

DEEP CREEK LAKE RECREATION AND LAND USE PLAN

2001



STATE OF MARYLAND



The Honorable Parris N. Glendening, *Governor*
Kathleen Kennedy Townsend, *Lt. Governor*

Department of Natural Resources

J. Charles Fox, *Secretary*
Karen M. White, *Deputy Secretary*

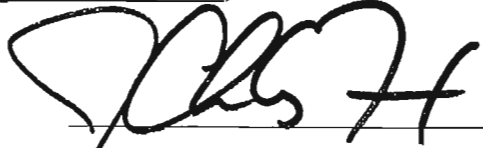
Deep Creek Lake Policy and Review Board

John M. Forman, *Chair*

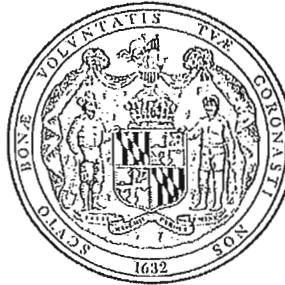


Approval of the Deep Creek Lake Recreation and Land Use Plan has been granted on this 17th day of October, 2001.


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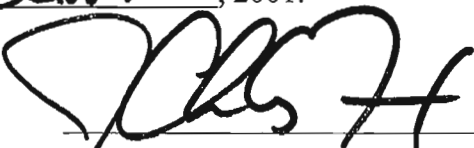
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Acknowledgments

The Department of Natural Resources greatly appreciates the efforts of the Deep Creek Lake Policy and Review Board members who contributed their time and energy to developing the Deep Creek Lake Recreation and Land Use Plan.

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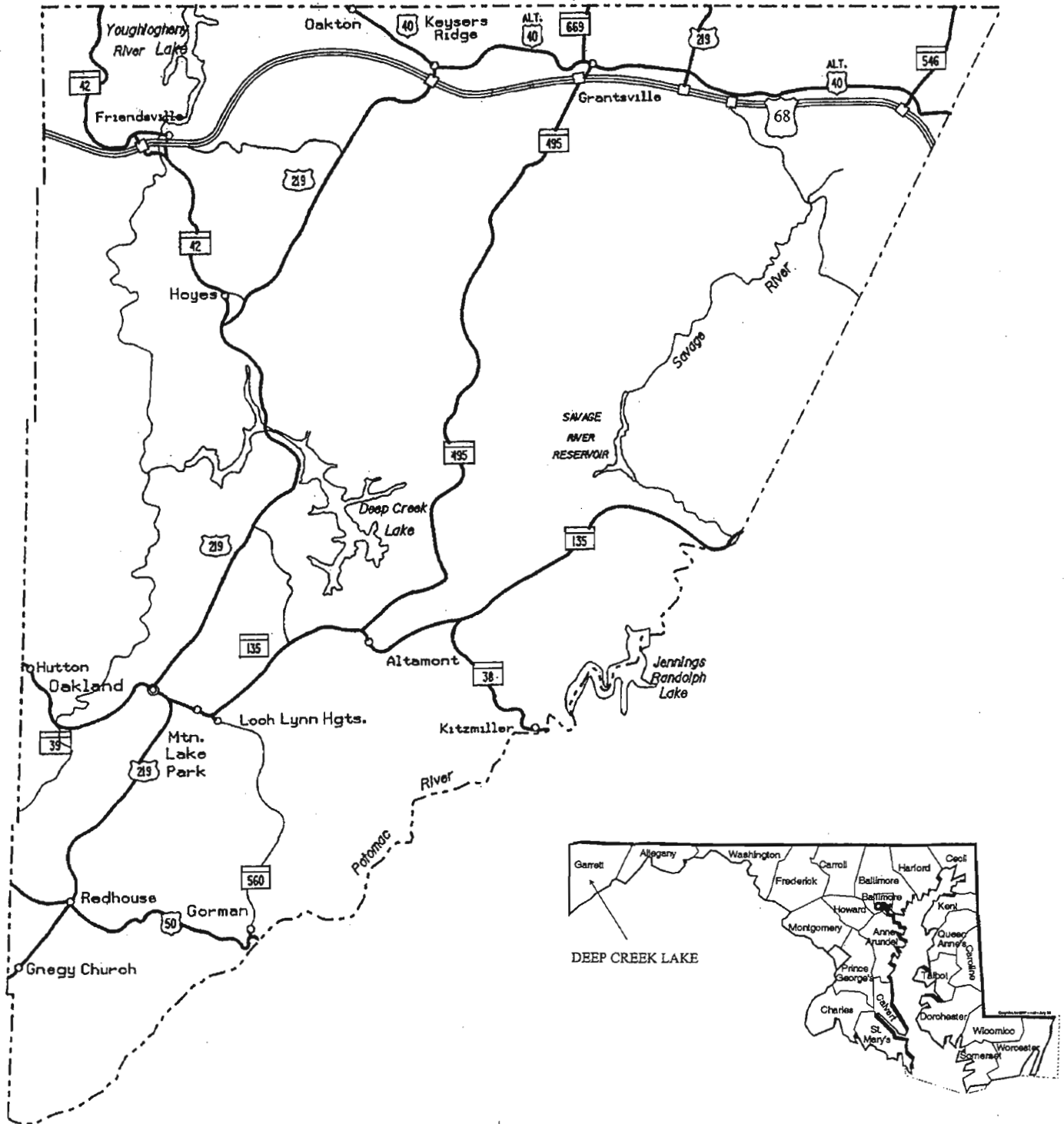
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Area Map



Map Not To Scale



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INTRODUCTION

Deep Creek Lake is located in Garrett County, the westernmost county in Maryland with a land area of approximately 423,680 acres or 662 square miles. Garrett County has a population of 29,846 according to the 2000 census, and is the least densely populated county in Maryland. Oakland is the county seat. The county lies entirely within the Allegheny Plateau, a physiographic area which is characterized by deep forests, diverse wildlife, and rich river valleys. These natural resources combined with a close proximity to major metropolitan areas such as Pittsburgh, Washington, and Baltimore, attract a wide variety of recreational users. Deep Creek Lake is Western Maryland's premier tourist destination.

The lake was created in 1925 when the Deep Creek hydroelectric project was constructed. The land which was flooded by construction of the dam as well as many properties surrounding the newly created lake had been acquired by the power company. Eventually, the Pennsylvania Electric Company (Penelec) began divesting itself of some of the real estate surrounding the lake, although a buffer zone around the lake was retained. Over the next few decades, the Deep Creek Lake region developed as a recreational resort region. In 1968, Penelec was issued a license to operate the facility by the Federal Energy Regulatory Commission (FERC). Penelec, as the lake owner, had established corporate policies and procedures for managing recreation and access to Deep Creek Lake. In 1980, the State of Maryland agreed to take over management of recreation and access at Deep Creek Lake. Lake management regulations were promulgated through a public

process beginning in 1981 and were updated in 1986, 1988, 1989 and 2000. These regulations are still in effect and provide the basis for the Department of Natural Resources (DNR) lake management operations.

On September 26, 1991, FERC determined that the federal government should not maintain jurisdiction over the Deep Creek Lake project. The State of Maryland issued a water appropriation permit in 1994 to guide the maintenance of lake levels and discharges for hydro-electric generation as well as recreational activities in the Youghiogheny River.

In 1999, General Public Utility, Inc (GPU), Penelec's holding corporation, and the State of Maryland entered into negotiations for the transfer of the lake bottom, buffer zone properties and certain other parcels owned by the power company. The sale of these areas to the State of Maryland was completed in 2000 for \$17 million. The dam, intake, tunnel and power plant were not acquired by the State. GPU eventually sold these assets to Sithe Energy. During its 2000 session, as the sale was being finalized, the

Maryland General Assembly passed legislation to guide future management of Deep Creek Lake.

The new law enacted by the General Assembly established a Deep Creek Lake Policy and Review Board (PRB). The PRB is required to meet a minimum of four times per year and is charged with advising DNR on matters relating to lake fees, budget and management. All fee and regulation changes must be approved by the PRB. In addition, the PRB and DNR were mandated to develop a Deep Creek Lake Recreation and Land Use Plan by June 2001 that provides for the wise use, protection and management of the natural and recreational resources of Deep Creek Lake. It was specified that the Deep Creek Lake Recreation and Land Use Plan address, at a minimum, the following items: Lake Water Quality, Shoreline and Buffer Area, Adjacent Land Use, Zoning, Carrying Capacity, Visitor Access, Recreation Areas, Commercial Uses, Private Uses and the Recreational Activities of fishing, boating, docking, hiking, water sports, scenic appreciation and interpretive programs.

Deep Creek Dam



PURPOSE AND GOALS OF THE PLAN

Plans provide an examination of conditions and establish management directions based on factors existing at a particular time. No planning document is capable of anticipating all future events. It is the purpose of this plan to serve as a guide to the overall lake management program, and cannot be a solution to every possible problem or issue that may be identified. To ensure maximum effectiveness, the plan has to allow the PRB, Garrett County and DNR flexibility in addressing long term concerns as well as providing a method for responding to new challenges as they arise. The PRB and DNR hope to accomplish, with Garrett County's favorable consideration, the following major goals with the Deep Creek Lake Recreation and Land Use Plan.

MAJOR GOALS

- To provide background information about the natural resources of the Deep Creek Lake region.
- To provide an assessment of existing conditions, recreational uses, facilities and management.
- To provide a basic framework for addressing future wise use, protection and management of the natural and recreational resources of Deep Creek Lake.
- To establish policies and procedures for the future operation of the Policy and Review Board.
- To ensure maximum effectiveness by outlining ways in which DNR, Garrett County and the PRB can better coordinate efforts and decisions pertaining to zoning and lake regulations as well as to ensure that policies are consistent, complementary and designed to protect the natural resources of the lake and watershed.



POLICY AND REVIEW BOARD PROCEDURES AND OPERATIONS

The Deep Creek Lake Policy and Review Board will play a pivotal role in the future management of the lake. The new legislation provides specific duties for the PRB. However, the exact methods of operation for the PRB are not mandated. Both the PRB and DNR feel that it is essential that this plan identify how the PRB will function, including ensuring that the general public has meaningful input to lake management decisions. The following procedures will allow for flexible and inclusive, yet efficient PRB operations and meetings:

- Each PRB meeting will be open to the public and scheduled for not more than two hours. The starting time for the next meeting will be set by the chair at the end of each meeting. A reminder notice of the starting time and meeting location will be contained in the agenda. A majority vote of the members present can extend the adjournment hour.
- Each agenda will be structured as follows: Action Agenda - specifically items that require a vote, Old Business, New Business, Correspondence Received, Public Comment, Agenda Topics for the Next Meeting.
- A tentative agenda for the next meeting will be established at the end of each meeting. If issues arise between meetings that a

member(s) believes should be added to the agenda, the chair or lake manager will be contacted at least two weeks prior to the meeting date. The chair and lake manager will finalize the agenda two weeks prior to the meeting date. The agenda and all background information will be mailed to board members at that time. A press release announcing the meeting and agenda will also be issued two weeks prior to the meeting date.

- The lake manager will handle issues that are addressed by the lake management regulations. Such matters will not be included as agenda items. However, if the manager believes that an issue that is addressed by regulation may be controversial or have a significant impact on the lake management program, that issue and background information will be forwarded to the board members for review, comment and/or recommendations.
- Issues that require a regulation or fee change will be scheduled on a board agenda.
- The board may establish, as deemed appropriate, committees to work with DNR in more detail on a specific issue and for other reasons as determined by the board. The committee members may meet as often as necessary. An established

committee will report to the full board at each meeting.

- Members of the public who request time with the board will be referred to the public comment portion of the meeting. The board will discuss the issue and decide how it wishes to proceed with responding (discussion, table until next meeting as new business, defer to DNR, action at meeting, no action at meeting, or declare that it is not board related business and defer to appropriate authority).
- A quorum for approving general business items such as: meeting minutes, requests for information, or establishing meeting dates and agenda items, consists of a majority of the board members. Board votes on items pertaining to fee changes, lake regulation changes and approval or changes to the management plan, requires five of the eight members who are eligible to vote on these items. It is noted that members of the General Assembly, who by statute, consist of two of the ten board members, are not eligible to vote in regards to fee changes, lake regulation changes and approval or changes to the management plan.
- Meetings will be conducted in accordance with Roberts Rules of Order.

ASSESSMENT OF EXISTING CONDITIONS, RECREATIONAL USES, FACILITIES AND MANAGEMENT

Current Lake Management Responsibilities

Management of the lake, shoreline and buffer strip is the responsibility of the Department of Natural Resources. In addition to statewide park regulations (COMAR 08.07.06), the Department administers the lake regulations found in COMAR sections 08.08.01 - 08.08.09 and is responsible for actions defined in the Annotated Code of Maryland, Natural Resources Articles 5-515 through 5-216. The Maryland Department of the Environment is responsible for the Water Appropriation Permit which determines the amount and conditions of lake water withdrawals. Garrett County has land use regulation and zoning authority and responsibility in the rest of the watershed. Private property owners have authority and responsibility for their lands.

Lake Water Quality and Quantity

Deep Creek Lake is Maryland's largest freshwater lake ecosystem. In addition to a source of recreation and leisure activities, Deep Creek Lake is a living natural ecosystem whose health can often be determined by the quality of its water. Maintaining the lake's water quality requires a balance between the desire of people to use and develop the watershed, and the capacity of the lake to absorb those impacts. The physical characteristics of the watershed, degree of forested cover, quality of the riparian buffer around the lake, and changes made by people affect the quality of the water flowing into the lake from

springs, streams, drainage ditches, roads, parking lots, and land surfaces.

The Deep Creek Lake watershed is bounded by several mountains, including Marsh Mountain, Meadow Mountain, Snaggy Mountain, and Roman Nose Hill. Most of the streams and small tributaries to the lake carry water from nearby developed, forested or agricultural lands. During storm events, water is carried quickly into the lake from roadside ditches and parking areas. Water quality is affected by stormwater runoff. This has increased in recent years due to growth in development in the watershed.

Deep Creek Lake's water quality has been studied by a number of government agencies and the Pennsylvania Electric Company over the past three decades. In the years 1989 through 1991, DNR conducted a comprehensive water quality study of the lake to establish baseline data for a number of chemical parameters. The intent was to use the information obtained to evaluate future changes in water quality.

The Department's studies indicated that the lake is generally characterized by soft water (low mineral content), low nutrient levels, and low phytoplankton and zooplankton abundance, all characteristics of an oligotrophic (or young lake) ecosystem. It should be noted these conclusions represent a lake-wide evaluation, and that local conditions in certain coves may lead to different conclusions (particularly in shallow areas with higher than normal nutrient runoff from septic or agricultural sites). These could be brought about by the lake's natural evolution

or by growth and development by property owners in the watershed.

The state and county maintain monitoring programs to measure toxic compounds (through sampling of fish tissue) and bacterial contamination. Recent data indicate that neither of these potential water quality issues are in existence at Deep Creek Lake. The one water quality impairment found in the lake is low levels of dissolved oxygen in the deeper portion of the lake. This is likely due to oxygen utilization by bacteria located on the lake bottom.

Deep Creek Lake has a surface area of approximately 3,900 acres with a storage volume of approximately 106,000 acre-ft at the 2462 elevation level. The lake's drainage area is 64.7 sq. miles. The lake has 65 miles of shoreline. Currently, water withdrawal from the lake is permitted for the Deep Creek power station and other limited purposes.

While the primary purpose of Deep Creek Lake has historically been to provide water for hydroelectric generation, the dam is managed to provide suitable water levels for lake recreation. Discharges into the Youghiogheny River are also designed to provide flows for living resource protection, maintenance of a recreational cold water fishery (trout) and for whitewater recreation. Historically, the average annual drawdown has been about 9 feet. During recent years, the drawdown has been in the 7-8 feet range.

Christmas Fern -
*Polystichum
acrostichoides*



Shoreline and Buffer Area

Prior to the state's ownership of Deep Creek Lake, the Pennsylvania Electric Company maintained a buffer strip of land around the lake for a variety of hydroelectric, recreational and environmental purposes. The width of the buffer area varies with elevation and can be anywhere from a few feet in width to several hundred yards.

Approximately 90% of the shoreline's natural character has been impacted by lake property owners and businesses to various degrees. In the older developed areas, the shoreline takes on a suburban backyard look, while there are several areas of the lake that still maintain their natural appearance with minimum or no disturbance. The forest cover along the buffer strip is generally fragmented or in various states of succession.

