

**Ridges Sanctuary No. 17**  
**State Natural Area**  
**Management Plan**  
**April, 2007**

This management plan contains the general procedures management of State Natural Areas. It also contains recommendations specific to the management need of each site and includes exceptions to the general procedures.

The specific management actions have been developed in consultation with the Department of Natural Resources' Natural Areas Section and approved by The Ridges Sanctuary and the Department Bureau of Endangered Resources. The plan will be reviewed periodically and if necessary amended to assure that all necessary management considerations are incorporated. Changes to the management plan may be made by written agreement between The Ridges Sanctuary and the Bureau of Endangered Resources.

The primary objectives of these procedures is to preserve the site in a natural condition with little human disturbance.

**I. GENERAL MANAGEMENT OF STATE NATURAL AREAS**

**A. Management of Terrestrial and Aquatic Communities, Geologic and Archaeological Features.**

1. Removal of plants, plant parts, animals, rocks and minerals, and artifacts is generally not permitted. However, gun deer hunting, fishing, berry picking and nut gathering is permitted if not expressly restricted. Collecting for scientific purposes may be allowed by permit which requires approval of The Ridges Sanctuary and the Department.
2. Cutting or removal of living or dead trees, standing or down, or other vegetation in forest communities, is generally limited to that essential to meet public safety requirements. Cut material will be left within the natural area. Death of trees due to blowdown, fire, flooding, insects and disease is regarded as a normal natural occurrence.
3. Control of plant succession with the use of fire, cutting, mowing or water level manipulation, may be employed to maintain a particular natural area type, or control of abnormal animal populations may be employed if provided for in this plan.
4. Introduction of exotic plant and animal species is prohibited. Reintroduction of an extirpated species, or introduction of a species which is known to inhabit a particular community and edaphic condition may be permitted if provided for in this plan.
5. Pesticides including herbicides, insecticides, fungicides and biological controls should not be used for plant or animal control. If absolutely necessary, pesticide use may be permitted if provided for in this plan. Biological control agents are preferred over chemical agents.

**B. Public Use**

1. Intensive public use is not encouraged or allowed. Any public use which damages vegetation or otherwise impairs natural conditions is discouraged and if necessary will be controlled. Recreational uses such as hiking, nature appreciation, and education use which do not degrade the natural features are encouraged.

2. Attention drawing signs should be limited to those areas that have low site fragility or have established trails. Signs indicating the areas' purpose and use limitations are desirable at access points. Boundaries may be marked for the convenience of the Ridges staff, visitors, and adjacent landowners.
3. Vehicle traffic of all types is discouraged and not allowed, except for snowmobiles on the existing snowmobile trails on the property located west of STH 57 and former Livingston Property. Snowmobiles must follow existing snowmobile trails, and if damage occurs, use will be curtailed. The snowmobile club that maintains the trails must be part of the state snowmobile trail program. The existing walking trails and roads may be maintained and will be identified on the management plan map. New walking trails may be constructed where use is heavy or where needed to protect sensitive vegetation; these will be identified in the management plan map.
4. No buildings, and other improvements such as dams, fireplaces, picnic grounds, athletic facilities, beach improvements or other waterway modification devices, will be constructed.

## II. SPECIFIC MANAGEMENT FOR THE RIDGES SANCTUARY

### A. Communities, Species or Features of Concern and Statement of Management Objectives. (Figure 1)

This 1260 acre area features northern wet-mesic forest (906 acres), northern wet forest (120 acres), northern forested uplands (39 acres), boreal forest (93 acres), meadow wetlands (7 acres), open bog (65 acres), beach/ridge (20 acres), 2 acre spring-fed pond and 8 acres of disturbed area in process of revegetation.

