

Wisconsin Natural Areas Preservation Council

GUIDELINES

Landscape Scale Natural Areas

Introduction

In the past, areas selected for inclusion in the Wisconsin State Natural Areas System have been relatively small and often have had relatively little protection. These areas listed in the system include samples of virtually all Wisconsin natural communities but most provide little opportunity for size increase or enhancement.

Recent scientific studies of population dynamics have provided evidence that numerous animal and plant species are area-sensitive, and suggest that small areas often are inadequate to preserve those species. Natural communities and populations fluctuate with disturbance, a normal stress in nature, and require areas large enough to accommodate such disturbance while providing opportunities for the communities and component populations to regenerate. The interior climate of small areas may not necessarily be similar to that of larger ones, and penetration by the elements and by edge species into the interior of both grasslands and forests is facilitated by the large edge/interior ratio characteristic of small areas.

Few large intact areas of native vegetation remain in Wisconsin, and opportunities to establish large areas are diminishing. Preserving large areas may require that some parts of a preserve, although initially in less than pristine condition, have the potential for restoration in the long run. The overall quality of the area must not be overly weighted toward low grade habitat, and eligibility for state match grant funding requires a measure of quality.

Definition

A Landscape Scale Natural Area (LSNA) is one large enough and of proper configuration to sustain community integrity in the face of natural or anthropogenic disturbance and to ensure that area-sensitive species, present or potential, will not be extirpated simply by inadequate size or presence of intrusive elements. A significant part of a LSNA is of NA-1 or NA-2 quality.

Rationale

1. Small natural areas, although extremely useful for preserving certain individual species, communities, and/or other natural features, are not adequate for preserving biotic diversity and heterogeneity, or for permitting interaction between communities.
2. Organism, material, and energy transfer between communities occurs with least interference in large and undisturbed natural areas.
3. Large areas can encompass a continuum of moisture, temperature, etc., that a small area cannot. A small area, therefore, may not provide for a full and natural range of structural and physical environmental conditions.
4. In the face of natural disturbance, resilience of communities in larger areas is greater than that in smaller ones.



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5. Large areas with low edge/interior ratios have greater resistance to disturbance.
6. Certain area-sensitive species require large, undisturbed areas for their existence. This is true whether the area is forest, grassland, or transition.
7. Larger units often are easier to administer than a number of smaller ones.

Guidelines

1. A LSNA should comprise a minimum of about 640 acres, depending upon the configuration of the area as it relates to the edge/interior ratio. (Edge: interior should approximate 3.5:1 to 4:1.)
2. A LSNA should ideally represent a natural physiographic unit such as a watershed.
3. A LSNA should contain at least one and preferably several high quality, representative communities as a core, and normally will also include transition and buffer areas.
 - a. At least one core area must be present and must be of NA-1 or NA-2 quality, whether terrestrial or aquatic.
 - b. The core area(s) can be surrounded by transition areas that may be somewhat disturbed but recovering habitat.
 - c. The buffer area serves to protect the integrity of the inner areas and may be of any habitat type, whether disturbed and recovering or not.
4. Community manipulation may be carried out in an LSNA when appropriate to the landscape being preserved.
 - a. Normally, the core area will be manipulated only as necessary to preserve its natural character (i.e., grasslands, savannas, and similar types).
 - b. The transition area may be manipulated to enhance and enlarge the core area.
 - c. The buffer area may be actively manipulated to enhance the core and transition areas.
5. As a rule, the core and transition areas would be dedicated. It would not be necessary to dedicate the buffer area, which might only be designated (easement, etc.), but all would be considered integral parts of the individual LSNA.

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