Annual lake water draw-downs related to the operation of the Deep Creek Power Station affect the aesthetics and character of the shoreline. Generally, the lake fluctuates from a level of 2462' lake elevation in the late spring (as measured at the spillway) to 2455' to 2457' in the winter. At high lake elevations, lacustrine wetlands are flooded and they provide a habitat for a variety of plant and animal species. Drawdowns affect the ability of some lake permittees to keep docks on the lake in the late summer or fall seasons, especially during periods of drought.

Each property owner has a permitted area of use in which certain activities may occur, with the approval of DNR, through an annual buffer strip use permit. Each contiguous property owner who maintains a permit with DNR for recreational use of the buffer area may use it for many purposes. Boat dockage is the



Deep Creek Lake Forest Buffered Shoreline

most often sought recreational use, followed by improvements to the buffer area (walkways, temporary sheds and other structures, utilities).

Regulations governing the eligibility and issuance of permits are provided for in the Code of Maryland Regulations (COMAR), Title .08 subtitle .08. Buffer strip use permits are issued on an annual basis and do not convey any exclusive or proprietary right to the use of the lake or buffer strip. The general public may use the buffer strip for walking and for shoreline fishing.

Most areas of the lake experience shoreline erosion. This is primarily due to the periodic flooding of the shoreline due to the power projects operation, and by waves generated naturally by wind or boat wakes. Many people have the perception that erosion rates have increased in recent years due to the changes in the lake drawdown rules, although the rates of erosion have not been quantified by the power company or by the state.

A forest buffer along the shoreline is important for environmental and aesthetic benefits and it buffers sound. It is the resource most threat-

ened by increased use and development. Most property violations investigated by park staff involve illegal cutting of vegetation and trees in the buffer strip. Protection of riparian forest buffers has been a long term objective of DNR. The conservation easement that will be in effect for all property sold by the state to contiguous landowners is designed to meet this objective.

Adjacent Land Use

Development Trends

Despite the severe limitations on development imposed by the topography and the natural characteristics of soils in the lake area, fairly extensive development has occurred at several places around the perimeter of the lake. The Deep Creek Lake area still remains as the center of growth in Garrett County and more than 40 percent of the subdivisions in Garrett County between 1986 and 1996 were for homes in the Deep Creek Lake area.

The McHenry and Thayerville areas represent the most appropriate location for continued growth of

year-round communities. While not incorporated, these two areas have become distinguishable communities within the drainage basin because of their location along major state and county roads and the type of existing development that has occurred there. These communities have many commercial services and support facilities such as restaurants, stores, churches, banks and a fire station which are typically associated with full-time communities. The following paragraphs taken from "A New Development Plan for Garrett County" completed by the Planning Commission in 1996 summarize the existing and future land use patterns of these communities;

"At McHenry, the Town Center category is mapped in a band along both sides of U.S. 219, extending from the top of the ridge (near the intersection of old 219) southeastward to the fairgrounds; beyond this point it extends to Gravelly Run along both sides of old 219 only. Existing development occupies most of this area. Town Residential is shown in four areas: adjoining Old Route 219 and the Wisp Ski Resort, behind the Town Center area on the north side of U.S. 219, along Bumble Bee Road to the rear of the college and along Marsh Hill Road near Wisp."

"The land use pattern in and around Thayerville consists of a mixture of Town Residential, Town Center and Commercial areas. The Town Center category begins about a mile south of the Deep Creek Bridge and extends south along both sides of U.S. 219 and terminates north of Mayhew Inn Road. The Town Residential area lies opposite the Town Center area south of U.S. 219. The Town Residential area extends south along U.S. Route 219 to a point just north of Mayhew Inn Road

and another small portion south of the Mayhew Inn Road intersection."

The Deep Creek Lake area has been growing at a stable rate. Based on Garrett County Building Permit Data (Table I in "A New Development Plan for Garrett County") for the Deep Creek Lake Watershed, there was a 47 percent increase in building permits issued for residential units (many of which were townhouse units) between 1986 and 1987. This growth trend continued until 1988 when a nationwide recessionary period slowed the growth of new construction. Growth rates throughout the 1990's have leveled off with single family homes being the predominant type of construction. These structures now tend to be much larger and have a greater number of bedrooms than earlier single family homes.

The vast majority of building permits issued in the Deep Creek Lake area were for single family detached dwelling units primarily used as second homes or vacation homes. Second homes and vacation homes that were previously only occupied during portions of the year

are being utilized more extensively throughout the year.

Zoning

The policies and standards developed within the Deep Creek Watershed Zoning Ordinance have been a positive influence on development patterns, property values and quality of growth which has occurred in the Deep Creek watershed over the past twenty-five years. County officials believe that existing policies will continue to favorably guide growth into the foreseeable future.

Lake Residential

The single largest zoning classification in terms of land area in the Deep Creek Watershed is the LR-Lake Residential Zoning district. The Lake Residential areas accommodate relatively low density residential and other open space, low intensity uses. Residential development would be permitted only at an average density of at least one acre per dwelling unit regardless of the type of construction used (single-



Town Commercial and Town Residential

family homes, townhouses, apartments, etc.). Continued farming and forest management are also encouraged as additional ways to keep land in low intensity uses and achieve a low overall density of population. Other additional land-based recreation facilities such as private, family-vacation farms are allowed (by special exception through the Deep Creek Lake Zoning Ordinance) to help reduce the pressures for recreation use of the water surface. More than 90 percent of properties along the shoreline are situated within the Lake Residential zoning district and single family residences are the predominant type of development in this district.

Town Residential and Town Center

The communities of McHenry and Thayerville are included in the TR-Town Residential and TC-Town Center zones. Town Residential areas are intended to provide for higher density, more compact village or small town settlements where centralized water and sewer exist as opposed to lower density lake residential areas. Single family homes, side by side twins, townhouses and apartment complexes would be allowed at about four to five dwelling units per acre which corresponds to the development patterns in Garrett's incorporated towns. The density is comparatively high in relation to rural densities, but would be considered relatively low to medium in an urbanized metropolitan setting.

The Town Residential areas are for those who seek a higher density, more compact residential setting that is convenient to the shops and services in the town's core, but one which is more exclusively residential than Town Centers, the next land use

category. A few, selected types of small commercial uses such as a neighborhood grocery store could be permitted by Special Exception (if proper screening and buffering are provided), but the Town Residential areas would otherwise remain basically residential in nature.

The Town Center areas are very similar to the Town Residential areas because they are intended to provide for higher density, more compact village or small town settlements which correspond to existing development patterns in Garrett County. Unlike the Town Residential areas, Town Centers will have a slightly higher density (five to six units per acre) and differ in their treatment of nonresidential uses. Centralized water and sewer facilities are necessary.

The Town Center areas represent the core areas of most of the existing towns which contain a mixture of residential, commercial and service uses. Single-family homes, apartment buildings, retail stores, churches, restaurants, apartments above shops, offices and other uses are intermixed in these Town Center areas to accommodate those persons

who prefer (or at least do not mind) living in this setting.

Commercial Resort

Several properties lying on the fringes of the McHenry and Thayerville communities have been classified as CR-Commercial Resort. Commercial Resort areas provide for commercial recreation uses and supporting commercial activities as well as residential development. These areas recognize the importance of promoting resort-type light commercial uses and land-based family-oriented recreational development in the Deep Creek Lake area as opposed to providing for the types of highway-oriented commercial establishments in the General Commercial areas. An opportunity exists for establishing less intensive, visitor-oriented commercial development in the Quarry Road and Wisp Resort areas. In addition, land-based, family-oriented development is appropriate for the Garrett County Fairgrounds area to help reduce pressures of water related recreation on the lake while allowing for low density residential development.



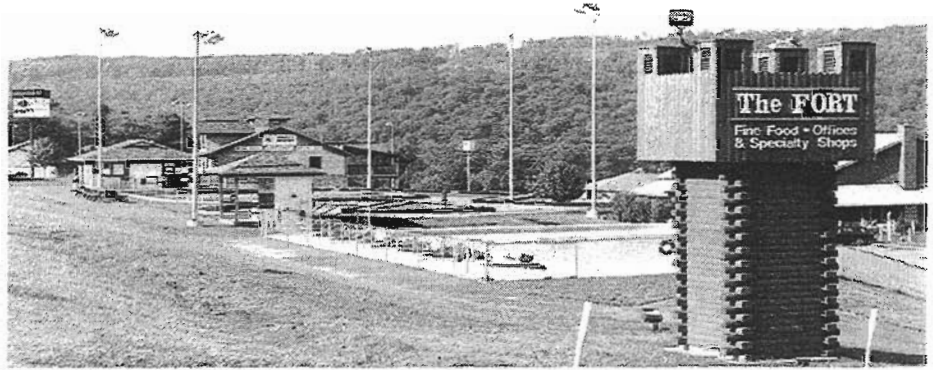
Deep Creek Lake Bridge Clusters Housing Area

General Commercial

General Commercial areas accommodate the kinds of "highway-oriented" commercial enterprises that function between or outside Town Center locations because they need large buildings, parking lots and/or outdoor storage areas. These would include automobile dealers, large supermarkets, warehouses and utility buildings, lumber yards, service stations and the like. Because such uses often generate substantial volumes of automobile and truck traffic, with associated impacts of noise and glare, they tend to be incompatible with residential neighborhoods. Accordingly, new residential uses are strongly discouraged in the General Commercial areas; these areas should be reserved solely for heavy commercial uses. Only a few properties have been designated as G-Commercial in the Deep Creek Watershed including two sites along US 219 (one at the intersection of Mayhew Inn Road and the other at the Sand Flat Road intersection), one at the Glendale Road, Toothpick Road intersection and a final one at the MD 135, Turkey Neck Road intersection.

Carrying Capacity

Carrying capacity relates to the ability of the lake or buffer strip to support various uses by people. There are two types of carrying capacity. *Social carrying capacity* relates to a level of use beyond which the recreational user's expectation of a quality experience is not realized. *Physical carrying capacity* relates to the level of use which the resource can sustain, beyond which irreversible biological or physical damage occurs to the point that the resource is no longer suitable or attractive for recreational or other



Deep Creek Lake Commercial Area

uses. The *optimum carrying capacity* is the level of use that does not exceed an area's physical or social carrying capacity.

Social recreational carrying capacity is an area of ongoing concern on Deep Creek Lake, particularly on summer weekends and holidays. In the mid to late 1980s, there was concern that boating levels had reached the point that user satisfaction and safety were being impacted. DNR contracted for a recreational carrying capacity study by the Urban Research and Development Corporation (URDC) which was completed in October of 1988.

URDC reported a number of major findings:

1. Deep Creek Lake was used for a variety of recreational activities, and that use was relatively low in the spring, fall, and winter, and on summer weekdays. Weekend and holiday use was increasingly heavy in the summer season.

2. The level of summer weekend and holiday use did not exceed the recreation carrying capacity of the lake. However, boating use of the lake was nearing capacity at peak times.

3. Social carrying capacity problems occurred at peak times, mainly due to the predominance of power boaters and water skiers. The

mixing of various boating-oriented activities compounded the conflicts occurring on peak summer weekends and holidays.

4. A substantial number of power boat operators were not knowledgeable about power boat handling, common courtesies, and the conditions unique to Deep Creek Lake.

5. Safety hazards and annoyances were caused by personal watercraft and other similar vessels.

6. Summer land-based and shoreline recreational activities were experiencing few if any problems of overcrowding or overuse.

7. Winter activities had mixed levels of use.

8. A high percentage of people surveyed indicated that they had enjoyable experiences at Deep Creek Lake, but many of them said that there are "too many people" on summer weekends.

9. There was no evidence of immediate threats to recreational use of Deep Creek Lake due to adverse resource conditions.

10. There was no system in place to collect data on the number, use patterns and characteristics of recreational users of the lake.

Following the publication of the report, DNR worked with the former Deep Creek Lake Advisory and Review Committee and prepared and implemented an action plan and updated the Deep Creek Lake regulations to address carrying capacity issues. The following actions were included:

- zoning additional coves with speed limit and use restrictions.
- implementation of a 3-knot minimum wake speed limit within 100 feet of shore.
- restrictions on personal watercraft use at peak use times.
- provisions for managed growth of new slips and permits.
- revision of eligibility criteria for dock permits.
- implementation of an environmental monitoring program.
- expanded information and education effort.

Boat count studies conducted by DNR since 1989 show that peak boating uses on summer weekends and holidays fluctuate between a low of 210 to 225 boats to a high of 400 to 430. URDC recommended a carrying capacity of 350 boats during peak use times. In the first five years of monitoring boat counts, observed peak boating use levels exceeded URDC's recommendation on approximately 25% of the sample days (warm summer weekends and holidays).

Visitor Access

Although the lake and buffer strip are used primarily by adjoining property owners with dock permits or by commercial establishments (marinas, restaurants, etc.), it is important to remember that the citizens of Maryland contributed substantial tax dollars to the acquisition and protection of the lake and buffer strip. Except at Deep Creek Lake State Park, the general public's use of the buffer strip is limited by regulation to walking and fishing. General public access points are currently limited to the state park, public road crossings, and commercial marinas.



Meadow Mountain Campground

Recreation Areas

In addition to the lake itself, Deep Creek Lake State Park provides a public recreation area. The State Park is the only public beach on the lake. Located in the central area of the lake, the park offers traditional recreational facilities, including the Meadow Mountain campground, boat launching, picnic areas, trails, and an interpretive center. During the winter months, the lake surface is often frozen, providing ice fishing and potential snowmobiling opportunities.

Commercial Uses

Garrett County's visitor-based industry has proven to be its most dynamic economic sector, with Deep Creek Lake being the center for recreation and tourism. While many industries such as agriculture and mining have suffered during the previous decades, spending for commercial services associated with recreation and tourism continue to rise, representing a shift from mining and farming toward a service oriented economy.

Because the service economy associated with Deep Creek Lake is dependant upon an ecologically sustainable and aesthetically pleasing environment, Garrett County has adopted the following policies regarding industry and commercial uses of the lake and surrounding area:

- Prevent the establishment of any new industry in the lake area which would be ecologically or aesthetically incompatible with area's recreational aspects.
- Realize the economic benefits of tourism without destroying the attractiveness of the natural features which are essential to this activity.
- Provide commercial facilities to meet local and tourist demands but avoid over-excessive strip-commercial development.
- Restrict use of unsightly advertising.
- Encourage commercial development which is

aesthetically compatible with other development around the Lake.

In most instances, existing lake regulations and county zoning ordinances direct commercial uses of Deep Creek Lake and the surrounding area to locations and in a manner which is in keeping with Garrett County and State policy.

Private Uses

A number of privately owned recreational facilities are located in the Deep Creek Lake area. Many of the facilities are adjacent to the lake and offer varying degrees of lake access and use. Private sector recreational facilities on Deep Creek Lake include docks and small beach areas at the many private residences bordering the lake. While these facilities do not provide recreation for the general public, they are large in number (approximately 2,000 dock permits are in existence). There are also two private yacht clubs for sailing enthusiasts on Deep Creek Lake.

Fishing

Overall, the recreational fishery of Deep Creek Lake is excellent. The bass and walleye fisheries attract tournament events throughout the season. The lake has the reputation of producing the largest sunfish in Maryland and the walleye fishery attracts many nonresident anglers. A relatively smaller group of anglers target the trophy northern pike fishery. The fishery is supported by natural reproduction for all species except trout. Angling opportunities exist throughout the year, including the winter ice fishing season.



Recreational Sailing on the Lake

The Maryland Department of Natural Resources (DNR) Fisheries Service has implemented several initiatives on Deep Creek Lake to protect and enhance the recreational fishery. Deep Creek Lake was the site of the first "catch and immediate release" spring black bass fishery in 1987, a measure that was implemented statewide in 1990. The reproducing walleye population was first established in 1983 through a fry stocking program. A current regulation protects walleye from harvest during the spawning period, from March 1 through April 15. The popular trout stocking program was implemented in 1987. Fisheries Service personnel continue to

monitor the status of fish populations annually in Deep Creek Lake, with the overall objectives of maintaining the high quality fishery and identifying opportunities to enhance fish populations.

Boating

Three basic types of boats are utilized on Deep Creek Lake: power boats, sail boats and human powered boats. Within each of these broad categories, a variety of different vessels are used. In general, boating activity on the lake is at a peak during spring and summer weekends. According to the 1988 URDC study, overall boating activity during non-

Permitted Public Fishing from Shore



peak times was well within carrying capacity limits.

