

ArcMap Geoprocessing: Introduction to Model Builder - Part 1

Welcome to the Essential ArcGIS Task Sheet Series. This series supplements the Iowa State University GIS Geospatial Technology Training Program short course series, "Essential ArcGIS Tutorial Series." The task sheets are designed to provide quick, easy instructions for performing specific tasks in GIS.

Model Builder is a feature that allows multiple ArcToolbox tools to be integrated into one process. Model Builder is useful to streamline and show multiple geoprocesses. To use data from this task sheet, visit the NRGIS web site and follow these links: under **State-wide Data** click **Infrastructure** then download **Hospitals**, **Museums** and **Highway**. For more information on the NRGIS web site, consult task sheet PM2082-09q regarding downloading from the Iowa DNR.

1. Open ArcMap

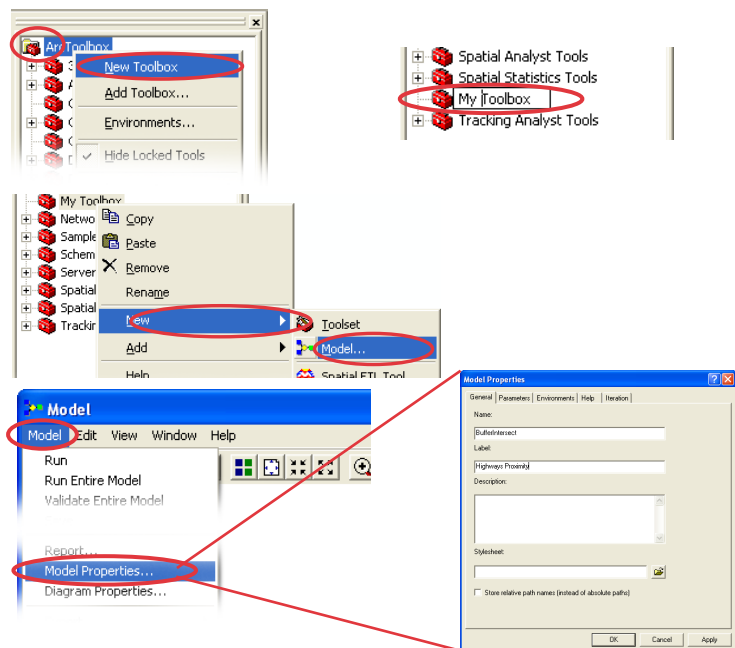
Add the **Hospitals**, **Museums** and **Highway** shapefiles that can be downloaded from the Iowa DNR.

2. Creating a New Model

1. Click the **ArcToolbox** icon to open ArcToolbox.
2. Right click **ArcToolbox** and select **New Toolbox**.

- Name the new toolbox **My Toolbox**.
- Right click **My Toolbox** and select **New > Model**.

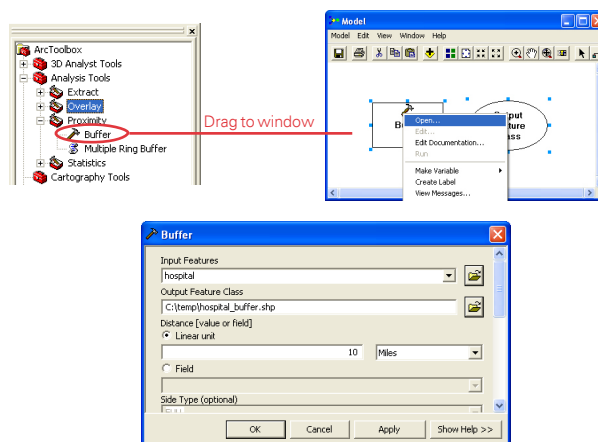
- In the Model window select **Model > Model Properties**.
- In the Model Properties window under **Name:** type **BufferIntersect**.
- Under **Label:** type **Highway Proximity**.
- Click **OK**.



