



Department of Environmental Conservation

MANAGEMENT PLAN

UPDATE

CRYSTAL LAKE WILD FOREST

FOREST PRESERVE DETACHED PARCEL

JUNE, 1993



New York State Department of Environmental Conservation
MARIO M. CUOMO, *Governor*

THOMAS C. JORLING, *Commissioner*

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**New York State Department of
Environmental Conservation
21 South Putt Corners Road
New Paltz, NY 12561**

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CRYSTAL LAKE WILD FOREST MANAGEMENT PLAN

DETACHED PARCEL

I. PREFACE

Crystal Lake was acquired by New York State on February 8, 1963 under the 1960 Park and Recreation Land Acquisition Bond Act. The Crystal Lake Wild Forest Area is a detached parcel, outside the Blue Line of the Catskill Park, and thus exempt from the requirement of the Catskill State Land Master Plan for a Unit Management Plan. Nevertheless, due to the popularity of the area with the public, the status of the fishery, and overuse of portions of the area, a management plan has been developed.

This management plan will guide DEC actions in the area for the next five years; through 1998.

DEC developed the management plan and gives consideration to comments, complaints, and suggestions from the public. Written comments are on file at the DEC Regional Office in New Paltz.

This document represents management objectives rather than a work plan of commitments. Accomplishment of management actions outlined herein is dependent on legislative budget appropriations, and personnel sufficient to carry them out.

II. DESCRIPTION OF AREA

The Crystal Lake Wild Forest Area is a detached parcel of the Forest Preserve in the Town of Fremont in Sullivan County. That is, the land is classified as Forest Preserve but is located six miles outside the "Blue Line" which encloses the great bulk of Forest Preserve lands in the Catskills. However, all constitutional, administrative, and regulatory provisions applicable to other units of the Forest Preserve apply to this unit.

The parcel is 497 acres in size, and includes a man-made lake of approximately 32 acres. Seeps and streams form a wet woods along the northern lake edge. An additional wetland area, an old beaver pond (Freshwater Wetland CA-2, Class II), occupies the valley east of the lake. Both Crystal Lake (Protected Lake P260) and the beaver pond drain into Hankins Creek. Although no endangered or threatened species have been identified on the property, the lake shore and surrounding moist woodland provide a habitat for plants, such as trilliums, wild leeks, Jack-in-the-pulpits and Dutchmans britches. Beavers were active along the lakeshore in Spring 1993. The Region's Fish and Wildlife Unit identifies three potential beaver colony sites on the property.

The lake is surrounded by rolling hills, which become quite steep along its easterly shore. The highest elevation is 1980 feet northeast of the lake, the lowest elevation is 1450 feet on the south edge of the parcel at Hankins Creek. The lake elevation is 1732 feet.

Most of the land is heavily forested with second growth hardwood species, though hemlock is an increasing component of the understory and forms dense stands along parts of the lakeshore. Several old fields, former lawns, and pasture areas are slowly reverting to brush and pioneer forests. Other open areas remain in grassy or unvegetated conditions as a result of heavy use by the public. An area several acres in size is predominantly covered by blueberry bushes.

Crystal Lake Road provides access to the lake and parking areas from Tennanah Lake Road, a town road.

The area has about 4000 feet of frontage on Tennanah Lake Road, and an additional 200 feet on Freidenstein Road.

III. INVENTORY OF MAN MADE FACILITIES

The Unit consists of a 497 acre parcel of Forest Preserve lands, detached from the Catskill Park. It is six miles southwest of the nearest point of the Blue Line, which encloses the great bulk of Forest Preserve lands in the Catskills.

Remnants of the last private use, a summer camp, can still be found, including two spring structures, concrete and rock footings, and several woods roads.

A stone and concrete dam forms Crystal Lake, a 32 acre body of water. After a portion of the dam collapsed, DEC rehabilitated it in 1987. Crystal Lake Road is a gravel town road leading to the lake from Tennanah Lake Road. Additional roads, rapidly disappearing, lead to a small gravel bank and an old dump, the site of former dwellings and a blueberry patch, and the former camp recreation areas on the south side of the lake. An old woods road runs generally north and south through the eastern half of the property. Other facilities, built by the DEC, include a parking area, boat launch site, a marked trail around the lake, and four officially designated campsites.

Unauthorized camping sites, stone fireplaces or fire rings along the lakeshore are removed when found.

