

Farny Natural Area

Management Plan

Adoption Date
June 6, 1994



New Jersey Department of Environmental Protection and Energy
Division of Parks and Forestry
Office of Natural Lands Management
CN 404
Trenton, New Jersey 08625-0404
(609) 984-1339

Contributors

This management plan was prepared by Cynthia L. Coritz of the Office of Natural Lands Management with sections contributed by consultant Jacques G. Hill III. The Farny Natural Area Management Plan was adopted by Commissioner Robert C. Shinn, Jr. on June 6, 1994.

The author wishes to express her sincere thanks to T. Mark Pitchell, Superintendent of Ringwood State Park, for his assistance and cooperation in formulating this management plan.

Gratitude is also expressed to the following persons for their contributions toward the completion of this document: The Natural Areas Council (Mary Arnold, Thomas J. Gilmore, Ted Gordon, Thomas F. Hampton, Elizabeth Johnson, David F. Moore and Sally Brecht Price), Richard Barker, David Burke, Thomas Card, Robert J. Cartica, Bill Cernik, Louis Cherepy, Craig Coutros, Michael Drake, Marialyce Fitzgerald, John Garcia, George Koeck, Sam Krall, Jerry Kunkel, Patricia McConnell, Bob Papson, George Plastoris, Martin Rapp, Ed Riley, Lawrence Schmidt, Jack Shuart, Robert Soldwedel, William Struble, Thomas Wells, Elena Williams, Tim Williamson and Nancy Zerbe.

Table of Contents

List of Figures	ii
Introduction	1
Description and Management Concerns	4
Geology and Soils	4
Topography and Surface Hydrology	4
Biotic Communities	5
Endangered and Threatened Species	7
Boundary	9
Public Use	9
Research	10
Introduced Features	11
Management Techniques	11
Natural Areas System Rules	11
Management Objective And Classification	12
Endangered and Threatened Species	12
Boundary	13
Public Use	14
Introduced Features	15
Literature Cited	16
Appendix A	19
Appendix B	25

List of Figures

1.	General Location of Farny Natural Area	2
2.	Boundary and Introduced Features	3
3.	Biotic Communities	6

Introduction

This management plan for the Farny Natural Area describes the resource features which this site contains and prescribes uses and practices that will be allowed and implemented to maintain and, if practicable, enhance these features.

The Natural Areas System is established and administered pursuant to N.J.S.A. 13:1B-15.4 et seq. and N.J.S.A. 13:1B-15.12a et seq. A "Natural Area" is defined as "an area of land or water, owned in fee simple or as a conservation easement by the Department, which has retained its natural character, although not necessarily completely undisturbed, or having rare or vanishing species of plant or animal life, or having similar features of interest, which are worthy of preservation for present and future residents of the State" (N.J.A.C. 7:5A-1.3).

Farny Natural Area is a 589-acre parcel located in Rockaway Township, Morris County and is part of the Highlands physiographic province of New Jersey. The natural area is the southernmost parcel of Farny State Park. The area lies approximately three miles north of the town of Denville and immediately northwest of Splitrock Reservoir. Figure 1 shows the general location of the natural area. The boundary of the natural area is indicated in Figure 2.

In 1941 the property that has come to be known as the Farny Natural Area was purchased by the Boy Scouts of America from Mrs. Katherine Culver Williams and her husband. The deed indicated that the tract is subject to restrictions and covenants of record. One of the restrictions was that the Boy Scouts of America may at any time convey all or part of the premises, in trust or otherwise, but only to another local council of the Boy Scouts or similar organization, to the State of New Jersey, or to Morris County for public recreational purposes or the preservation and conservation of wildlife. Farny Natural Area was acquired by the State in 1943 and designated to the Natural Areas System in 1978.

The management objective for this natural area under N.J.A.C. 7:5A-1.13(a)16iii is "preservation of northern mixed oak-hardwood forest, hardwood swamp forest, and rare species habitat". N.J.A.C. 7:5A-1.8 also mandates the preparation of this management plan.

The Division of Parks and Forestry, through Ringwood State Park, serves as the administering agency, being responsible for implementing policy and, after consultation with other Divisions, organizations and individuals, making land management decisions affecting Farny Natural Area. Ringwood State Park shall implement the management policies necessary to achieve the management objective of this plan.

The Office of Natural Lands Management (ONLM) is responsible for overall administration of the Natural Areas System, promulgation and revision of rules governing System lands, and preparation of management plans. The ONLM also periodically monitors implementation of the management techniques outlined in management plans, and may propose amendments to plans as needed.

