

SUSTAIN–Programmer's Manual: BMP Siting Tool

Submitted to



U.S. Environmental Protection Agency
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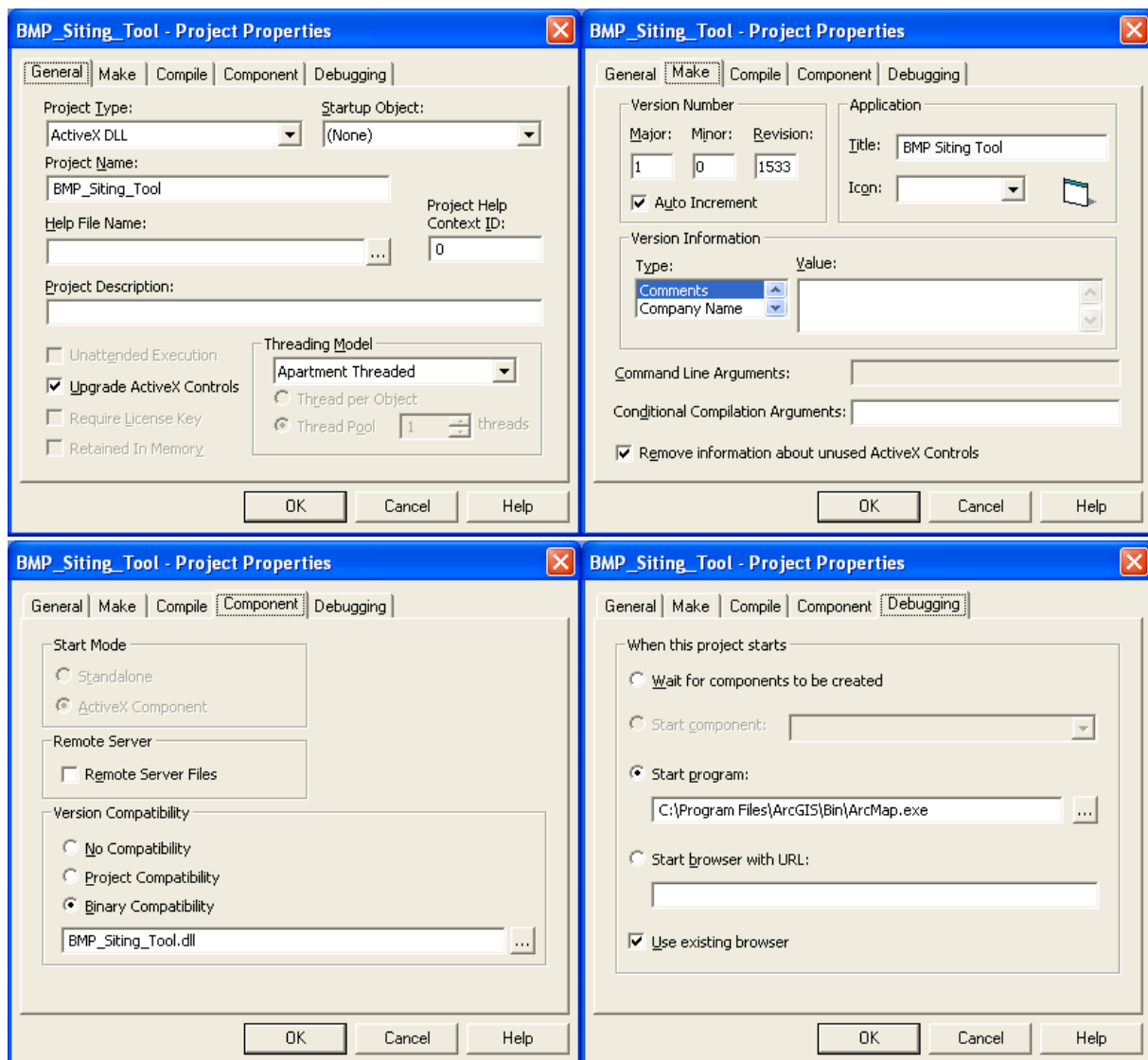
BMP Siting Project

This section provides the software requirements and the properties settings for BMP Siting Tool project. The required software is Microsoft Visual Basic 6 program, which is part of the Visual Studio 6.0 package. Microsoft Visual Studio 6.0 is compatible with Windows XP and might not be supported by any latest Windows operating system. The BMP Siting Tool uses the ESRI ArcObjects to use many of the available functionalities in ArcGIS 9.3.1 geoprocessing tools. The screenshots shown below illustrate the project properties for defining the project name, project type, version number, debug mode configuration, and the output file name of the dynamic link library for the ArcGIS extension (i.e., BMP_Siting_Tool.dll). The settings of project properties are required only once before compiling the source code for the first time.

Software Requirements

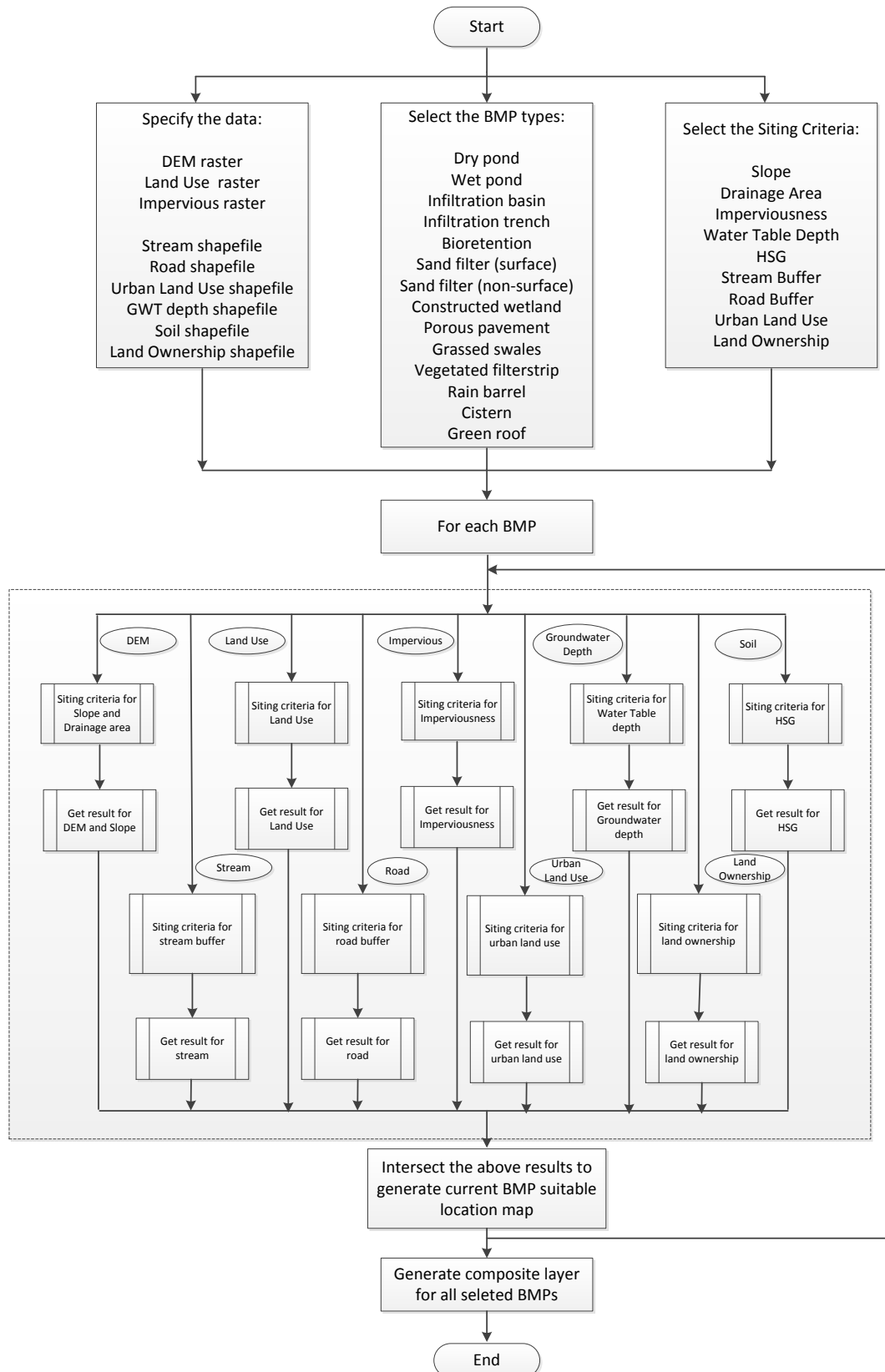
- Microsoft Visual Basic (Visual Studio 6.0)
- ArcGIS 9.3.1 with service pack 2 and Spatial Analyst extension
- Operating System: Windows XP

Project Properties



Data Flow Model

BMP Siting Tool is an extension for ArcGIS 9.3.1 that requires Spatial Analyst extension. ArcGIS interfaces of the Siting Tool allow user to define the GIS data, select BMP type, and define the BMP siting criteria for site suitability analysis. The data flow model for BMP Siting Tool is shown below.



