UT-MOWET Dataset Development Process

1. Assigned each of the combined strata from Table 7 to an initial confidence class. We based the confidence classes on breaks in the data for the percent aquatic area. We used the following classes: 1) very low (<8%), 2) low (25–34%), 3) medium (42–54%), and 4) high (66-79%) (Table 7).
2. Extracted all of the aquatic features (classes listed in Table 3) and water features from each dataset.
3. Combined datasets into one using the Union tool in ArcPro, which maintains all feature attributes and creates new polygons for each unique set of overlapped features. Each feature could be from a single dataset or could represent several datasets that all showed an aquatic resource at the same location.
4. Attributed features in the Union dataset with the following:
    a. Number and percent of available datasets that mapped that feature as aquatic. The maximum number of datasets ranged from five to seven, depending on the availability of VCMQ and fen data.
    b. The number of datasets in each confidence category that mapped that feature as aquatic, using confidence categories from Table 7.
5. Assigned each feature to a final confidence category based on the following criteria:
    a. High if any of the following were true:
        i. At least one strata assigned to the high confidence class from Table 7 was present (e.g., NWI Shrub, Fen)
        ii. ≥80% of layers mapped the feature as aquatic
        iii. Mapped as Water by any four layers or Lake by NWI
    b. Medium if any of the following were true:
        i. At least one strata assigned to the medium confidence class from Table 7 was present (e.g., NLCD Upper Montane, WRLU Lower Montane)
        ii. ≥60% of layers mapped the feature as aquatic
        iii. Mapped as water by any three layers or by WRLU
    c. Low if none of the above were true.
6. Assigned each feature to an initial cover class (Emergent, Woody, Water, or Unknown) using the following criteria.
    a. If one class dominated, then assigned based on the classification of the majority of datasets.
    b. If no majority, then assigned to the class from the most accurate dataset available for that feature, based on the overstory assessment in Table 8. Table A1 shows the order in which classes were assigned. We did not use raster datasets to assign the Woody class due to their low classification accuracy.

Table A1. Order of priority for assigning wetland classes in the final layer.

Order	**Dataset Used for Classification**	**Layers Classified**

1	Majority of datasets (no ties)	Emergent, Water, or Woody
2	NWI	Emergent, Water, or Woody
3	VCMQ	Emergent, Water, or Woody
4	WRLU	Water
5	NLCD, Landfire NVC, LCMAP	Water
6	Landfire NVC or NLCD	Emergent
7	None of the above combinations	Unknown

7. Used the Dissolve tool in ArcPro to dissolve features by confidence class and cover class and then processed the data to remove very small features through the following steps:
    a. Used the Eliminate tool in ArcPro to merge very small features into larger adjacent features
    b. Removed low confidence features <1000 m^2 that shared a boundary with higher confidence features
    c. Removed features <100 m^2
8. Attributed features with supporting data from Table 6
    a. May/June and July/August NDVI from 2019 and 2020
    b. Canopy height class from lidar data
    c. May and August 10 year surface water extent.
9. Removed Water, Shore, and some low confidence features
    a. Used August surface water, July/August 2019 and 2020 NDVI values to classify features as Water or Shore and removed those features from the dataset
    b. Used the Subdivide tool in ArcPro to divide the low confidence features into polygons of approximately 4000 m^2, attributed those polygons with July/August 2020 NDVI and canopy height values, and removed all low confidence features that were classified as Tree or had July/August 2020 NDVI values less than or equal to 0.7
10. Used lidar canopy height data to update cover classes features classified as Water or Unknown to Emergent, Shrub, or Tree classes.