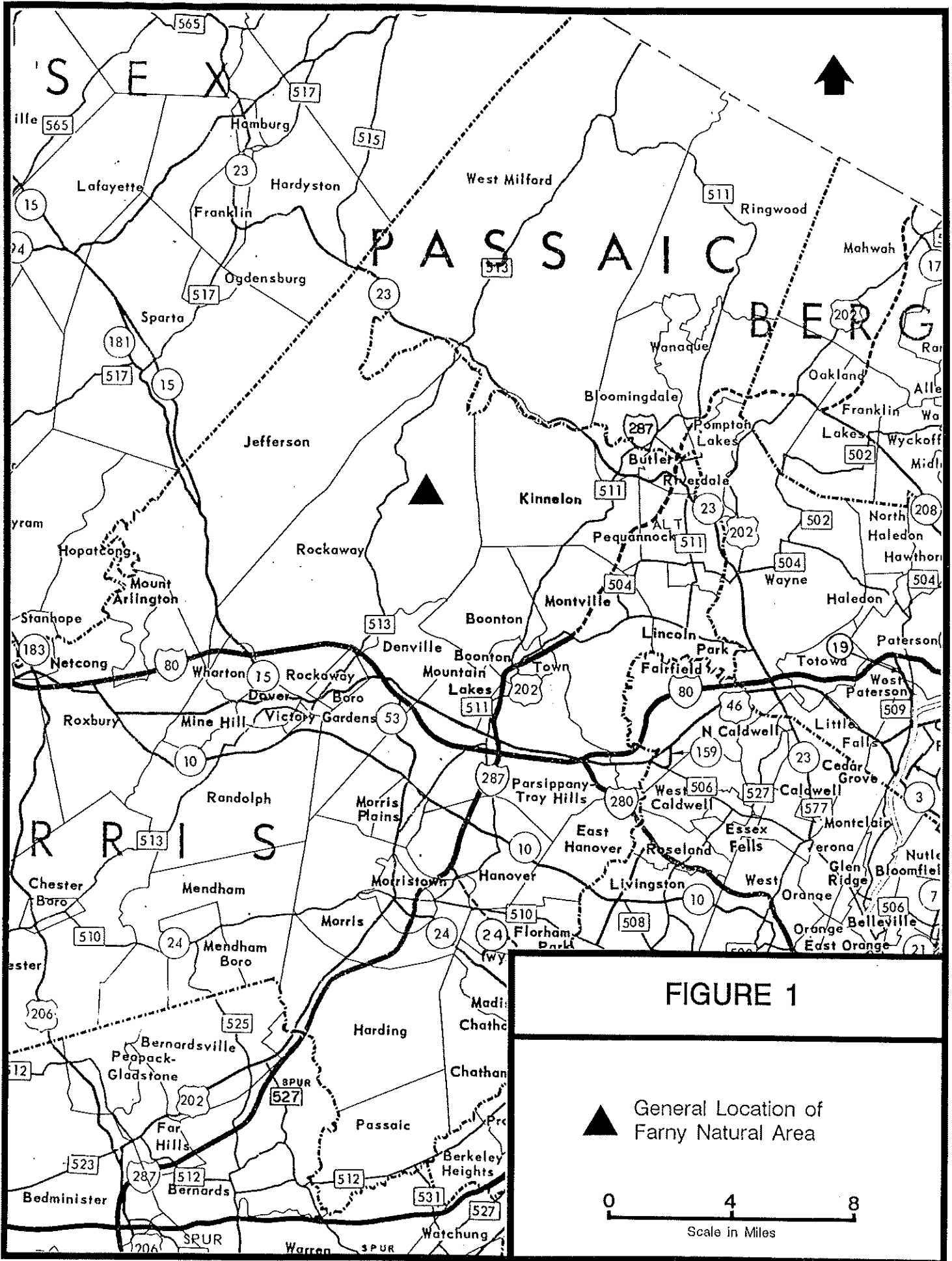
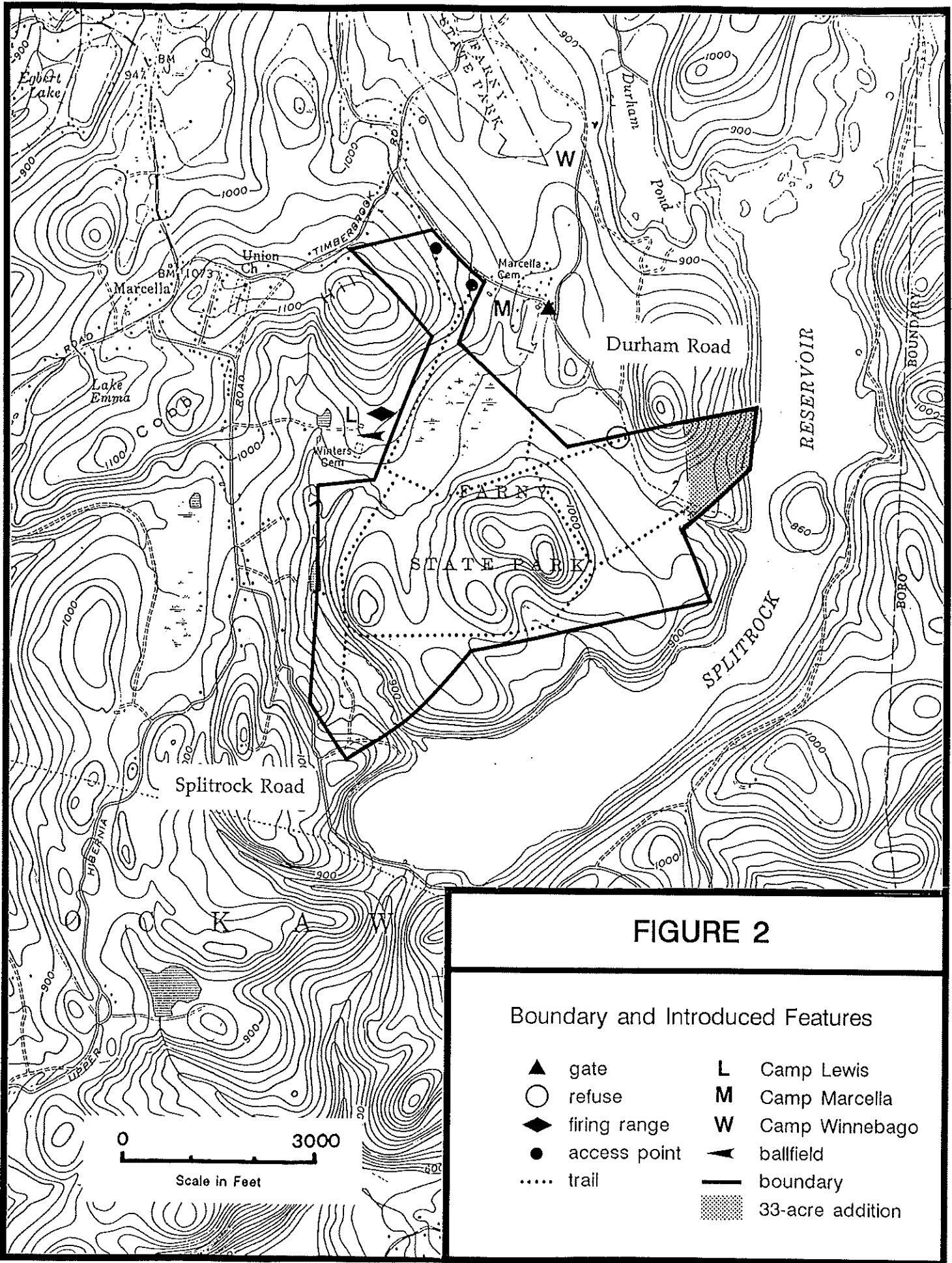


FIGURE 1

▲ General Location of Farny Natural Area

0 4 8
Scale in Miles



Description and Management Concerns

Geology and Soils

The bedrock of the area is primarily Precambrian gniesses, schists, granite, gabbro and other metamorphic rocks (Robichaud and Buell 1973, Wolfe 1977). Paleozoic sedimentary strata underlie the intermontagne valleys (Wolfe 1977). The terminal moraine of the Wisconsin glaciation, a ridge of glacial till 25 to 300 feet deep and one-half to two miles wide, extends across the Highlands province and lies just to the south of the natural area. Ground moraine was deposited in Highland areas to the north of the terminal moraine as the ice sheet melted. This created the "swell and swale topography" which characterizes the area (Wolfe 1977). The natural area lies just southeast of the Copperas Mountains and includes a portion of Cobb Hill. The area consists geologically of Tertiary Cohansey Sand which is chiefly quartz sand with local beds of clay and gravel (Geologic Map of NJ 1910-1912).

The soil association within the natural area is the Rockaway-Hibernia-Urban Land association. This association occurs on uplands and contains deep, well drained to somewhat poorly drained, gently sloping to steep gravelly sandy loams and stony to extremely stony loams and sandy loams that overlie granitic gneiss. A fragipan occurs in the lower part of the profile and a few rock outcrops are present (U.S. Department of Agriculture 1971). Representative soil series include Rockaway extremely stony sandy loam, Rockaway very stony sandy loam, Rockaway-Rock Outcrop complex 3-15% slopes, Hibernia stony loam, Rockaway-Rock Outcrop complex 15-20% slopes, and Carlisle Muck (U.S. Department of Agriculture 1971). Several soils within Farny Natural Area are designated in Morris County as being hydric or containing a hydric component. These soils include alluvial land, Carlisle muck, Adrian muck, Ridgebury very stony loam, Hibernia stony loam, Whitman very stony loam and Ridgebury extremely stony loam (U.S. Department of Agriculture 1992).