A power line enters the area from Tennanah Lake Road, near Crystal Lake Road and runs back out to Tennanah lake Road. The power lines running along Long Pond Road to Crystal Lake and up to the old camp buildings were removed by the utility company in the last five year plan.

The remains of several demolished buildings have been fairly well covered. Septic fields and junction boxes remain in the ground.

Former camp lawn areas remain open or semi-open, with areas of brush, grass and some small trees. The old dump has been covered over with fill and is revegetating.

IV. PRESENT PUBLIC USE

Numerous individuals and groups have used the road and trail network to access and meet on parts of the property for beer parties or similar activities potentially disruptive to other users and/or damaging to the area. Inappropriate vehicle access and dumping decreased substantially when DEC closed off much of the woods road network. Nevertheless, litter and garbage problems continue, damage to trees and other vegetation occurs, and sometimes noisy and boisterous behavior disturbs family campers and law-abiding visitors. Signs for the area have often been stolen or damaged. However, the majority of

campers and visitors are respectful of the environment and each other.

Illegal ATV use, camping too close to the lakeshore, and general overuse of the area is not appropriate to the Forest Preserve. On Memorial Day and July Fourth weekends, up to 50 cars and 40 tents have been observed on the property.

Passive recreational use - hiking, boating (no gasoline motors), and hunting for small game, deer, and turkey (popular in the fall) - are compatible with the area's designation. Trapping for furbearers is also permitted. However, because of the property's small size no special wildlife management practices have been instituted. Pheasants have been stocked on the property since September/October, 1991.

The lake is very popular for fishing. The DEC restored the trout fishery in 1987 after an inappropriate introduction of smallmouth bass affected previously excellent trout fishing.

V. CRYSTAL LAKE FISHERY RESOURCE

The intent and policy of the DEC is to manage the lake for trout.

Crystal Lake supports an extremely unique and high-quality fishery. Such a fishery existed following the chemical eradication (in 1975) of a generally poor quality population of pickerel, yellow perch, pumpkinseed, brown bullhead, and rock bass and exists again today following the 1987 lake treatment to remove bass. In the Spring of 1976, 2000 wild brook trout fry were transferred from Balsam Lake, a privately owned pond in the upper Beaver Kill drainage. These fish subsequently developed a self-sustaining trout population in Crystal Lake.

The introduced wild brook trout and their progeny provided a very popular angling experience. Wild brook trout ponds are rare in New York, particularly outside of the Adirondacks. In the Catskill, only three other publicly accessible ponds (Alder, Trout and Echo) support self-sustaining populations of Catskill strain brook trout, and only one of these (Alder) provides vehicular and boat access. Data obtained from Crystal Lake in 1977 indicated approximately 1600 angler trips made during the season (50 per acre). The average size of creeled trout was approximately 12"; some fish were taken in excess of 15".

By 1982, it became apparent that smallmouth bass had been illegally introduced to the lake. Several fingerling bass were captured in October of that year, probably indicating

that adult smallmouth had been stocked in 1981. Although the bass growth rate was slow, additional reproduction in subsequent years resulted in a numerically large population of smallmouth by 1986. Trap net and gill net collections made in October of 1986 obtained 109 bass between 2.4" and 11.4".

Concurrent with the expansion of the smallmouth bass, trout populations exhibited a precipitous decline. In 1982, Fall sampling with trap and gill nets collected a total of 248 brook trout. In 1986, similar sampling obtained only three trout. Angler reports during this period indicated substantial dissatisfaction with the deteriorating trout fishery.

The 1986 sampling convincingly demonstrated that brook trout and smallmouth bass cannot coexist in Crystal Lake. Bass populations continued to increase, virtually eliminating the trout. However, although smallmouth reproduction was successful, growth is limited by low fertility in this headwater impoundment (total alkalinity @ 20 ppm). The slow growth observed further deteriorated as population numbers and intra-specific competition increased. The resulting bass population was not of high quality. Moreover, good smallmouth fishing already exists in a number of area lakes and rivers. Consequently, DEC continued the original

management intent of a wild brook trout fishery at Crystal Lake by restocking with a suitable strain of wild Catskill brook trout.

The rehabilitation of the Crystal Lake Dam in 1987 required a partial dewatering of the impoundment. This provided an opportunity to apply the fish toxicant and reduce the risk of premature spill from the lake. In the interim, the size limit on bass was removed to encourage harvest. Efforts were made to salvage smallmouth for introduction into other waters prior to the reclamation.

