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/** ----- Trial of different classifications for the same data set -----
/** FILE NAME:    No_AvR_Classes.txt
/** AUTHOR:      RENEE SCHICKER
/** CREATED:     27 NOVEMBER 2010
/** MODIFIED:    09 FEBRUARY 2010
/**
/** The scripts may be supplied in a more readily useable format if the work is acknowledged
/** CONTACT:     Renee_Schicker@hotmail.com
/**
/** INPUT DATA:  awfnoavr1
/**
/** PURPOSE:     Assign each of the classification techniques to the initial weights of evidence
/**              model (one with mean monthly rainfall excluded). The landslide inventory is
/**              then combined and the total proportion of landslide area and proportion of
/**              total area in each of the five susceptibility classes can be compared. In
/**              addition the relative landslide density for each class within each
/**              classification can be determined and compared.
/**
/**
/** *****

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SET VARIABLES: CLASS BREAKS FOR EACH CLASSIFICATION (LOW TO HIGH).

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/* Natural Breaks - Set the four class breaks as determined in ArcMap for the five classes

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&SETVAR .NAvR_NB_B1 = 8.659999847
&SETVAR .NAvR_NB_B2 = 12.68999958
&SETVAR .NAvR_NB_B3 = 16.56999969
&SETVAR .NAvR_NB_B4 = 20.67000008

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/* Geometric Intervals - Set the four class breaks as determined in ArcMap for the five classes

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&SETVAR .NAvR_GI_B1 = 7.81851639
&SETVAR .NAvR_GI_B2 = 12.1758228
&SETVAR .NAvR_GI_B3 = 14.60417598
&SETVAR .NAvR_GI_B4 = 18.96148239

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/* Equal Intervals – Set the four class breaks as determined in ArcMap for the five classes

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&SETVAR .NAvR_EI_B1 = 5.355999756
&SETVAR .NAvR_EI_B2 = 10.71199951
&SETVAR .NAvR_EI_B3 = 16.06799927
&SETVAR .NAvR_EI_B4 = 21.42399902

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/* Quantiles – Set the four class breaks as determined in ArcMap for the five classes

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```

&SETVAR .NAvR_Q_B1 = 10.43999958
&SETVAR .NAvR_Q_B2 = 13.10999966
&SETVAR .NAvR_Q_B3 = 16.04999924
&SETVAR .NAvR_Q_B4 = 20.40999985

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/**** PROCESSES TO CALL:

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```

&CALL WoE_NoAvR_NB
&CALL WoE_NoAvR_GI
&CALL WoE_NoAvR_EI

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```
&CALL WoE_NoAvR_Q
&RETURN
```

```
/*****
&ROUTINE WoE_NoAvR_NB
```

```
&CALL SETUP
WoEVL = CON(awfnoavr1 le %.NAvR_NB_B1%, 1, 0)
WoEL = CON(awfnoavr1 gt %.NAvR_NB_B1% and awfnoavr1 le %.NAvR_NB_B2%, 2, 0)
WoEM = CON(awfnoavr1 gt %.NAvR_NB_B2% and awfnoavr1 le %.NAvR_NB_B3%, 3, 0)
WoEH = CON(awfnoavr1 gt %.NAvR_NB_B3% and awfnoavr1 le %.NAvR_NB_B4%, 4, 0)
WoEVH = CON(awfnoavr1 gt %.NAvR_NB_B4%, 5, 0)
LSIClass = (WoEVL + WoEL + WoEM + WoEH + WoEVH)
KILL WoEVL
KILL WoEL
KILL WoEM
KILL WoEH
KILL WoEVH
SETMASK off
Q
&IF [EXIST NoAvRNB_Cov -COVER] &THEN KILL NoAvRNB_Cov
&IF [EXIST QGLI_NoAvRNB -COVER] &THEN KILL QGLI_NoAvRNB
GRIDPOLY LSIClass NoAvRNB_Cov
KILL LSIClass
UNION D:\Renee_GIS\Output_data\Organised\04_Inventory\li_extent NoAvRNB_Cov
QGLI_NoAvRNB
&RETURN
```

