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.



<u>Setting up the Select Layer By</u> <u>Attribute tool:</u>

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

Layer Name or Table View 📃 🐣	Layer Name or Table
Louisville Metro Parks 💽 🔁	View
Selection type (optional)	
NEW_SELECTION	The feature layer or table
Expression (optional)	view to which the selection
PARK_NAME = 'ALGONQUIN'	will be applied.
	The input can be a layer or
<u>•</u>	table view in the ArcMap
OK Cancel Apply << Hide Help	Tool Help

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:

	[™] Buffer	×
Right click on the Buffer tool	Input Features	Input Features
and click Open . Complete it as	Selected Park(s)	
follows:	Output Feature Class	polygon features to be
Ionows:	Distance [value or field]	buffered.
	Linear unit	
Notice that the Output Feature	1 Miles	
Class is at	C Field	
ModelBuilder\Scratch\	Side Type (optional)	
Output odb\Park Buffer	FULL	
output.guo a unc_buiter.	End Type (optional)	
Click OK Pight click on the	Dissolve Type (optional)	
	NONE	
Buffer again and select Make		
Variable>From Parameter>		
Distance [value or field].	PARK_ACRE REGION	
Move the new "Distance		
[value or field]" oval so that it		
is not on top of anything.	SHAPE.AREA	
Click OK when done.	Select All Unselect All Add Field	-
Setting up the Clip Tool:	OK Cancel Apply << Hide Help	Tool Help

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

input Features		🗐 Output Featu	re
Current Parcel Polygon	<u> </u>	🖆 🛛 Class	
Ilip Features			
Park_Buffer	- 6	The feature class	to be
Dutput Feature Class		created.	
H:\ModelBuilder\Scratch\Output.gdb\Parcel_Clip)	<u></u>	
(Y Tolerance (optional)			
F	eet	-	

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 with 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.

-• Model	
This tool has no parameters.	Model
_	
OK Cancel Environments << Hide Help	Tool Help

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:

••Model	
Expression (optional)	Parcel_Clip
PARK_NAME = 'CHEROKEE'	-12 NB
Distance [value or field] (2)	No description available
2 Miles 💌	
C Field	
V	
Parcel_Clip	
H:\ModelBuilder\Scratch\Output.gdb\Parcel_ClipCherokee	
_	-
OK Cancel Environments << Hide Help	Tool Help

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.

rcel Cli	p Properties				? ×
General	Parameters Envi	onments He	lp Iteration		
Name:					
Parcel	lClip				
Label:					
Parcel	l Clip				
Descrip					
that b	around the selected ouffer area.	park(s) and cli	p the parcels with	nin I	
Stylesn	ieet:			6	
I Sto I Alw	re relative path nam vays run in foregrour	es (instead of Id	absolute paths)		
			ОК	Cancel	Apply