Method for Using Multi-Metric Index to Estimate Condition at New Sites

Use the following steps to determine the condition of a new Valleys and Foothill meadow:

1. Determine whether your site meets the definition of a Valley or Foothill meadow. The site should be located within the Mountain Valleys or Semiarid Foothills ecoregion and have less than 25% cover of herbaceous plants. The site should be distinct from marshes, which usually have deeper and more consistent flooding and taller emergent vegetation like cattails and bulrushes.

2. Use vegetation data to calculate the four variables in the final multi-metric index (Table 41). Obtain nativity, duration, and wetland indicator data from USDA Plants or similar source and C-values from the UGS or NWCA.

3. Standardize all variables using floor and ceiling values from Table 42. First, set any values below the floor (or above if the floor is higher) to zero and any values above the ceiling (or below if the ceiling is higher) to 10. To standardize any other values, use the equation: (obs-floor)/(ceiling-floor)*10, where the observed value is the metric value for the site of interest. For example, for a site with 20% introduced perennial cover, the equation is: (20-61.1)/(0.5-61.1)*10 and the standardized value is 6.8. If that site had 0.1% or 70% introduced perennial cover, the standardized value would be 0 and 10, respectively.

4. To obtain the multi-metric index value, add up the four standardized metric values from the site, multiply by 10 and divide by 4. For example, if the standardized values are 6.8, 1.2, 4.3, and 6.7, the MMI value is 47.5.

5. Check the MMI value versus the thresholds for establishing good, fair, and poor condition. Sites with values equal to or above 82.1 are in good condition, those with values below 70.7 are in poor condition, and the remaining sites are fair.