Forms

frmBMPCriteria Form
frmSplash Form
frmWeightCriteria Form

Objects

BMPCCommand Object
BMPEXTension Object
BMPobj Object
SitingToolbar Object

Standard Modules

ModuleMenu Module
ModuleRasterUtils Module
ModuleSustainGlobal Module

Methods

addWeightCriteriaColumnDC_HG Method
BCriteriaStored_Click Method
BCriteriaStored_HG_Click Method
BOpenCriteriaWeight_DS_Click Method
BOpenCriteriaWeight_HG_Click Method
Browse_Dataset Method
ChangeStyle Method
Check_Criteria Method
Check_Datasets Method
Check_Expression Method
chkBB_Click Method
chkDA_Click Method
chkDS_Click Method
chkHG_Click Method
chkIMP_Click Method
chkLO_Click Method
chkRB_Click Method
chkSB_Click Method
chkWT_Click Method
Class_Terminate Method
Clean_Layer Method
cmbBMPTType_Click Method
cmdAdd_Click Method
cmdBack_Click Method
cmdBrowseDEM_Click Method
cmdBrowseIMP_Click Method
cmdBrowseLanduse_Click Method
cmdBrowseMRLC_Click Method
cmdBrowseMrlc_Ik_Click Method
cmdBrowseRoad_Click Method
cmdBrowseSoil_Click Method
cmdBrowseSoil_Ik_Click Method
cmdBrowseStream_Click Method
cmdBrowseWT_Click Method
cmdCancel_Click Method
cmdDel_Click Method
cmdLandowner_Click Method
cmdNext_Click Method
cmdOK_Click Method

cmdPrev_Click Method
cmdProceed_Click Method
Command1_Click Method
Copy_Data_toWorkfolder Method
Copy_from_Cache Method
Copy_Raster_Data Method
Copy_Table_Data Method
Create_Composite_Layer Method
CreateSingleBufferFeature Method
Form_Load Method
Generate_Criteria_Cache Method
Generate_Siting_Cache Method
GenerateSoilWholeExtent Method
Get_Available_name Method
Get_ExportedShapefile Method
Get_Intersect_FeatureLayer Method
Get_Scale_Factor Method
Get_Soil_Groups Method
ICommand_OnClick Method
IExtension_Shutdown Method
Initialize_BMPs Method
Initialize_Controls Method
Initialize_List Method
IsGeodatabaseFClass Method
IToolBarDef_GetItemInfo Method
Multipart_to_SinglePart Method
Populate_Criteria_Weight Method
PrepareBufferFeature Method
RemoveOverlap Method
Start_Analyze Method
summarizeWeights Method
tbsBMP_Click Method
Turn_Off_Layers Method
txtDEMPath_Click Method
txtImp_Click Method
txtLandownerpath_Click Method
txtLandusepath_Click Method
txtMRLC_Click Method
txtMrlc_Ik_Click Method
txtRoadpath_Click Method
txtSoilpath_Click Method
txtStreampath_Click Method
txtWTPath_Click Method
txtZUnit_Click Method
updateColumnName Method
updateCriteriaWeightText Method

Functions

AlwaysOnTop_ST Function
Calculate_Slope Function
CheckInputDataProjection_ST Function
CheckMapDocumentSavedStatus_ST Function
CheckSpatialAnalystLicense Function
CleanUpMemory Function
ConvertRastertoFeature Function
Create_FlowDirectionandAccumulation Function

Create_Join Function
DefineApplicationPath_ST Function
Delete_Dataset_ST Function
Delete_Raster Function
FillRawDEM Function
Generic_Trim Function
GetArcGISPath Function
GetDataTable Function
GetFeatureLayer Function
GetInputFeatureLayer Function
GetInputRasterLayer Function
GetInputRasterLayerCount Function
GetInputTable Function
GetSpatialReferenceForLayer Function
GetVersion Function
GetWorkspace Function
InitializeMapDocument Function
InitializeOperators Function
OpenRasterDataset Function
OpenRasterDatasetFromDisk Function
OpenShapeFile Function
Parse_Expression Function
Parse_Expression2 Function
ParseCriteriaToExp Function
RenderUniqueValueFillSymbol_ST Function
SetDataDirectory_ST Function
StringContains Function
ValidateDatasets_ST Function
WriteRasterDatasetToDisk Function

Properties

BMPId Property
BMPName Property
BMPTYPE Property
DC_BB Property
DC_BB_State Property
DC_DA Property
DC_DA_State Property
DC_DS Property
DC_DS_State Property
DC_DS_Weight Property
DC_DS_Weight_State Property
DC_HG Property
DC_HG_State Property
DC_HG_Weight Property
DC_HG_Weight_State Property
DC_IMP Property
DC_IMP_State Property
DC_LO Property
DC_LO_State Property
DC_RB Property
DC_RB_State Property
DC_SB Property
DC_SB_State Property
DC_WT Property
DC_WT_State Property

m_BMPType Property

Variables

gAppCount Variable
gApplicationPath Variable
gBMPCriteriaDictionary Variable
gBMPSelDict Variable
gBMPTypeDict Variable
gCellSize Variable
gCreatedSoilCount Variable
gDACriteria Variable
gDEMdata Variable
gImperviousdata Variable
gLandownerdata Variable
gLandusedata Variable
gLayerNameDictionary Variable
gMRLCdata Variable
gMrIcTable Variable
Gp Variable
gRasterfolder Variable
gRoaddata Variable
gShowStatus Variable
gSoildata Variable
gSoilTable Variable
gStreamdata Variable
gWorkingfolder Variable
gWorkingfolderParent Variable
gWTdata Variable
gZUnit Variable
m_backFlag Variable
m_LayerDict Variable
m_ParentHWND (frmBMPCriteria) Variable
m_ParentHWND (ModuleMenu) Variable
m_ParentHWND (ModuleRasterUtils) Variable
m_PassFlag Variable
m_Prev_BMP Variable
m_strBMPName Variable
strResult Variable

frmBMPCriteria Form

Remarks

Below is a screenshot of frmBMPCriteria.

The screenshot shows the 'BMP Siting Tool' dialog box with the 'Data Management' tab selected. The dialog contains the following elements:

- Select Raster Data:**
 - DEM grid: dropdown menu with 'dem_' selected, followed by a browse button.
 - Landuse grid: dropdown menu with 'imperv' selected, followed by a browse button.
 - Impervious grid: empty dropdown menu, followed by a browse button.
 - Z-unit of the DEM grid: dropdown menu with 'Meter' selected.
 - Landuse lookup table: dropdown menu with 'LuLuMlrc' selected, followed by a browse button.
- Select Vector Data:**
 - Stream shapefile: dropdown menu with 'streams_data_layer' selected, followed by a browse button.
 - Urban Landuse shapefile: empty dropdown menu, followed by a browse button.
 - Soil shapefile: empty dropdown menu, followed by a browse button.
 - Land ownership shapefile: empty dropdown menu, followed by a browse button.
 - Road shapefile: empty dropdown menu, followed by a browse button.
 - GWT depth shapefile: empty dropdown menu, followed by a browse button.
 - Soil lookup table: empty dropdown menu, followed by a browse button.

At the bottom of the dialog are 'Close' and 'Next' buttons.

It is the main interface for you to select the source layers, BMP types, and BMP siting criteria.

Properties

[m_BMPTYPE](#)

Methods

[addWeightCriteriaColumnDC_HG](#), [BCriteriaStored_Click](#), [BCriteriaStored_HG_Click](#), [BOpenCriteriaWeight_DS_Click](#), [BOpenCriteriaWeight_HG_Click](#), [Browse_Dataset](#), [ChangeStyle](#), [Check_Criteria](#), [Check_Datasets](#), [Check_Expression](#), [chkBB_Click](#), [chkDA_Click](#), [chkDS_Click](#), [chkHG_Click](#), [chkIMP_Click](#), [chkLO_Click](#), [chkRB_Click](#), [chkSB_Click](#), [chkWT_Click](#), [Clean_Layer](#), [cmbBMPTYPE_Click](#), [cmdAdd_Click](#), [cmdBack_Click](#), [cmdBrowseDEM_Click](#), [cmdBrowseIMP_Click](#), [cmdBrowseLanduse_Click](#), [cmdBrowseMRLC_Click](#), [cmdBrowseMrlc_lk_Click](#), [cmdBrowseRoad_Click](#), [cmdBrowseSoil_Click](#), [cmdBrowseSoil_lk_Click](#), [cmdBrowseStream_Click](#), [cmdBrowseWT_Click](#), [cmdCancel_Click](#), [cmdDel_Click](#), [cmdLandowner_Click](#), [cmdNext_Click](#), [cmdOK_Click](#), [cmdPrev_Click](#), [cmdProceed_Click](#), [Copy_Data_toWorkfolder](#), [Copy_from_Cache](#), [Copy_Raster_Data](#), [Copy_Table_Data](#), [Create_Composite_Layer](#), [CreateSingleBufferFeature](#), [Form_Load](#), [Generate_Criteria_Cache](#), [Generate_Siting_Cache](#), [GenerateSoilWholeExtent](#), [Get_Available_name](#), [Get_ExportedShapefile](#), [Get_Intersect_FeatureLayer](#), [Get_Scale_Factor](#), [Get_Soil_Groups](#), [Initialize_BMPs](#), [Initialize_Controls](#), [Initialize_List](#), [IsGeodatabaseFClass](#), [Multipart_to_SinglePart](#), [Populate_Criteria_Weight](#), [PrepareBufferFeature](#), [RemoveOverlap](#), [Start_Analyze](#), [summarizeWeights](#), [tbsBMP_Click](#), [Turn_Off_Layers](#), [txtDEMPATH_Click](#), [txtImp_Click](#), [txtLandownerpath_Click](#), [txtLandusepath_Click](#), [txtMRLC_Click](#), [txtMrlc_lk_Click](#), [txtRoadpath_Click](#), [txtSoilpath_Click](#), [txtStreampath_Click](#), [txtWTPATH_Click](#), [txtZUnit_Click](#), [updateColumnName](#), [updateCriteriaWeightText](#)

addWeightCriteriaColumnDC_HG Method

A private method of frmBMPCriteria. Adds a column recording weight number to the input layer according to the weight criteria.

