Biodiversity Preserve Plan

Policy

Criteria for Designating Westchester County Biodiversity Preserves

Definition

A biodiversity preserve is an area within the boundaries of a park that is recognized for its ecological significance. The purpose of establishing and protecting such areas is to preserve the overall biodiversity of the park. In selecting an area for a biodiversity preserve, decisions should be based on the overall unique environmental features of the site rather than the individual species occurring there (single-species preserves and rare species recovery projects should not be treated as biodiversity preserves). In the management of a biodiversity preserve, preservation of the site takes precedence over the other land-use concerns.

Ecological Significance:

Ecological Significance can be demonstrated in any of the following ways:

1. High diversity of native species.
2. Absence of alien/invasive species.
3. Concentration of rare species.
4. Unique ecological conditions favorable to high biodiversity or rare species.
5. Ancient or pristine communities un-impacted by human activity.

When considering an area for designation as a biodiversity preserve, it may be evaluated on the basis of any one of these criteria or preferably on a combination of two or more of these criteria.

Diversity of native species:

Any area that exhibits unusually high native biodiversity (with or without the presence of alien invasives) qualifies as a potential candidate for preservation. For example, the intertidal and subtidal zones at Read Wildlife Sanctuary support a very high diversity of native mollusks, crustaceans, and fish despite the presence of alien periwinkles and grapsid crabs.

Absence of alien/invasive species:

Any area where alien species are notably absent. For example, remote sections of forest where “edge aliens” haven’t penetrated (garlic mustard, oriental bittersweet, etc.). Also, elevated ravines where alien earthworms are absent may provide high-quality duff sols favorable to orchids, snails, worm snakes, etc.

Concentration of rare species:

The presence of rare species, especially multiple rare species, is usually an indication of unique environmental conditions. Although such areas are usually pristine and unaltered by man, they need not be to qualify as potential biodiversity preserves. For example, the Kensico Quarry at Cranberry Lake is a highly altered and impacted site that consequently supports numerous rare species.

Unique ecological conditions:

In some cases, an area may qualify for consideration as a biodiversity preserve based on soil, geology, or other factors regardless of the current flora and fauna. Or sometimes common species act as indicators of the potential occurrence of rare species. An abundance of horsetails (Equisetum), for example, may indicate the presence of limerich soils that may in the future support rare caliphilic plants or develop a high diversity of snails.

Ancient or pristine communities:

Any area that has managed to remain in a pristine condition un-impacted by outside influences is likely to support high biodiversity, especially in the occurrence of relict species. Example are remote and inaccessible wetlands, such as Ward Pound Ridge Reservation's Honey Hollow, and steep rocky slopes and crests, such as the overlooks at Mountain Lakes. This would include headwater habitats that may have survived the effects of aerial pesticides and still support populations of dusky salamanders, crayfish, etc.

Delineation:

The boundaries of a biodiversity preserve should incorporate the home ranges of the species being targeted for protection. For example, vernal pool areas should include enough surrounding forest to accommodate the home ranges of the obligate amphibians that breed in them.

The boundaries of a biodiversity preserve should follow the boundaries of the natural community wherever possible – rather than following the boundaries of component species occurrences – and may include a buffer zone extending into the surrounding communities (Ken Soltesz and Beth Herr, Criteria for Designating Biodiversity Preserves, Westchester County Dept. Parks, Recreation & Conservation, 1998).

Westchester County Department of Parks' Conservation Division's Biodiversity Research Program

The Westchester County Department of Parks' Conservation Division's Biodiversity Research Program is responsible for:

1. Surveying and updating surveys of all parks run by the Westchester County Parks, Recreation and Conservation Department.
2. Creating lists of all plant and animal species, including all vascular plants, mammals, breeding birds, reptiles, amphibians, butterflies, dragonflies, fish and mollusks. In addition, we are creating lists of certain insect groups, such as orthopterans, some moth families, and some beetle families. The groups included in our surveys will grow over time.
3. Categorizing each species to relative abundance or rarity within Westchester.
4. Documenting locations and descriptions of all rare, threatened, declining, and endangered species in the county.
5. Creating maps pinpointing significant species locations.
6. Mapping aggressive and invasive species. Especially those being monitored and/or controlled, such as certain strands of *Phragmites Australis.*
7. Creating a database for all biodiversity data.
8. Comparing Westchester park land biodiversity with that of New York State.
9. Sending voucher specimens of species found in Westchester parks to Albany that are not in their current database for Westchester County.
10. Writing Natural Resource Management Plans.
11. Creating Biodiversity Reserves to protect rare and significant species and habitats.
12. Developing species recovery projects.
13. Advising the Parks Planning personnel regarding all proposed projects.
14. Updating the Westchester County Endangered Species Act list of species.
15. Studying, monitoring, and making recommendations regarding the county's white tailed deer population.
16. Building, erecting, and monitoring nesting boxes for rare birds.

17. Managing woodlands, wetlands, and meadows.
18. Providing habitat for rare species.
19. Protecting native species, including those which are required food sources for insects.
20. Controlling over populated predator populations such as raccoons that may be interfering with turtle reproduction.
21. Managing head-starting program for declining species, such as wood turtles, and monitoring the populations.
22. Monitoring groundwater, saltwater, brackish water, and freshwater quality.
23. Recommending, consulting, and advising on all projects affecting Westchester's environment, including acts, corridors, executive orders, initiatives, possible land acquisition, recreational uses, hunting, fishing, trapping, and collecting.