Rotenone, the toxicant of choice, was used to eradicate the bass population. Derived from a plant root, it is the standard material used virtually worldwide for treating bodies of water. Use of Rotenone is authorized in NYCRR Section 328.6(a) through (g). The pesticide is registered with DEC for use in New York State. Persons applying the pesticide are certified or working under the direct supervision of a certified applicator.

Following detoxification, wild brook trout were reintroduced. Surveillance and enforcement efforts against illegal importation of fish or use of bait has been increased. The 10" size limit and three fish daily bag limit for trout will be retained and monitoring of the trout

population during the Fall spawning period will continue. Brook trout a native species, can maintain a self-sustaining population in Crystal Lake as long as competing species are not introduced.

Since the 1987 reclamation and subsequent reintroduction of wild Catskill strain brook trout, the presence of brown bullhead and golden shiner has been documented during routine netting surveys of the lake. A few individual brown bullhead may have survived the reclamation by locating in spring outflow areas which provided refuge from the fish toxicant. Golden shiner were likely introduced after the 1987 reclamation by the illegal use of this species as live bait.

While the presence of these two species is not desirable because they will provide some competition with the brook trout for available food resources, the presence of golden shiner and brown bullhead is not as destructive as other more voracious species, such as smallmouth bass. Successful brook trout reproduction has been documented along with the presence of abundant brown bullhead and golden shiner. As long as brook trout reproduction, growth, and survival continue at adequate levels, reclamation because of the presence of these two species will not be necessary.

Reclamation and restocking with wild Catskill brook trout will be repeated if it becomes necessary.

VI. MANAGEMENT GOALS AND OBJECTIVES

Land management will continue to encourage uses appropriate for a wild forest unit of the Forest Preserve.

Specific management activities will include the following actions:

- Maintain dam. The Regional Operations Unit periodically inspects the dam at Crystal Lake to:
 1. keep the spillway free of debris and at a suitable height to avoid road flooding.
 2. keep the dam free of graffiti.

Any work requiring the lowering of the water level will be scheduled for late summer, a time when the lake is normally at its lowest level, and coordinated with the Fisheries Unit to protect the fish.

- Maintain Trout Fishery (see previous discussion).
- Abandon Old Woods Road. DEC believes the old road running generally north and south through the woods in the area is an old town road known as Trout Pond - Long Pond Road, which has not been officially abandoned. It is likely the extension of the present Frelich Road,

No. 24. See copy of portion of town of Fremont highway map, Appendix A. The road is unmaintained, overgrown, and unused. The Town does not include it on the current highway map. Nevertheless, to protect the area from future attempts to open and use the old woods road, the Department will continue to seek official abandonment of two segments. The road will be abandoned between the following points:

1. Southwest of the lake at the State property corner nearest the lake, to the dam at Crystal Lake and
2. The point where the road leaves Crystal Lake Road to the north to the northern boundary of State land.

The road has been barricaded with boulders at each location as necessary to prevent entry.

NOTE WELL: Crystal Lake Road, listed as Road No. 13 on the Town of Fremont highway map (Appendix A), will continue to be a town road open to motor vehicles. The Town Highway Department is responsible for the maintenance of this road, to town road specifications. However, the road is not plowed in winter. Crystal Lake Road terminates at the dam.

- Maintain barricades on all roads and trails except Crystal Lake Road with large boulders. Place a barricade on State land on the woods road leading

from Tennanah Lake. Post new "No Motorized Vehicles . . ." signs as necessary.

- Manage camping along the lakeshore. Camping is allowed at four locations within 150 feet of the lakeshore:
 1. Northeast side of Lake approximately half way up the lake.
 2. North corner of lake near stone pile.
 3. South shore of lake at east side of bay (move 50 meters {150 feet} from the peninsula to the east on the shore.)
 4. Point on southwest side of lake where old fields meet forest.

Continuing these widely separated sites will allow a limited lakeshore camping experience, while protecting the rest of the shoreline from overuse or degradation. Existing fire rings or fire places at other locations found within 150 feet of the water will be dismantled or removed. All other camping, as per DEC rules and regulations, must be at least 150 feet from roads, trails, parking areas, streams or the lake. See Appendix B. No permits for groups of 10 or more will be issued for designated lake shore campsites. NYCRR Part 190.3 and 190.4 will be strictly enforced.