Syntax

object.addWeightCriteriaColumnDC_HG (pFeatureLayer, pBMPTYPEText, origColumnName, newColumnName)

The **addWeightCriteriaColumnDC_HG** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pFeatureLayer</i>	Required. IFeatureLayer object. The source feature layer to add the weight number.
<i>pBMPTypeText</i>	Required. String. Not used in this method.
<i>origColumnName</i>	Required. String. Not used in this method.
<i>newColumnName</i>	Required. String. The name for the newly generated field. Records the weight number.

Applies To

[frmBMPCriteria](#)

BCriteriaStored_Click Method

A private method of frmBMPCriteria. During this step, frmWeightCriteria shows.

Syntax

object.**BCriteriaStored_Click** (*Index*)

The **BCriteriaStored_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicates which image is clicked.

Applies To

[frmBMPCriteria](#)

BCriteriaStored_HG_Click Method

A private method of frmBMPCriteria. During this step, frmWeightCriteria shows.

Syntax

object.**BCriteriaStored_HG_Click** (*Index*)

The **BCriteriaStored_HG_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicates which image is clicked.

Applies To

[frmBMPCriteria](#)

BOpenCriteriaWeight_DS_Click Method

A private method of frmBMPCriteria. During this step, frmWeightCriteria shows.

Syntax

object.**BOpenCriteriaWeight_DS_Click** (*Index*)

The **BOpenCriteriaWeight_DS_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicates which image is clicked.

Applies To

[frmBMPCriteria](#)

BOpenCriteriaWeight_HG_Click Method

A private method of frmBMPCriteria. During this step, frmWeightCriteria shows.

Syntax

object.**BOpenCriteriaWeight_HG_Click** ()

The **BOpenCriteriaWeight_HG_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

Browse_Dataset Method

A private method of frmBMPCriteria. Browse for the dataset.

Syntax

object.**Browse_Dataset** (*pdatasetType*, *pControl*)

The **Browse_Dataset** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pdatasetType</i>	Required. datasetType object. The dataset type to be browsed.
<i>pControl</i>	Required. ComboBox object. If pControl is a dropdownlist, add the dataset name to it.

Returns

Boolean. True if it successfully finds the dataset.

Applies To

[frmBMPCriteria](#)

ChangeStyle Method

A private method of frmBMPCriteria. This method handles the feature symbology according to the following rules:

- for point features, use a marker symbol for rendering.
- for line features, use a line symbol.
- for polygon features, use a fill symbol.
- for others, do not assign renderer to layer.

Syntax

object.**ChangeStyle** (*pFeatLyr*)

The **ChangeStyle** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pFeatLyr</i>	Required. IFeatureLayer object. The source feature layer.

Applies To

[frmBMPCriteria](#)

Check_Criteria Method

A private method of frmBMPCriteria. Checks the validation of the criteria.

Syntax

object.**Check_Criteria** ()

The **Check_Criteria** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Returns

Boolean.

True: If the criteria are valid.

False: If the criteria are not valid.

Applies To

[frmBMPCriteria](#)

Check_Datasets Method

A private method of frmBMPCriteria. Checks the completeness of the datasets.

Syntax

object.**Check_Datasets** ()

The **Check_Datasets** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Returns

Boolean.

True: If all the inputs are valid.

False: If not all inputs are valid.

Applies To

[frmBMPCriteria](#)

Check_Expression Method

A private method of frmBMPCriteria. Checks the expression of the criteria.

Accepts >min, <max, min-max formats

Syntax

object.**Check_Expression** (*strExp*, *bCanBeRange*)

The **Check_Expression** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>strExp</i>	Required. String. The string to be checked.
<i>bCanBeRange</i>	Required. Boolean. Whether to allow a range of numbers: "a-b".

Returns

Boolean.

True: The expression is valid.

False: The expression is not valid.

Applies To

[frmBMPCriteria](#)

chkBB_Click Method

A private method of frmBMPCriteria. Determines whether Building Buffer criteria are used.

Syntax

object.chkBB_Click ()

The **chkBB_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

chkDA_Click Method

A private method of frmBMPCriteria. Determines whether Drainage Area criteria are used.

Syntax

object.chkDA_Click ()

The **chkDA_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

chkDS_Click Method

A private method of frmBMPCriteria. Determines whether Slope criteria are used.

Syntax

object.chkDS_Click ()

The **chkDS_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

chkHG_Click Method

A private method of frmBMPCriteria. Determines whether Hydrologic Soil Group criteria are used.

Syntax

object.chkHG_Click ()

The **chkHG_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

chkIMP_Click Method

A private method of frmBMPCriteria. Determines whether Imperviousness criteria are used.

Syntax

object.chkIMP_Click ()

The **chkIMP_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

chkLO_Click Method

A private method of frmBMPCriteria. Determines whether Land Ownership criteria are used.

Syntax

object.chkLO_Click ()

The **chkLO_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

chkRB_Click Method

A private method of frmBMPCriteria. Determines whether Road Buffer criteria are used.

Syntax

object.chkRB_Click ()

The **chkRB_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

chkSB_Click Method

A private method of frmBMPCriteria. Determines whether Stream Buffer criteria are used.

Syntax

object.chkSB_Click ()

The **chkSB_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

chkWT_Click Method

A private method of frmBMPCriteria. Determines whether Water Depth criteria are used.

Syntax

object.chkWT_Click ()

The **chkWT_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

Clean_Layer Method

A private method of frmBMPCriteria. Deletes the unnecessary field except for "BMP" and "sumWeight".

Syntax

object.Clean_Layer (pLayer)

The **Clean_Layer** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pLayer</i>	Required. IFeatureLayer object. The target feature layer to perform the cleaning process.

Returns

IFeatureLayer.

Applies To

[frmBMPCriteria](#)

cmbBMPTType_Click Method

A private method of frmBMPCriteria. Selects a BMP Type. Saves the criteria for the previously selected BMP type. The controls on the "BMP Siting Criteria" tab are initialized for the currently selected BMP type.

Syntax

object.cmbBMPTType_Click ()

The **cmbBMPTType_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdAdd_Click Method

A private method of frmBMPCriteria. During this step, a BMP Type is added to lstBMP.

Syntax

object.cmdAdd_Click ()

The **cmdAdd_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdBack_Click Method

A private method of frmBMPCriteria. Go back to the previous step.

Syntax

object.cmdBack_Click ()

The **cmdBack_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdBrowseDEM_Click Method

A private method of frmBMPCriteria. Allows the user to browse for the DEM raster data. Calls Browse_Dataset

Syntax

object.cmdBrowseDEM_Click ()

The **cmdBrowseDEM_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdBrowseIMP_Click Method

A private method of frmBMPCriteria. Allows the user to browse for and choose the impervious raster layer.

Syntax

object.cmdBrowseIMP_Click ()

The **cmdBrowseIMP_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdBrowseLanduse_Click Method

A private method of frmBMPCriteria. Allows the user to browse for the land use data. Calls Browse_Dataset.

Syntax

object.cmdBrowseLanduse_Click ()

The **cmdBrowseLanduse_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdBrowseMRLC_Click Method

A private method of frmBMPCriteria. Allows the user to browse for and choose the land use grid raster layer.

Syntax

object.cmdBrowseMRLC_Click ()

The **cmdBrowseMRLC_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdBrowseMrlc_Ik_Click Method

A private method of frmBMPCriteria. Allows the user to browse for and choose the land use lookup table.

Syntax

object.cmdBrowseMrlc_Ik_Click ()

The **cmdBrowseMrlc_Ik_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdBrowseRoad_Click Method

A private method of frmBMPCriteria. Allows the user to browse for the road data. Calls Browse_Dataset.

Syntax

object.cmdBrowseRoad_Click ()

The **cmdBrowseRoad_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdBrowseSoil_Click Method

A private method of frmBMPCriteria. Allows the user to browse for the soil data. Calls Browse_Dataset.

Syntax

object.cmdBrowseSoil_Click ()

The **cmdBrowseSoil_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdBrowseSoil_lk_Click Method

A private method of frmBMPCriteria. Allows the user to browse for and choose the Soil lookup table.

Syntax

object.cmdBrowseSoil_lk_Click ()

The **cmdBrowseSoil_lk_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdBrowseStream_Click Method

A private method of frmBMPCriteria. Allows the user to browse for the stream data. Calls Browse_Dataset.

Syntax

object.cmdBrowseStream_Click ()

The **cmdBrowseStream_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdBrowseWT_Click Method

A private method of frmBMPCriteria. Allows the user to browse for and choose the GWT depth shapefile.

Syntax

object.cmdBrowseWT_Click ()

The **cmdBrowseWT_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdCancel_Click Method

A private method of frmBMPCriteria. Cancels the BMP Siting Tool.

Syntax

object.cmdCancel_Click (Index)

The **cmdCancel_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. The index of the command.

