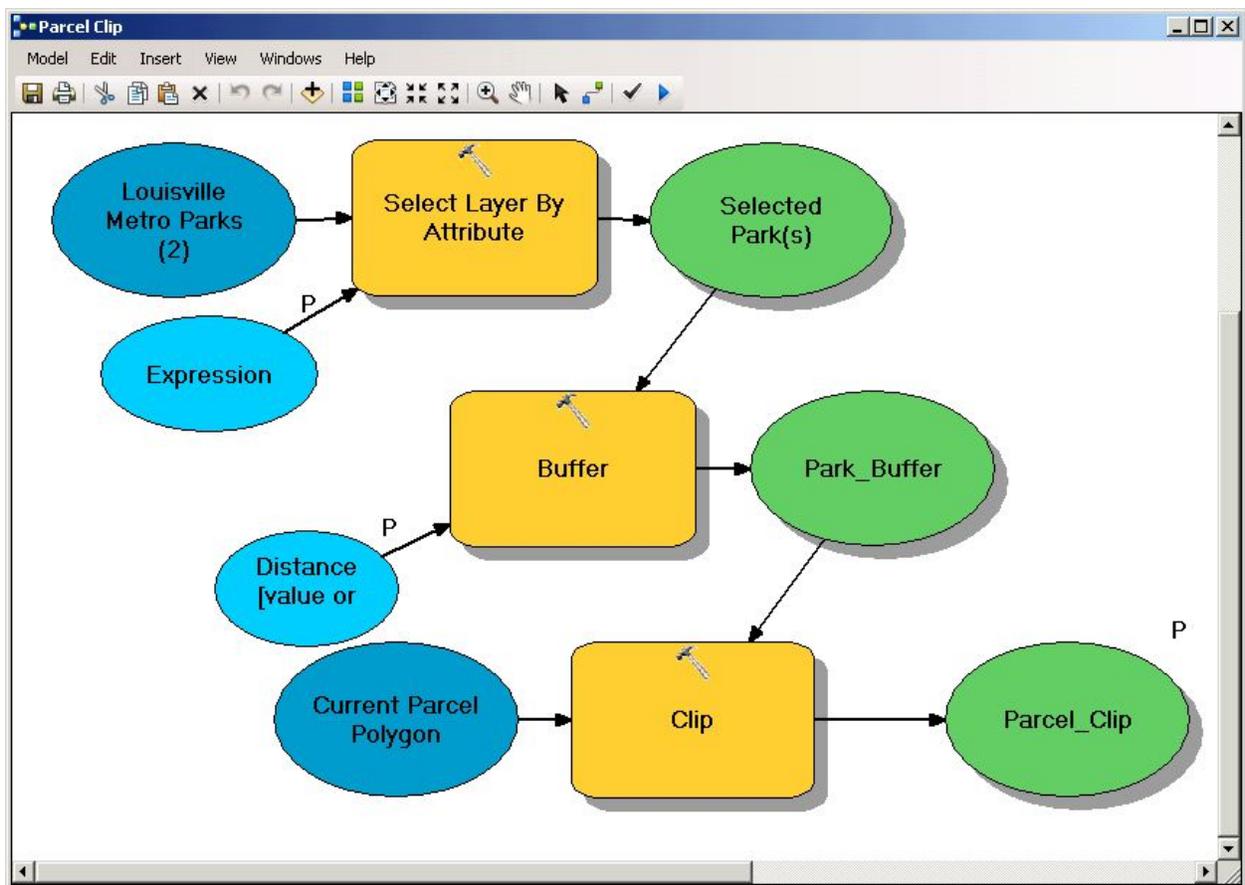
From the **ArcToolbox** window, right click on the **ParcelToolbox>Model** and select **Edit**.

Right click on the “**Expression**” oval and check on **Model Parameter**.

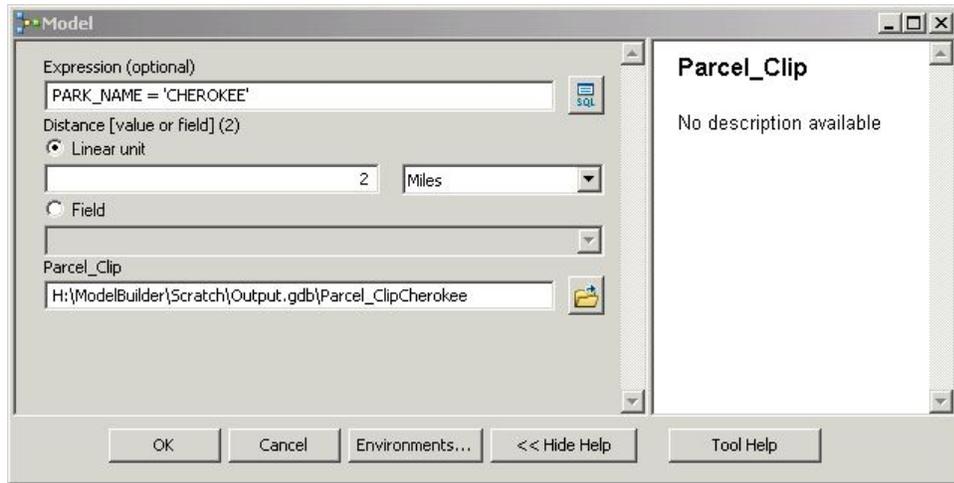
Right click on the “**Distance [value or field]**” oval and check on **Model Parameter**.

Right click on the “**Parcel\_Clip**” oval and check on **Model Parameter**.

A “**P**” should appear next to each of these ovals. The final model should look like this:



Save the Model and close the Model window. In the **ArcToolbox** window, **Double click** on **ParcelToolbox>Model**. The Parameter Window will appear and now these parameters will be available for you to tailor to you needs. Update the parameters as follows:



Click **OK** and the model will run.

**Renaming the Model:**

From the **ArcToolbox** window, right click on the **ParcelToolbox>Model** and select **Rename**. Rename it “**Parcel Clip**”.

**Documenting the Model:**

From the **ArcToolbox** window, right click on the **ParcelToolbox>Parcel Clip** and select **Properties**. Complete the **General** tab as follows:

Click **OK** when done. The model is now complete. Save the mxd and close.

