# envision tomorrow

a suite of urban and regional planning tools

#### SCENARIO BUILDER USER GUIDE VERSION 3.0



### SCENARIO BUILDER USER GUIDE

VERSION 3.0

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### INSTALLATION





#### 1. Double-click the install file.

- Follow on-screen instructions
- You may need to have **.NET Framework** installed in order for installation to be successful. It is included on the Demo CD.

### **GETTING STARTED**



#### 1. Load toolbar in ArcGIS.

• Right click on ArcGIS toolbar and select Envision 3.0 toolbar.

### **GETTING STARTED**

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#### 1. Dock the Envision window to the left.

Dock the toolbar on top and click the button to load the Envision window.

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#### 1. File > Open Envision File Geodatabase

2. Browse to and select the Geodatabase containing the scenario layers, then click **Add**. Envision will create a table listing all of the unique layers included in this Geodatabase



*The first time you open a scenario geodatabase,* Envision performs several functions behind the scenes:

- Generates several tables within the **geodatabase** for tracking scenario results.
- Generates a list of all layers included in the **geodatabase** each layer is a potential scenario layer.



- 1. You will be automatically prompted to Select a Scenario Excel Spreadsheet.
- Generates several tables within the **geodatabase**.



Scenario 1

Scenario 2

Scenario 3

Scenario 4

Scenario 5

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Functions on this page are specific to the first time

opening a new scenario geodatabase only.

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NOTE

Define Scenario Layers

**Open Envision Excel File** 

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#### The first time you open a new geodatabase, you will be promted to "Define the Scenario Layer." You only need to define Scenario 1 at this point.

#### 2. File > Define Scenario Layers

Browse to and select the **geodatabase** containing the scenario layers, then click **Add**.

- Once you've defined which layer is Scenario 1, Envision will remember your selection.
- If you have already created additional scenario layers in your **geodatabase**, you can define them as Scenarios 2-5 at any time.

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Saratoga\_Scenario\_ 🗸

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• Use ArcCatalog to make copies, add and name additional layers to be used as scenario layers within your **geodatabase**. You will need to reload the **geodatabase** in order for Envision to recognize additional layers added to the **geodatabase**.

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- 1. File > Open Envision Excel File > Select
- 2. Browse to and select the Envision spreadsheet.
- Allow a few moments for Excel sheet to load.









# INTERFACE DETAILS



#### 1. Multiple paint brush options.



- Synchronize options: Quickly ensures that the scenario layer matches the results displayed in the scenario spreadsheet.
- 3. Quick sync: Syncs only painted cells.
- Full sync: Syncs all cells, including applying zero values to unpainted cells.

# INTERFACE DETAILS



 Attribute field manager: Allows users to define which attributes of the development types are written and tracked in the scenario layer. There are dozens of development type attributes that can be tracked.

<u> </u>			Check All		Unchee
Track	Field Name	Alias	G	Calc by Acres	Calc Outp Field Nam
	Streets	Street Percentage	(3		
	Civic	Civic Percentage			
	Park	Park Percentage			
	Net_Land	Net Land Percentage			
	net_acre	Net Buildable Acre			
	Strt_Mi_Acre	Street Miles per Acre		1	STRT_MI
	Ln_Mi_Acre	Land Miles per Acre		1	LN_MI
	IntDen_Mi	Intersection Density per Sq Mi			
	green_street	Green Street Percentage	1		
	Public_Imperv	Public Impervious Percentage			
	Net_Imperv	Building Impervious %			
	Gross_Imperv	Gross Impervious %			
	NetHUDen	Net Housing Unit Density	2		
	NetEMPDen	Net Job Density			
	HUDen	Housing Unit Density			HU
	EMPDen	Job Density			EMP
	Redev_Rate	Redevelopment Rate			
	DevdHUDen	Redev Housing Unit Density			
	DevdEMPDen	Redev Job Density			
	avg_FAR	Average FAR			
	SFDen	Single Family Density		1	SF
	THDen	Townhome Density			TH
	MFDen	Multifamily Density		1	MF

2. Check the "Track" box:

If you want to track the attributes and write their values as you paint the scenario layer, simply check this box.

3. Certain attributes can be multiplied against the land area (acres) and result in additional variables. For example, housing unit density can be multiplied against the acres and result in housing units. Check the "Calc by Acres" box if you wish to track this level of detail.

As well, Envision will keep track of your selections even if you shut down ArcMap and return to the project later.

# INTERFACE DETAILS

#### **DEFINING A SUBAREA**

The **subarea** function allows the user to zoom into user defined places in order to create more detailed designs and track the outputs for only the specified area. The **subarea** function simply creates a **definition query** and **syncronizes** the scenario layer so that the **scenario spreadsheet** results are limited to the specified area. A **subarea** is simply a unique attribute of the scenario layer. For instance, if you have a "City" field in your scenario layer attributes, and "Planeville" is one of the cities in that field, you can select Planeville as your subarea.



- Core EAGLE MOUNTAIN LEHI SARATOGA SPRINGS
- 1. Select the field containing the subarea names, such as "City"
- 2. Select the specific attributes, such as "Saratoga Springs." Envision will zoom to the location and perform a Quick Sync to update the **scenario spreadsheet** values for that smaller area.

# SCENARIO PAINTING



- 1. *Select paint brush:* There are multiple types of paint brushes to choose from.
- 2. Select development type i.e. paint color.
- *3. Paint onto scenario layer:* Select an area to paint, the results will automatically be calculated upon painting.
- 4. Changes will appear within the scenario spreadsheet.



#### **HELPFUL HINTS**

Using two monitors is helpful with painting scenarios so Excel can be open on one monitor and the Scenario Painter open on another monitor.

Track progress both in the **summary tab** and also in the **scenario tab** that corresponds with the scenario number you are currently editing.