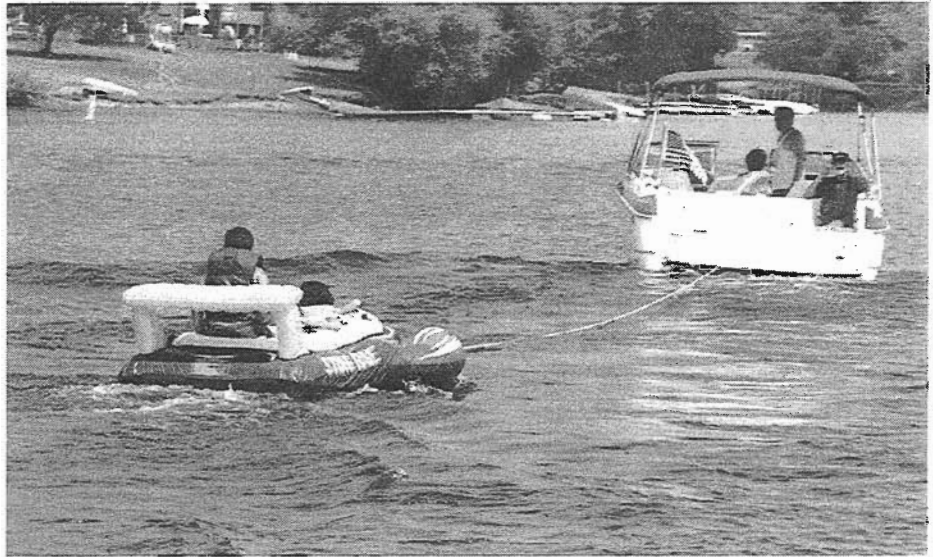
Power boats travel on all sections of the lake for the purposes of fishing, water skiing or scenic appreciation. Boat lengths are restricted by current regulations to 26 feet length overall, except for pontoon boats which are limited to 30 feet.

Bridge heights may restrict the use of sailboats to certain areas of the lake. The area south of the Glendale Road bridge is the most popular sailing site, and has two private yacht clubs that offer moorings to members.

Human powered boats include canoes, kayaks, rowboats and paddle boats. These craft tend to stay close to shore to avoid close contact with faster traveling power boats. Sailboat activity tends to be concentrated from midmorning to late afternoon. In general, a lack of wind in the early morning and early evening hours makes these time periods less conducive to sailing.

Docking

Some privately controlled docks are common docks, built for the joint use of people living in a particular development. The majority of docks on the lake, however, are individual docks belonging to property owners with waterfront property. These docks are constructed and maintained according to the requirements of the lake regulations and buffer strip use permits issued by the lake manager. The lake regulations address docking of personal water craft (PWC), but only to the extent that they are treated as power boats when moored at docks. PWC may be beached on the shore if they weigh 500 pounds or less. In recent years, there have been an increasing number of dock permit holders who moor personal



Family Recreation on the Lake



Privately Controlled Common Dock

water craft at their docks in numbers that exceed the restrictions on power boats.

Hiking

The current lake regulations allow the general public to walk on the buffer strip. However, a continuous trail on the buffer strip has not been developed or contemplated.

DNR does have and maintains hiking trails in Deep Creek Lake State Park as well as in other nearby public land units including Herrington Manor and New Germany State Parks and Savage River State Forest.

Water Sports

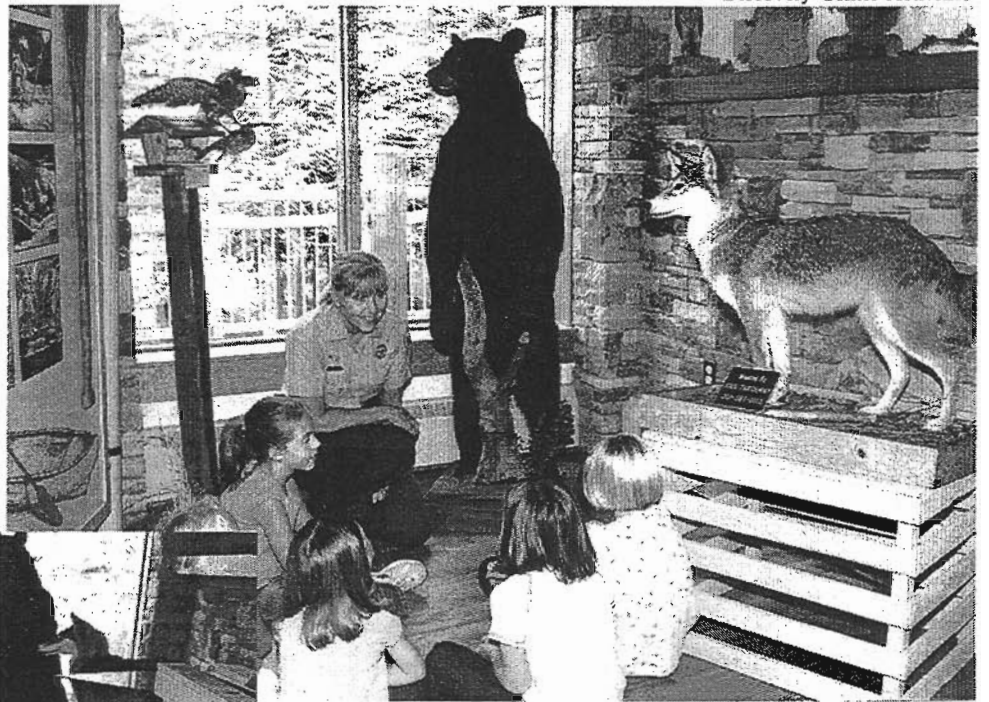
Water skiing, wake boarding and tubing are popular at Deep Creek Lake. Windsurfing also occurs. These uses also tend to be at their highest levels during the peak boating periods of spring/summer weekends. The operation of personal water craft is restricted on the lake during summer peak-use boating periods.

Canoes and Kayak on the Lake



Scenic Appreciation

The rural and natural setting of Deep Creek Lake is an important factor attracting tourists to the region. Maintaining that character is also important to lake property owners as well as Garrett County. It is the objective of the county to protect the scenic qualities of Deep Creek Lake.



Interpretive Programs

Deep Creek Lake State Park sponsors interpretive programs for park visitors. The recent construction of the Deep Creek Lake Discovery Center within the park provides an opportunity for all visitors to the region to learn more about the natural and cultural resources of the area.



MAJOR ISSUES AND RECOMMENDATIONS

Deep Creek Lake currently has a 76-year history. Since 1925, the use of the lake has evolved as the needs of the power company, local citizens and visitors changed. Both local and state governments have taken on certain tasks to ensure that Deep Creek Lake and its associated natural and recreational resources are managed effectively for all citizens. Because of the evolution of the lake management program and regulations between the time that the dam was constructed and the purchase of the lake and buffer by the State of Maryland, many of the major issues facing the Deep Creek Lake community have been previously addressed.

This plan is being developed with a view toward providing a framework for a future cooperative management approach to Deep Creek Lake. The Policy and Review Board, Garrett County and DNR recognize that this document will not be able to address all of the management issues facing the lake community. However, the plan is designed to build on the work that has already been accomplished and to address major unresolved issues that have overall consequences for the future lake management program. This section identifies those issues and provides the recommendations of the PRB and DNR for their resolution.

Lake Water Quality

Good water quality is essential to maintain the biological integrity of Deep Creek Lake. Recreational use of the lake is also dependent on pollution free water. As was discussed in the Assessment of Existing Conditions section, the water quality of Deep Creek Lake is generally

considered good. Because the maintenance of good water quality is extremely important to the economy of the Deep Creek Lake region, it is one of the major objectives in DNR's management of the lake.

Water quality can be degraded by either point source discharges or non-point source contributions. Point source discharges are those that can be traced to a single point, such as a sewage outfall pipe, as opposed to non-point sources that cannot be traced to a single point, such as runoff from developed land, fields or forests and deposition from the atmosphere during storm events.

Point Sources

Control of point sources occurs through a permitting system created by the Federal Clean Water Act known as the National Pollutant Discharge Elimination System (NPDES). In Maryland, each point source must be permitted by the Department of the Environment in cooperation with the U.S. Environmental Protection Agency.

Non-point Sources

The effects of non-point sources of pollution within the lake are more difficult to monitor and control. Potential non-point source pollution includes sediment and nutrient runoff from agricultural and developed land, stormwater runoff from roads and other impervious surfaces, bacterial contamination from failing septic systems and acid input from both localized sources and precipitation.

Sedimentation stems from land use activities such as agriculture, construction and logging which expose bare ground to precipitation and allow soil to leave the site. Excess nutrients (nitrogen and phosphorus) from non-point source runoff can cause large growths of algae and other aquatic plants. When these plants die and decompose, dissolved oxygen in the water column is depleted. This situation can contribute to fish kills. Population, physiography and land and water use all contribute to existing water quality conditions throughout the Deep Creek Lake Basin.



Sedimentation from Land Use Activities and Shore Erosion



Rapirian Buffered Shore Line with Housing and Docking

The following recommendations aim to maintain the overall good water quality and to suggest methods for improving potential localized problems.

1) Growth and development in the watershed will be the largest potential impact to water quality in the future. Garrett County is encouraged to utilize its land use authority to direct growth in a manner which has the least possible impact on the water quality of Deep Creek Lake.

2) Shoreline erosion is generated by natural events and boat wakes and contributes to sedimentation levels within the lake. Because this issue has never been the subject of a scientific study at Deep Creek Lake, it is recommended that such a study be undertaken.

3) Ongoing water quality sampling should continue. Every ten years, an independent, comprehensive water chemistry and biological study should be conducted at Deep Creek Lake in order to monitor any changes in these parameters over time.

4) Forested buffers to water bodies have been demonstrated to dramatically reduce the amount of sediment and nutrients entering a water system from non-point sources. All land owners with stream or lake front property within the Deep Creek watershed are strongly encouraged to maintain a forested buffer whenever possible. The Department should develop incentive programs to encourage landowners to voluntarily plant vegetative buffers along the lake and its tributaries.

5) Failing septic systems pose a public health threat and can contribute to nutrient enrichment problems. Areas of failing septic systems in the Deep Creek Lake watershed should be corrected. Garrett County should consider doing additional monitoring of areas with failing septic systems.

6) Private land use in the watershed has a significant influence on lake water quality. Best management practices are strongly encouraged for agricultural, construction, forest management and mining activities in the watershed. Streamside buffers are encouraged whenever these uses occur in or near a tributary to the

lake. Property owners are encouraged to take advantage of state and federal cost share programs to assist them in protecting these resources.

7) Permitting agencies are encouraged to consider the unique importance of the resources of Deep Creek Lake when issuing point source discharge permits, and to ensure that all measures have been taken to protect and maintain the existing good water quality at the lake.

8) Landowners within the watershed should be encouraged to limit the use of, and handle properly, all lawn, vehicle and household chemicals that could run into the lake or its tributaries.

9) Acid mine drainage is a factor that affects lake water quality. The state should continue with its management program to mitigate this problem. Private solutions to this issue are also encouraged.

Buffer Strip

The pattern and types of development activities that occur on the land adjacent to the lake have an impact on both the natural resources and the experiences of the lake users. Garrett County has developed a zoning ordinance that officials feel will favorably guide growth in the future. The county has also adopted a policy of developing long term programs and strategies to encourage land-based commercial recreational uses away from the lake surface to help relieve pressure on the shoreline, buffer strip and lake.

The shoreline and surrounding buffer strip are an important natural and recreational resource. Vegetative cover in the buffer strip is important for protecting the water

quality of the lake, providing a visual and sound buffer and providing habitat for wildlife. Because the buffer strip is in public ownership, there are public access and use issues surrounding its management. The following steps should help maintain the integrity of the lake and the surrounding land.

1) Management of the shoreline and buffer strip are covered by the existing lake regulations. These regulations have largely been effective and no major changes to them are recommended at this time.

2) It is recommended that DNR develop and implement incentive programs to encourage property owners to plant trees and other vegetation in the watershed, and to provide a more stable forest cover on the buffer strip and shoreline.

3) Although the buffer strip is public property, a continuous trail around the lake is not desirable due to resource protection considerations. Should other trails be developed in the future, consideration should be given to resource protection needs in their design. Any new trails that DNR established on the buffer strip must have access for the general public.

4) Garrett County is strongly encouraged to continue to use its zoning authority to protect the lake resources and scenic beauty.

5) It is recommended that incentive programs and technical assistance be made available to property owners for the purpose of protecting the shoreline of the lake from erosion, and to help assist in the funding of shoreline protection projects.

Carrying Capacity, Boating and Docking

Current concerns regarding lake carrying capacity are focused on boating and personal water craft use during peak periods on summer weekends and holidays. Growing personal water craft use is especially seen by many people in the lake community as an activity that should be addressed.

There is also concern by many property owners about physical access to their dock sites due to shallow water or the growth of submerged aquatic vegetation (SAV). Historically, the Maryland Department of Natural Resources has not attempted to manipulate SAV in Deep Creek Lake. This approach acknowledges both the benefits of SAV and its natural occurrence in lentic ecosystems like Deep Creek Lake. However, recent climatic conditions coupled with the increased development of home sites in shallow headwater reaches of Deep Creek Lake have increased complaints from affected lake property owners regarding SAV.

The following recommendations are designed to adapt to changing needs and circumstances pertaining to boating use of the lake.

1) Boating and personal water craft use on the lake will change over time. Both physical and social carrying capacity will be affected by changes in use patterns. Therefore, it is recommended that an independent carrying capacity study should be undertaken as soon as possible, and then be updated every 10 years.

2) Based on the results of the carrying capacity study, the Department and the PRB will work together to develop regulations and other ways better to manage boating, skiing, personal watercraft, and similar recreational uses.

3) Sedimentation of submerged areas is perceived to be a problem; therefore, property owners with permitted dock sites should be able to remove sediment in channels and in the immediate vicinity of their docks by permit. Excavation should only be conducted to the original level of the



Recreational Fishing from Power Boat



Public Swimming Area

lake bottom. Obtaining government permits and the costs of sediment removal and disposal will be the responsibility of the property owner. The Department will address requests for removal of sediment from any areas affecting more than one property owner.

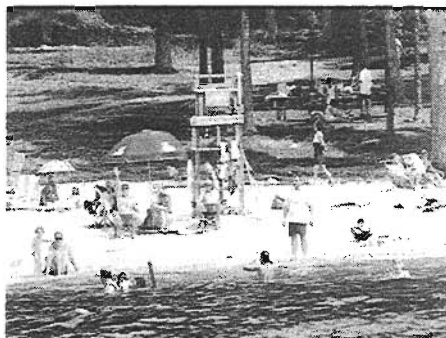
4) Submerged aquatic vegetation (SAV) has been perceived to be a problem related to the recreational use of the lake. The Department has examined a number of options related to solving the SAV issue. Mechanical treatment is the preferred management option for the specific dock sites impacted by SAV growth and should be allowed by permit. Cutting should only be conducted in the areas immediately around the affected docks or for an access channel to them. All costs involved with mechanical treatment and the disposal of SAV cuttings will be the responsibility of the property owner.

Visitor Access, Recreation Areas and Activities

Deep Creek Lake provides recreational activities during all

seasons. In general, the availability of access to the lake and quantity and quality of recreational areas and activities is adequate to meet visitor demand. There are, however, some outstanding issues that should be addressed.

1) During winter months, snowmobiling and ice fishing are popular activities on the lake. Penelec traditionally allowed these uses despite the inherent hazards. This is a new management issue now that the lake is state property. Snowmobiling and ice fishing on the lake surface should be permitted by DNR at the users own risk. DNR should adopt regulations to manage operating under the influence and reckless operation of snowmobiles.



Public Swimming and Picnic Area

2) Public swimming and boating access are important to enjoyment of the lake. If future demand for these services increases, Garrett County and DNR should work together to establish additional public recreational opportunities.