Applies To

[frmBMPCriteria](#)

cmdDel_Click Method

A private method of frmBMPCriteria. Removes the selected BMP type from lstBMPSel and adds it to lstBMP.

Syntax

object.cmdDel_Click ()

The **cmdDel_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdLandowner_Click Method

A private method of frmBMPCriteria. Allows the user to browse for the Land owner data. Calls Browse_Dataset.

Syntax

object.cmdLandowner_Click ()

The **cmdLandowner_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdNext_Click Method

A private method of frmBMPCriteria. After selecting the BMP types, goes to the next step.

Syntax

object.cmdNext_Click ()

The **cmdNext_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdOK_Click Method

A private method of frmBMPCriteria. It is executed after all the raster and vector layers are selected. During this step the dataset is validated; the .src file is generated and data layer names are saved to the .src file; the subfolder "SitingTool" is created.

Syntax

object.cmdOK_Click ()

The **cmdOK_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdPrev_Click Method

A private method of frmBMPCriteria. Goes back to the previous step.

Syntax

object.cmdPrev_Click ()

The **cmdPrev_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

cmdProceed_Click Method

A private method of frmBMPCriteria. Calls Generate_Criteria_Cache and then calls Start_Analyze to produce the final result.

Syntax

object.cmdProceed_Click ()

The **cmdProceed_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

Copy_Data_toWorkfolder Method

A private method of frmBMPCriteria. Copies all the source data layers and tables to the separate working folder:Siting1, Siting2...

Syntax

object.Copy_Data_toWorkfolder ()

The **Copy_Data_toWorkfolder** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Returns

Boolean. True if the copy was successful.

Applies To

[frmBMPCriteria](#)

Copy_from_Cache Method

A private method of frmBMPCriteria. Copies the Slope shapefile "Slope_Ras" and Flow shapefile "Flow_Ras" to the separate working folder: Siting1, Siting2...

Syntax

object.Copy_from_Cache ()

The **Copy_from_Cache** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

Copy_Raster_Data Method

A private method of frmBMPCriteria. Copies raster data to the folder strCopyTo with the new raster data name strRaster.

Syntax

object.Copy_Raster_Data (*strRaster*, *pRasterLayer*, *strCopyTo*)

The **Copy_Raster_Data** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

<i>strRaster</i>	Required. String. The name of the newly generated raster data.
<i>pRasterLayer</i>	Required. IDataLayer object. The raster layer to be copied.
<i>strCopyTo</i>	Required. String. The destination folder.

Applies To

[frmBMPCriteria](#)

Copy_Table_Data Method

A private method of frmBMPCriteria. Copies the table to the workspace pWkspc with the new table name pTableName.

Syntax

object.Copy_Table_Data (pTable, pTableName, pWkspc)

The **Copy_Table_Data** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pTable</i>	Required. ITable object. The table to be copied.
<i>pTableName</i>	Required. String. The name of the newly generated table.
<i>pWkspc</i>	Required. IWorkspace object. The destination workspace.

Applies To

[frmBMPCriteria](#)

Create_Composite_Layer Method

A private method of frmBMPCriteria. Create a composite layer ("Composite") of all the BMP result layers. This layer is added to the map.

Syntax

object.Create_Composite_Layer (pcolResult, f)

The **Create_Composite_Layer** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pcolResult</i>	Required. The dictionary of the names of the result layers.
<i>f</i>	Required. Status bar.

Applies To

[frmBMPCriteria](#)

CreateSingleBufferFeature Method

A private method of frmBMPCriteria. Creates the buffer area feature layer.

Syntax

object.CreateSingleBufferFeature (bufferMin, bufferMax, strWorkspacePath, InFlayerName, gBufferIndex)

The **CreateSingleBufferFeature** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

<i>bufferMin</i>	Required. Integer. The minimum value for the buffer area.
<i>bufferMax</i>	Required. Integer. The maximum value for the buffer area.
<i>strWorkspacePath</i>	Required. String. The name of the workspace for the result.
<i>InFlayerName</i>	Required. String. The name of input layer for the buffer area.
<i>gBufferIndex</i>	Required. Integer. The index for the result layer. Every time the buffer area layer is generated, it is increased by 1.

Applies To

[frmBMPCriteria](#)

Form_Load Method

A private method of frmBMPCriteria. Calls Initialize_List to initialize the controls.

Syntax

object.**Form_Load** ()

The **Form_Load** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

Generate_Criteria_Cache Method

A private method of frmBMPCriteria. Generates the criteria and writes into file "_criteria.src".

Syntax

object.**Generate_Criteria_Cache** ()

The **Generate_Criteria_Cache** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

Generate_Siting_Cache Method

A private method of frmBMPCriteria. Generates the .src file and writes the names of the dataset to the .src file.

Syntax

object.**Generate_Siting_Cache** ()

The **Generate_Siting_Cache** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

GenerateSoilWholeExtent Method

A private method of frmBMPCriteria. Creates a fake soil feature layer (of the whole extent). This layer is used as the very first layer to perform intersects.

Syntax

object.GenerateSoilWholeExtent (*strWorkspacePath*, *CreatedFlayerName*)

The **GenerateSoilWholeExtent** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>strWorkspacePath</i>	Required. String. The name of the workspace of the created layer.
<i>CreatedFlayerName</i>	Required. String. The name of the created layer.

Returns

IFeatureLayer. The result of the created layer.

Applies To

[frmBMPCriteria](#)

Get_Available_name Method

A private method of frmBMPCriteria. Gets a new name for a newly generated shape file. It should be different from the existing ones.

Syntax

object.Get_Available_name (*strName*)

The **Get_Available_name** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>strName</i>	Required. String. The desired name.

Returns

String. The desired name appended by a number.

Applies To

[frmBMPCriteria](#)

Get_ExportedShapefile Method

A private method of frmBMPCriteria. Exports the feature layer.

Syntax

object.Get_ExportedShapefile (*pFLayer*, *strExportName*, *pDissolve*)

The **Get_ExportedShapefile** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pFLayer</i>	Required. IFeatureLayer object. The source feature layer to be exported.
<i>strExportName</i>	Required. String. The name for the result layer.
<i>pDissolve</i>	Required. Boolean. The result layer should be dissolved or not.

	True: dissolved. False: not dissolved.
--	---

Returns

IFeatureClass. The result feature layer.

Applies To

[frmBMPCriteria](#)

Get_Intersect_FeatureLayer Method

A private method of frmBMPCriteria. Gets the intersect layer of two feature layers.

Syntax

object.**Get_Intersect_FeatureLayer** (*pInputFeatLayer*, *pOverlayLayer*, *strResultName*)

The **Get_Intersect_FeatureLayer** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pInputFeatLayer</i>	Required. IFeatureLayer object. The Feature layer on which to perform the intersect.
<i>pOverlayLayer</i>	Required. IFeatureLayer object. The Overlay layer on which to perform the intersect.
<i>strResultName</i>	Required. String. The name for the result layer.

Returns

IFeatureLayer. The result layer of the intersect.

Applies To

[frmBMPCriteria](#)

Get_Scale_Factor Method

A private method of frmBMPCriteria. Gets the scale factor of the map. This factor ensures that the unit for buffer in the siting criteria is in feet.

Syntax

object.**Get_Scale_Factor** (*pTable*)

The **Get_Scale_Factor** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pTable</i>	Required. ITable object. The table to be copied.

Applies To

[frmBMPCriteria](#)

Get_Soil_Groups Method

A private method of frmBMPCriteria. Parses the Hydrologic Soil Groups criteria.

Syntax

object.**Get_Soil_Groups** (*strSoilRange*, *strDelim*)

The **Get_Soil_Groups** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>strSoilRange</i>	Required. String. The Hydrologic Soil Groups criteria string to be parsed. Should be in form of A-Z.
<i>strDelim</i>	Required. String. This parameter is not used in the function.

Returns

Collection

Applies To

[frmBMPCriteria](#)

Initialize_BMPs Method

A private method of frmBMPCriteria. Initializes the Criteria to the default value.

Syntax

object.**Initialize_BMPs** ()

The **Initialize_BMPs** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

Initialize_Controls Method

A private method of frmBMPCriteria. Initializes the controls on frmBMPCriteria.

Syntax

object.**Initialize_Controls** ()

The **Initialize_Controls** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

Initialize_List Method

A public method of frmBMPCriteria. Initializes the controls.

Syntax

object.**Initialize_List** ()

The **Initialize_List** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

IsGeodatabaseFClass Method

A private method of frmBMPCriteria. Determines if pDLayer is from a geodatabase.

Syntax

object.IsGeodatabaseFClass (*pDLayer*)

The **IsGeodatabaseFClass** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pDLayer</i>	Required. IDataLayer2 object. The data layer to be determined whether it belongs to a geodatabase.

Returns

Boolean. True if the Datalayer is from a geodatabase.

Applies To

[frmBMPCriteria](#)

Multipart_to_SinglePart Method

A private method of frmBMPCriteria. Calls the geoprocessing tool "MultipartToSinglepart" and adds the result on the map.

Syntax

object.Multipart_to_SinglePart (*strShapeFileName*)

The **Multipart_to_SinglePart** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>strShapeFileName</i>	Required. String. The shape file name on which to process with the geoprocessing tool.