Plant species of concern are four state-endangered species; moonwort (*Botrychium lunaria*), tussock bulrush (*Scirpus cespitosus*), northern comandra (*Geocaulon lividum*), and selago-like spikemoss (*Selaginella selaginoides*); six state-threatened species; beautiful sedge (*Carex concinna*), Garber's sedge (*Carex garberi*), Ram's-head lady's-slipper (*Cypripedium arietinum*), small round-leaved orchis (*Amerorchis rotundifolia*), dune goldenrod (*Solidago simplex* var. *gilmenii*), and dwarf lake iris (*Iris lacustris*); and twenty-seven additional species of special concern; tall white orchid (*Platanthera dilatata*), white adder's-mouth (*Malaxis brachypoda*), small fringed gentian (*Gentianopsis procera*), Dragon's mouth (*Arethusa bulbosa*), showy lady's-slipper (*Cypripedium reginae*), Arctic primrose (*Primula mistassinica*), one-flowered broomrape (*Orobanche uniflora*), marsh horsetail (*Equisetum palustre*), variegated scouring-rush (*Equisetum variegatum*), least moonwort (*Botrychium simplex*), common bog arrow-grass (*Triglochin maritimum*), bog reed grass (*Calamagrostis inexpansa*), tufted hairgrass (*Deschampsia cespitosa*), purple false oats (*Trisetum melicoides*), hair-like sedge (*Carex capillaris*), Crawe sedge (*Carex crawei*), northern bog sedge (*Carex gynocrates*), livid sedge (*Carex livida*), sheathed sedge (*Carex vaginata*), few-flowered spike-rush (*Eleocharis pauciflora*), sooty beakrush (*Rhynchospora fusca*), Hooker's orchid (*Platanthera hookeri*), sea rocket (*Cakile edentula*), cuckoo flower (*Cardamine pratensis*), marsh willow-herb (*Epilobium palustre*), Ohio goldenrod (*Solidago ohioensis*); and calypso (*Calypso bulbosa*), a state-threatened species transplanted here.

The federally-endangered Hines Emerald Dragonfly (*Somatochlora hineana*) occurs on the Ridges Sanctuary. Animal species of concern is the goshawk (*Accipiter gentiles*).

Management objectives are to preserve and protect the natural ecological values by eliminating or

reducing in abundance invasive exotic species, managing intensive use areas to prevent ecological degradation, eliminating plant theft, and coordinate activities with surrounding landowners to assure resource protection.

## **B. Problem Identification.**

Problem species are reed canary grass, phragmites, Japanese barberry, Japanese knotweed, honeysuckle, spotted knapweed, Canada thistle, orange hawkweed, oxeye daisy, wild carrot, bladder campion, white campion, curled dock, teasel, European marsh thistle, garlic mustard and sweet clovers.

Facility related concerns are the maintenance of the trails and observation platform, clearing of the range light path, plant theft, utility easements and construction, and the impacts of visitors.

## **C. Management Requirements for Communities or Species and Type of Action.**

### Community Management

- Northern upland forest
- Northern wet-mesic forest
- Northern wet forest
- Boreal Forest  
No specific management is required.
- Open meadow  
Remove all non-native trees and shrubs and allow normal succession.
- Pine Plantation (on former Fuch's property containing White, Red and Austrian pine).  
While restoring the pine plantation area, thinning can be used to provide habitat for shade tolerant trees, shrubs and forbs. The restoration could involve planting locally collected native species or allowing natural succession to occur. The eventual goal is to eliminate the pines and to restore the area to native species.
- Open bog  
Annually monitor for the presence of purple loosestrife and remove, if found.
- Beach and Beach ridges  
Annually search for the presence of invasive exotic species and take appropriate actions to eliminate. Control guidelines are found in the Department's Invasive Species Control Handbook.
- Spring-fed Pond  
Retain in its natural state and monitor for removal of any invasive plants.
- Disturbed Area (from sand and gravel removal)  
The restoration could involve additional planting native species or just allowing natural succession to occur as it has for the last 15 years. No grading or filling is necessary. Invasive species, including teasel and Japanese knotweed, will be controlled according to guidelines in the Department's Invasive Species Control Handbook.

### Species Management

- Ram's-head Lady's-slipper  
Canopy thinning and small prescribed burns have been suggested as management techniques to

enhance the populations of this species. Any such actions should be done as research only. Any research must have consultation and approval of the Natural Areas Preservation Council.

- Moonwort
  - Northern Commandra
  - Tussock Bulrush
  - Selago-like Spikemoss
  - Beautiful Sedge
  - Garber's Sedge
  - Small Round-leaved Orchis
  - Dune Goldenrod
  - Dwarf Lake Iris
  - Tall White Orchid
  - White Adder's-mouth
  - Small Fringed Gentian
  - Arctic Primrose
  - Showy Lady's-slipper
  - Dragon's Mouth
  - One-flowered Broomrape
  - Marsh Horsetail
  - Variegated Scouring-rush
  - Least Moonwort
  - Common Bog Arrow-grass
  - Bog Reed Grass
  - Tufted Hairgrass
  - Purple False Oats
  - Hair-like Sedge
  - Crawe Sedge
  - Northern Bog Sedge
  - Livid Sedge
  - Sheathed Sedge
  - Few-flowered Spike-rush
  - Sooty Beakrush
  - Hooker's Orchid
  - Sea Rocket
  - Cuckoo Flower
  - Marsh Willow-herb
  - Ohio Goldenrod
  - Calypso
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- Northern Goshawk  
No specific management is required.
  - Hine's Emerald Dragonfly  
Protection of habitat areas and water quality monitoring will be of primary importance

### Easement Management

The Ridges will maintain and monitor easements according to the signed easement agreements. To assist in monitoring, easements can be transferred to other land trusts, such as the Door County Land Trust.