Commercial Uses

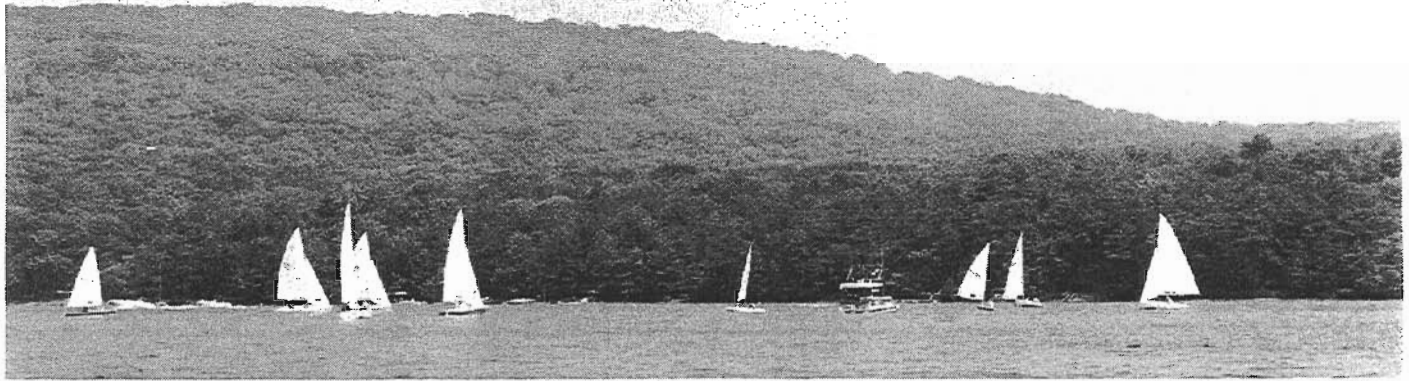
The lake management regulations address existing commercial uses of the lake and shoreline by contiguous property owners. However, the regulations do not provide for commercial uses by individuals or corporations that do not own property on the lake.

1) DNR receives requests for new commercial services and uses of the lake. Permitted activities must be limited to those that are recreational in nature. The lake regulations should be amended, with the approval of the PRB, to manage these uses under a permitting system. The regulations will include a definition of "recreation" and what uses are appropriate for continuing the quality of experience in the lake area.



Day Use Entrance and Public Boat Ramp





2) There is a growing demand to convert commercial marina permits to residential use permits. DNR should continue to prohibit this from occurring.

Fish and Wildlife Resource Management

The natural resources of Deep Creek Lake and its watershed are important to the health of the Lake ecosystem. Many species of fish and game are also valuable recreational resources. Conservation of fish and wildlife resources is a major overall goal of the lake management program. The following recommendations are designed to protect fish, forest, wildlife and natural heritage resources while considering the economic and recreational needs of the region.

1) Habitat loss and fragmentation are vital concerns for the plants and animals in the Deep Creek Lake watershed. Protecting or reestablishing forested buffers around the lake and along watershed streams is important from a habitat standpoint.

2) The hydrologic regime of Lower Deep Creek has been dramatically altered by the reservoir and associated hydroelectric plant.

Restoration of more natural flow characteristics is important to plant and animal life.

3) There are a number of rare, threatened or endangered species that have been identified on state property in the Deep Creek Lake watershed. All state agencies and Garrett County should implement measures to protect these species and their habitats. A strong effort is also needed to educate lake visitors and property owners about the actions they can undertake to conserve rare, threatened and endangered species.*

4) Property owners and visitors should also be encouraged to avoid feeding waterfowl and other wildlife

species as well as to store garbage in bear proof containers.

5) Fisheries Service personnel should continue to monitor the status of fish populations annually in Deep Creek Lake, with the overall objectives of maintaining the high quality fishery and identifying opportunities to enhance populations.

6) A strong effort is needed to educate all residents, property owners and visitors to the Deep Creek Lake region concerning the importance of preventing the introduction of hydrilla, zebra mussels and other non-native species to the watershed.

Commercial Fuel Dock



*Garrett County recognizes only the Federal list of rare, threatened or endangered species.

The Department of Natural Resources owns and manages Deep Creek Lake State Park, the lake and buffer strip. This area represents approximately 10% of the Deep Creek Lake watershed. Garrett County, watershed landowners and visitors to the region all have vital roles to play in managing the natural and recreational resources of the Lake. A cooperative approach is essential if Deep Creek Lake is to remain a healthy ecosystem and a strong economic asset to Western Maryland.

1) Garrett County is responsible for land use regulation and zoning. It should continue to use those ordinances to protect the resources and scenic quality of the Deep Creek Lake area.

2) DNR has been entrusted to protect Deep Creek Lake and the surrounding buffer strip for the long term benefit and enjoyment of visitors, property owners, and the citizens of Maryland. DNR is also responsible for the day to day management of the lake and buffer strip, as well as implementation of the Deep Creek Lake regulations. The lake management staff should maintain its current structure and policies. Changes in fees and the regulations that management feels are necessary to respond to future events shall be brought before the PRB. If the PRB agrees that a change is required to best manage the Lake, the Department is responsible for conducting the necessary legal process and ensuring that the change is implemented.

3) Private landowners are responsible for management of the land and structures that they own. Most are concerned with protecting

both their investment and the Lake environment. Educating landowners about the best techniques for conserving habitat and water quality is important for the future of Deep Creek Lake. The DNR and the PRB should develop educational brochures and organize a more effective outreach program. The County is encouraged to continue to participate in this endeavor.

4) Interpretive and educational outreach to visitors is also important. Local real estate firms should be encouraged to include education information about conserving Lake resources to renters and sales clients. Deep Creek Lake State Park's interpretive programs should be focused more on encouraging visitors to appreciate and wisely use the natural resources of the Lake.

5) The Policy and Review Board has the following specific roles and responsibilities: (1) As found in Annotated Code of Maryland, Article-Natural Resources, Section 5-215.1 (B)(1) -" The Secretary and the Deep Creek Lake Policy and Review Board shall prepare a plan that provides for the wise use, protection and management of the natural and

recreational resources of Deep Creek Lake"; and (2) As found in Annotated Code of Maryland, Article-Natural Resources, Section 5-215.1 (D)(2) -" Before the Secretary proposes or adopts a regulation, the Secretary shall submit a draft of the regulation to the Deep Creek Lake Policy and Review Board for its review and consent if the regulation relates to (I) The content or the adoption and implementation of a Deep Creek Lake Recreation and Land Use Plan or (II) Any fee proposed under Section 5-215." Although these duties are the only ones defined by law, the PRB is the eyes and ears of the Lake community. While DNR, as the managing entity, is usually aware of issues as they arise, the PRB also has a responsibility to actively engage DNR, other appropriate agencies, and the general public in lake management issues.

6) The DNR, Garrett County, and the PRB should coordinate their management efforts and decisions pertaining to zoning and lake regulations, to ensure that policies are consistent, complementary, and designed to protect the natural resources of the lake and watershed.



Deep Creek Lake Riparian Buffer

APPENDIX I - NATURAL RESOURCES OF THE DEEP CREEK LAKE REGION

Geography and Topography

The topographic elevations found within the Deep Creek Lake region are a reflection of the geologic history of the area and the varying erosive rates of different rocks. This physical activity has created elevations which range from more than 3,000 feet above sea level to the full pool elevation of the lake at 2466 feet.

The topography provides the foundation for understanding the other natural features which influence development and land use in the region. The topography determines the watershed boundaries and channels surface water into Deep Creek Lake. The level of the water table generally follows the surface topography and flows down the gradient toward the lake. In turn, the water table influences to a large degree the types of soils found on-site and their drainage characteristics which may impose constraints on development. Even the vegetation and wildlife observed are affected by the area's topography. Along the stream valley corridors, for example, the high water table, periodic flooding, and other environmental factors combine to produce a unique natural community.

Slope is an expression of how rapidly the elevation changes. Slope is an important factor in determining the suitability of land for various uses. Level terrain is often poorly drained in temperate regions and this can increase development costs owing to surface drainage costs. Gentle slopes (3-8 percent) are prime areas for residential or industrial development. Steep slopes (25 percent or

greater) increase development costs by necessitating additional grading. Steep slopes also intensify the erosion and sedimentation problems associated with development.

Geology

The Deep Creek Lake region is located in a portion of the Allegheny Mountains which is a subdivision of the Appalachian Plateau Physiographic Province (see Geologic Map of Maryland). The Alleghenies are, in geologic terms, old hills. They have a long, complex history that began more than 500 million years ago during the Paleozoic era. For more than 300 million years, the Appalachian area was a long trough filled by an arm of the ocean, and sediments from eroding uplands washed into the area, slowly adding to the accumulating debris of marine skeletons. In later ages, due to the filling process, the trough became a low-lying swamp teeming with primitive insects and reptiles. Two hundred million years ago, conditions changed and a geologic event known as the Appalachian Orogeny (mountain making) occurred. Pressures in the earth's crust caused the area to buckle and contort as the region was uplifted. The sea bottom and swamp sediments, thousands of feet thick, were pressed into high folds. Entombed were plant remains that became today's coal beds.

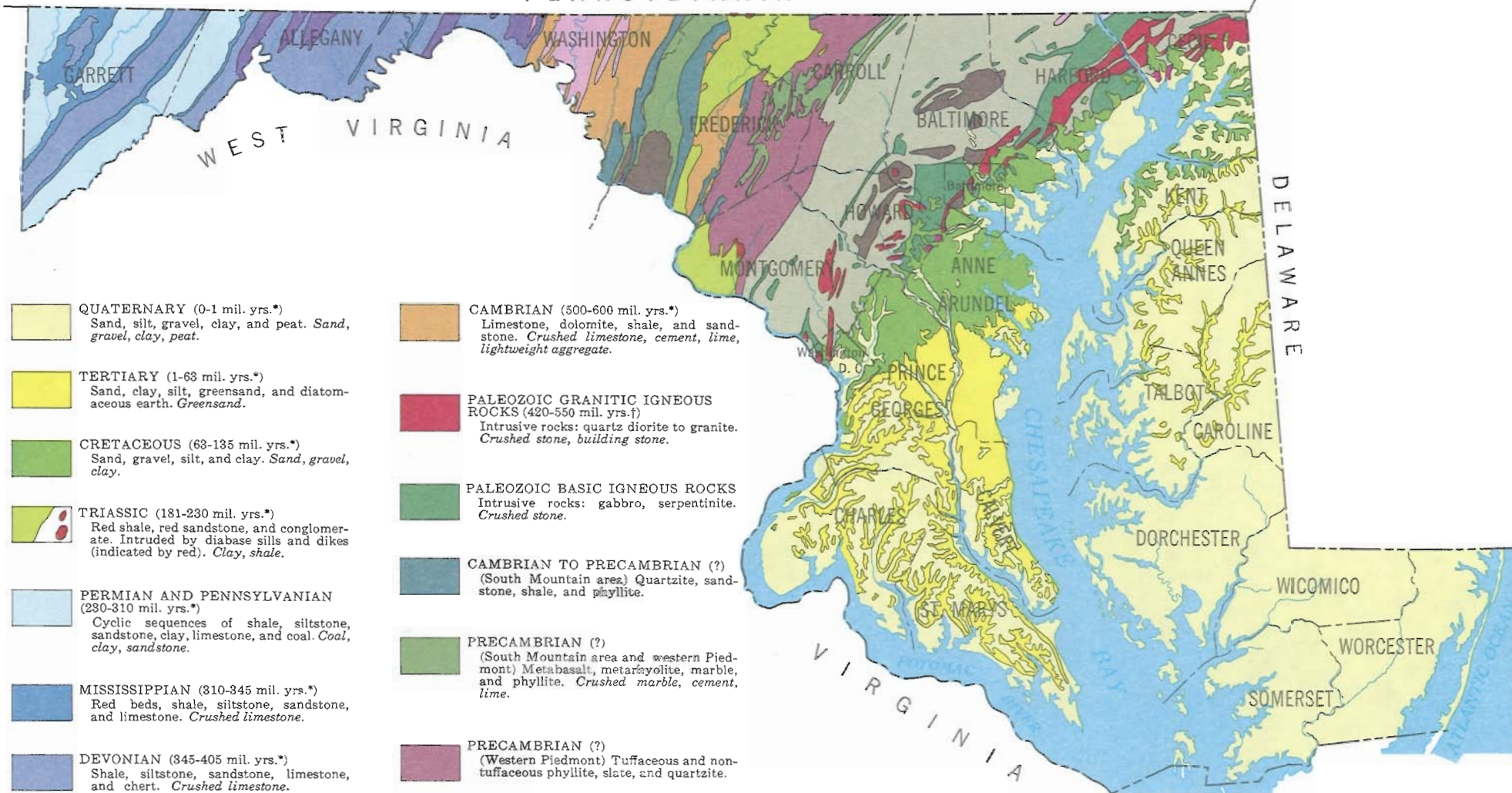
The northern half of Deep Creek Lake is located on a broad "U" shaped structure, known as a syncline, called the Casselman Basin. Meadow Mountain is the eastern

border of this formation. The sediments exposed here are brown colored sandstones and shales of an old formation called the Mauch Chunk. These sediments are from the Mississippian age (approximately 335 million years old). At the state park, the 200 to 300-foot thick Greenbrier Limestone underlies the lake and contributes calcium carbonate to buffer the lake waters from acidic runoffs due to the younger formations of sandstone, shale and coal.

The dam and immediately adjacent areas are in the Upper Youghiogheny coal basin in which sandstones and shales are exposed of the Allegheny/Pottsville formation of Lower Pennsylvanian age (325 million years old). Some lower coal beds may also be exposed.

Southeast of Deep Creek Lake State Park and Meadow Mountain, the southern half of the Lake lies in the "A" shaped Deer Park Anticline composed of the (1) brown colored sandstones and shales of the Pocono Formation of Lower Mississippian age (350 million years old) then (2) further southeast, red to reddish brown sandstones and shales of the Hampshire Formation of Upper Devonian age (365 million years old) and finally (3) the Foreknobs Formation (formerly called the Jennings Formation) consisting of yellowish gray to brown sandstones and shales also of Devonian age. This older formation is located in an area which may be prospective for natural gas exploration from the Oriskany Formation (385 million years old) 5000 to 6000 feet below the surface.

PENNSYLVANIA

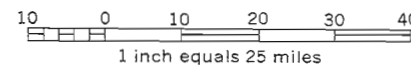


- QUATERNARY (0-1 mil. yrs.*)
Sand, silt, gravel, clay, and peat. *Sand, gravel, clay, peat.*
- TERTIARY (1-63 mil. yrs.*)
Sand, clay, silt, greensand, and diatomaceous earth. *Greensand.*
- CRETACEOUS (63-135 mil. yrs.*)
Sand, gravel, silt, and clay. *Sand, gravel, clay.*
- TRIASSIC (181-230 mil. yrs.*)
Red shale, red sandstone, and conglomerate. Intruded by diabase sills and dikes (indicated by red). *Clay, shale.*
- PERMIAN AND PENNSYLVANIAN (280-310 mil. yrs.*)
Cyclic sequences of shale, siltstone, sandstone, clay, limestone, and coal. *Coal, clay, sandstone.*
- MISSISSIPPIAN (310-345 mil. yrs.*)
Red beds, shale, siltstone, sandstone, and limestone. *Crushed limestone.*
- DEVONIAN (345-405 mil. yrs.*)
Shale, siltstone, sandstone, limestone, and chert. *Crushed limestone.*
- SILURIAN (405-425 mil. yrs.*)
Shale, mudstone, sandstone, and limestone. *Glass sand, crushed limestone.*
- ORDOVICIAN (425-500 mil. yrs.*)
Limestone, dolomite, shale, siltstone, and red beds. Slate and conglomerate in northern Harford County. *Crushed limestone, cement, clay, lime.*

- CAMBRIAN (500-600 mil. yrs.*)
Limestone, dolomite, shale, and sandstone. *Crushed limestone, cement, lime, lightweight aggregate.*
- PALEOZOIC GRANITIC IGNEOUS ROCKS (420-550 mil. yrs.†)
Intrusive rocks: quartz diorite to granite. *Crushed stone, building stone.*
- PALEOZOIC BASIC IGNEOUS ROCKS
Intrusive rocks: gabbro, serpentinite. *Crushed stone.*
- CAMBRIAN TO PRECAMBRIAN (?) (South Mountain area) Quartzite, sandstone, shale, and phyllite.
- PRECAMBRIAN (?) (South Mountain area and western Piedmont) Metabasalt, metagraywacke, marble, and phyllite. *Crushed marble, cement, lime.*
- PRECAMBRIAN (?) (Western Piedmont) Tuffaceous and non-tuffaceous phyllite, slate, and quartzite.
- PRECAMBRIAN (?) (Eastern Piedmont) Schist, metagraywacke, quartzite, marble, and metavolcanic rocks. *Crushed stone, crushed marble, building stone.*
- PRECAMBRIAN BASEMENT COMPLEX (1100 mil yrs.†)
Gneiss, migmatite, and augen gneiss.