Topography and Surface Hydrology

Farny Natural Area lies within the central region of the Highlands physiographic province. This central region is a broad, plateau-like upland area (Wolfe 1977). The natural area is predominantly upland with an elevation ranging from approximately 840 to 1120 feet. Large rock outcrops, hilly terrain with small peaks, small ravines, and bands of lowland areas give the area a diverse topography. The southern portion of the natural area is especially hilly with steep slopes extending to the north and west shores of Splitrock Reservoir.

The natural area is part of the Passaic River Basin and is within the Rockaway Watershed. Three small streams flow from the natural area southeast to the Splitrock Reservoir which is within 600 feet of the natural area boundary. One stream originates from a pond on Durham Road, just northeast of the boundary, and runs southeast through a lowland area in the north central section of the natural area. The stream then turns south and runs along the western boundary and into Splitrock Reservoir. A second stream

originates just north of the western segment of the natural area and runs southeast, through another lowland area, and into Splitrock Reservoir to the east. A third small stream emanates from a lowland area in the middle of the south end of the park and runs south into the reservoir.

Biotic Communities

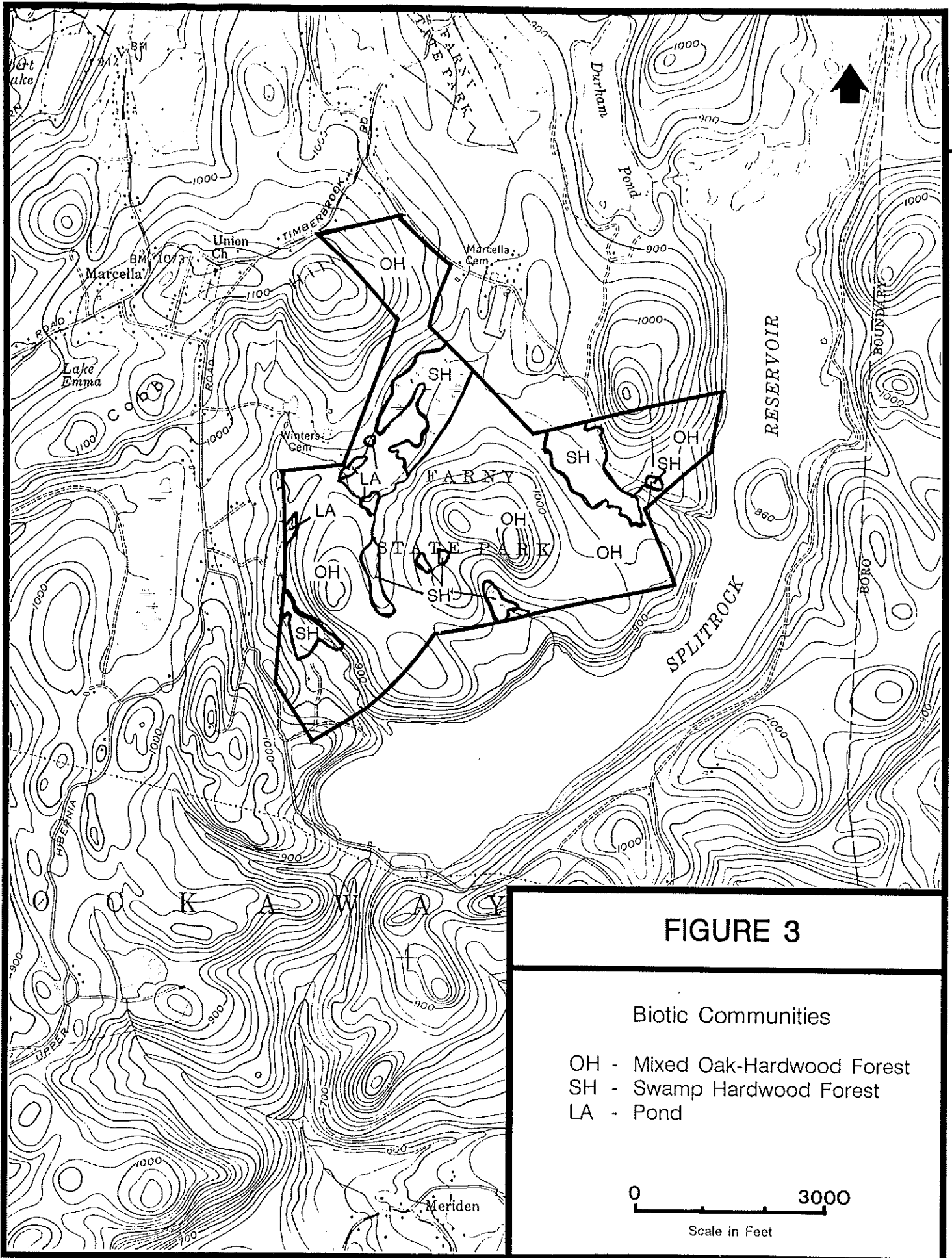
The community classifications and Figure 3 were derived from analysis by Janet Jessel and Brian Sayer, Office of Environmental Analysis, based on aerial photography dated 1986 (NJ DEPE 1987), field examination by Jacques G. Hill III and Robert Manson conducted on August 28, 1992 and through field examination by the author on December 4, 1992, as well as information obtained from Breden (1989). Figure 3 indicates only general locations and approximate boundaries for the various community types. Animal species likely to be found in the natural area were derived from noted sources and the Department's Natural Heritage Database based on the suitability of the habitat to support these species. The Database search was conducted in January 1993.

Mixed Oak-Hardwood Forest

This community type occupies a majority of the natural area. Canopy species co-dominant in this community include red oak (*Quercus rubra*), white oak (*Q. alba*) and black oak (*Q. velutina*) with chestnut (*Castanea dentata*), scarlet oak (*Q. coccinea*), red maple (*Acer rubrum*), sugar maple (*A. saccharum*), beech (*Fagus grandifolia*), tulip tree (*Liriodendron tulipifera*) and American basswood (*Tilia americana*) also present. Understory species include sassafras (*Sassafras albidum*), chestnut and red maple saplings. In some areas the understory is dense with mountain laurel (*Kalmia latifolia*) and rhododendron (*Rhododendron maximum*). Mapleleaf viburnum (*Viburnum acerifolium*), common witch-hazel (*Hammamelis virginiana*) and spicebush (*Lindera benzoin*) are the dominant shrubs while garlic mustard (*Alliaria officinalis*), virginia creeper (*Parthenocissus quinquefolia*), American pennyroyal (*Hedeoma pulegioides*), poison ivy (*Rhus radicans*), skunk cabbage (*Symplocarpus foetidus*) and cinnamon fern (*Osmunda cinnamomea*) were observed in the herbaceous layer.

Swamp Hardwood Forest

Swamp hardwood forests are present in the lowland areas of the park. Dominant canopy species in these areas include red maple, yellow birch (*Betula lutea*), black birch (*B. lenta*) and sour gum (*Nyssa sylvatica*). Highbush blueberry (*Vaccinium sp.*), spicebush, common elderberry (*Sambucus canadensis*), green briar (*Smilax sp.*) and nannyberry (*V. lentago*) are present in the shrub layer. Common herbs include skunk cabbage, jewelweed (*Impatiens capensis*), sphagnum and other mosses, various ferns and sedges.