Applies To

[frmBMPCriteria](#)

Populate_Criteria_Weight Method

A public method of frmBMPCriteria. Saves the Criteria for Slope or Hydrologic Group.

Syntax

object.Populate_Criteria_Weight (*cIndex*)

The **Populate_Criteria_Weight** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>cIndex</i>	Required. Integer. Determine the Criteria type: 0: Criteria for Slope. 1: Criteria for Hydrologic Group.

Applies To

[frmBMPCriteria](#)

PrepareBufferFeature Method

A private method of frmBMPCriteria. Parses the min max for the buffer area and calls CreateSingleBufferFeature.

Syntax

object.PrepareBufferFeature (*strExp*, *strWorkspace*, *InFlayerName*, *gBufferIndex*)

The **PrepareBufferFeature** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>strExp</i>	Required. String. The string to be parsed to generate min and max for the buffer.
<i>strWorkspace</i>	Required. String.
<i>InFlayerName</i>	Required. String. The name for the input layer.
<i>gBufferIndex</i>	Required. Integer. This parameter is not used in the subroutine.

Applies To

[frmBMPCriteria](#)

RemoveOverlap Method

A private method of frmBMPCriteria. Removes the overlap part from the unioned layer.

Syntax

object.RemoveOverlap (*fileName*)

The **RemoveOverlap** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>fileName</i>	Required. String. The name of the input feature layer.

Applies To

[frmBMPCriteria](#)

Start_Analyze Method

A private method of frmBMPCriteria. Produces the final result.

Syntax

object.Start_Analyze (*pcolResult*, *f*)

The **Start_Analyze** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pcolResult</i>	Required. Scripting.Dictionary object. The dictionary of recording all the BMP types listed in cmbBMPTType. This parameter is passed by reference. It is used in Create_Composite_Layer to produce the composite layer.
<i>f</i>	Required. frmSplash object. Status bar.

Applies To

[frmBMPCriteria](#)

summarizeWeights Method

A private method of frmBMPCriteria. Summarizes the weights of all the designated columns. Saves the result in the newly generated field "sumWeight".

Syntax

object.summarizeWeights (pFeatureLayer, colNames())

The **summarizeWeights** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pFeatureLayer</i>	Required. IFeatureLayer object. The feature layer on which to compute the summarized weights.
<i>colNames()</i>	Required. String. Names for all the weight columns.

Applies To

[frmBMPCriteria](#)

tbsBMP_Click Method

A private method of frmBMPCriteria. Initializes the controls on frmBMPCriteria.

Syntax

object.tbsBMP_Click (PreviousTab)

The **tbsBMP_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>PreviousTab</i>	Required. Integer. The index of the previous tab.

Applies To

[frmBMPCriteria](#)

Turn_Off_Layers Method

A private method of frmBMPCriteria. Turns off all the layers designated in pcolResult.

Syntax

object.Turn_Off_Layers (pcolResult)

The **Turn_Off_Layers** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pcolResult</i>	Required. Scripting. Dictionary object. Indicate the names for all the layers that need to be turned off.

Applies To

[frmBMPCriteria](#)

txtDEMpath_Click Method

A private method of frmBMPCriteria. Allows the user to select the DEM raster layer.

Syntax

object.txtDEMPath_Click (Index)

The **txtDEMPath_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicates which DEM combo box is clicked.

Applies To

[frmBMPCriteria](#)

txtImp_Click Method

A private method of frmBMPCriteria. Allows the user to select the impervious raster layer.

Syntax

object.txtImp_Click (Index)

The **txtImp_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicates which Impervious Raster combo box is clicked.

Applies To

[frmBMPCriteria](#)

txtLandownerpath_Click Method

A private method of frmBMPCriteria. Allows the user to select the Landowner layer.

Syntax

object.txtLandownerpath_Click (Index)

The **txtLandownerpath_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicates which Landownerpath combo box is clicked.

Applies To

[frmBMPCriteria](#)

txtLandusepath_Click Method

A private method of frmBMPCriteria. Allows the user to select the urban land use layer.

Syntax

object.txtLandusepath_Click (Index)

The **txtLandusepath_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicates which Urban Landusepath combo box is clicked.

Applies To

[frmBMPCriteria](#)

txtMRLC_Click Method

A private method of frmBMPCriteria. Allows the user to select the land use raster layer.

Syntax

object.txtMRLC_Click (Index)

The **txtMRLC_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicates which Landuse Grid combo box is clicked.

Applies To

[frmBMPCriteria](#)

txtMrlc_Ik_Click Method

A private method of frmBMPCriteria. Allows the user to select the landuse lookup table.

Syntax

object.txtMrlc_Ik_Click ()

The **txtMrlc_Ik_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

txtRoadpath_Click Method

A private method of frmBMPCriteria. Allows the user to select the road layer.

Syntax

object.txtRoadpath_Click (Index)

The **txtRoadpath_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicates which Roadpath combo box is clicked.

Applies To

[frmBMPCriteria](#)

txtSoilpath_Click Method

A private method of frmBMPCriteria. Allows the user to select the soil layer.

Syntax

object.txtSoilpath_Click (Index)

The **txtSoilpath_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicate which Soilpath combo box is clicked.

Applies To

[frmBMPCriteria](#)

txtStreampath_Click Method

A private method of frmBMPCriteria. Allows the user to select the stream layer.

Syntax

object.txtStreampath_Click (Index)

The **txtStreampath_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicates which Streampath combo box is clicked.

Applies To

[frmBMPCriteria](#)

txtWTPath_Click Method

A private method of frmBMPCriteria. Allows the user to select the GWT depth layer.

Syntax

object.txtWTPath_Click (Index)

The **txtWTPath_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicate which WTPath combo box is clicked.

Applies To

[frmBMPCriteria](#)

txtZUnit_Click Method

A private method of frmBMPCriteria. Selects the Z-unit for the DEM raster.

Syntax

object.txtZUnit_Click (Index)

The **txtZUnit_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Index</i>	Required. Integer. Indicates which ZUnit combo box is clicked.

Applies To

[frmBMPCriteria](#)

updateColumnName Method

A private method of frmBMPCriteria. Changes the field name to make it more illustrative.

Syntax

object.updateColumnName (*pFeatureLayer*, *oldColumnName*, *newColumnName*)

The **updateColumnName** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>pFeatureLayer</i>	Required. IFeatureLayer object. The feature layer that needs a column to be renamed.
<i>oldColumnName</i>	Required. String. The old column name.
<i>newColumnName</i>	Required. String. The new column name.

Applies To

[frmBMPCriteria](#)

updateCriteriaWeightText Method

A public method of frmBMPCriteria. Updates the gBMPCriteriaDictionary.

Syntax

object.updateCriteriaWeightText ()

The **updateCriteriaWeightText** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

m_BMPTYPE Property

A public variable of frmBMPCriteria. Records the BMP type. It is always set to be "*" in the program.

Syntax

object.m_BMPTYPE

The **m_BMPTYPE** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmBMPCriteria](#)

Gp Variable

A private variable of frmBMPCriteria. It is an object of the geoprocessing tool.

Syntax

Gp [= value]

Type

Object

Applies To

[frmBMPCriteria](#)

m_backFlag Variable

A private variable of frmBMPCriteria. A Boolean variable used in the tbsBMP_Click to control whether to repopulate lstBMP.

Syntax

m_backFlag [= value]

Type

Boolean

Applies To

[frmBMPCriteria](#)

m_LayerDict Variable

A private variable of frmBMPCriteria. The dictionary for the layers (tables) on the map.

Syntax

m_LayerDict [= value]

Type

Scripting.Dictionary

Applies To

[frmBMPCriteria](#)

m_ParentHWND (frmBMPCriteria) Variable

A private variable of frmBMPCriteria. It is set to get correct parenting of Error handler forms.

Syntax

m_ParentHWND [= value]

Type

Long

Applies To

[frmBMPCriteria](#)

m_PassFlag Variable

A private variable of frmBMPCriteria. A Boolean variable widely used to control execution, such that if some step (such as data validation) fails, the program exits.

Syntax

m_PassFlag [= value]

Type

Boolean

Applies To

[frmBMPCriteria](#)

m_Prev_BMP Variable

A private variable of frmBMPCriteria. Records the previously selected BMP type. It is set to a non-empty string in cmbBMPTyp_Click.

Syntax

m_Prev_BMP [= value]

Type

String

Applies To

[frmBMPCriteria](#)

strResult Variable

A private variable of frmBMPCriteria. It is a string variable recording the BMP type. It is set in Start_Analyze.

Syntax

strResult [= value]

Type

String

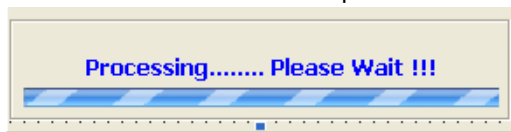
Applies To

[frmBMPCriteria](#)

frmSplash Form

Remarks

Below is a screenshot of frmSplash.