MARYLAND GEOLOGICAL SURVEY
Kenneth N. Weaver, Director

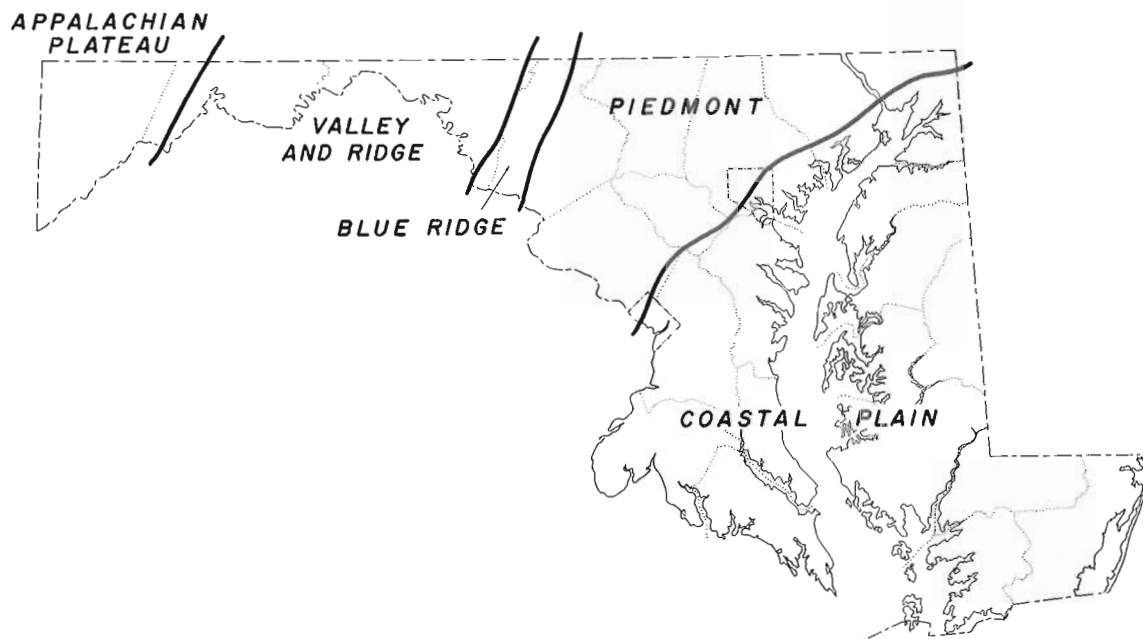
GENERALIZED GEOLOGIC MAP OF MARYLAND*
1967



Most important mineral products in italics.
* Age ranges from Kulp, J. L., 1961, Geologic time scale: Science, v. 133, no. 3459, p. 1105-1114.
† Radiometric dates made on Maryland rocks.

† A detailed Geologic Map of Maryland, 1968 at a scale of 1 inch equals 4 miles, is also available.

A BRIEF DESCRIPTION OF THE GEOLOGY OF MARYLAND



Maryland is part of three distinct physiographic regions: (1) the Coastal Plain Province, (2) the Piedmont Province, and (3) the Blue Ridge, Valley and Ridge, and Appalachian Plateau Provinces. These extend in belts of varying width along the eastern edge of the North American continent from Newfoundland to the Gulf of Mexico.

The Coastal Plain Province is underlain by a wedge of unconsolidated sediments including gravel, sand, silt, and clay, which overlaps the rocks of the eastern Piedmont along an irregular line of contact known as the Fall Zone. Eastward, this wedge of sediments thickens to more than 8,000 feet at the Atlantic coast line. Beyond this line is the Continental Shelf, the submerged continuation of the Coastal Plain, which extends eastward for at least another 75 miles where the sediments attain a maximum thickness of about 40,000 feet.

The sediments of the Coastal Plain dip eastward at a low angle, generally less than one degree, and range in age from Triassic to Quaternary. The younger formations crop out successively to the southeast across Southern Maryland and the Eastern Shore. A thin layer of Quaternary gravel and sand covers the older formations throughout much of the area.

Mineral resources of the Coastal Plain are chiefly sand and gravel, and are used as aggregate materials by the construction industry. Clay for brick and other ceramic uses is also important. Small deposits of iron ore are of historical interest. Plentiful supplies of ground water are available from a number of aquifers throughout much of the region.

The Piedmont Province is composed of hard, crystalline igneous and metamorphic rocks and extends from the inner edge of the Coastal Plain westward to Catoctin Mountain, the eastern boundary of the Blue Ridge Province. Bedrock in the eastern part of the Piedmont consists of schist, gneiss, gabbro, and other highly metamorphosed sedimentary and igneous rocks of probable volcanic origin. In several places these rocks have been intruded by granitic plutons and pegmatites. Deep drilling has revealed that similar metamorphic and igneous rocks underlie the sedimentary rocks of the Coastal Plain. Several domal uplifts of Precambrian gneiss mantled with quartzite, marble, and schist are present in Baltimore County and in parts of adjacent counties. Differential erosion of these contrasting rock types has produced a distinctive topography in this part of the Piedmont.

The rocks of the western part of the Piedmont are diverse and include phyllite, slate, marble, and moderately to slightly metamorphosed volcanic rocks. In central Frederick County the relatively flat Frederick Valley is developed on Cambrian and Ordovician limestone and dolomite. Gently undulating plains underlain by unmetamorphosed bedrock of Triassic red shale, siltstone, and sandstone occur in three areas in the western Piedmont.

The Piedmont Province contains a variety of mineral resources. Formerly, building stone, slate, and small deposits of non-metallic minerals, base-metal sulfides, gold, chromite, and iron ore were mined. Currently, crushed stone is important for aggregate, cement, and lime. Small to moderate supplies of ground water are available throughout the region, but favorable geological conditions locally may provide larger amounts.

Unlike the Coastal Plain and Piedmont Provinces, the Blue Ridge, Valley and Ridge, and Appalachian Plateau Provinces are underlain mainly by folded and faulted sedimentary rocks. The rocks of the Blue Ridge Province in western Frederick County are exposed in a large anticlinal fold whose limbs are represented by Catoctin Mountain and South Mountain. These two ridges are formed by Lower Cambrian quartzite, a rock which is very resistant to the attack of weathering and erosion. A broad valley floored by Precambrian gneiss and volcanic rock lies in the core of the anticline between the two ridges.

The Valley and Ridge Province between South Mountain in Washington County and Dans Mountain in western Allegany County contains strongly folded and faulted sedimentary rocks. In the eastern part of the region, a wide, open valley called the Great Valley, or in Maryland, the Hagerstown Valley, is formed on Cambrian and Ordovician limestone and dolomite. West of Powell Mountain, a more rugged terrain has developed upon shale and sandstone bedrock which ranges in age from Silurian to Mississippian. Some of the valleys in this region are underlain by Silurian and Devonian limestones.

For many years the limestone formations have been used as local sources of agricultural lime and building stone. Modern uses include crushed stone for aggregate and cement. A pure, white sandstone in the western region of the province is suitable for glass manufacturing.

The Appalachian Plateau Province includes that part of Allegany County west of Dans Mountain and all of Garrett County, the westernmost county in Maryland. The bedrock of this region consists principally of gently folded shale, siltstone, and sandstone. Folding has produced elongated arches across the region which expose Devonian rocks at the surface. Most of the natural gas fields in Maryland are associated with these anticlinal folds in the Appalachian Plateau. In the intervening synclinal basins, coal-bearing strata of Pennsylvanian and Permian ages are preserved.

The sedimentary rocks of the Blue Ridge, Valley and Ridge, and Appalachian Plateau Provinces yield small to moderate supplies of ground water. Under favorable conditions large amounts may occur.

Jonathan Edwards, Jr.
Geologist

1981

STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES

Prepared by the
MARYLAND GEOLOGICAL SURVEY

Baltimore, Maryland 21218

Soils

The five major factors in the formation of soils are climate, living organisms, parent material, topography, and time. Climate and living organisms, particularly vegetation, are the active forces. Their effect on parent material is modified by topography and by the length of time the parent material has been in place. The relative importance of each factor varies from place to place.

Climate is important in the formation of soils because it influences the weathering of rocks and minerals. Weathering is more rapid under a warm, humid climate than it is under a cold or dry climate. Since the climate is fairly uniform throughout the county, there are no significant differences among soils of the lake and its watershed caused by climate alone. In addition, precipitation and length of growing season influence the type and abundance of vegetation.

Native plants have been and continue to be a major influence on the development of soils. Trees and other plants take up minerals from the soil and store them in their roots, stems, and leaves. When trees shed their leaves or needles or when plants die and decay, the plant nutrients are returned to the soil and are used by other plants. Soil development is also affected by plant roots. Roots penetrate soil material to various depths, generally increase soil porosity, and break coarse fragments such as stones. Organic acids produced by plants or released during the decay of plant material react on basic minerals contained in the parent material.

Differences in slope, especially in combination with differences in the position on the landscape, have a significant influence on the kind of soil that develops from a given parent

material. Soils in steep areas where erosion is high tend to be shallow. In flat areas, soils are usually thick and well developed.

The varying characteristics of soils are important for two reasons: (1) They influence the type and abundance of vegetation; (2) They limit the possible uses of land. The chart and map on the following page depict the soil series and associations found within the watershed. High erosion rates and stony material are the main limitations to the soils in the Deep Creek Lake watershed.

Climate

In Garrett County, precipitation is the most important climatic factor. Everyone is aware that plants need a certain amount of precipitation to grow, but rain and snow also contribute to the weathering of rocks and the development of soils.

Garrett County's elevation and location combine to produce a mean annual precipitation of 47.3 inches, an average annual snowfall of 97.0 inches, and the lowest mean annual temperature (47 degrees F) among Maryland's 23 counties. The widely varying topography is also an important factor contributing to marked differences in climate within the

county. On the southern facing valleys and slopes, for example, temperatures are generally warmer and precipitation is less than the northern facing areas of the county. These microclimatic differences can produce substantially varying vegetative types.

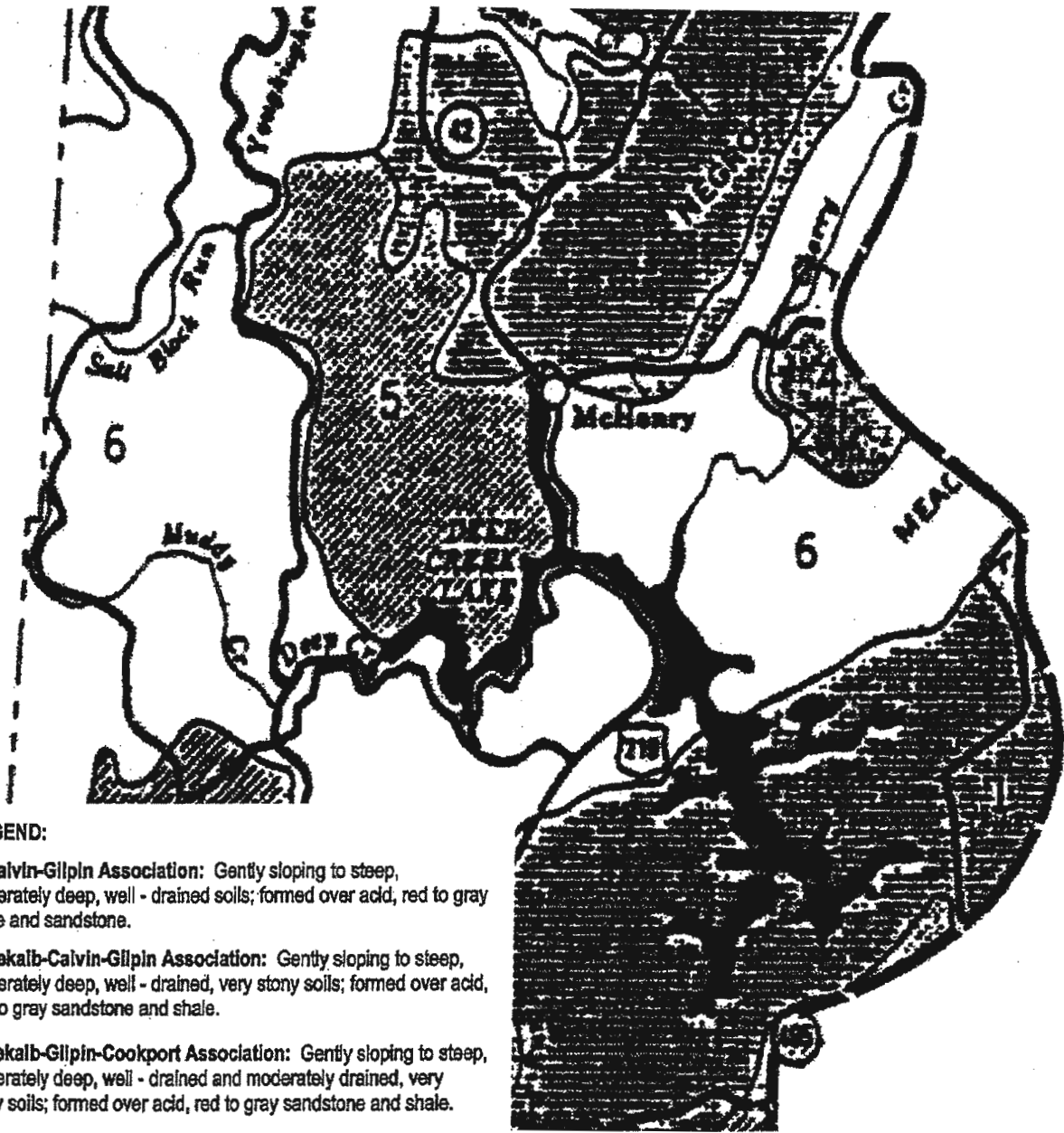
The period between the last freezing temperature in spring and the first in fall, defined as the growing season, averages only 122 days. However, this average can vary by as much as two weeks from place to place along the river corridor. This fact further influences the vegetative types found in this region.

Water Resources

Deep Creek Lake is a complex and dynamic ecosystem. The lake, viewed as a water system, is influenced by the hydrologic conditions in the watershed (streams, bogs, seeps, wetlands and groundwater draining into the lake) the shape of the lake basin, the lake water and bottom sediments. The physical and chemical components of the lake system, in turn, support a community of organisms. These organisms enrich the complexity of the lake system, having numerous links to one and other as well as affecting the lake's physical



Aerial View of the Lake



LEGEND:

1 -Calvin-Gilpin Association: Gently sloping to steep, moderately deep, well - drained soils; formed over acid, red to gray shale and sandstone.

5 -Dekalb-Calvin-Gilpin Association: Gently sloping to steep, moderately deep, well - drained, very stony soils; formed over acid, red to gray sandstone and shale.

6 -Dekalb-Gilpin-Cookport Association: Gently sloping to steep, moderately deep, well - drained and moderately drained, very stony soils; formed over acid, red to gray sandstone and shale.

SOIL SERIES	SYMBOL	PARENT MATERIAL	SLOPE	LIMITATIONS	NATIVE VEGETATION
Calvin	CaC2, CaD2, CIE	Reddish shale, siltstone, & sandstone	10-50%	Slope & erosion hazard	Native hardwoods, mostly oak
Cookport	CuB, CuD	Acidic sandstone	0-25%	Very stony, seasonally high water table	Hardwoods – oak, hickory & maple
Dekalb	DbB, DbC2, DbD2, DcD, DgC, DgD	Acidic sandstone	0-25%	Very stony, erosion hazard	Mixed hardwoods – largely black oak
Gilpin	GnB2, GnC2	Acid shale & sandstone	0-20%	Stony	Hardwood & some pine

Site Analysis - Soil Associations

Deep Creek Lake
 Maryland Department of Natural Resources
 Resource Planning

Map Graphics by DAR-PP - wdl-117/01
 File: Soils Map Deep Creek.dwg

and chemical features. All of the components of the lake system, physical, chemical and biological, are in constant change.