- **Maintain boat launching area.** The present boat launching area on the southeast corner of the lake will be maintained for car top or trailered boats. Only electric boat motors will be permitted since they are quiet, non-polluting, and are an advantage to elderly or disabled anglers. Gasoline motors will not be allowed. Parking is permitted in the boat launch area, including space for a handicapped van or truck. New fishing and non-motorized vehicle signs will replace those damaged or removed and large boulders will be used to more clearly delineate the boat launch and eliminate vehicular use of the nearby trail. Vehicles blocking the Town roadway will be ticketed.
- **Rehabilitate spring boxes.** Test spring water for potability. If springs show signs of poor water quality, remove structures completely and provide drainage channels for water. If of good quality, clean, repair and screen spring on the north end of lake for use by the public. Install a pipe leading from the spring to the trail to avoid the creation of a new path and disturbance of the area.

- Remove collapsed roof and sides of spring box near parking area and provide a stable drainage channel. Fill the spring box with stone to reduce its depth to around 1 foot. The concrete sides should be no more than 1 foot or so above the water or gravel level.

- Improve Sanitation:
 1. Two wood privies, one northeast of the boat launching area and the other on the edge of the field on the west side of the lake were installed in 1988. Shortly thereafter they were vandalized and used for firewood.
 2. Monitor the intensity of use and the need to install new pit privies. If privies are needed, to improve sanitation in the area near the lake, they should be of durable, non-flammable materials, more than 150 feet from water, trail and road.

Maintain Existing Facilities

The Crystal Lake Road from Tennanah Road will be maintained by the Town, terminating at the dam and boat launching area. The parking lot will be maintained. The foot trail around the lake will be maintained to DEC specifications. The trail will be rerouted in areas along the easterly lakeshore where it runs less than 10 feet from the lake, and where conditions indicate. The trail runs through several seeps and wet areas at the northerly end of the lake. Here, the trail will be lined with the flat native stone abundant throughout the woods in order to encourage users to stay on the trail and disturb the wetland and moist woods as little

as possible. Presently semi-open fields near the south end of the lake will be left for use by the public for fishing and picnicking. Camping is not allowed within 150 feet of open water except in designated areas (190.3b). Appropriate signs will be posted.

Maintenance activities will be included in annual schedules for existing facilities. In addition, litter and light maintenance will be scheduled during warm weather months by DEC as required.

Upon installation, new facilities will be included in succeeding years for maintenance. The Regional Field Operations Unit will be responsible for scheduling, budgeting, performing and inspecting such maintenance, in consultation with appropriate field program staff.

A budget schedule is included in this plan for all necessary maintenance work.

Monitor Public Use

Install a registration booth and information center (bulletin board) near the boat launch area. Monitor and maintain fishery information, trail, campsite and other signs.

Enforce Regulations

Stepped up enforcement will be required to ensure visitor compliance with State regulations, reduce vandalism and garbage and discourage uses incompatible with the Forest Preserve Wild Forest Category. Forest Rangers, and Environmental Conservation Officers will be scheduled to patrol the area as often as possible, at least once a week with special emphasis on weekends and holidays, including evening hours. Loud behavior, parties, dumping and damage to trees and State signs has often occurred. Alternating visits between Forest Rangers, Environmental Conservation Officers and Foresters will be used to increase DEC presence in the area while distributing the workload.

A seasonal Assistant Forest Ranger will be employed to oversee the area from spring to fall. The Ranger will divide his/her time working at Crystal Lake, Alder Lake, Waneta Lake and Peekamoose Valley. The Assistant Forest Ranger will be supervised by Forest Ranger staff.

State Police and Sherriff's Department officers stop by frequently. The Department will assist them in any way possible to help discourage problem users.

Boundary Line Maintenance

Boundary lines will be posted and blazes painted on a periodic basis. Blazes will be painted at a minimum of once every seven years or more frequently if necessary.

Boundaries are scheduled to be repainted in 1994.

Standard boundary signs, with DEC State land logo and "Forest Preserve" wording, will be posted on boundary lines approximately every 500 feet. In addition, two boundary signs will be posted, facing outward, at each corner.

Signs

A large identification sign will be maintained at the junction of the gravel access road and Tennanah Lake Road.

Other signs to direct parking, boat launching and control motor vehicles and camping will be posted as needed.

Crystal Lake Road from Tennanah Lake Road to the boat launching area will remain open for the use of motor vehicles. All other areas of the unit will be closed to motor vehicles.