Lacustrine

A few small ponds exist in the western portion of the natural area near Camp Lewis property. One of the ponds appears to have been created by damming.

Endangered and Threatened Species

According to the Natural Heritage Database, four rare species are associated with Farny Natural Area. State status is indicated below.

Animal Species	Status
red-shouldered hawk (<i>Buteo lineatus</i>) breeding population	E
migratory population	T
barred owl (<i>Strix varia</i>) breeding population	T
migratory population	T
wood turtle (<i>Clemmys insculpta</i>)	T
 Plant Species	
three birds orchid (<i>Triphora trianthophora</i>)	E

Explanation of Status Codes

- E - Listed as State Endangered
- T - Listed as State Threatened

The red-shouldered hawk (*Buteo lineatus*) has been documented in the natural area as recently as 1990. This species of hawk prefers nesting in areas of mature, contiguous forest, including a coniferous component, with moderate openings due to wetlands (Bosakowski, et.al. 1991). Bosakowski et. al. (1991) indicates that the requirement of high crown closure generally helps to prevent invasion by the red-tailed hawk (*Buteo jamaicensis*). They also mention great horned owl predation, off-road vehicle (ORV) use and heavy hiking traffic as additional threats to red-shouldered hawks.

The barred owl (*Strix varia*) is a year-round resident in New Jersey and will live and breed in the same area annually (NJ DEPE 1993). The following information is from the Natural Heritage Database. Habitat includes dense mixed-oak forest, mixed hardwoods and conifers, and white cedar swamps. These owls usually nest in tree cavities, but are known to use abandoned nests of squirrels, crows and hawks. Breeding typically occurs between

March and April however nesting could continue into May. After a 28-day incubation period the young hatch and may leave the nest at four to five weeks and fly at about six weeks. Both parents raise the young, which may remain with the parents throughout the summer, sometimes longer. A barred owl has been observed and heard west of the natural area near Splitrock Road and north of the natural area near the entrance to Camp Winnebago. Because the natural area contains habitat preferred by barred owls and because there have been sightings north and west of the natural area, it is likely that this owl is using the natural area.

The wood turtle (*Clemmys insculpta*) in New Jersey is restricted to hardwood forests in the northern and central sections of the state (Zappalorti, et. al. 1984). The following information is taken from the Natural Heritage Database. The species hibernates in the banks or bottoms of streams from October to April and then moves into the surrounding woods and fields from mid-May to mid-October. Wood turtles also use the streams for mating in spring and/or fall. Eggs are laid in open, sunny areas of sandy soil in May or June and then hatch between August and October. The wood turtle is an omnivore and feeds in the water as well as on land.

A small population of the State endangered three birds orchid (*Triphora trianthophora*) was observed near the western shore of Splitrock Reservoir as recently as 1986 according to the Natural Heritage Database. This is the only confirmed extant occurrence of this species in the State. The population was surveyed this past summer and it remains unclear whether or not the population is within the natural area or on the adjacent Jersey City Department of Water property. During this recent survey it was noted that all-terrain vehicle (ATV) tracks occur where some plants had been documented in a past survey. Three birds orchid, also known as nodding pogonia, occurs under the canopy of rich moist woods, often on rotten logs (Gleason and Cronquist 1963). It has been noted in a past survey that this population has been possibly impacted by drought or gypsy moth-caused tree canopy loss. This member of the orchid family bears white to pale pink flowers from mid-August to September (Gleason and Cronquist 1963). As with other members of the orchid family, this plant occurs erratically. One year the plants may appear above ground and the next year they may not (David Snyder pers. comm.). Based on its habitat requirements there is potential for this State endangered plant to occur within the natural area. The Jersey City Department of Water has given verbal permission for State employees to access the population for monitoring purposes as long as the Boonton Field Office is given advance notice of the visit (George Plastoris pers. comm.).

Bob Papson, Division of Fish, Game and Wildlife (DFG&W) biologist at the Lebanon Fisheries Lab indicated that brook trout (*Salvelinus fontinalis*) have been found in Hibernia Brook and tributaries of Beaver Brook located southwest of the natural area. Mr. Papson indicated that based on these locations it is possible that brook trout could be in the streams throughout the natural area.

Black bear (*Ursus americanus*) have been observed in the natural area on several occasions (William Struble pers. comm.). The black bear is listed in *Special Animals of New Jersey* (NJDEPE 1992a) as an increasing species, which means that the number of individuals in the population has increased over a long term period. It is also indicated as a Watchlist species. This means that, although the species is of conservation concern, individual occurrences are not currently tracked in the Database.

One of the bears observed by Mr. Struble in 1992 had a green tag in each ear. Pat McConnell, DFG&W biologist, indicated that this bear was part of the 1991 tag and release program. The green tag indicates that it was tagged north of Route 23 off Canistear or Clinton Road. Mrs. McConnell also indicated that Farny Natural Area is part of a major travel corridor between Wawayanda and Picatinny Arsenal and that bears will travel in and out of the natural area frequently during the year depending on availability of a food source. Black bears were once hunted in New Jersey, but that season has been closed since 1971 (Pat McConnell pers. comm.).

Diane Nelson, Morris County Park Commission, indicated that two birds of prey, the State threatened northern goshawk (*Accipiter gentilis*) and the State endangered bald eagle (*Haliaeetus leucocephalus*), have been known to utilize the area around Farny (pers. comm.). Also, the State threatened osprey (*Pandion haliaetus*) has been known to use Splitrock Reservoir as a feeding ground (Robert Soldwedel, pers. comm.).

Boundary

The boundary of Farny Natural Area is indicated in Figure 2. This boundary is believed to reflect the current extent of State ownership. Review of the deed of sale for the Farny tract revealed an adjacent 33-acre parcel, located near Durham Road, owned by the State of New Jersey. Figure 2 indicates the location of this tract which is proposed for addition to the Farny Natural Area.

The Division of Parks and Forestry is currently reviewing several acquisition options in the vicinity of Farny Natural Area. The camps referred to below are indicated on Figure 2. The Division recently acquired two small parcels totalling 14 acres north of the natural area from New Jersey Camp for the Blind's Camp Marcella. The Division is negotiating for the purchase of an easement on the remainder of Camp Marcella and a portion of two neighboring Boy Scout properties, Camp Winnebago and Camp Lewis, for public access to a proposed trail from Wawayanda State Park to the Delaware Water Gap National Recreation Area. There is also the possibility of fee simple acquisition of Camp Lewis and using the camp as a possible trail head.

Public Use

The natural area is currently used for hunting, hiking, mountain biking, horseback riding and ATV riding. A system of wide trails provides access to much of the natural area (Figure 2). The old roads traversing the natural area were probably built to access timber during logging in the area. An old furnace exists near the Splitrock Reservoir Dam less than one-half mile from the natural area. This indicates that the area was probably cut for charcoal (Jack Shuart pers. comm.). The trails appear to be in good condition, however, continued use by ATVs could degrade them severely. State Park Service Rules and Regulations state that motorized vehicle use on State Park Service land is strictly prohibited.

Numerous tracks left on the trails indicate extensive use by ATVs. According to Pat McConnell, ATV use creates a disturbance to bears, especially females with young. Bears are denning species and can be disturbed by ATV use near the den. Mrs. McConnell adds

that ATVs also disturb nesting bird species.