```
/*****
&ROUTINE WoE_NoAvR_GI
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```
&CALL SETUP
WoEVL = CON(awfnoavr1 le %.NAvR_GI_B1%, 1, 0)
WoEL = CON(awfnoavr1 gt %.NAvR_GI_B1% and awfnoavr1 le %.NAvR_GI_B2%, 2, 0)
WoEM = CON(awfnoavr1 gt %.NAvR_GI_B2% and awfnoavr1 le %.NAvR_GI_B3%, 3, 0)
WoEH = CON(awfnoavr1 gt %.NAvR_GI_B3% and awfnoavr1 le %.NAvR_GI_B4%, 4, 0)
WoEVH = CON(awfnoavr1 gt %.NAvR_GI_B4%, 5, 0)
LSIClass = (WoEVL + WoEL + WoEM + WoEH + WoEVH)
KILL WoEVL
KILL WoEL
KILL WoEM
KILL WoEH
KILL WoEVH
SETMASK off
Q
&IF [EXIST NoAvRGI_Cov -COVER] &THEN KILL NoAvRGI_Cov
&IF [EXIST QGLI_NoAvRGI -COVER] &THEN KILL QGLI_NoAvRGI
GRIDPOLY LSIClass NoAvRGI_Cov
KILL LSIClass
UNION D:\Renee_GIS\Output_data\Organised\04_Inventory\li_extent NoAvRGI_Cov QGLI_NoAvRGI
```

&RETURN

/\*\*\*\*\*

&ROUTINE WoE\_NoAvR\_EI

&CALL SETUP

WoEVL = CON(awfnoavr1 le %.NAvR\_EI\_B1%, 1, 0)

WoEL = CON(awfnoavr1 gt %.NAvR\_EI\_B1% and awfnoavr1 le %.NAvR\_EI\_B2%, 2, 0)

WoEM = CON(awfnoavr1 gt %.NAvR\_EI\_B2% and awfnoavr1 le %.NAvR\_EI\_B3%, 3, 0)

WoEH = CON(awfnoavr1 gt %.NAvR\_EI\_B3% and awfnoavr1 le %.NAvR\_EI\_B4%, 4, 0)

WoEVH = CON(awfnoavr1 gt %.NAvR\_EI\_B4%, 5, 0)

LSIClass = (WoEVL + WoEL + WoEM + WoEH + WoEVH)

KILL WoEVL

KILL WoEL

KILL WoEM

KILL WoEH

KILL WoEVH

SETMASK off

Q

&IF [EXIST NoAvREI\_Cov -COVER] &THEN KILL NoAvREI\_Cov

&IF [EXIST QGLI\_NoAvREI -COVER] &THEN KILL QGLI\_NoAvREI

GRIDPOLY LSIClass NoAvREI\_Cov

KILL LSIClass

UNION D:\Renee\_GIS\Output\_data\Organised\04\_Inventory\li\_extent NoAvREI\_Cov QGLI\_NoAvREI

&RETURN

/\*\*\*\*\*

&ROUTINE WoE\_NoAvR\_Q

&CALL SETUP

WoEVL = CON(awfnoavr1 le %.NAvR\_Q\_B1%, 1, 0)

WoEL = CON(awfnoavr1 gt %.NAvR\_Q\_B1% and awfnoavr1 le %.NAvR\_Q\_B2%, 2, 0)

WoEM = CON(awfnoavr1 gt %.NAvR\_Q\_B2% and awfnoavr1 le %.NAvR\_Q\_B3%, 3, 0)

WoEH = CON(awfnoavr1 gt %.NAvR\_Q\_B3% and awfnoavr1 le %.NAvR\_Q\_B4%, 4, 0)

WoEVH = CON(awfnoavr1 gt %.NAvR\_Q\_B4%, 5, 0)

LSIClass = (WoEVL + WoEL + WoEM + WoEH + WoEVH)

KILL WoEVL

KILL WoEL

KILL WoEM

KILL WoEH

KILL WoEVH

SETMASK off

Q

&IF [EXIST NoAvRQ\_Cov -COVER] &THEN KILL NoAvRQ\_Cov

&IF [EXIST QGLI\_NoAvRQ -COVER] &THEN KILL QGLI\_NoAvRQ

GRIDPOLY LSIClass NoAvRQ\_Cov

KILL LSIClass

UNION D:\Renee\_GIS\Output\_data\Organised\04\_Inventory\li\_extent NoAvRQ\_Cov QGLI\_NoAvRQ

&RETURN

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/******  
&ROUTINE SETUP  
&RUN d:\renee_gis\scripts\checkproggrid.txt  
  
&TYPE set window to rain98av...  
SETWINDOW D:\Renee_GIS\Output_data\Organised\13_Rain\rain98av  
  
SETMASK D:\Renee_GIS\Output_data\Organised\13_Rain\rain98av  
&TYPE setmask complete  
  
&RETURN  
  
/******
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