

# GIS in Homeland Security

## Table of Contents:

Project Overview Page .....	HS-1
Presentation 1 – Homeland Security .....	HS-3
Presentation 2 – The Project Management Model (PMM) .....	HS-13
Presentation 3 – Navigating ArcGIS 9.1 .....	HS-17
Project Plan .....	HS-23
Presentation 4 – Creating the Base Map .....	HS-27
Project Implementation – Base Map Creation .....	HS-33
Changing the Name of the Data Frame (Data Frame Properties) .....	HS-38
Adding Image Data to ArcMap .....	HS-39
Changing Symbology of Image Data (Layer Properties) .....	HS-41
Changing Layer Name (Layer Properties) .....	HS-42
Changing Display Units (Data Frame Properties) .....	HS-42
Adding Vector Data to ArcMap .....	HS-43
Changing Symbology of Vector Data in Table of Contents .....	HS-44
Saving a Map Document .....	HS-45
Creating a Map Layout .....	HS-47
Exporting a Map Layout .....	HS-45
Printing a Map Layout .....	HS-53
Presentation 5 – ArcGIS Tools & Techniques for Risk Assessment .....	HS-55
<b>1.0 Project Implementation – Risk Assessment .....</b>	<b>HS-59</b>
Assigning Risk Values to Landmarks .....	
Opening an Existing Map Document .....	HS-59
Using Display Mode in ArcMap .....	HS-61
Opening an Attribute Table .....	HS-62
Using Source Mode in ArcMap .....	HS-62
Opening a Text Table in ArcMap .....	HS-62
Joining a Text Table to an Attribute Table .....	HS-63
Adding a Field to an Attribute Table .....	HS-64
Using the Select by Attributes Method to Select Features .....	HS-65
Using Calculate Values to Add Data to a Table .....	HS-66
Changing Symbology of Vector Data to Graduated Color (Layer Properties) .....	HS-68
Exporting Selected Features as a New Layer .....	HS-70
Removing a Layer from the Table of Contents .....	HS-71
Editing Legend Properties for a Map Layout .....	HS-72
Presentation 6 – ArcGIS Tools & Techniques for Mitigation .....	HS-75
<b>2.0 Project Implementation – Mitigation .....</b>	<b>HS-81</b>
<b>2.1 Prepare Visual Status Map of Low &amp; Guarded Threat Conditions:</b>	
Changing Labeling Options (Layer Properties) .....	HS-85
Labeling Features in the Map Display .....	HS-85
Changing Symbology of Vector Data to Unique Values (Layer Properties) .....	HS-86
Adding Graphic Images to a Map Layout .....	HS-89
Adding Drawing Elements (Ellipse) to a Map Layout .....	HS-90
<b>2.2 Prepare Visual Status Map of Elevated Threat Conditions:</b>	
Creating New Group Layers in the Table of Contents .....	HS-93
Adding Layers to a Group Layer (Group Layer Properties) .....	HS-93
Downloading Tabular Data from the Internet .....	HS-95
Managing Downloaded Data in Microsoft Excel .....	HS-96
Displaying Downloaded Tabular Data in ArcMap .....	HS-96
Exporting Event Data Created from Downloaded Data .....	HS-99
Searching for Features using the Find Tool .....	HS-102

Selecting Features in the Map Display from the Find Dialog Box.....	HS-102
Buffering Selected Features using ArcToolbox.....	HS-126
Modifying the Transparency of a Layer using the Effects Toolbar.....	HS-128
Using the Select by Location Method to Select Features.....	HS-129
Using the ArcMap Help Window.....	HS-135
Using VBA Scripts to Perform Advanced Field Calculations.....	HS-136
<b>2.3 Prepare Visual Status Map of High Threat Conditions:</b>	
Buffering Selected Features using the Buffer Wizard.....	HS-148
Setting Selectable Layers.....	HS-151
Creating Reports.....	HS-152
Adding a Report to a Map Layout.....	HS-154
<b>2.4 Prepare Visual Status Map of Severe Threat Conditions:</b>	
Using Advanced Labeling Options (Layer Properties).....	HS-159
Converting Labels to Annotation for Editing.....	HS-160
Presentation 7 – ArcGIS Tools & Techniques for Preparedness.....	HS-163
<b>3.0 Project Implementation – Preparedness.....</b>	<b>HS-167</b>
Merging Data Layers into a New Data Layer using the ArcToolbox.....	HS-173
Adding Multiple Data Frames to a Map Layout.....	HS-178
Grouping Layers into a Group Layer using the Context Menu.....	HS-183
Changing Selection Colors (Layer Properties).....	HS-185
Selecting Multiple Features in the Map Display using the Select Tool.....	HS-186
Using the Call Out Drawing Tool in the Map Display.....	HS-187
Presentation 8 – ArcGIS Tools & Techniques for Response.....	HS-191
<b>4.0 Project Implementation – Response.....</b>	<b>HS-195</b>
<b>4.1 Locate Emergency Services and Personnel:</b>	
Downloading Text Data from Common Online Sources.....	HS-196
Creating a New Address Locator in ArcCatalog.....	HS-203
Using a New Address Locator to Geocode Address Data in ArcMap.....	HS-204
Interactively Matching Unmatched Addresses in ArcMap.....	HS-205
<b>4.2 Assign Response Personnel:</b>	
Creating a New Shapefile in ArcCatalog.....	HS-220
Adding Features to a New Shapefile in ArcMap (Points).....	HS-220
<b>4.3 Dispatch On-Site Incidents Attendants:</b>	
Changing Default Drawing Symbols.....	HS-228
Plotting Incident Locations using the Find Tool.....	HS-229
<b>4.4 Responding to Special Populations Activity.....</b>	<b>HS-234</b>
Presentation 9 – ArcGIS Tools & Techniques for Recovery.....	HS-235
<b>5.0 Project Implementation – Recovery.....</b>	<b>HS-237</b>
<b>5.1 How Many People are Affected by an Emergency?</b>	
Displaying Statistics for a Selected Table Field.....	HS-241
<b>5.2 Setting Fixed Recovery Units.....</b>	<b>HS-245</b>
Creating a buffer around a buffer.....	HS-248
<b>5.3 Setting Mobile Recovery Units.....</b>	<b>HS-254</b>
Adding Features to a New Shapefile in ArcMap (Polygons).....	HS-260
Project Presentation – Written Report Instructions.....	HS-265
Project Presentation – Oral Report Instructions.....	HS-267
<b>Local Community Project.....</b>	<b>HS-269</b>