Bicycle riders also use the trails throughout the natural area, although it is not known to what extent. Bicycle riding is prohibited on natural area trails in accordance with State Park Service Rules and Regulations. General problems associated with illegal bicycle use include damage to trails, vegetation and soils as well as disturbance to wildlife, such as ground nesting birds and interior forest nesting birds. Trails through the hilly terrain at Farny could become heavily eroded from bicycle use.

Three camps are located adjacent to the natural area (Figure 2). Camp Marcella, The New Jersey Camp for the Blind, occurs north of the natural area on Durham Road. The Boy Scouts of America's Camp Winnebago is a neighbor of Camp Marcella and is located northeast of the natural area. Another Boy Scout camp, Camp Lewis, is west of the natural area off of Hibernia Road. A rifle range and baseball field at Camp Lewis occur in close proximity to the boundary of the natural area (Figure 2). The rifle firing range is a U-shaped 10-foot high dirt mound which is situated so that users are firing north toward Durham Road, not toward the nearby trail in the natural area.

The natural area is part of an area designated by the Division of Fish, Game and Wildlife as Deer Management Zone 6 which includes lands north of Route 80, east of Route 517 and south of Route 23. For the 1992-1993 deer hunting season, bow, shotgun and muzzleloader permits are available for hunting in the natural area (NJDEPE 1992b). Farny Natural Area is Zone 7 for turkey (*Meleagris gallopavo*) hunting. Wild, captured turkey were released north, south and east of Farny in Picatinny Arsenal and the Newark Watershed by the DFG&W in the 1980's (Pat McConnell pers. comm.). Small game hunting as well as trapping are also permitted in the natural area (Tom Card pers. comm.). Mr. Riley and staff at Camp Marcella indicate that many hunters access the natural area from Durham Road near their camps, often trespassing on their properties and creating a potentially dangerous situation for campers.

A gate exists across Durham Road at Camp Marcella (Figure 2). According to Gary Larson of Camp Marcella, the section of Durham Road from Camp Marcella to Splitrock Reservoir was closed to the public prior to 1982. The gate was installed by the Township and is maintained by Camp Winnebago staff. Staff at Camp Winnebago and Camp Marcella as well as the Rockaway Township Police and DFG&W Conservation Officers know the combination of the lock and are able to access the southern portion of Durham Road as needed.

Lack of parking severely limits use of the natural area by visitors. Vehicles parking on the roadside are frequently ticketed by local police. Trail access into the natural area occurs at three points (Figure 2). The trail access points occur in the northern portion of the natural area.

Research

In 1990, Thomas Bosakowski, Dwight G. Smith and Robert Speiser used Farny Natural Area as one of their study sites while researching red-shouldered hawks in the Northern Highlands region of New Jersey. The purpose of their investigation was to identify existing

nesting territories that remain in this central population and determine essential habitat requirements. Broadcast surveys were conducted using a tape of red-shouldered hawk and red-tailed hawk vocalizations. Nest searches were initiated following a positive response, unless private property prevented a search. Macrohabitat Analysis was performed on several nest sites and many unused sites. Statistical analysis was then used to compare the 21 macrohabitat variables of nest sites against unused sites. Farny Natural Area was identified as a red-shouldered hawk territory, but no nest was found. After statistical manipulation several results were apparent. Red-shouldered hawks prefer nesting in remote wilderness areas with a general avoidance of human disturbance. They prefer to nest near wetlands, but not necessarily open water habitats. They do not favor nesting in either extreme; contiguous unfragmented forest or open/edge habitats. They prefer habitat with a coniferous component. Bosakowski et. al. (1991) indicates that to their knowledge their intensive study area, of which Farny Natural Area is a part, contains the densest population of nesting red-shouldered hawks ever reported. Another interesting result of the study was that illegal off-road vehicles or tracks were found close by (<80 m) to four nests that failed and hikers were frequently seen on trails which were close (<20 m) to two of the other failed nests.

George Koeck, Regional Forester with the Division of Parks and Forestry, uses Farny Natural Area as a control area in his gypsy moth (*Lymantria dispar*) monitoring program. Mr. Koeck used to have six plots to count egg masses, but now his yearly monitoring consists of flying over and visually inspecting the area (George Koeck pers. comm.) This area has not been sprayed for gypsy moth control since the 1960's (Jack Shuart pers. comm.). Mr. Koeck indicated that the last major defoliation at Farny was during 1981-1982 resulting in approximately 3% defoliation. He also indicated that a Japanese fungus seems to be keeping the gypsy moth levels down.

Introduced Features

A refuse pile (bottles, cans, pots and pans, tires and railroad ties) exists in the natural area at its boundary along Durham Road (Figure 2). Judging from the age of the debris it was not dumped recently. No evidence of recent dumping was observed in the natural area.

Management Techniques

Natural Areas System Rules

Relevant sections of the rules and regulations concerning Natural Areas and the Natural Areas System (N.J.A.C. 7:5A-1.1 et seq.) appear in Appendix A. An important function of these rules is to provide general interim management guidelines for all natural areas for which management plans have not been prepared. Upon preparation of a management plan, interim management guidelines may continue or may be superseded by management techniques more appropriate to fulfill the management objective of the natural area. The following analysis will outline management and uses contrary or supplemental to

existing rules. Interim management guidelines in the Natural Areas System Rules should be consulted for issues/techniques not covered below.

Management Objective And Classification

The management objective for Farny Natural Area is "preservation of northern mixed oak-hardwood forest, hardwood swamp forest, and rare species habitat." (N.J.A.C. 7:5A-1.13(a)16ii). The following management techniques are based in part on consultation with appropriate agencies, individuals and the Natural Areas Council, and are designed to adequately maintain, and if possible enhance the quality of the natural area. An explanation of the reason for each technique is also provided below each itemized management technique.

Throughout this section, administering agency refers to the Division of Parks and Forestry, through Ringwood State Park. It is recognized that the State Park Service is severely understaffed and, as a result, some management activities may need to be extended beyond the deadlines indicated. Priorities will be established on a case-by-case basis.

Endangered and Threatened Species

1. The administering agency will post signs at all access points stating the prohibition of motorized vehicles on State property by June 30, 1995.

This management technique is included to help ensure the preservation of the State endangered and threatened species in the natural area. All-terrain vehicles (ATVs) can kill or injure wood turtles; degrade and/or destroy wood turtle habitat through erosion and siltation; create disturbance to red-shouldered hawks and barred owls that can cause habitat not to be suitable for nesting or cause established nests to be abandoned; and destroy habitat for the three birds orchid. This technique is also included to inform the public of the prohibition of motorized vehicles on lands administered by the State Park Service as per N.J.A.C. 7:2-3.0.

2. The Division of Parks and Forestry may perform gypsy moth control activities within the natural area upon notification to the Natural Areas Council including a copy of the environmental impact statement (EIS) prepared by the Division. In the event that the Division of Parks and Forestry submits a gypsy moth control plan and EIS for spraying activities at Farny Natural Area, the Jersey City Department of Water will be consulted.