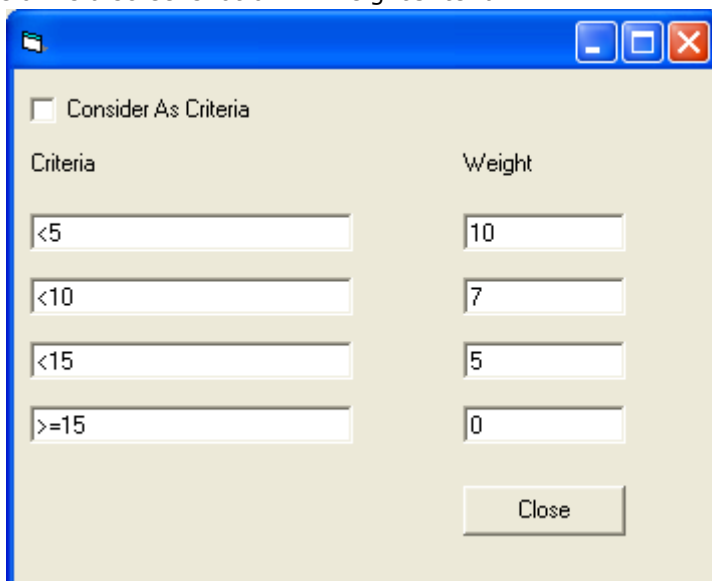


The status bar. It is disabled in this version of *SUSTAIN*.

frmWeightCriteria Form

Remarks

Below is a screenshot of frmWeightCriteria.

A screenshot of a Windows-style dialog box titled 'frmWeightCriteria'. It has a blue title bar with standard window controls. Inside, there is a checkbox labeled 'Consider As Criteria'. Below it is a table with two columns: 'Criteria' and 'Weight'. The table contains four rows of data. At the bottom right, there is a 'Close' button.

Criteria	Weight
<5	10
<10	7
<15	5
>=15	0

The weight Criteria interface for you to input the weight criteria rules for Slope and Hydrological Soil Group.

Methods

[Command1_Click](#)

Command1_Click Method

A private method of frmWeightCriteria. Saves the Weight Criteria to Slope or Hydrologic Soil Groups.

Syntax

object.Command1_Click ()

The **Command1_Click** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[frmWeightCriteria](#)

BMPCommand Object

This class defines the registered BMP Command.

Methods

[ICommand_OnClick](#)

ICommand_OnClick Method

Makes the form of BMP criteria appear.

Syntax

object.ICommand_OnClick ()

The **ICommand_OnClick** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPCommand](#)

BMPExtension Object

This class defines the software extension.

Methods

[IExtension_Shutdown](#)

IExtension_Shutdown Method

Cleans up memory.

Syntax

object.IExtension_Shutdown ()

The **IExtension_Shutdown** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPExtension](#)

BMPobj Object

A model that defines the criteria of each BMP type.

Properties

[BMPIId](#), [BMPName](#), [BMPTType](#), [DC_BB](#), [DC_BB_State](#), [DC_DA](#), [DC_DA_State](#), [DC_DS](#), [DC_DS_State](#), [DC_DS_Weight](#), [DC_DS_Weight_State](#), [DC_HG](#), [DC_HG_State](#), [DC_HG_Weight](#), [DC_HG_Weight_State](#), [DC_IMP](#), [DC_IMP_State](#), [DC_LO](#), [DC_LO_State](#), [DC_RB](#), [DC_RB_State](#), [DC_SB](#), [DC_SB_State](#), [DC_WT](#), [DC_WT_State](#)

BMPIId Property

A public property of BMPobj. It stores the ID of the BMP. This property is only to be set, but not used in the program.

Syntax

object.**BMPIId**

The **BMPIId** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

BMPName Property

A public property of BMPobj. It stores the name of the BMP.

Syntax

object.**BMPName**

The **BMPName** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

BMPTType Property

A public property of BMPobj. It stores the type of the BMP.

Syntax

object.**BMPTType**

The **BMPType** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_BB Property

A public property of BMPobj. It stores the criteria of the building buffer.

Syntax

object.**DC_BB**

The **DC_BB** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_BB_State Property

A public property of BMPobj. Boolean property to determine whether the building buffer criteria are used in the result.

Syntax

object.**DC_BB_State**

The **DC_BB_State** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_DA Property

A public property of BMPobj. It stores the criteria of drainage area.

Syntax

object.**DC_DA**

The **DC_DA** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_DA_State Property

A public property of BMPobj. Boolean property to determine whether the drainage area criteria are used in the result.

Syntax

object.**DC_DA_State**

The **DC_DA_State** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_DS Property

A public property of BMPobj. It stores the criteria of the slope.

Syntax

object.**DC_DS**

The **DC_DS** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_DS_State Property

A public property of BMPobj. Boolean property to determine whether the slope criteria are used in the result.

Syntax

object.**DC_DS_State**

The **DC_DS_State** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_DS_Weight Property

A public property of BMPobj. It stores the criteria of the slope weight.

Syntax

object.**DC_DS_Weight**

The **DC_DS_Weight** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_DS_Weight_State Property

A public property of BMPobj. Boolean property to determine whether the slope weight criteria are used in the result.

Syntax

object.DC_DS_Weight_State

The **DC_DS_Weight_State** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_HG Property

A public property of BMPobj. It stores the criteria of the hydrologic soil group.

Syntax

object.DC_HG

The **DC_HG** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_HG_State Property

A public property of BMPobj. Boolean property of determine whether the hydrologic soil group criteria are used in the result.

Syntax

object.DC_HG_State

The **DC_HG_State** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_HG_Weight Property

A public property of BMPobj. It stores the criteria of the hydrologic group weight.

Syntax

object.DC_HG_Weight

The **DC_HG_Weight** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_HG_Weight_State Property

A public property of BMPobj. Boolean property to determine whether the hydrologic group weight criteria are used in the result.

Syntax

object.DC_HG_Weight_State

The **DC_HG_Weight_State** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_IMP Property

A public property of BMPobj. It stores the criteria of imperviousness.

Syntax

object.DC_IMP

The **DC_IMP** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_IMP_State Property

A public property of BMPobj. Boolean property to determine whether the imperviousness criteria are used in the result.

Syntax

object.DC_IMP_State

The **DC_IMP_State** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_LO Property

A public property of BMPobj. It stores the criteria of the land owner.

Syntax

object.DC_LO

The **DC_LO** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_LO_State Property

A public property of BMPobj. Boolean property to determine whether the land owner criteria are used in the result.

Syntax

object.**DC_LO_State**

The **DC_LO_State** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_RB Property

A public property of BMPobj. It stores the criteria of the road buffer.

Syntax

object.**DC_RB**

The **DC_RB** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_RB_State Property

A public property of BMPobj. Boolean property to determine whether the road buffer criteria are used in the result.

Syntax

object.**DC_RB_State**

The **DC_RB_State** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_SB Property

A public property of BMPobj. It stores the criteria of the stream buffer.

Syntax

object.**DC_SB**

The **DC_SB** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_SB_State Property

A public property of BMPobj. Boolean property to determine whether the stream buffer criteria are used in the result.

Syntax

object.**DC_SB_State**

The **DC_SB_State** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_WT Property

A public property of BMPobj. It stores the criteria of the groundwater table depth.

Syntax

object.**DC_WT**

The **DC_WT** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

DC_WT_State Property

A public property of BMPobj. Boolean property of determine whether the water table depth criteria are used in the result.

Syntax

object.**DC_WT_State**

The **DC_WT_State** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[BMPobj](#)

m_strBMPName Variable

A private variable of BMPobj. It stores a string to record the BMP name.

Syntax

m_strBMPName [= value]

Type

String

Applies To

[BMPobj](#)

SitingToolbar Object

This class defines the registered siting toolbar.

Methods

[Class_Terminate](#), [IToolBarDef_GetItemInfo](#)

Class_Terminate Method

Releases the map document.

Syntax

object.**Class_Terminate** ()

The **Class_Terminate** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.

Applies To

[SitingToolbar](#)

IToolBarDef_GetItemInfo Method

Defines the commands on the toolbar.

Syntax

object.**IToolBarDef_GetItemInfo** (*Pos*, *itemDef*)

The **IToolBarDef_GetItemInfo** syntax has these parts:

Part	Description
<i>object</i>	Required. An object expression that evaluates to an object in the Applies To list.
<i>Pos</i>	Required. Long.
<i>itemDef</i>	Required. IItemDef object. Sets the classID and determines if the item starts a new group.

Applies To

[SitingToolbar](#)

ModuleMenu Standard Module

A module that controls whether each command is enabled.

m_ParentHWND (ModuleMenu) Variable

A private variable of ModuleMenu. It is set to get correct parenting of Error handler forms.

Syntax**m_ParentHWND** [= value]**Type**

Long

ModuleRasterUtils Standard Module

This module includes all calculating functions for the raster dataset.

Calculate_Slope Function

Calculates the slope for the input raster data. It generates a raster data named "SLOPE".

Syntax**Calculate_Slope** (*pRasterLayer*, *dScalefac*)

The **Calculate_Slope** syntax has these parts:

Part	Description
<i>pRasterLayer</i>	Required. IRasterLayer object. The source raster layer to on which to perform Raster Surface Operator.
<i>dScalefac</i>	Required. Double. Zfactor of the Raster Surface Operator.

CheckSpatialAnalystLicense Function

Checks the Spatial Analyst License.

Syntax**CheckSpatialAnalystLicense** ()**Returns**

Boolean. True if the Spatial Analyst License is available.

ConvertRastertoFeature Function

Converts the raster data to a polygon shapefile. Generates a new polygon shapefile named "****_Ras" in the separate working folder.