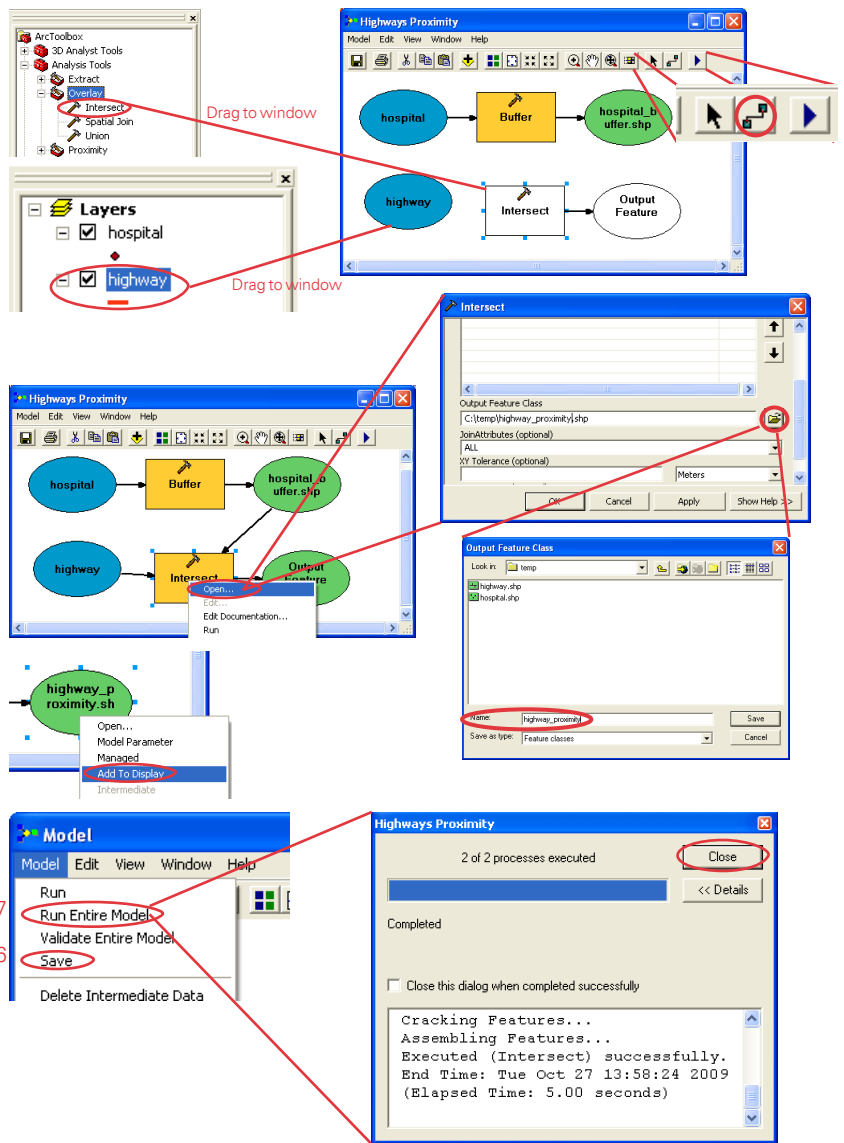
3. Building a New Model

1. With the new model (Highway Proximity) still open, expand **Analysis Tools > Proximity** from ArcToolbox. Click and drag the **Buffer** into the model window. Right click on the **Buffer** tool and select **Open**.

- From the **Input Features** drop-down menu, select **hospital**.
- Under **Output Feature Class** click the folder icon, browse to **C:\ > temp** and in the **Name:** box, type **hospital_buffer**. Click **Save**.
- Under **Linear unit**, type **10** and select **Miles** from the drop-down menu beside it.
- Click **OK**.



- Click **Model**, then select **Save**.
- From Layers Table of Contents, drag the **highway** layer into the model window.
- From ArcToolbox, expand **Analysis Tools** > **Proximity** then click and drag the **Intersect** tool into the model window.
 - Select the **Add Connection** tool. Click the **hospital_buffer.shp** oval and then click the **Intersect** box. Repeat by clicking the **highway** oval then clicking the **Intersect** box.
 - Right click the **Intersect** box and select **Open**.
 - Under **Output Feature Class**, click the folder icon, browse to **C:\ > temp** and in the **Name:** box, type **highway_proximity**. Click **Save**.
 - Click **OK**.
- Right click **highway_proximity.shp** and select **Add to Display**.
- Click **Model**, then select **Save**.
- Click **Model**, then select **Run Entire Model**.
 - Once the model is finished running, click **Close**.
 - Close the **Buffer and Intersect** window to view the results of the model. Click **Yes** to save the model.
 - Uncheck the **highway** layer from the **Layers** table of contents to view the results.
- See task sheet PM2082-09w on creating parameters and variables in Model Builder to continue.



Contacts

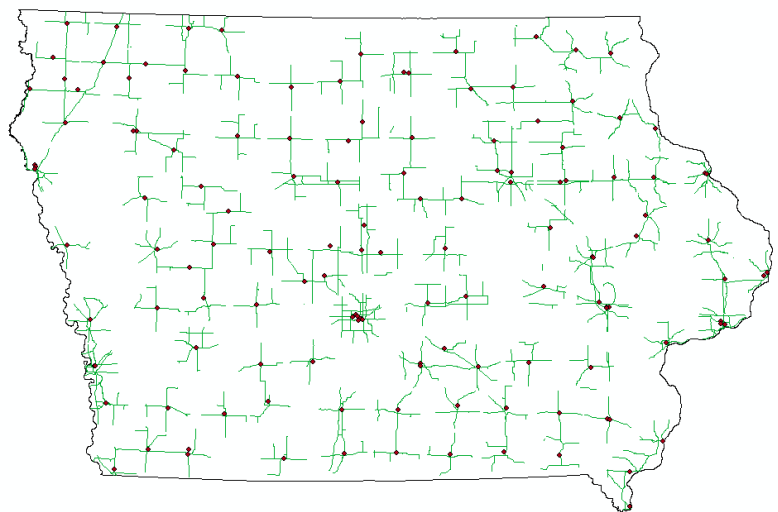
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This task sheet and more are available for free download at www.extension.iastate.edu/gis.



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