This management technique is in accordance with N.J.A.C. 7:5A-9(e)13. Gypsy moth control activities may be needed to preserve the high canopy closure and high percent canopy needed by barred owls and red-shouldered hawks. Consultation with the Jersey City Department of Water is necessary because of the proximity of Splitrock Reservoir to the natural area.

3. The ONLM, in cooperation with the Endangered and Nongame Species Program, will survey/monitor for barred owl, red-shouldered hawk, wood turtle and three birds

orchid on a periodic basis and assess future management needs. Should additional locations of these or other endangered or threatened species be discovered in the natural area, they too will be monitored on a periodic basis.

This management requirement was included in the plan to help ensure the preservation of these species, which may be located in the Farny Natural Area and experience various degrees of rarity in the State and nation.

4. The ONLM will provide the administering agency with a map indicating known and possible locations of all endangered and threatened species as well as the extent of their habitat by June 30, 1995. The map will be updated by the ONLM should locations for any additional species be discovered.

This management requirement was included so that the administering agency can more effectively manage the natural area and the species within it, and to ensure consideration of these species in future planning in the natural area.

Boundary

1. The boundary of the natural area is revised to include a 33-acre State-owned parcel located along Durham Road near Splitrock Reservoir. The resulting acreage of the Farny Natural Area is 589 acres.

In accordance with N.J.A.C. 7:5A-1.12, revisions to the boundary of a natural area that result in a net change of not more than 25 percent of the total acreage of the natural area may be made by the Department, effective upon public notice, if the boundary change conforms with physical features identifiable in the field or the edge of State ownership and serves to protect the natural area or further its designation objective. The boundary change will further the designation objective by increasing protection of suitable habitat for State endangered and threatened species recorded for Farny Natural Area. The Council approved this boundary change at its meeting of September 1, 1993, in accordance with procedures at N.J.A.C. 7:5A-1.12(h).

2. The administering agency, in conjunction with the ONLM and Jersey City Department of Water, will post State Natural Area boundary signs at trail access points and along the natural area boundary, where practicable, at a maximum of ten per mile by June 30, 1995. These signs will be replaced as needed.

Posting of the boundaries of all natural areas is required in accordance with N.J.A.C. 7:5A-1.9(e)1.

3. The ONLM will provide the administering agency with State Natural Area boundary signs as needed.

The ONLM, which is responsible for overall administration of the Natural Areas System, designs and distributes paper boundary signs for posting of all State Natural Areas.

Public Use

1. Current uses of the natural area, which include hiking, hunting, bird watching, botanizing and horseback riding, will be allowed to continue in the natural area. The ONLM and the administering agency will continue to monitor the above uses and/or any illegal uses to assess any impacts on the natural features occurring in this area.

The above uses are compatible with preservation of the species and habitats that occur within the natural area.

2. Bicycle riding is prohibited within the natural area. The administering agency will post this prohibition by June 30, 1995.

This prohibition is in accordance with the State Park Service Rules and Regulations at N.J.A.C. 7:2-2.25(l), which state that bicycles are prohibited on historic sites, walkways, natural area trails and hiking trails.

3. Camp fires are prohibited within the natural area. The administering agency will post this prohibition by June 30, 1995.

This prohibition is in accordance with the State Park Service Rules and Regulations at N.J.A.C. 7:2-2.12(a), which state that a person shall not start or maintain any open fire except for small handwarming fires in areas designated for ice fishing, on any lands or frozen waters under the jurisdiction of the State Park Service.

4. The administering agency will negotiate a memorandum of understanding with the Rockaway Township Police Department regarding concurrent enforcement of all or part of the State Park Service Code, N.J.A.C. 7:2, at the natural area by June 30, 1995.

This management requirement is included to allow the administering agency to provide additional enforcement of the area which is more than 20 miles from the administering agency's office. Any memorandum of understanding negotiated under this management technique will be subject to legal review and approval by the Division of Law.

5. The administering agency will construct a gravel roadside parking area on Durham Road capable of accommodating six cars (approximately 25' x 80') for hiking trail use by December 31, 1995. If an alternate parking area outside of the natural area becomes available through State acquisition before or after this parking area is built, the site on Durham Road will be closed or removed from consideration for this use.

This management requirement is included to provide parking to visitors of the natural area. This parking area will direct visitors to the preferred access point while reducing the amount of illegal roadside parking and trespassing. If parking becomes available through nearby State acquisition, this would prevent the need to use a section of the natural area for the parking area.

6. The administering agency will construct a wooden routed entrance sign and install the sign at the parking area by December 31, 1995. The sign should identify the site as Farny Natural Area and the dimensions and wording should be consistent with the standard entrance sign for a State Park or Forest.

This management requirement is included to identify the natural area for visitors.

7. By June 30, 1995, the administering agency will post signs along the trail near the rifle firing range at Camp Lewis informing the public of the proximity of the firing range. Language on the sign is left to the discretion of the administering agency upon consultation with the Division of Law.

This management requirement is included to alert hikers and other trail users of the proximity of the rifle firing range to the natural area. The range, which is surrounded by an earthen berm, occurs just outside of the natural area boundary on private camp property. Although the range, if properly used, does not present a safety hazard to visitors of the natural area, the sound of close rifle fire could be alarming.

8. The administering agency will contact Camp Lewis staff by June 30, 1995 requesting that a sign be posted at the firing range, notifying range users that visitors to the natural area may be walking on the adjacent trail.

This management requirement is included to inform range users of the possibility of hikers near the firing range so that hiker safety is considered.

9. If the administering agency determines that trail closure is needed for any trail accessible by vehicles, entry will be prohibited using a gate. A key will be provided to the section firewarden.

This management requirement is included to ensure that the section firewarden has access to the natural area to perform fire suppression activities.

10. The administering agency will obtain all applications to conduct research or collect specimens, forward a copy to the ONLM, and provide a response within a reasonable date of application submittal. The administering agency shall coordinate a response with the ONLM.

This requirement is included in accordance with procedures for conducting research and collecting specimens in natural areas as outlined in N.J.A.C. 7:5A-1.10, and to ensure thorough review of all proposals.

Introduced Features

1. The administering agency will remove refuse located in the northeast section of the natural area by December 31, 1995.

Rubbish or any other waste material must be removed from the natural area in accordance with N.J.A.C. 7:5A-1.9(e)7.

2. The administering agency will forward any plans that include subsurface disturbance to the Historic Preservation Office for review.

This requirement is included to protect any prehistoric period sites and other cultural remains that may occur within the natural area.