Syntax**ConvertRastertoFeature** (*strWorkspace*, *strRaster*, *pFilter*, *pParse*, *pBMPTText*)

The **ConvertRastertoFeature** syntax has these parts:

Part	Description
<i>strWorkspace</i>	Required. String. The source workspace of the rasterdata.
<i>strRaster</i>	Required. String. The name of the raster data.
<i>pFilter</i>	Required. Boolean. Indicates whether to filter the Rasterbased on Flow Criteria.
<i>pParse</i>	Required. Boolean. Indicates whether to parse the expression.
<i>pBMPTText</i>	Optional. String. The BMPTType based on which the siting criteria are created.

Returns

IFeatureClass. The resulting polygon feature class.

Create_FlowDirectionandAccumulation Function

Performs FlowDirection and FlowAccumulation for the input raster data. Generates a raster data named "FLOW".

Syntax

Create_FlowDirectionandAccumulation (*pRaster*)

The **Create_FlowDirectionandAccumulation** syntax has these parts:

Part	Description
<i>pRaster</i>	Required. IRaster object. The source raster layer on which to perform Flow direction and Flow accumulation.

Delete_Raster Function

Deletes the designated raster data.

Syntax

Delete_Raster (*dir*, *name*)

The **Delete_Raster** syntax has these parts:

Part	Description
<i>dir</i>	Required. String. The location of the raster data.
<i>name</i>	Required. String. The name of the raster data.

Returns

Boolean.

True if the raster data are successfully deleted.

False if the deletion cannot be performed.

FillRawDEM Function

Performs hydrology operator "Fill" operation for the input raster data. Generates a raster data named "FillDEM".

Syntax

FillRawDEM ()

InitializeOperators Function

Initializes Global Map Algebra, Hydrology, Neighborhood, Reclass Operators. Set extent, cell size to DEM raster's extent and cell size.

Syntax

InitializeOperators ()

OpenRasterDataset Function

Opens the raster dataset in a workspace.

Syntax

OpenRasterDataset (*sDir*, *sRasterDs*)

The **OpenRasterDataset** syntax has these parts:

Part	Description
<i>sDir</i>	Required. String. The name of the workspace of the raster data.
<i>sRasterDs</i>	Required. String. The name of the raster data.

Returns

IRasterDataset. The opened raster dataset.

OpenRasterDatasetFromDisk Function

Opens raster dataset from disk. Requires the name of the raster dataset. This function does not require the directory path. It assumes the directory path as TEMP directory.

Syntax

OpenRasterDatasetFromDisk (*pRasterName*)

The **OpenRasterDatasetFromDisk** syntax has these parts:

Part	Description
<i>pRasterName</i>	Required. String. The name of the raster data.

Returns

IRaster. The opened raster.

ParseCriteriaToExp Function

Parse criteria string to expression.

E.g., converts "<4:5;<10:3;<15:2;>=15:1" to "con([Raster_Con] < 4 and [Raster_Con]< 5,5,[Raster_Con] < 10 and [Raster_Con] < 5,3,[Raster_Con] < 15 and [Raster_Con] < 5,2,[Raster_Con] >=15 and [Raster_Con] < 5,1,0)"

where "[Raster_Con] < 5" is specified by the second parameter: strExp.

Syntax

ParseCriteriaToExp (*allCriteria*, *strExp*)

The **ParseCriteriaToExp** syntax has these parts:

Part	Description
<i>allCriteria</i>	Required. String. The source string to be parsed.
<i>strExp</i>	Required. String. The addition string to be added to the result expression.

Returns

String. The resulting expression

WriteRasterDatasetToDisk Function

Writes the temporary raster (in memory) to the disk. This function requires the name of raster file, assumes the output directory as TEMP directory.

Syntax

WriteRasterDatasetToDisk (*pRaster*, *pOutName*)

The **WriteRasterDatasetToDisk** syntax has these parts:

Part	Description
<i>pRaster</i>	Required. IRaster object. The raster data to be writtenout.
<i>pOutName</i>	Required. String. The name for the saved raster data.

m_ParentHWND (ModuleRasterUtils) Variable

A private variable of ModuleRasterUtils. It is set to get correct parenting of Error handler forms.

Syntax

m_ParentHWND [= value]

Type

Long

ModuleSustainGlobal Standard Module

This module includes all the general functions for the siting tool and the global variables.

AlwaysOnTop_ST Function

Determines whether the frame window is always on top.

Syntax

AlwaysOnTop_ST (*FrmID*, *OnTop*)

The **AlwaysOnTop_ST** syntax has these parts:

Part	Description
<i>FrmID</i>	Required. Form object. The input form.
<i>OnTop</i>	Required. Integer. -1: always on top. others: not on top.

CheckInputDataProjection_ST Function

Checks the input projection of the input layers.

Syntax

CheckInputDataProjection_ST ()

Returns

Boolean.

True if all input layers are in the same projection.

False if all input layers are not in the same projection.

CheckMapDocumentSavedStatus_ST Function

This function checks if the map document is saved to a name other than "Untitled".

Syntax

CheckMapDocumentSavedStatus_ST ()

Returns

Boolean.

True if the map document is saved.

False if the map document is not saved.

CleanUpMemory Function

Clears the memory by setting public variables (gMxDoc, gMap) to nothing.

Syntax

CleanUpMemory ()

Create_Join Function

Creates a join of the feature layer and the table.

Syntax

Create_Join (*pLayer*, *pTable*, *pFld1*, *pStTab*, *pFld2*)

The **Create_Join** syntax has these parts:

Part	Description
<i>pLayer</i>	Required. IFeatureLayer object. The source feature layer.
<i>pTable</i>	Required. ITable object. The display table corresponding to the source feature layer.
<i>pFld1</i>	Required. String. The originPrimaryKeyField for the source feature layer.
<i>pStTab</i>	Required. ITable object. The table to be joined to the source feature layer.
<i>pFld2</i>	Required. String. The originForeignKeyField for the joined table.

Returns

String. The source feature class name appended by "_Join".

DefineApplicationPath_ST Function

Gets the path of the map and stores it in a global variable.

Syntax

DefineApplicationPath_ST ()

Returns

String. Path of the map.

Delete_Dataset_ST Function

Deletes a shapefile from a workspace.

Syntax

Delete_Dataset_ST (*strWorkspace*, *strDataset*)

The **Delete_Dataset_ST** syntax has these parts:

Part	Description
<i>strWorkspace</i>	Required. String. The source workspace.
<i>strDataset</i>	Required. String. The name of the shapefile to be deleted.

Generic_Trim Function

Replaces the first and last string piece with the designated string piece.

Syntax

Generic_Trim (*strSearch*, *strFind*, *strReplace*)

The **Generic_Trim** syntax has these parts:

Part	Description
<i>strSearch</i>	Required. String. The string to be processed.
<i>strFind</i>	Required. String. The string piece to be replaced.
<i>strReplace</i>	Required. String. The string piece to replace with.

Returns

String. The resulting string.

GetArcGISPath Function

Gets the path of the ArcView software.

Syntax

GetArcGISPath ()

Returns

String. The path information of the ArcView Software.

GetDataTable Function

Gets the standalone table from the workspace.

Syntax

GetDataTable (*strWorkspace*, *tableName*)

The **GetDataTable** syntax has these parts:

Part	Description
<i>strWorkspace</i>	Required. String. The source workspace.
<i>tableName</i>	Required. String. The name of the table.

Returns

IStandaloneTable.

GetFeatureLayer Function

Gets the feature layer from the workspace. If the workspace does not contain feature class, no feature layer is returned.

Syntax

GetFeatureLayer (*strWorkspace*, *FLayerName*)

The **GetFeatureLayer** syntax has these parts:

Part	Description
<i>strWorkspace</i>	Required. String. The source workspace.
<i>FLayerName</i>	Required. String. The name of the feature layer.

Returns

ILayer.

GetInputFeatureLayer Function

Gets the feature layer or raster layer from map. If the layer is not found, no feature layer or raster layer is returned.

Syntax

GetInputFeatureLayer (*FLayerName*)

The **GetInputFeatureLayer** syntax has these parts:

Part	Description
<i>FLayerName</i>	Required. String. The feature layer or raster layername.

Returns

ILayer.

GetInputRasterLayer Function

Gets the input raster layer.

Syntax

GetInputRasterLayer (*RLayerName*)

The **GetInputRasterLayer** syntax has these parts:

Part	Description
<i>RLayerName</i>	Required. String. The name of the raster layer.

Returns

IRasterLayer. The required raster layer on the map.

GetInputRasterLayerCount Function

Gets the number of raster layers under name *RLayerName*.

Syntax

GetInputRasterLayerCount (*RLayerName*)

The **GetInputRasterLayerCount** syntax has these parts:

Part	Description
<i>RLayerName</i>	Required. String. The name of the raster layer.

Returns

Integer. The number of the raster layers under the input name.

GetInputTable Function

Get the table from map.

Syntax

GetInputTable (*tableName*)

The **GetInputTable** syntax has these parts:

Part	Description
<i>tableName</i>	Required. String. The name of the table.

Returns

ITable.

GetSpatialReferenceForLayer Function

Checks the input projection of an input layer. Checks the type of input layer (feature/raster) and gets its spatial reference.

Syntax

GetSpatialReferenceForLayer (*pLayer*)

The **GetSpatialReferenceForLayer** syntax has these parts:

Part	Description
<i>pLayer</i>	Required. ILayer object. The input layer (feature or raster).

Returns

ISpatialReference.

GetVersion Function

Gets the version of ArcMap.

