# **1. Reclassify**

Reclassify **Drainage\_class\_score2** from float to integer classes.

|  |  |  |
| --- | --- | --- |
| **Old** | **New** | **Label** |
| 0 | 1 | Unlikely |
| 0.75 | 2 | Potential |
| 1 | 3 | Likely |

Output: **Drainage\_class\_score2\_reclass**

# **2. Tabulate Area**

Run Tabulate Area three times with **Drainage\_class\_score2\_reclass** as the input raster data and the boundary layers as the feature zone data.

## **Watershed**

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input raster or feature zone data | AgDrainage\_Watershed |
| Zone field | HUC8 |
| Input raster or feature class data | Drainage\_class\_score2\_reclass |
| Class field | Value |
| Output table | Drainage\_class\_score2\_Watershed |

## **County**

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input raster or feature zone data | AgDrainage\_County |
| Zone field | GEOID |
| Input raster or feature class data | Drainage\_class\_score2\_reclass |
| Class field | Value |
| Output table | Drainage\_class\_score2\_County |

## **State**

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input raster or feature zone data | AgDrainage\_State |
| Zone field | STATEFP |
| Input raster or feature class data | Drainage\_class\_score2\_reclass |
| Class field | Value |
| Output table | Drainage\_class\_score2\_State |

# **3. Join tables**

Run Add Join for each boundary layer.

## **Watershed**

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input Table | AgDrainage\_Watershed |
| Input Join Field | HUC8 |
| Join Table | Drainage\_class\_score2\_Watershed |
| Join Table Field | HUC8 |

## **County**

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input Table | AgDrainage\_County |
| Input Join Field | GEOID |
| Join Table | Drainage\_class\_score2\_County |
| Join Table Field | GEOID |

## **State**

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input Table | AgDrainage\_Watershed |
| Input Join Field | HUC8 |
| Join Table | Drainage\_class\_score2\_Watershed |
| Join Table Field | HUC8 |

# **4. Export feature classes**

Export the three boundary layers to new feature classes to permanently preserve the join.

Right-click **AgDrainage\_County** and select **Data --> Export Features**. Export the feature class with the new name **AgDrainageLikelyExtent\_County**.

This process is repeated for **AgDrainage\_Watershed** and **AgDrainage\_State** to create **AgDrainageLikelyExtent\_Watershed** and **AgDrainageLikelyExtent\_State** respectively.

# **5. Add Fields**

Add the following fields to the three boundary layers:

* TOTAL\_AREA\_AC (Double, Numeric)
* LIKELY\_AREA\_AC (Double, Numeric)
* LIKELY\_PCT (Double, Numeric)
* POTENTIALLY\_AREA\_AC (Double, Numeric)
* POTENTIALLY\_PCT (Double, Numeric)
* UNLIKELY\_AREA\_AC (Double, Numeric)
* UNLIKELY\_PCT (Double, Numeric)

# **6. Calculate Total Area**

Run **Calculate Geometry** on the **TOTAL\_AREA\_AC** field for each three boundary layers.

## **Watershed**

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input Features | AgDrainageLikelyExtent\_Watershed |
| Field | TOTAL\_AREA\_AC |
| Property | Area |
| Area Unit | Acres |

## **County**

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input Features | AgDrainageLikelyExtent\_County |
| Field | TOTAL\_AREA\_AC |
| Property | Area |
| Area Unit | Acres |

## **State**

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input Features | AgDrainageLikelyExtent\_State |
| Field | TOTAL\_AREA\_AC |
| Property | Area |
| Area Unit | Acres |

# **6. Calculate Field**

Use the following formulas in **Calculate Field** for each three boundary layers. The VALUE\_1, VALUE\_2, VALUE\_3 fields from Tabulate Area are currently in square meters. In the expressions, they are converted to acres with the factor 0.000247105.

## **Watershed**

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input Table | AgDrainageLikelyExtent\_Watershed |
| Field Field Name (Existing or New) | LIKELY\_AREA\_AC |
| Expression | !VALUE\_3! \* 0.000247105 |

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input Table | AgDrainageLikelyExtent\_Watershed |
| Field Field Name (Existing or New) | LIKELY\_AREA\_PCT |
| Expression | ((!VALUE\_3! \* 0.000247105) / !TOTAL\_AREA\_AC!) \* 100 |

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input Table | AgDrainageLikelyExtent\_Watershed |
| Field Field Name (Existing or New) | POTENTIALLY\_AREA\_AC |
| Expression | !VALUE\_2! \* 0.000247105 |

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input Table | AgDrainageLikelyExtent\_Watershed |
| Field Field Name (Existing or New) | POTENTIALLY\_AREA\_PCT |
| Expression | ((!VALUE\_2! \* 0.000247105) / !TOTAL\_AREA\_AC!) \* 100 |

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input Table | AgDrainageLikelyExtent\_Watershed |
| Field Field Name (Existing or New) | UNLIKELY\_AREA\_AC |
| Expression | !VALUE\_1! \* 0.000247105 |

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Input Table | AgDrainageLikelyExtent\_Watershed |
| Field Field Name (Existing or New) | UNLIKELY\_AREA\_PCT |
| Expression | ((!VALUE\_1! \* 0.000247105) / !TOTAL\_AREA\_AC!) \* 100 |

## **County**

Repeat expressions from Watershed section using **AgDrainageLikelyExtent\_County** as the input table.

## **State**

Repeat expressions from Watershed section using **AgDrainageLikelyExtent\_State** as the input table.