Certain physical processes that occur in the lake have an effect on lake dwelling organisms. Sunlight penetration, known as the depth of the littoral zone, determines the amount and extent of photosynthesis - dependent algae and submerged aquatic vegetation. In spring and early summer, the combination of solar heating and wind mixing of near-surface water layers brings about the warming of the upper portion of the lake water column. This causes stratification of the lake into layers of water with different temperatures and densities. During summertime thermal stratification, a warmer, less dense layer of water (epilimnion) floats on a cooler, denser layer (hypolimnion). Water does not mix from top to bottom, causing oxygen levels in the hypolimnion to decrease. When temperature-controlled zonation breaks down in the fall, the lake waters mix from top to bottom and oxygen levels at depth increase.

Lakes constantly receive materials from their watersheds. It is a natural geologic process for lakes of moderate depth to eventually fill in and become wetlands. Excessive or accelerated sedimentation and nutrient delivery due to landscape changes in the watershed is a process known as eutrophication.

There are no natural lakes in Maryland due to the fact that glaciers did not advance as far south as the region during the last ice age. Glacier lakes tend to be deeper and more uniform in shape than reservoirs created by dams. Deep Creek Lake was created by flooding a river valley. As a result, the lake is long, narrow and has a convoluted shoreline.

Forest Vegetation

The Deep Creek Lake Watershed, like all ecosystems, is dynamic and constantly changing. The current forest cover of the watershed is dominated by the oak-hickory type and to a lesser extent by the northern hardwood type. It represents a second-growth and maturing forest as a result of widespread logging that occurred in the watershed near in the late 1800's and early 1900's. The chestnut blight has eliminated mature American chestnuts from the forest and Dutch elm disease has reduced the number of elms. Recently, gypsy moths have caused significant mortality among the oak species and are currently poised to make a rebound.

There is evidence that the American Indian impacted the resource with firecreating open understories for hunting and protection from enemies. Early settlers removed significant quantities of trees for farming, fencing, and housing. White pine was almost eliminated for shipbuilding purposes. With the advent of narrow gauge railroads at the turn of the century, previously inaccessible areas were cut over. Wildfires that resulted from the trains and other

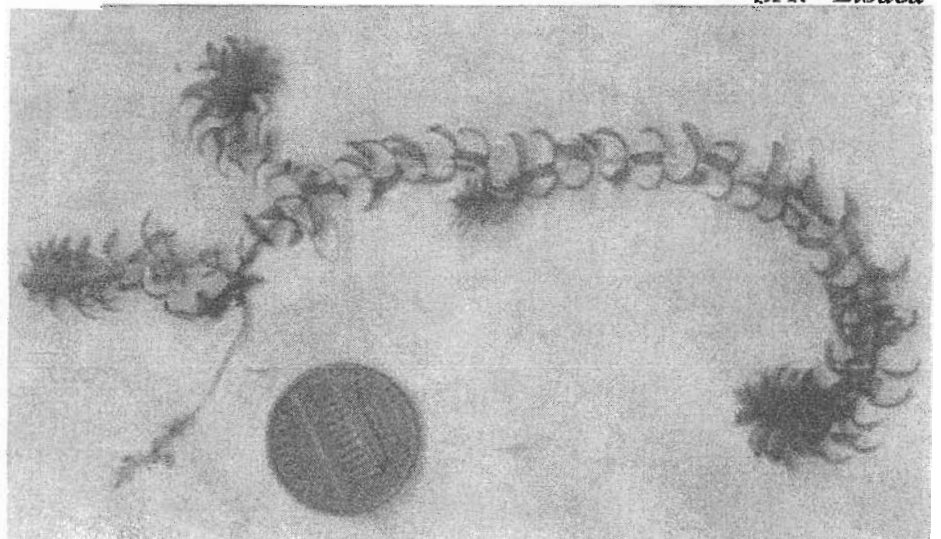
sources frequently burned in the area favoring species that were resistant to fire damage. These wildfires and heavy cutting have resulted in an even aged forest that is approaching maturity.

In general, the area north and west of the Glendale Road bridge is much more heavily forested than the area to the south and east. The southeastern area has had more agricultural development. Since World War II both areas have experienced increasing residential development. The fragmentation of the forest is expected to increase in the future as residential development continues to increase. As development and forest fragmentation increases, additional runoff from the land in the watershed occurs.

Submerged Aquatic Vegetation (SAV) in Deep Creek Lake

The SAV community within Deep Creek Lake consists of three important species: elodea (*Elodea sp.*), wild celery (*Valisneria americana*), and sparganium (*Sparganium sp.*). Elodea is the most common SAV in Deep Creek Lake and probably accounts for more than 90 percent of all SAV. It is characterized by broad oval

SAV -*Elodea*



leaves, usually four in number, arranged in whorls around a stem. However, it varies somewhat in appearance throughout its range. It is common in the northern and north-central states south to Kentucky and Virginia. Wild celery is much less widely distributed in Deep Creek Lake, and probably makes up less than 5 percent of SAV. It is characterized by a horizontal stem system which supports tufts of long, ribbon-like, flaccid leaves. The leaves of sparganium also originate from a central tuft but are short and stiff. Sparganium does not grow more than a few inches from the bottom and therefore does not have the potential to interfere with boating traffic. Both elodea and wild celery can produce dense stands which may reach the surface.

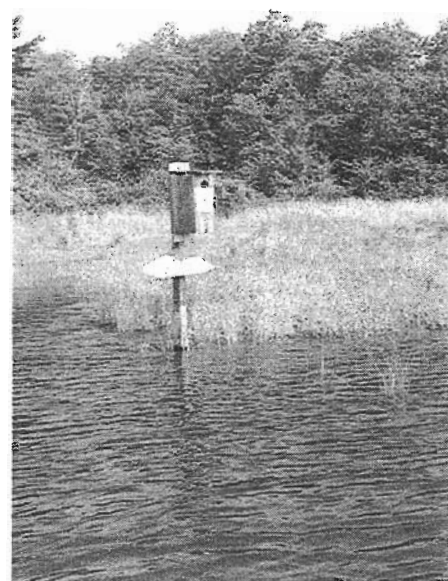
DNR staff conducted three on site surveys of Deep Creek Lake in the fall of 1998, two via boat and one aerial survey via light plane, to map the distribution of SAV. In general, SAV is found throughout much of the littoral zone of Deep Creek Lake. Exceptions are areas where the bottom is characterized by a predominately shale or rock rubble substrate. Bottom areas of silt or fine sediment, with adequate light penetration and readily available nutrients, support the densest growth of the dominant plant species, elodea. With the exception of the uppermost reaches of McHenry Cove and a few small isolated areas, the above described SAV habitat is located almost entirely in the southern portion of Deep Creek Lake in coves like Green Glade, Hoop Pole, Beckman's, Holy Cross, North Glade, and Pawn Run.

From a lake-wide perspective, SAV occurs in a relatively small proportion of the total area of Deep Creek Lake. It is estimated that less than 10 percent (probably on the order of 6 to 8 percent) of Deep

Creek Lake's 3900 acres supports significant SAV growth during the typical summer peak growth period. Areas where boaters accessing their docks encounter seasonal difficulty due to dense SAV are further limited and probably comprise less than 2 percent of the total lake area. However, property owners in communities like Crescent Shores, Hickory Ridge, Green Glade, and Paradise Ridge may encounter total SAV coverage in their coves during peak growth periods and experience considerable difficulty in navigating to and from their boat docks. The combination of shallow depths, ideal substrate, total light penetration, and readily available nutrients will continue to produce optimal conditions for SAV in those areas. SAV distribution and abundance patterns typically vary from year to year. Mild winters, with minimal ice and snow cover, will benefit the growth of SAV. The Deep Creek Lake area has experienced two relatively mild winters in succession. Two 100 year flood events in 1996 probably introduced higher than normal loads of nutrient laden sediment into coves in the southern reaches of Deep Creek Lake. The combination of mild winters and atypical nutrient input undoubtedly contributed to SAV growth in 1997 and 1998.

Elodea and wild celery are native species to Maryland waters and provide many valuable functions within the ecosystem of Deep Creek Lake. SAV contributes to water clarity by absorbing and storing nutrients which might otherwise support undesirable algal growth or stimulate phytoplankton blooms. The root systems of SAV stabilize the silt and fine sediment substrates the plants colonize, minimizing turbidity produced by wind and wave action and boat wakes.

SAV, particularly wild celery, is an important food source for waterfowl. SAV provides habitat for macroinvertebrates like snails, crayfish, and dragonfly nymphal stages, which in turn provide an important food source for fish and waterfowl. SAV also serves as an essential spawning areas for several fish species as well as habitat for the early life stages of many fish species. SAV is a habitat for turtles and amphibians, and important foraging areas for wading birds and fur



SAV in Deep Creek Lake

bearers such as mink, otter, and muskrat.

Overall, in Deep Creek Lake, the SAV community is a key component in the maintenance of water quality, the outstanding sport fishery, and the diverse waterfowl and animal community. The presence of SAV is evidence of a healthy environment capable of supporting a diverse aquatic community as well as a variety of waterfowl and animals.



Mallard - *Anas platyrhynchos*

Rare, Threatened and Endangered Species

Prior to the construction of the reservoir, the Deep Creek watershed was a mosaic of bogs, wetlands and conifer-lined streams. Larger wetlands within this system included The Glades/Cherry Creek Bogs, Thayerville Bog (now under DCL), and Hammel Glade. Alterations in the landscape since the dam was constructed has reduced the habitat area of some species, making some of them rare, threatened or endangered.

Much of Hammel Glade is a natural area owned by the Nature Conservancy, and Lower Deep Creek Natural Area was purchased by The Nature Conservancy and transferred to the State. Both of these significant habitats are in the vicinity of Deep Creek Lake, and both support several rare, threatened and endangered species. The southern water shrew (*Sorex palustris punctulatus*), is a State Endangered Species found in these environments. A wetland associated with a cove near Holy Cross Camp supports an occurrence of the State Threatened plant, *Polemonium van-bruntiae* or Jacob' Ladder. This occurrence is now quite isolated and its long-term viability is questionable. Other coves that are influenced by circum-neutral ground water and have not been developed too intensively may harbor small occurrences of this plant.

Paraplanaria (Planaria) dactyligera, an apparently rare epigeal species of flatworm, occurs in a groundwater spring between Deep Creek Lake and Rt. 219. In Maryland, this species is found at seven locations in Garrett County and one in Prince Georges County. It is reported in four other states south to

* State Endangered Species

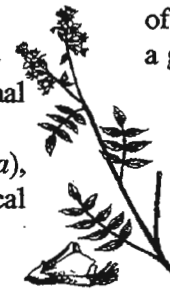
Louisiana. Many springs surveyed between the disjunct localities in Maryland have failed to yield additional occurrences. Identical external morphology to a widespread and common species (*Phagocata velata*), in conjunction with extreme technical difficulties inherent with internal morphological examination (i.e., staining/sectioning) needed for positive species identification, have prevented the additional survey work needed to confirm the need for listing *P. dactyligera* as threatened or endangered in Maryland.

A species of *Pygonodon*, a large freshwater mussel has been documented to occur in the shallow waters of Deep Creek Lake adjacent to Deep Creek State Park. While *P. grandis* is the only native *Pygonodon* to the watershed, *P. cataracta* may have been introduced incidentally during fish stocking. *P. grandis*, limited to the Ohio/Mississippi River drainages, is potentially very rare in Maryland and a potential candidate for listing as threatened or endangered. If the

species is determined to be *P. cataracta*, the occurrence may be

worth protecting since mussels can help maintain good water quality by filtering excess nutrients.

The forest land of Deep Creek Lake State Park offers values associated with the conservation of biological diversity. In conjunction with forest land that surrounds the park, the area represents a fairly large tract of forested habitat. This area provides a



Jacob's-Ladder *
Polemonium van-bruntiae

suitable habitat for several species of forest interior dwelling birds, a group of animals which are rapidly losing habitat state-wide. The park land has forests that are significantly older than the surrounding forest (part of which is managed for timber) and thereby offers significant habitats that are associated with older forests. These include a varied and complex forest canopy, more dense trees, and a more complex ground cover because of more coarse woody debris.

Fish

The recreational fishery in Deep Creek Lake is a "two story" fishery in that it supports a cold water component as well as traditional warm water species. About 10,000 brown and rainbow trout are stocked by the Fisheries Service annually, producing year-round angling opportunities. Trout are often targeted by fisherman in midsummer, a period of high boat traffic on Deep Creek Lake, which may affect fishing for other species. Trout are also active in midwinter and are routinely caught by ice fisherman. In general, stocked trout are pelagic in behavior, tending to occupy open waters without



Southern Water Shrew - *
Sorex palustris punctulatus



Freshwater Mussel - *Pygonodon*



White-tailed Deer

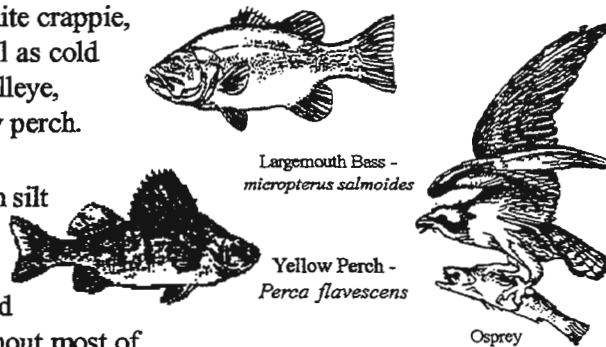
orienting on structure. The result is increased angling opportunities without increased interspecific competition with naturally reproducing gamefish species.

Deep Creek Lake supports quality fishing for warmwater species like largemouth bass, bluegill sunfish, pumpkinseed sunfish, white crappie, and chain pickerel as well as cold water species such as walleye, northern pike, and yellow perch.

Physical habitat is highly variable and ranges from silt bottomed areas in the upper reaches of shallow coves to rock and cobble substrates throughout most of the lake. Much of the large woody debris, mostly the stumps of virgin hemlock cut at the time the lake was constructed, is still intact on the lake bottom. Those stumps continue to provide valuable fish habitat.

It has been suggested that SAV

can potentially cause unbalanced predator/prey relationships in fish populations. DNR monitoring studies of fish population parameters in Deep Creek Lake indicate that species composition, age and size, structure, growth rates, predator-prey balance, and reproductive success are within



Largemouth Bass - *micropterus salmoides*

Yellow Perch - *Perca flavescens*

Osprey

desirable ranges. Walleye, for example, reach minimum harvestable size of 15 inches in four years in Deep Creek Lake, comparable to other highland reservoirs. Walleye have produced fair to excellent year classes in all but three of the years

since natural reproduction was first documented in 1983. A successful walleye year class in one of every three years is considered average in reservoirs. The growth rates of yellow perch, an important prey species of walleye, have improved since walleye were established in Deep Creek Lake. Predation by walleye on juvenile yellow perch has effectively controlled yellow perch numbers, reduced intraspecific competition, and improved the growth rate of survivors despite the fact that young yellow perch utilize SAV as cover in Deep Creek Lake.

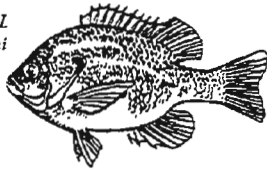
Largemouth bass and small-mouth bass reach the minimum harvestable size of 12 inches in three and four years respectively in Deep Creek Lake, comparable to black bass populations in other northern reservoirs. Bluegill sunfish, an important prey species for black bass in Deep Creek Lake, exhibit excellent growth rates. In fact, Deep Creek Lake has produced by far the largest proportion of citation size bluegills entered annually in the Maryland Sport Fishing Tournament as well as a new state record bluegill in August 1998. Although juvenile bluegill sunfish are abundant in SAV, predation is sufficient to produce outstanding growth among survivors, evidence that SAV does not overly protect bluegill in Deep Creek Lake.



Wildlife

Historically, the Deep Creek area and its glades were heavily utilized by

Bluegill - *L. macrochi*



a variety of wildlife species. Most notable were the large mammals, such as the eastern elk, wood bison, white-tailed deer, black bear, eastern cougar and grey wolf. The bald eagle, golden eagle, osprey and wild turkey were the largest birds found in the Deep Creek watershed. The beaver and otter were the most conspicuous wetland mammals.

The habitat occupied by the above species of wildlife consisted of extensive glades where the lake now exists, and the upland consisted of large coniferous stands of white pine, eastern hemlock and red spruce on the high ridges. The hardwood consisted of predominantly American chestnut and oak/hickory stands.