Syntax

GetVersion ()

GetWorkspace Function

Returns a shapefile workspace object of a given path.

Syntax

GetWorkspace (*sPath*)

The **GetWorkspace** syntax has these parts:

Part	Description
<i>sPath</i>	Required. String. The path of the workspace.

Returns

IWorkspace. The required workspace.

InitializeMapDocument Function

Initializes the map document and calls SetDataDirectory_ST.

Syntax

InitializeMapDocument ()

OpenShapeFile Function

Opens a feature dataset (.shp) from disk and returns the feature class.

Syntax

OpenShapeFile (*dir*, *name*)

The **OpenShapeFile** syntax has these parts:

Part	Description
<i>dir</i>	Required. String. The source workspace.
<i>name</i>	Required. String. The name of the shapefile.

Returns

IFeatureClass.

Parse_Expression Function

Parses the expression in the Drainage Area criteria.

Syntax

Parse_Expression (*strExp*, *pParse*)

The **Parse_Expression** syntax has these parts:

Part	Description
<i>strExp</i>	Required. String. The expression to be parsed.

<i>pParse</i>	Required. Boolean. Whether the parsed result should be in the acres unit. 0: not in unit. 1: in unit.
---------------	---

Returns

String. The parsed result.

Parse_Expression2 Function

Parses expression in weight criteria detail frame.

Before and after >, <, >=, <=, add a space (e.g., x>4 to x > 4), otherwise it returns a syntax error.
if pParse is true, recalculate the grid value.

Syntax

Parse_Expression2 (*strExp*, *pParse*)

The **Parse_Expression2** syntax has these parts:

Part	Description
<i>strExp</i>	Required. String. The expression to be parsed.
<i>pParse</i>	Required. Boolean. Whether the parsed result should be in acres unit. 0: not in unit. 1: in unit.

Returns

String. The parsed result.

RenderUniqueValueFillSymbol_ST Function

Renders a feature layer based on the unique value of a certain field.

Syntax

RenderUniqueValueFillSymbol_ST (*pFeatureLayer*, *pFieldNames*, *pHeading*)

The **RenderUniqueValueFillSymbol_ST** syntax has these parts:

Part	Description
<i>pFeatureLayer</i>	Required. IFeatureLayer object. The input featurelayer to be rendered.
<i>pFieldNames</i>	Required. String. The field of the input layer for rendering.
<i>pHeading</i>	Required. String. The heading of the rendering.

SetDataDirectory_ST Function

Creates folder of "SitingTool" Create file "***_Siting.src" and writes the layer names into "***_Siting.src".
Creates file "***_criteria.src" and writes default criteria into "***_criteria.src".

Syntax

SetDataDirectory_ST ()

StringContains Function

Checks whether a given string is in another string.

Syntax

StringContains (*FindString*, *SearchString*)

The **StringContains** syntax has these parts:

Part	Description
<i>FindString</i>	Required. String. The source string to be searched.
<i>SearchString</i>	Required. String. The search string which is normally shorter than FindString.

Returns

Boolean. True if SearchString is in the FindString.

ValidateDatasets_ST Function

Validates the source datasets and sets the global source layer names. Both "Data Management" and "BMP Siting Criteria" steps call this function.

Syntax

ValidateDatasets_ST (*CreateJoin*)

The **ValidateDatasets_ST** syntax has these parts:

Part	Description
<i>CreateJoin</i>	Required. Boolean. Determine whether the feature layer is joined to the table. True: feature layer is joined to the table. False: feature layer is not joined to the table.

Returns

Boolean.

True: The source dataset is valid.

False: The source dataset is not valid.

gAppCount Variable

A public variable of ModuleSustainGlobal. This variable of type integer stores how many times the siting tool has been executed after ArcMap is opened. Each time siting tool is executed, gAppCount is increased by 1. It serves as an index for the name of the temporary feature layer result (union result or dissolved result). Without this variable, the temporary feature layer result might be locked by ArcMap and a new result cannot be generated.

Syntax

gAppCount [= value]

Type

Integer

gApplicationPath Variable

A public string variable of ModuleSustainGlobal. It stores the path of the map document.

Syntax

gApplicationPath [= value]

Type

String

gBMPCriteriaDictionary Variable

A public dictionary variable of ModuleSustainGlobal.

It stores the dictionary that is storing the actual criteria for each BMP.

eg: gBMPCriteriaDictionary.Add "Dry pond", oBMP; where oBMP is the criteria of class type BMPobj.

gBMPCriteriaDictionary serves as a media to update the criteria. e.g.,

gBMPCriteriaDictionary.Remove BMPTYPE.

gBMPCriteriaDictionary.Add BMPTYPE, oBMP; where oBMP is the updated criteria for BMPTYPE.

Syntax

gBMPCriteriaDictionary [= value]

Type

Scripting.Dictionary

gBMPSelDict Variable

A public dictionary variable of ModuleSustainGlobal. It stores the name of the dictionary that is storing the user-selected BMP types. It is initialized during the Form loading process by reading the file "_criteria.src".

Syntax

gBMPSelDict [= value]

Type

Scripting.Dictionary

gBMPTypeDict Variable

A public dictionary variable of ModuleSustainGlobal. It stores the name of the dictionary that is storing the default criteria for each BMP. e.g., gBMPTypeDict.Add "Dry pond", oBMP; where oBMP is the criteria of class type BMPobj.

Syntax

gBMPTypeDict [= value]

Type

Scripting.Dictionary

gCellSize Variable

A public variable of ModuleSustainGlobal. This double variable is set to be the cell size (in feet) of the DEM raster data layer if DEM is designated.

Syntax

gCellSize [= value]

Type

Double

gCreatedSoilCount Variable

A public variable of ModuleSustainGlobal. Every time the siting tool processes for each selected BMP type, it increases gCreatedSoilCount by 1.

gAppCount combined with gCreatedSoilCount ensures that all the temporary feature layer names are unique.

Syntax

gCreatedSoilCount [= value]

Type

Integer

gDACriteria Variable

A public variable of ModuleSustainGlobal. This variable of type string stores drainage area criteria or slope criteria. It is used as a parameter to the function Parse_Expression.

Syntax

gDACriteria [= value]

Type

String

gDEMdata Variable

A public dictionary variable of ModuleSustainGlobal. It stores the DEM raster layer name.

Syntax

gDEMdata [= value]

Type

String

gImperviousdata Variable

A public variable of ModuleSustainGlobal. It stores the impervious raster layer name.

Syntax

gImperviousdata [= value]

Type

String

gLandownerdata Variable

A public variable of ModuleSustainGlobal. It stores the land ownership layer name.

Syntax

gLandownerdata [= value]

Type

String

gLandusedata Variable

A public variable of ModuleSustainGlobal. It stores the land use feature layer name.

Syntax

gLandusedata [= value]

Type

String

gLayerNameDictionary Variable

A public dictionary variable of ModuleSustainGlobal. It stores the name of the dictionary that records the layer names.

Syntax

gLayerNameDictionary [= value]

Type

Scripting.Dictionary

gMRLCdata Variable

A public variable of ModuleSustainGlobal. It stores the land use raster layer name.

Syntax

gMRLCdata [= value]

Type

String

gMrIcTable Variable

A public variable of ModuleSustainGlobal. It stores the land use lookup table name.

Syntax

gMrIcTable [= value]

Type

String

gRasterfolder Variable

A public variable of ModuleSustainGlobal. This variable of type string stores the path of the generated raster folder "Cache". This folder stores all the temporary raster files.

Syntax

gRasterfolder [= value]

Type

String

gRoaddata Variable

A public variable of ModuleSustainGlobal. It stores the road feature layer name.

Syntax

gRoaddata [= value]

Type

String

gShowStatus Variable

A public variable of ModuleSustainGlobal. This Boolean variable controls whether to show the status bar. In the current version, it is always set to false (to not show the status bar).

Syntax

gShowStatus [= value]

Type

Boolean

gSoildata Variable

A public variable of ModuleSustainGlobal. It stores the soil layer name.

Syntax

gSoildata [= value]

Type

String

gSoilTable Variable

A public variable of ModuleSustainGlobal. It stores the soil lookup table name.

Syntax

gSoilTable [= value]

Type

String

gStreamdata Variable

A public variable of ModuleSustainGlobal. It stores the stream feature layer name.

Syntax

gStreamdata [= value]

Type

String

gWorkingfolder Variable

A public variable of ModuleSustainGlobal. This variable of type string stores the path of the working folder for the current execution of the siting tool. Every time the siting tool is executed, a new folder "Siting*" (* is a number) is generated inside gWorkingfolderParent ("SitingTool"). All temporary layers are saved in this folder "Siting*".

Syntax

gWorkingfolder [= value]

Type

String

gWorkingfolderParent Variable

A public variable of ModuleSustainGlobal. This variable of type string stores the path of the parent folder "SitingTool" for all the working folders "Siting*". Every time the siting tool is executed, a new folder "Siting*" (* is a number) is generated inside gWorkingfolderParent ("SitingTool").

Syntax

gWorkingfolderParent [= value]

Type

String

gWTdata Variable

A public variable of ModuleSustainGlobal. It stores the GWT depth layer name.

Syntax

gWTdata [= value]

Type

String

gZUnit Variable

A public variable of ModuleSustainGlobal. It stores the Z-unit of the DEM data.

Syntax

gZUnit [= value]

Type

String