### Problem Species

Search for the presence of invasive exotics. Remove populations when found through best management practices identified in the Invasive Species Control Handbook and recommendations from consultants.

Herbicide can be used to control reed canary grass, phragmites, Japanese knotweed, honeysuckle, spotted knapweed, Canada thistle, teasel, and European marsh thistle.

Listed problem species occur primarily along trails, roads, parking lots, and near the Nature Center. Controls should concentrate first on those areas away from visitor use areas; then on the beach ridges where there are trails; then along the roads where control may involve others; and finally around the parking areas and the buildings. BER will work with The Ridges Sanctuary in identifying the extent of the invasive exotic problem and recommend specific species control methods.

## **D. Monitoring, Research, Educational and Public Use.**

### Monitoring

- Breeding Birds  
Survey annually to determine the site's value to breeding birds.
- Rare Plants  
Develop and implement a rare plant monitoring program.

### Public Use

- Research and education use is encouraged.

### Inspections

- Inspections should be done twice a year according to manual code and the results reported on Natural Areas Inspection Sheet Form 1700-21.

## **E. Facility Development and Maintenance. (Figure 2)**

### Signs

- Boundary Signs  
Erect "State Natural Area or Ridges Sanctuary" and "private land ahead" signs along Ridges private land boundaries. Erect SNA or Ridges signs along Highways 57 and Q. Signing of the common Toft Point State Natural Area and Mud Lake State Wildlife Area boundaries is not necessary.

### Access

- Access to The Ridges Sanctuary east of STH 57 must be made through the maintained entrance on

County Highway Q. Access from Ridges Drive is discouraged and may need further restrictions. A parking area can be constructed to provide access to land west of Highway 57. The parking area will be located at the west side of STH 57 just north of CTH "Q".

#### Trails and Boardwalks

- All trails and boardwalks are maintained by the Ridges personnel or volunteers. Trails should be discontinued, abandoned, or closed, and then restored to native vegetation, if degradation of the plant and animal communities are taking place. New trails on land west of STH 57 should use existing logging trails except for connection points.

#### Handicap Accessible trail

- Maintain to standards.

#### Observation Platform

- Maintain as necessary for safety.

#### Range Light Path

- Maintain the cleared path as required to keep the navigational light visible. Clearing will be done with hand tools or hand held power equipment. Herbicides will not be used.

#### Boundary Survey

- Conduct boundary survey on contended lands, as necessary.

#### Road Maintenance

- Work with the County and Township to assure minimal roadside maintenance.
- Work to have a no herbicide policy adopted by the local governmental bodies.

#### Utility Construction

- Work with the utilities to have any construction take place as close to existing road corridors as possible. Advance dedication papers as rapidly as possible to prevent future sanctuary/utility conflicts.

#### Plant Theft

- Place signs informing the public about the plant theft problem at the parking lot and the Door County beach parking lot.
- Seek statutory authority to increase the penalty for plant theft and enforce those regulations on the Ridges property.

#### Deer Hunting

- To control the deer browsing problem, deer hunting is permitted during the deer gun season via The Ridges Special Deer Hunting Provisions. At least two (2) hunters per 40 acres may be allowed to hunt with permission.
- All existing deer stands must be removed and permit only stands according to DNR regulations.
- Inspections should be done once a year and the results reported on Natural Areas Inspection Sheet Form 1700-21.

People

- The impacts of thousands of visitors annually must be carefully monitored. A contingency plan should be in place to address the actions to be taken if severe resource degradation is taking place.

**F. Land Acquisition.**

Acquisition within the natural area boundary is at the discretion of the Ridges Sanctuary. Stewardship monies will be applicable to future purchases, if they meet steward criteria for a natural area.

**G. Anticipated Effects of Management Actions.**

By searching for, eliminating, or reducing in abundance the problem species; monitoring rare species populations; monitoring and addressing the impacts of visitors; and anticipating future cultural impacts, the site's integrity should be maintained. Natural community functions and rare species populations should be maintained.

This Management Plan is recommended by The Ridges Sanctuary Acting Director, approved by The Ridges Sanctuary Board, and approved by the Department of Natural Resources' Bureau of Endangered Resources.

Recommended by The Ridges Sanctuary Executive Director

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Steve Leonard, Executive Director

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Date

Approved by The Ridges Sanctuary, Inc. Board of Directors

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George Cobb, President

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Date

Approved by Bureau of Endangered Resources

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Signe Holtz, Director

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Date