The settling of Garrett County and the Deep Creek area by Europeans had a dramatic effect on the flora and fauna of the area. By the beginning of the 20th century all the large mammals were eliminated except for a few deer and black bear. The coniferous forest was reduced to a few remnant stands. Only the American chestnut and young stands of oak-hickory stands remained. The American chestnut would be eliminated due to the chestnut blight by mid-century.

With the removal of the old forest vegetative composition, the number of songbirds and small mammal populations were either reduced or eliminated. The American wild turkey was eliminated by the beginning of the 20th century. The mid-size predator, the bobcat, was

reduced to a low population. In a period of 150 years, the ecosystem of the Deep Creek area was dramatically altered.

In the past 100 years, there has been a resurgence of the forests and wildlife species in Garrett County and the Deep Creek area. The maturing hardwoods provide for a rich diversity of wildlife species. Thayer Game Refuge (now Deep Creek Lake State Park) was one of the first areas in Garrett County to reintroduce white-tailed deer to Western Maryland. The advent of Deep Creek Lake introduced or increased waterfowl and wetland species to



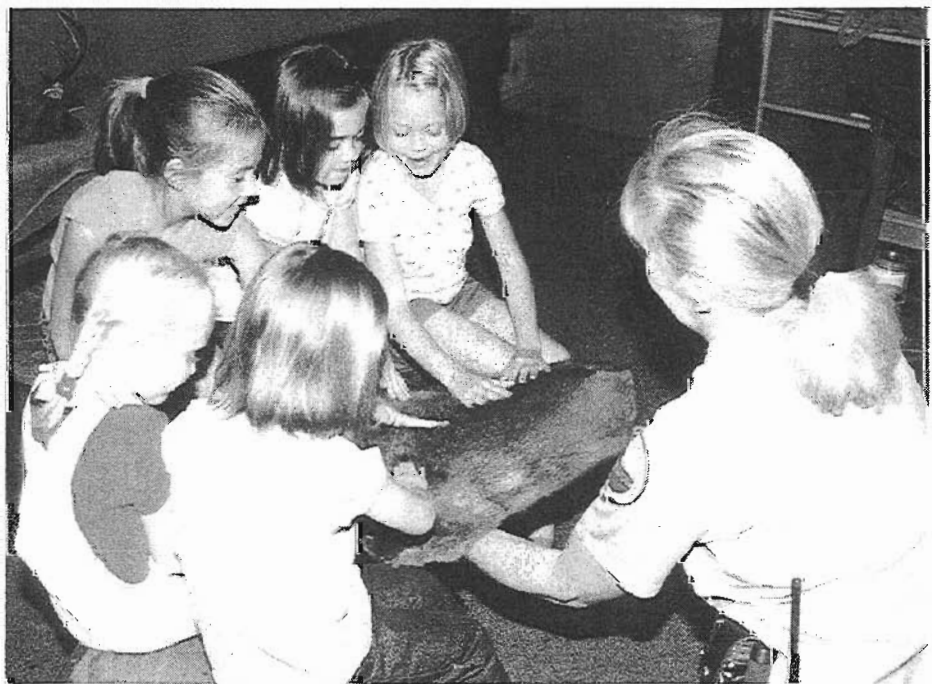
River Otter - *Lutra canadensis*

Garrett County. The maturing hardwoods also witnessed the reintroduction of the wild turkey to the area. In the 1980's, the river otter was also reintroduced to Garrett County and now reside in Deep Creek Lake. The watershed

has regained many of the wildlife species that formerly inhabited the area.

Since the 1980s, the black bear and eastern coyote population has increased in Garrett County. The Deep Creek watershed contains some of the better bear habitats found in Garrett County. The increasing development and fragmentation of wildlife habitats in the Deep Creek watershed will have an adverse effect on the wildlife in the area. Many species will be reduced in numbers, others will lose their fear of humans and become either a joy or a nuisance/possible danger to lake residents and visitors. The black bear and coyote can adapt to moderate development and become quite fearless of humans, creating situations where these large mammals can conflict with people. The waterfowl population (i.e., Canada Geese and mallards) can adapt to residential development and cause problems with defecation on lawns, docks and beaches. The increasing white-tailed deer populations can result in damage to trees, shrubs and vehicles.

Wildlife Education at the Discovery Center



APPENDIX II - HISTORY OF THE DEEP CREEK LAKE REGION

Indian tribes known to have inhabited Garrett County include the Monogahela - who apparently disappeared around 1600 - the Shawnee, the Delaware and the Iroquois. Records of early explorers and surveyors and archeological evidence suggest that the area was used extensively for hunting and fishing. Evidence also indicates some permanent Indian settlements.

Settlement by European settlers and the subsequent displacement of the Indians began with John Friend in 1765, when his family constructed their homes at the site of a former Indian village. The small community later became known as Friendsville. Indian trails and footpaths in the area became the entryways for colonial settlers and explorers. Among the more famous of travelers using the pathways was George Washington, who followed them while exploring the area during the French and Indian war.

The history of development follows a pattern similar to other areas of Appalachia. Initial settlement was accomplished by farmers and woodsmen who established self-sufficient communities. These early settlers cleared only enough land to provide for their own crops with a little left over for sale or trade. Small grist mills on several tributary streams provided grain milling services to the local farmers.

During the Revolutionary War, Maryland encouraged service in the Continental Army by offering a bounty of 50 acres of land to each of

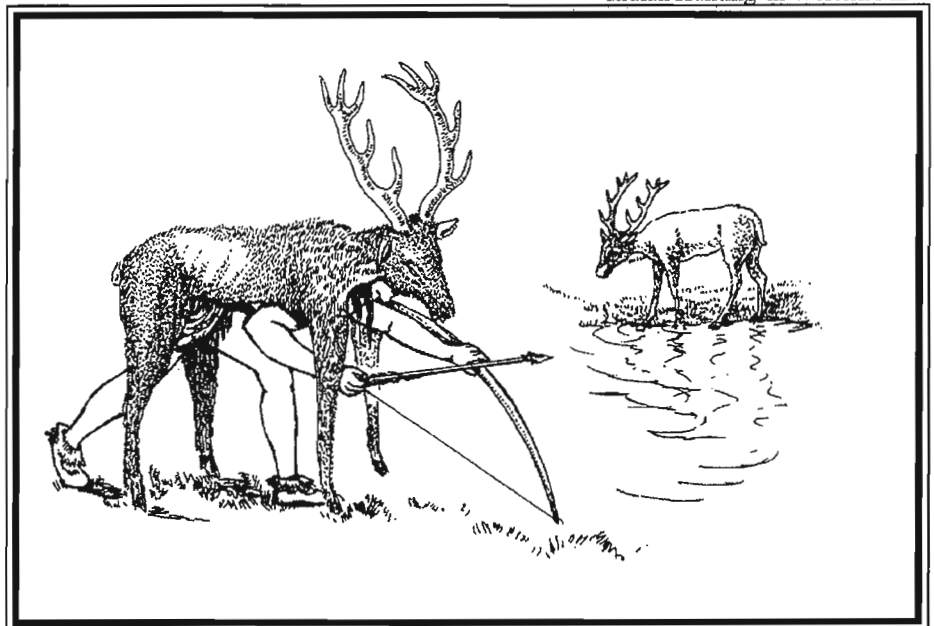
its soldiers who would serve at least three years. Colonel Francis Deakins surveyed approximately 2,774 "military lots" in Garrett County. It is interesting to note that no soldier settled upon his bounty lot, thus allowing most of the land to be sold to speculators for \$12 to \$15 each. Some Garrett County land still remains divided into military lots.

The development of the Cumberland Road (US 40) as the first national road spurred the growth of Garrett County. The coming of the railroad in 1852 and the scenic beauty of the area combined to promote the establishment of resort towns. The railroad brought many vacationers; among them were a number of presidents - Grover Cleveland, Ulysses S. Grant, and Benjamin Harrison. Camping, too, became a popular pastime. Henry Ford, Thomas Edison, and Harvey Firestone used Muddy Creek as their campsite.

During this period, Garrett County prospered and grew. Its economy was established on a threefold basis of agriculture, timber and coal extraction, and recreation. This growth precipitated the Governor of Maryland to sign a proclamation declaring Garrett a separate county on December 5, 1872.

Garrett County experienced a decrease in economic prosperity during the early 1900's as the timber, coal and tourism industries declined. However, the construction of Deep Creek Dam and subsequent creation of Deep Creek Lake in 1925 brought a revival in tourism. Acquisition of state forest lands has also contributed to the recreational potential in Garrett County. Current residents of the county are employed in a variety of economic sectors including timber harvesting, mining, agriculture, manufacturing, retail, tourism and government service.

Indian Hunting in Western MD



APPENDIX III - MARYLAND ANNOTATED CODE

Title .08
DEPARTMENT OF NATURAL RESOURCES
Subtitle 08 DEEP CREEK LAKE
Chapter 01 GENERAL PROVISIONS

.01 Premises and Purpose.

A. The primary purposes for the promulgation of regulations for Deep Creek Lake are the protection of the lake as a natural resource, the preservation of its ecological balance, and furtherance of its highest use as a recreational resource, recognizing that abuse of the lake by its overuse could jeopardize its well-being. A further purpose underlying the codification of these regulations is a realization that there is a relationship between the quality of the recreational experience on Deep Creek Lake and the level of recreational use. It is recognized that at some point recreational use of the lake could be said to have reached a saturation level, and intensification of lake usage beyond that point would begin an increasing deterioration of the quality of the recreational experience and perhaps the overall health and well-being of the lake as a natural resource. Therefore, it is recognized that the highest and best plan for Deep Creek Lake as a recreational resource shall take into consideration a balance between the greatest possible level of recreational use of the lake and the quality of the recreational experience. This balance can only be achieved by providing some type of control of the level of usage as the saturation point is approached. An important and fundamental consideration in the drafting of these and future regulations, therefore, has been and will be to work toward a reasonable balance preserving an acceptable quality of recreational experience on Deep Creek Lake, while at the same time providing for the greatest use of the lake consistent with a quality experience and safety of all users of the lake.

B. The State of Maryland owns Deep Creek Lake in Garrett County, Maryland including the land under the lake and the buffer strip. The Department has allowed and will allow the public and surrounding landowners to use, and in certain instances to occupy, the waters of the lake, the land beneath the lake, and the buffer strip, but only as a matter of privilege. Permanent or long-term property interests in these properties are not intended to be granted to the public or to surrounding landowners in connection with recreational use of the lake and the buffer strip under these regulations.

C. The department has authority and responsibility under State law to regulate many public, recreational uses of natural resources in and around the lake, such as boating and fishing. Other regulations in this title also apply to activities on the lake and the buffer strip. These regulations define how the Department will carry out this additional right and responsibility.

.02 Definitions.

A. The following terms have the meanings indicated.

B. Terms Defined.

- (1) "Adjacent Landowner" means a person, other than a commercial landowner, who:
 - (a) Owns property immediately adjacent to the buffer strip;
 - (b) Owns property immediately adjacent to a public right-of-way that is adjacent to the buffer strip;
 - (c) Has deeded access to the buffer strip; or
 - (d) Is eligible to apply for a buffer strip use permit pursuant to COMAR 08.08.05.02B(1)(b).
- (2) "Buffer strip" means an area above the 2,462 feet lake elevation and not presently fenced or posted by the Department to limit or exclude use by the public.
- (3) "Buffer strip use permit" means a permit issued by the lake manager to an adjacent landowner permitting certain uses of the buffer strip as set forth in COMAR 08.08.03.02 and 08.08.05.02.
- (4) "Commercial landowner":
 - (a) Means a person who owns or leases property immediately adjacent to the buffer strip or property immediately adjacent to a public right-of-way that is adjacent to the buffer strip and who legally pursues a trade, business, or other nonpersonal enterprise on that property;
 - (b) Does not include those persons eligible for a development permit.
- (5) "Committee" means the Deep Creek Lake Advisory and Review Committee.

(7) "Common dock facility" means a boating or swimming facility owned or used in common.

(7) "Deeded access" means a right conveyed in connection with a subdivided lot not fronting on the buffer strip, that authorizes persons from the lot to cross property fronting on the buffer strip in order to reach the buffer strip. For deeded access created after May 5, 1986, this right will be recognized only if it is conveyed by a person who intends to develop land by subdividing lots out of a parcel or adjacent parcels of land that includes frontage on the buffer strip. A person with deeded access, for purposes of these regulations, is one who acquires the right to apply for a buffer strip use permit by the means described above.

(8) "Department" means the Department of Natural Resources.

(9) "Development permit" means a permit issued by the lake manager pursuant to COMAR 08.08.05.06.

(10) "General public" means those persons who do not hold a valid buffer strip use permit or who are not the tenants or guests of a person who holds a valid buffer strip use permit.

(11) "Houseboat" means a boat constructed for use as a residence or used principally as a residence.

(12) "Lake" means the area of pooled water within the watershed of Deep Creek in Garrett County, Maryland formed by the hydroelectric dam and the lake bottom.

(13) "Lake manager" means the official of the Department who is designated to manage the lake on behalf of the Department in accordance with this subtitle.

(14) "Land records" means the duly recorded documents filed, recorded, and indexed in the custody of the Clerk of the Circuit Court for Garrett County.

(15) "Multiple family dwelling" means a residential building containing more than one separate living unit.

(16) "Nonconforming use" means an activity on, or a use of, the buffer strip or Deep Creek Lake, or both, which does not conform to the regulations of this

subtitle, but which existed lawfully and under authorization of the Department before May 5, 1986.

(17) "Nonconforming use permit" means a permit issued by the lake manager for any activity on, or use of, the buffer strip or Deep Creek Lake which does not conform to the regulations of this subtitle, but which existed lawfully and under authorization of the Department before May 5, 1986.

(18) "Penelec" means the Pennsylvania Electric Company.

(19) "Permanent structure or facility" means a structure or facility imbedded in the land or otherwise affixed to the buffer strip or lake bottom so as not to be readily removable.

(20) "Recreational permit" means a permit issued by the Department to a person who did not:

(a) Own land adjacent to the buffer strip or adjacent to a public right-of-way adjacent to the buffer strip; or

(b) Hold deeded access to the buffer strip.

(21) "Special permit" means a permit issued by the lake manager for any temporary or permanent alteration or improvement, or both, to or of the buffer strip.

(22) "Temporary structure or facility" means a structure or facility placed on the buffer strip or in the lake so as to be readily removable.

(23) Usable buffer strip.

(a) "Usable buffer strip" means frontage on the buffer strip which meets one of the following tests:

(i) At a lake level of 2,462 feet of elevation, along a line drawn perpendicular to the buffer strip line and the adjoining property line, a depth of 4 feet of water shall be reached within 50 feet; or

(ii) At a lake level of 2,462 feet of elevation, along a line drawn perpendicular to the 2,462 feet elevation line, a depth of 4 feet shall be reached within 50 feet, within the boundaries of the permit site.

(b) "Usable buffer strip" does not include the total front footage along the buffer strip boundary held by the permittee.

(24) "Vessel" means a watercraft, other than a seaplane, used or capable of being used as means of transportation on the water.

Title .08
DEPARTMENT OF NATURAL RESOURCES
Subtitle 08 DEEP CREEK LAKE
Chapter 02 BOATING AND LAKE USES

Repealed and Recodified to COMAR 08.18.33
Effective May 19, 1995

Title .08
DEPARTMENT OF NATURAL RESOURCES
Subtitle 08 DEEP CREEK LAKE
Chapter 03 BUFFER STRIP USES

.01 General Public Use of the Buffer Strip.

A. Applicability. The provisions of this regulation apply to the general public, including persons who own property adjacent to the buffer strip but who do not obtain a buffer strip use permit.

B. Permissible Uses.

(1) A person may walk along any portion of the buffer strip.

(2) In an emergency a person may use any portion of the buffer strip for access to and from the lake.

(3) A person who holds a valid fishing license may fish from the buffer strip.

C. Prohibited Uses.

(1) Except as authorized by permit issued by the lake manager, a person may not:

(2)

(a) Construct, place, or maintain a dock, mooring buoy, or other facility or structure, or modify land or vegetation in or on the waters of the lake or on the buffer strip;

(b) Camp, picnic, drive vehicles, bike, build fires, or beach boats on, or swim from the buffer strip, except in areas designated for those uses by the public;

(2) A person may not use, remove, deface or damage a private dock, mooring buoy, navigational aid, launching ramp, fireplace, picnic table, pavilion, or other structure or facility placed on the buffer strip or in the lake by a commercial or adjacent landowner under permit from the Department.