SUMMARY AND PROJECTED COST OF MANAGEMENT ACTIVITIES

MAINTENANCE ACTIVITIES AND BUDGET

<u>YEAR</u>	<u>ACTIVITY</u>	<u>PROJECTED COST</u>
I	Barricade Roads: At State boundaries (1 location)	\$ 800
	Delineate boat launching area parking lot with additional large boulders	\$ 800
	Seasonal Assistant Forest Ranger (May - September, 16 weeks)	4,600
	Move designated camping site #3	300
	Lands and Forests State Management Activities	<u>900</u>
	TOTAL	\$ 7,400
II	Seasonal Assistant Forest Ranger (May - September, 16 weeks)	4,830
	Rehabilitate Spring Boxes	3,000
	Upgrade Foot Trail (In wet areas and move from lakeshore)	2,500
	Lands and Forests State Management Activities	900
	Annual Parking Lot and Boat Launching Site Maintenance Maintain Boundary Lines Annual Sign Maintenance Several Cleanups	<u>2,200</u>
	TOTAL	\$13,430

<u>YEAR</u>	<u>ACTIVITY</u>	<u>PROJECTED COST</u>
III	Seasonal Assistant Forest Ranger	\$ 5,000
	Improve Sanitation (two privies)	5,000
	Lands and Forests State Management Activities	1,000
	Annual Parking Lot and Boat Launching Site Maintenance, Maintain Boundary Lines, Annual Sign Maintenance, Several Cleanups	<u>2,300</u>
	TOTAL	\$13,300
IV	Install registration booth and information center	\$ 500
	Seasonal Assistant Forest Ranger (May - September, 16 weeks)	5,325
	Lands and Forests State Management Activities	1,000
	(Annual Parking Lot and Boat Launching Site Maintenance Maintain Boundary Lines Annual Sign Maintenance)	<u>2,300</u>
	TOTAL	\$ 9,125
V	Seasonal Assistant Forest Ranger (May - September, 16 weeks)	5,600
	Lands and Forests State Management Activities	1,200
	Annual Parking Lot and Boat Launching Site Maintenance Maintain Boundary Lines Annual Sign Maintenance	<u>2,300</u>
	TOTAL	\$ 9,100
FIVE YEAR TOTAL		\$51,755

APPENDIX B

Excerpt from Title 6 NYCRR Part 190

190.3 Camping Sites.

- (a) Areas used for temporary camping and adjacent lands under the jurisdiction of the department must be kept in a neat, clean and sanitary condition. Garbage and refuse must either be deposited in receptacles provided, or removed.
- (b) Camping is prohibited within 150 feet of any road, trail, spring, stream, pond or other body of water except at camping areas designated by the department.
- (c) No person may pollute in any manner nor deposit waste material of any kind in or on waters under the jurisdiction of the department.
- (d) Except in an emergency, or during the period December 15 to April 30 each year in the Adirondack Park, or during the period December 21 to March 21 each year in the Catskill Park, no person may camp on lands under the jurisdiction of the department which are located at an elevation in excess of 4,000 feet above sea level in the Adirondack Park or in excess of 3,500 feet above sea level in the Catskill Park.

APPENDIX B (Continued)

- (e) Except in an emergency, no open fires are permitted on lands under the jurisdiction of the department which are located at an elevation of 4,000 feet above sea level in the Adirondack Park or in excess of 3,500 feet above sea level in the Catskill Park.

Historical Note

Sec. filed April 28, 1972; amds. filed: Sept. 26, 1977;
April 19, 1979 eff. April 19, 1979

190.4 Camping Permits.

- (a) Temporary camping in one location for four nights or more is prohibited except under permit. Except during the big game hunting season, no temporary camping permit will be issued to any person for a period in excess of 14 consecutive nights. No temporary camping permit may be renewed, or a new permit issued, to the same person of the same location in the same calendar year.
- (b) Temporary camping is restricted in certain posted areas and no person may camp on such areas without a permit.

APPENDIX B (Continued)

- (c) Upon termination of camping all equipment and supplies must be removed from State land. The storage of personal property on State lands is prohibited.
- (d) No temporary camping permits will be issued to individuals under 18 years of age.
- (e) No group of 10 or more individuals may camp on State lands at any time except under permit.

Historical Note

Sec. filed April 28, 1972; repealed, new added by renum, 190.5,
filed Sept. 26, 1977; amd. filed Dec. 24, 1980
eff. Dec. 24, 1980

