

AN INTRODUCTION TO ESRI ARCADE EXPRESSIONS

Patrick McKinney
Lead GIS Analyst/Developer
Cumberland County

pmckinney@ccpa.net

<https://www.ccpa.net/116/Geographic-Information-Systems-GIS>

<https://pnmcartodesign.com/>

<https://github.com/pmacmaps>



WHAT ARE ARCADE EXPRESSIONS?

- ▶ "scripting language for creating custom visualizations and labeling expressions."
- ▶ Includes feature and geometry data types
- ▶ Works across ArcGIS ecosystem



ARCADE EXPRESSIONS IN THE WILD

- ▶ Vehicle Crash Data Map
 - ▶ Set text based upon codes in dataset
- ▶ Agricultural Resources Map
 - ▶ Join two fields
 - ▶ apply text formatting
- ▶ Japanese Knotweed Sites
 - ▶ Set number of decimal places
 - ▶ Return default text if no value in record
 - ▶ Add commas to number



SUPPORTED PLATFORMS

- ▶ ArcGIS Pro
- ▶ ArcGIS Enterprise
- ▶ ArcGIS Online
- ▶ ArcGIS JS API
- ▶ ArcGIS Runtime

▶ See

<https://developers.arcgis.com/arcade/guide/version-matrix/> for version support



ANATOMY OF ARCADE EXPRESSIONS

- ▶ Similar to JavaScript syntax
- ▶ Declare variables using "**var**" keyword
- ▶ End lines with semi-colon (";")
- ▶ Can use conditional statements, loops, and perform math
- ▶ Good practice to end statement with "**return**" keyword
- ▶ Can include comments in code
 - ▶ "//" for single line
 - ▶ "/* */" for multi-line



ANATOMY OF ARCADE EXPRESSIONS

- ▶ Global variables based upon context in which an Arcade expression is evaluated and understood
 - ▶ \$datastore
 - ▶ \$feature
 - ▶ \$layer
 - ▶ \$map
 - ▶ \$value
 - ▶ \$view.scale



LET'S BUILD ARCADE EXPRESSIONS!