Literature Cited

- Bosakowski, T., D.G. Smith and R. Speiser. 1991. Status and macrohabitat selection of red-shouldered hawks in the Northern Highlands Region of New Jersey. Report submitted to NJ DEPE, Division of Fish, Game and Wildlife, Endangered and Nongame Species Program, Trenton, New Jersey.
- Breden, T.F. 1989. A preliminary natural community classification for New Jersey. In E.F. Karlin (ed.) New Jersey's rare and endangered plants and animals. Institute for Environmental Studies, Ramapo College, Mahwah, New Jersey. 280 p.
- Gleason, H.A. and A. Cronquist. Manual of vascular plants of northeastern United States and adjacent Canada. Willard Grant Press. Boston, Massachusetts.
- N.J. Department of Environmental Protection and Energy. 1993. New Jersey Natural Heritage Database, Office of Natural Lands Management.
- N.J. Department of Environmental Protection and Energy. 1992a. Special animals of New Jersey. Booklet prepared by the Division of Parks and Forestry, Office of Natural Lands Management, Trenton, New Jersey.
- N.J. Department of Environmental Protection and Energy. 1992b. New Jersey Fish and Wildlife Digest. 6(1).
- N.J. Department of Environmental Protection and Energy. 1987. Vegetation map of Farny Natural Area prepared by the Office of Environmental Analysis, Trenton, New Jersey.
- Robichaud, B. and M.F. Buell. 1973. Vegetation of New Jersey: A study of landscape diversity. Rutgers University Press. New Brunswick, New Jersey.
- U.S. Department of Agriculture. 1992. Morris County soils information data summary. Prepared by USDA Soil Conservation Service Morristown Field Office.
- U.S. Department of Agriculture. 1971. Soil survey of Morris County, New Jersey. Prepared by the Soil Conservation Service in cooperation with New Jersey Agricultural Experiment Station.

Wolfe, P.E. 1977. The geology and landscapes of New Jersey. Crane, Russak and Co., Inc. New York, New York.

Zappalorti, R.T., R. Farrell and P.A. Reap. 1984. The ecology and distribution of the wood turtle, (*Clemmys insculpta*) in New Jersey part III. Report prepared for NJ DEPE, Division of Fish, Game and Wildlife, Endangered and Nongame Species Program.

Appendix A

INTERIM MANAGEMENT PRACTICES FOR NATURAL AREAS

From Natural Areas System Rules
(N.J.A.C. 7:5A-1.1 et seq.)

7:5A-1.9 INTERIM MANAGEMENT PRACTICES

- (a) Interim management practices shall be implemented by the administering agency, provided that:
 - 1. The practice will have no direct or indirect adverse impact on natural features of concern;
 - 2. The administering agency notifies the secretary of the Council, in writing, no later than 30 days after initiating the practice;
 - 3. Approval of the Commissioner is not required by provision elsewhere in this subchapter; and
 - 4. The practice is consistent with terms of any conservation easement held by the Department.
- (b) Interim management practices listed at (e) or (f) below which require the approval of the Commissioner shall first be submitted to the Council for its review and recommendation.
- (c) Upon finding that an interim management practice listed below at (e) or (f) would be detrimental to achieving a specific management objective, the Council shall recommend to the Commissioner the substitution of a more appropriate interim management practice. Should the Commissioner concur with the recommendation of the Council, the Commissioner may approve substitution by a more appropriate interim management practice.
- (d) Where there are conflicts between general practices described below at (e) and practices specific to a natural area classification described below at (f), the latter shall apply.
- (e) The following interim management practices apply generally to all natural areas upon designation to the System and until and unless superseded by the provisions of an adopted management plan:
 - 1. Natural area boundaries shall be made clearly evident by posting signs at a maximum density of ten signs per mile; entrance points shall be posted to indicate

- to users that they are entering a natural area; boundary signs shall be of a standard size and format as approved by the Commissioner and provided by the Division;
2. Boundary fences that are needed to protect the natural area may be installed provided the fence shall not have a detrimental effect on movement of wildlife, air circulation, or other natural conditions;
 3. Vehicular access lanes may be maintained within a natural area but may not be enlarged in any manner except upon approval of the Commissioner.
 4. Existing firebreaks within a natural area may be maintained for safety purposes; temporary firebreaks made by mowing, raking, plowing or wetting, may be used in conjunction with prescribed burning for habitat management;
 5. Existing structures may be maintained in a natural area; new structures and enlargement of existing structures may be undertaken upon approval by the Commissioner, provided the structures directly or indirectly contribute to the management objective; new structures, of a temporary nature, may be constructed for research purposes in accordance with N.J.A.C. 7:5A-1.10;
 6. No measures, such as cutting of grass, brush, or other vegetation, thinning of trees, opening of scenic vistas, or planting, shall be taken to alter natural processes or features for the purpose of enhancing the beauty or neatness of a natural area;
 7. Except as otherwise provided in this section, there shall be no introduction, removal or consumptive use of any material, product, or object to or from a natural area; prohibited activities include grazing by domestic animals, farming, gathering of plants or parts thereof, mining or quarrying, and dumping, burying, or spreading of garbage, trash, or other materials; structures or materials may be removed as follows:
 - i. Old interior fences may be removed, giving consideration to leaving posts to mark boundaries between former land uses;
 - ii. Rubbish or any other waste material may be removed; and
 - iii. Structures having no historic, scientific or habitat value may be demolished and removed unless such structures are deemed essential for administrative purposes;
 8. Water levels within a natural area shall not be altered except to restore water levels which have been altered due to a sudden natural phenomena or man-induced conditions off-site; routine repairs to existing water control structures may be undertaken but the structures may not be enlarged;
 9. All wildfires shall be brought under control as quickly as possible; after a fire within a natural area, there shall be no cleanup or replanting except as approved by the Commissioner to achieve the management objective or for reasons of

health and safety;

10. Prescribed burning, to eliminate safety hazards and to manage habitat, may be conducted upon review of a proposal for prescribed burning by the Council and approval by the Commissioner; use of vehicles and equipment shall be specified in the proposal for prescribed burning;
11. Erosion control within a natural area shall not be undertaken except to restore existing grades which have been altered due to a sudden natural phenomena or man-induced conditions within or beyond the natural area;
12. Habitat manipulation may be undertaken if preservation of a particular habitat type or species of native flora or fauna is included in the management objective of the natural area and upon approval by the Commissioner of a specific habitat manipulation plan prepared by the Department.
13. Gypsy moth control activities may be implemented as an interim management practice after approval of a gypsy moth control plan by the Commissioner; the Commissioner shall review a gypsy moth control plan only after the State Forester has determined that egg mass counts and prior year defoliation indicates that tree mortality will be severe without intervention; to the extent practicable, biological controls, rather than chemical means, shall be used to control gypsy moths;
14. There shall be no physical manipulation of a natural area or application of chemicals known as adulticides for the purpose of controlling mosquitoes; the application of larvacides may be permitted in salt marshes only and only as follows:
 - i. The application of *Bacillus thuringensis* var. *israeliensis* (BTI) may be initiated by a mosquito control agency at any time; and
 - ii. The application of other larvacides may be initiated upon approval by the Commissioner of a specific mosquito control plan submitted by a mosquito control agency; the plan shall identify the specific area where a larvacide application will be made, the types and amount of larvacide to be applied, the need for the application, and the reason why BTI cannot be used for this application;
15. Research activities and the collection of specimens may only be conducted in accordance with N.J.A.C. 7:5A-1.10 and upon approval of the administering agency; and
16. Public use of natural areas shall be allowed only to the extent and in a manner that will not impair natural features; the administering agency may restrict access and use as necessary to protect the natural area; the following are permissible public uses of natural areas:

- i. Hunting, trapping, and fishing are permitted in accordance with N.J.A.C. 7:25-5 and 7:25-6; except for the stocking of fish and game, habitats may not be manipulated for the purpose of enhancing hunting, trapping, or fishing;
 - ii. Occasional camping along trails, boating, and swimming may be permitted in specified locations of natural areas in accordance with N.J.A.C. 7:2-2, 7:2-5, 7:2-7, 7:2-8, and 7:25-2, and are further limited as follows:
 - (1) No permanent structures may be erected;
 - (2) No motorized methods of boating or camping are permitted;
 - (3) Trailside shelters of the type called lean-tos are permitted, but there may not be two such shelters within three miles of each other; and
 - iii. Existing trails may be maintained, but not enlarged in any manner, by the administering agency to allow public use and prevent erosion, trampling of vegetation beyond the trails, and other deterioration as follows:
 - (1) New trails or enlargement of existing trails for interpretive purposes may be initiated subsequent to review of a plan by the Council and approval of that plan by the Commissioner;
 - (2) Rare plants may not be removed for the purpose of maintaining existing or constructing new trails; and
 - (3) To the extent possible, natural materials shall be used on and along trails; and
 - iv. All pets shall be kept caged or leashed and under immediate control of the owner except that dogs used while legally hunting shall be exempt from the leashing requirement.
- (f) The following interim management practices, unless superseded by an adopted management plan, apply to the appropriate specified natural area classifications:
1. Location markers identifying interpretation points of interest may be installed except within ecological reserves;
 2. Trail blazes may be used within any natural area;
 3. Existing vehicular access lanes may not be enlarged in any manner within an ecological reserve;
 4. New vehicular access lanes may be constructed only within buffer areas and upon approval by the Commissioner;
 5. The alteration of natural processes or features for the purpose of enhancing public use of the natural area may be conducted by the administering agency only

within buffer areas; and

6. The following management practices shall not be permitted within ecological reserves:
 - i. New, existing, or temporary firebreaks;
 - ii. Construction of new trails;
 - iii. Alteration or restoration of water levels;
 - iv. Prescribed burning;
 - v. Erosion control measures;
 - vi. Gypsy moth control activities; and
 - vii. Manipulation of vegetation and wildlife habitats.

Appendix B

NATURAL AREAS SYSTEM MANAGEMENT PLAN TASKS AND RESPONSIBILITIES

Natural Area: Farny

Plan Adoption Date:

Name:

Date:

	<u>Date Indicated in Plan</u>	<u>Proposed Accomp. Date</u>	<u>Date Accomp.</u>
I. Ringwood State Park Superintendent			
1. The administering agency will post signs at all access points stating the prohibition of motorized vehicles on State property by June 30, 1995.	6/30/95	_____	_____
2. The administering agency, in conjunction with the ONLM and Jersey City Department of Water, will post State Natural Area boundary signs at trail access points and along the natural area boundary, where practicable, at a maximum of ten per mile by June 30, 1995. These signs will be replaced as needed.	6/30/95	_____	_____
3. The administering agency will negotiate a memorandum of understanding with the Rockaway Township Police Department regarding concurrent enforcement of all or part of the State Park Service Code, N.J.A.C. 7:2, at the natural area by June 30, 1995.	6/30/95	_____	_____
4. The administering agency will construct a gravel roadside parking area on Durham Road capable of accomodating six cars (approximately 25' x 80') for hiking trail use by December 31, 1995. If an alternate	12/31/95	_____	_____

parking area outside of the natural area becomes available through State acquisition before or after this parking area is built, the site on Durham Road will be closed or removed from consideration for this use.

- | | | | | |
|-----|--|-----------|-----------|-----------|
| 5. | The administering agency will construct a wooden routed entrance sign and install the sign at the parking area by December 31, 1995. The sign should identify the site as Farny Natural Area and the dimensions and wording should be consistent with the standard entrance sign for a State Park or Forest. | 12/31/95 | _____ | _____ |
| 6. | By June 30, 1995, the administering agency will post signs along the trail near the rifle firing range at Camp Lewis informing the public of the proximity of the firing range. Language on the sign is left to the discretion of the administering agency upon consultation with the Division of Law. | 6/30/95 | _____ | _____ |
| 7. | The administering agency will contact Camp Lewis staff by June 30, 1995 requesting that a sign be posted at the firing range, notifying range users that visitors to the natural area may be walking on the adjacent trail. | 6/30/95 | _____ | _____ |
| 8. | If the administering agency determines that trail closure is needed for any trail accessible by vehicles, entry will be prohibited using a gate. A key will be provided to the section firewarden. | As needed | As needed | As needed |
| 9. | The administering agency will obtain all applications to conduct research or collect specimens, forward a copy to the ONLM, and provide a response within a reasonable date of application submittal. The administering agency shall coordinate a response with the ONLM. | As needed | As needed | As needed |
| 10. | The administering agency will remove refuse located in the northeast section of the natural area by December 31, 1995. | 12/31/95 | _____ | _____ |

- | | | | |
|--|-----------|-----------|-----------|
| 11. The administering agency will forward any plans that include subsurface disturbance to the Historic Preservation Office for review. | As needed | As needed | As needed |
| 12. Current uses of the natural area, which include, hiking, hunting, bird watching, botanizing and horseback riding, will be allowed to continue in the natural area. The ONLM and the administering agency will continue to monitor the above uses and/or any illegal uses to assess any impacts on the natural features occurring in this area. | Ongoing | Ongoing | Ongoing |
| 13. Bicycle riding is prohibited within the natural area. The administering agency will post this prohibition by June 30, 1995. | 6/30/95 | _____ | _____ |
| 14. Camp fires are prohibited within the natural area. The administering agency will post this prohibition by June 30, 1995. | 6/30/95 | _____ | _____ |
| 15. The boundary of the natural area is revised to include a 33-acre State-owned parcel located along Durham Road near Splitrock Reservoir. The resulting acreage of the Farny Natural Area is 589 acres. | N/A | N/A | N/A |

II. NJ DEPE Office of Natural Lands Management

- | | | | |
|--|---------|---------|---------|
| 1. The ONLM, in cooperation with the Endangered and Nongame Species Program, will survey/monitor for barred owl, red-shouldered hawk, wood turtle and three birds orchid on a periodic basis and assess future management needs. Should additional locations of these or other endangered or threatened species be discovered in the natural area, they too will be monitored on a periodic basis. | Ongoing | Ongoing | Ongoing |
| 2. The ONLM will provide the administering agency with a map indicating known and possible locations of all endangered and threatened species as well as the extent of their habitat by June 30, 1995. The map will be updated by the ONLM should locations for any additional species be discovered. | 6/30/95 | _____ | _____ |

- | | | | | |
|----|--|-----------|-----------|-----------|
| 3. | The ONLM will provide the administering agency with State Natural Area boundary signs. | As needed | As needed | As needed |
|----|--|-----------|-----------|-----------|

III. NJ Division of Parks and Forestry

- | | | | | |
|----|---|-----------|-----------|-----------|
| 1. | The Division of Parks and Forestry may perform gypsy moth control activities within the natural area upon notification to the Natural Areas Council including a copy of the environmental impact statement (EIS) prepared by the Division. In the event that the Division of Parks and Forestry submits a gypsy moth control plan and EIS for spraying activities at Farny Natural Area, the Jersey City Department of Water will be consulted. | As needed | As needed | As needed |
|----|---|-----------|-----------|-----------|