



Driftless Prairies: Native Ecosystems

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Floristic Quality Assessment

Floristic Quality Assessment

The Floristic Quality Assessment (FQA) is a tool to quantify the quality of remnant and restored ecosystems. It acts like a restoration triage system so management plans can be developed appropriately. It also assists with site monitoring, providing managers with a means of measuring the progress of a site against its management plan.

The FQA is determined by the mean Coefficient of Conservatism (C) for the total inventory of native plants for a site and by calculating the Floristic Quality Index (FQI). Non-native plants and naturalized plants are excluded from this listing; according to Swink & Wilhelm the existence of weeds on a site does not “signify significant degradation of an area.” Degradation is delineated by the loss of plants with a high C value. You can read more about the FQA methods and processes in *Plants of the Chicago Region* (1994) by Floyd Swink & Gerould Wilhelm and *The Tallgrass Restoration Handbook* (2005) by Stephen Packard and Cornelia F. Mutel.

3 Steps to Calculating your FQA

Step 1: Generate a Plant Inventory

Create a complete inventory of the native plants on your site. If you have a very large natural area, this inventory can be developed by transect or quadrant sampling. Although non-native and naturalized plants are not included in the FQA, I keep a list of those so I can monitor them, manage them, and study their impact on our work.

[List of Plants and CoC, 2024](#)

[Plant Inventory Listing](#)

Step 2: Ascertain the Mean Coefficient of Conservatism (C)

Each plant is assigned a number on a scale from 0 to 10. These numbers are based on the likelihood that the plant would exist in an ecosystem if it were in a non-degraded community. For example, a plant that was very common and in most locations might be assigned a 0 or a 1; a plant that was found in both quality and degraded environs would be a 5; and a plant found only in high-quality, specific sites and regions would be a 10. Coefficients are specific to a geographic area.

After each plant has been assigned its coefficient, total them and divide by the total number of species. This is the mean C.

Step 3: Calculate the Floristic Quality Index (FQI)

Multiply the mean C by the square root of the total number of native species(n): $FQI = C\sqrt{n}$

Driftless Prairies mean coefficient: 5.09

242 native plants divided by the total of the CoC is 1233. The mean is 5.09.

Driftless Prairies FQI: 79.18

The square root of 242 is 15.56.

$15.56 \times 5.09 = 79.18$

How to interpret the FQA and FQI

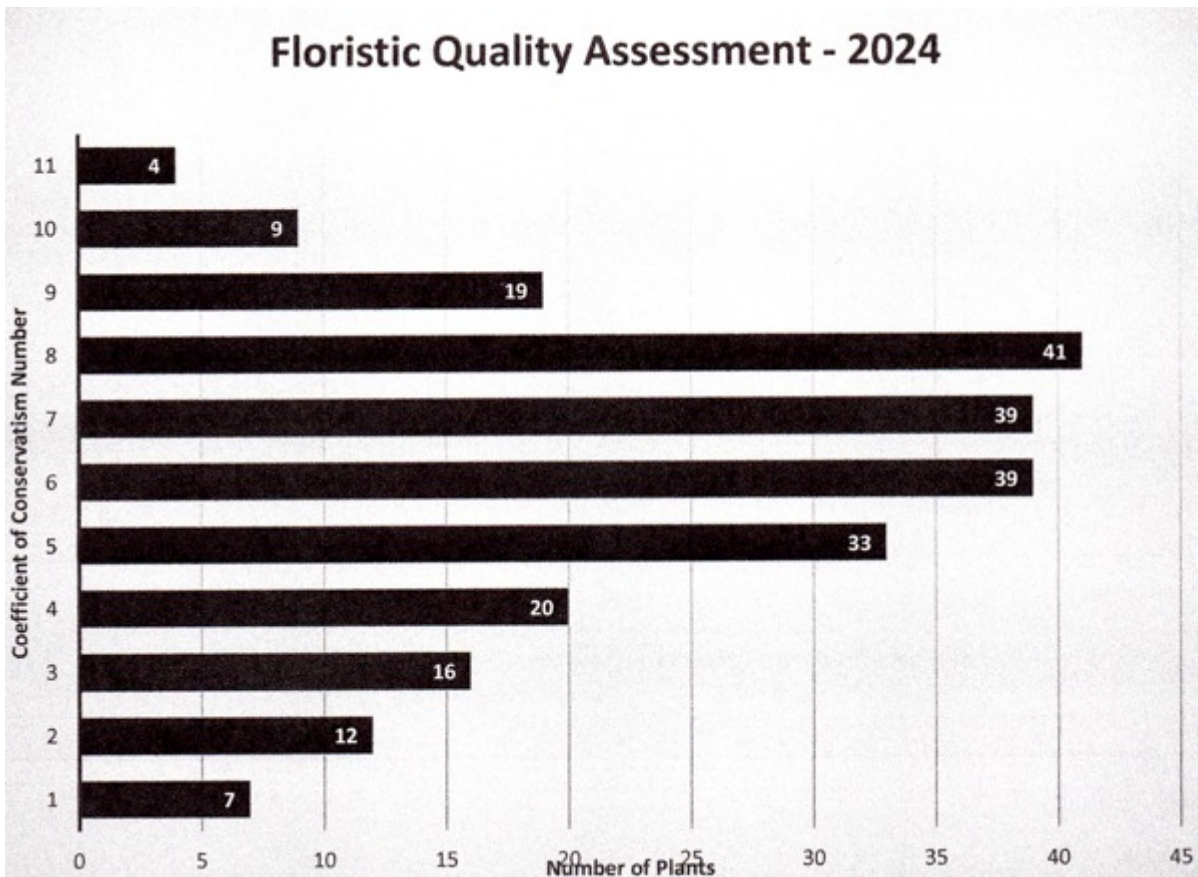
High quality: The mean C is greater than 4 and the FQI is greater than 50

Medium quality: The mean C is 2-4 and the FQI is 20-50

Low quality: The mean C is 0-2 and the FQI is 0-20

[How the FQA for Wisconsin was Developed](#)

I created a bar chart but was unable to get the label to start at zero. This chart shows how many plants we have in each coefficient (the number at the end of the bar). Just be sure to know these are 0-10 and not 1-11.



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