(3) A person may not deposit on the buffer strip or in the lake debris, garbage, sewage, waste, decaying or unused barrels, unused dock facilities, foodstuff, paper, or other litter or obnoxious material, or solid waste.

(4) A person may not attach a rope or cable to, or around, trees or shrubs on the buffer strip.

.02 Adjacent Landowner Use of the Buffer Strip.

Permit Required. An adjacent landowner may make only such uses of the buffer strip as are authorized for the general public, unless the landowner obtains a buffer strip use permit from the lake manager, or is a member of an association, condominium, or group validly operating a common dock facility for residential purposes, which has obtained a valid buffer strip use permit.

.03 Commercial Landowner Use of the Buffer Strip.

A commercial landowner shall be regulated in the same manner in which an adjacent landowner regulated, and shall be subject to all the same provisions. In addition, a commercial landowner shall have his or her buffer strip use permit validated for commercial use.

Title .08
DEPARTMENT OF NATURAL RESOURCES
Subtitle 08 DEEP CREEK LAKE
Chapter 04 NONCONFORMING USES

Repealed July 10, 1989

Title .08
DEPARTMENT OF NATURAL RESOURCES
Subtitle 08 DEEP CREEK LAKE
Chapter 05 PERMITS

.01 General Provisions.

A. Scope of Permits

- (1) A permit does not constitute an interest in property or proprietary right in the buffer strip or the lake.
- (2) A person acting under a permit may not engage in any activity which interferes with the operation of the lake as a hydroelectric project or with authorized public use of the buffer strip or lake.
- (3) Guests or tenants of a permittee may use the buffer strip in the same way as a permittee, unless restricted by the permittee.
- (4) A buffer strip use permittee or guests or tenants may only use the buffer strip as authorized under Regulation .03. Other uses of the

buffer strip by a buffer use permittee are prohibited unless authorized by a special permit, a development permit, or a nonconforming use permit.

B. Uses of the buffer strip not permitted for the general public are prohibited unless authorized by permit.

C. Area of Use

(1) A permittee may use that area of the buffer strip located directly in front of the property through which the permittee claims access to the buffer strip as is determined by extending the permittee's property lines to the water's edge.

(2) In coves or other areas where an extended property line intersects with the extended lines of other permittees, causing conflicts in the areas of the buffer strip to be used by each or resulting in the denial of an adjacent permittee's access to the lake, or producing a similar anomalous result, the lake manager shall determine the area which each permittee may use by taking the total area of buffer strip affected by the anomalous condition, and dividing it equitably among the permittees, based on the amount of the buffer strip frontage of each.

(3) When an adjacent land owner claims access through deeded access or participates in a common dock facility, the lake manager shall consider the deed or other instrument through which the landowner claims access, or covenants pertaining to the common dock facility when the lake manager determines the landowner's area of use.

(4) The lake manager shall designate on the permit the area of the buffer strip which the lake manager has determined may be used by a permittee.

D. Authority of the Lake Manager.

(1) Permit Review.

(a) The lake manager shall deny a permit application, or limit the use, location, type, or position of a facility authorized under a permit, if the lake manager determines that this action

is necessary to protect public safety or welfare or to carry out the policies set forth in COMAR 08.08.01.01. In making a determination to grant or deny a permit, the lake manager shall consider:

- (i) Public safety;
- (ii) The configuration of the lake frontage;
- (iii) Fluctuation of the water line;
- (iv) Depth of water at the proposed site;
- (v) Density of existing boat usage or other recreational uses;
- (vi) Number of existing, permitted docks in the area;
- (vii) Potential navigational problems;
- (viii) Preservation of aquatic vegetation and wildlife in the area; and
- (ix) Protection of the ecological balance of the lake.

(b) If the lake manager determines, based on the criteria stated in §§ C(1)(a) above, that a dock cannot be permitted under an individual buffer strip use permit, the lake manager may accept an application from adjoining landowners for a common dock facility that is consistent with the criteria stated in §§.

C(1)(a) above. This paragraph applies only where the applicants meet all eligibility requirements under these regulations, including minimum frontage.

(2) Except as provided in § F of this regulation, within 30 days of receiving a complete application and any additional information required, the lake manager shall:

- (a) Approve or disapprove the application;
- (b) Notify the applicant in writing of the action taken; and
- (c) State the grounds for the decision.

(3) The lake manager shall keep on file all applications received and copies of permits issued.

E. Allocations of New Slips after December 19, 1988. Except for new permit applications for new transient slips assigned to restaurants and stores, all permit applications received after December 19, 1988 which request approval of new slips for new and existing facilities shall be reviewed by the lake manager in the following manner:

(1) From December 19, 1988 to August 31, 1990 the lake manager shall issue permits with not more than a total of 165 new slips. If requests for more than 165 new slips are received, the lake manager shall determine the priority of the applications in accordance with §§ D(1)(a). Applications received between:

(a) December 19, 1988 and April 1, 1989 shall be reviewed as a group and the approved applications shall represent the slip allocation for 1989.

(b) April 2, 1989 and September 1, 1989 shall be reviewed as a group between September 2, 1989 and December 1, 1989. The lake manager shall issue all permits or denials by December 31, 1989. These permits shall be the total new slip allocation for 1990.

(2) After August 31, 1990 the lake manager shall issue permits for new slips in the following sequence:

(a) Applications received between September 2, 1989 and September 1, 1990 shall be reviewed during the period of September 2, 1990 to December 1, 1990. The lake manager shall issue all permits or denials by December 31, 1990, which shall represent the 1991 allocation.

- (b) New dock slip allocations for subsequent years shall be made in the same sequence as §§

E(2)(a).

F. Permit Expiration. A permit issued under these regulations shall be valid for not longer than 1 year and shall expire:

- (1) On March 31 of each year; or
- (2) At the end of the term specified in the permit.

.02 Buffer Strip Use Permits.

A. An adjacent or commercial landowner who desires to use the lake or buffer strip other than as a member of the general public shall obtain a buffer strip use permit. Issuance of a buffer strip use permit entitles:

- 1) An adjacent landowner to use the lake and buffer strip as provided in Regulation .03; and
- (2) A commercial landowner to use the lake and buffer strip as provided in Regulation .05.

B. Application.

- (1) An applicant for a buffer strip use permit shall apply to the lake manager on a form provided by the Department. The applicant shall:
 - (a) Provide all additional relevant information requested by the lake manager;
 - (b) Certify to the lake manager that the proposed use of the buffer strip conforms to existing zoning laws.
- (2) When more than one person is eligible, as a result of joint ownership or deeded access, to obtain a permit for use of the same portion of the buffer strip, the application shall be made by one eligible person on behalf of a minimum of two thirds of the eligible persons.

(3) Failure to meet any of the requirements of this section may result in denial of the application.

C. Eligibility.

(1) Except as provided in §§ C(2) of this regulation, the lake manager shall issue a buffer strip use permit to the following persons:

- (a) An adjacent or commercial landowner who owns property for which a valid dock permit was issued or was eligible to be issued, before imposition of the Department's moratorium on August 12, 1983;
- (b) A person who obtained a recreational permit from Penelec, holds a valid dock permit from the Department, and has continually maintained a dock in the lake, or shows good cause why these criteria are not met;
- (c) A person who owns property with at least 100 feet of land fronting on usable buffer strip or on a public right-of-way adjacent to the buffer strip, if the property was subdivided and recorded among the land records of Garrett County, either by deed or subdivision plan or plat, after imposition of the Department's moratorium on August 12, 1983, provided that the property meets local zoning requirements for the construction of a residential dwelling unit;
- (d) A person who owns property with less than 100 feet of land fronting on the buffer strip or on a public right-of-way adjacent to the buffer strip who desires to make only recreational use of the buffer strip and does not desire to install a dock or mooring buoy;
- (e) A person who seeks a buffer strip use permit pursuant to a development permit issued by the lake manager;
- (f) A person who has deeded access to the lake from a lot that meets local zoning requirements for the construction of a residential dwelling unit; and

(g) A person who owns a parcel of land adjacent to the buffer strip that was conveyed to them by Penelec after January 1, 1994, and which has frontage that was issued or was eligible to be issued a buffer strip use permit before that date.

(2) The lake manager may not issue a buffer strip use permit:

(a) To an applicant who has in the past 5 years had a buffer strip use permit revoked or is currently in violation of these regulations;

(b) If denial is required on the grounds stated in Regulation .01D;

(c) For property for which a development permit is required, but has not been obtained;

(d) To an applicant who does not have a minimum of 100 feet of usable buffer strip frontage, unless a permit was issued for the buffer strip before July 10, 1989.

D. Fee. Upon receipt of a buffer strip use permit, the permittee shall forward to the lake manager the fee specified in the permit. The permit shall be valid only after the lake manager receives the permit fee.

E. Display of Permit Identification Numbers. Upon receipt of a buffer strip use permit, the permittee shall display the permit identification numbers on the permittee's dock, mooring buoy, and other structures so as to be visible from the lake and from land.

.03 Uses Permitted with a Buffer Strip Use Permit.

A. An adjacent landowner who obtains a buffer strip use permit may:

(1) Make general, nonprofit recreational use of the buffer strip.

(2) Fish from the buffer strip if the person has a valid fishing license.

(3) Maintain vegetation on the buffer strip by mowing grass and lawn care, including seeding, trimming, and such other activities as are necessary for maintenance of the grass only.

B. Unless otherwise authorized by a special permit, a development permit, or a nonconforming use permit, a buffer strip use permittee may install mooring buoys and a boating or swimming structure, or both, if the following requirements are met. The permittee may:

(1) Install not more than one dock for swimming or boating, or both, with slip space for not more than three boats, regardless of the amount of land fronting on the buffer strip owned by the permittee;

(2) Keep not more than three boats on the lake, including boats that are docked and those that are moored;

(3) Keep more than two powerboats on the lake;

(4) Beach boats or vessels, in addition to the three boats allowed under §§ D(2), above, that individually have a total weight, including the power source, of not more than 500 pounds.

C. Docks, and boating and swimming structures shall:

(1) Be nonpermanent and easily removable from the lake.

(2) Float or have wheels.

(3) Have securely fastened flotation devices that are nontoxic, nonpermeable, and nonhazardous to aquatic life. Containers previously used for toxic material are prohibited.

D. All drums used as a flotation device shall contain sufficient positive flotation material to keep the drum visibly afloat if it detaches from the dock.

E. Mooring buoys shall:

(1) Be nonpermanent;

(2) Be marked by polystyrene, plastic, or fiberglass flotation buoys not smaller than 500 cubic inches and not larger than 4,000 cubic inches;

(3) Be white with a blue belly band;

(4) Be marked with the owner's permit number; and

(5) Have no metallic portion within two feet of the water's surface, other than metal connecting rings or hardware.

F. Docks, boating and swimming structures, and mooring buoys shall be located within 100 feet of the shore, or within 1/3 of the distance to the opposite shore, whichever is less, unless otherwise approved by special permit.

G. From December 1 through April 1, all docks, boating and swimming structures, and mooring buoys shall be removed from the lake, and shall be secured to or removed from the buffer strip. Vehicles may be driven on the buffer strip to comply with this section.

H. A buffer strip use permittee shall be responsible for the repair and upkeep of a dock, boating and swimming structure, or mooring buoy that the permittee installs.

.04 Uses Not Permitted within a Buffer Strip Use Permit.

A. A buffer strip use permittee may not:

(1) Install a facility on or use the buffer strip to interfere with operations of the Deep Creek hydroelectric project, or with the improvement to or installation of public works;

(2) Discharge sewage or waste into the lake;

(3) Install or expand septic systems, including tanks and drain fields, on the buffer strip or as prohibited by any law or regulation relating to septic systems;

(4) Bury or dispose of garbage or trash in the lake or on the buffer strip;

(5) Remove or plant trees or shrubbery on the buffer strip without written consent by the lake manager;

(6) Alter or obstruct the natural flow of water in the lake;

(7) Erect fences or other obstructions on the buffer strip;

(8) Dredge or fill the lake except as authorized by a special permit;

(9) Perform maintenance activities including the removal of or pruning of live trees, the applying of fertilizers, weed control agents, or other chemicals, the cutting of undergrowth, or any other form of maintenance on the buffer strip, except by authorization of a special permit;

(10) Remove water from the lake without the written consent of the lake manager;

(11) Interfere with public uses of the lake authorized by these regulations, or the lake manager;

(12) String a rope or cable across the water in a way that creates a safety hazard to lake users.

B. In addition to any other penalty required by law, failure to meet any of the requirements in this regulation may result in denial of the application for permit.

.05 Special Permits.

A. Application.

(1) The following persons shall be required to obtain a special permit:

(a) A buffer strip user permittee who desires to use, alter, modify, or improve the lake or buffer strip other than as authorized under a buffer strip use permit;

(b) A commercial landowner who desires to install more than one dock with three slip spaces or moorings, or who wishes to use a boat launch ramp for commercial purposes.

(2) A person who wishes to obtain a special permit shall apply to the lake manager on a form provided by the Department. When the special permit is requested:

(a) By a commercial landowner for the installation of more than one dock with three slip spaces, the applicant shall include a detailed plan for the proposed use of the buffer strip and the lake, including the proposed placement of docks, number of slips, and types of uses proposed;

(b) For alterations, modifications, or other uses of the buffer strip, the applicant shall include a detailed plan which describes materials to be used, construction methods, proposed timetables, location of modifications, and other relevant information.

(3) The lake manager may request additional relevant information from the applicant. Failure to submit requested information shall result in denial of application.

(4) After assessing the possible damage to the buffer strip and lake, or both, the lake manager may require the applicant to submit a bond in a reasonable amount to cover the possible damage to the lake or the buffer strip. If a bond is required, the lake manager shall state in writing to the applicant the amount of the bond and the reasons why a bond is required. Failure to submit the requested bond shall result in the denial of the application.

B. Issuance.

(1) When the applicant requests a special permit for installation of permanent structures, excavation or filling of the buffer strip or the lake bottom, or removal of vegetation, other than maintenance authorized under §.03A(3) of this regulation, the lake manager may issue the permit in accordance with this regulation, as follows:

(a) In reviewing an application for a special permit, the lake manager shall consider the criteria set out in §.01C of this regulation.

(b) A special permit issued by the lake manager shall specify the use, modification, construction, alteration, or activity permitted. A permittee who exceeds the authority granted in a special permit shall be liable for damage resulting from the unauthorized action.

(2) When the applicant requests the placement of a dock for a commercial landowner to accommodate greater than three slips or moorings, or the use of a boat launch ramp for commercial purposes, the lake manager may grant or deny the application as follows:

(a) If the lake manager determines that the plan for use of the lake or buffer strip is not consistent with these regulations, the application shall be denied.

(b) The lake manager may approve or disapprove the proposed location, type, and position of dock facilities and mooring areas, or otherwise condition the special permit as necessary considering the criteria set out in Regulation .01D.

(c) If the use of the boat slips or moorings includes the overnight storage of boats, not including rental boats, boats used by marina employees, or boats stored for service, or includes the leasing of boat slips to the public, the lake manager may approve not more than one slip space or mooring buoy for each 50 feet of usable buffer strip frontage to which the applicant has title, unless a permit has been issued before May 5, 1986 and the commercial use has not significantly changed. The following apply:

(i) If a property validated for commercial use significantly changes to a use other than that described in the permit and validation, then the lake manager shall restrict the number of slips or mooring buoys to one for each 50 feet of usable buffer strip.

(ii) The lake manager may assign to other commercial permittees slips in excess of the 50-foot limitation which have been eliminated from a special

permittee's use permit due to a significant change in the nature of the permittee's operation.

(d) The lake manager may approve less than one slip space or mooring buoy for each 50 feet of frontage as described in §§ B(2)(c) of this regulation, if the lake manager determines that this action is necessary under the criteria set out in Regulation .01D.

(e) If the use of docks or mooring buoys does not include the overnight storage of boats at docking or mooring facilities, or involve ramping or dry storage to accomplish overnight storage of boats, the lake manager may approve more than one slip space or mooring buoy for each 50 feet of frontage, providing the approved level of use is consistent with the criteria set out in Regulation .01D.

(f) Except for boats owned by a buffer strip use permit holder stored on ramps, when the special permit approves the use of a boat launch ramp, the lake manager shall specifically designate the number and types of launchings which are to be permitted. The lake manager may alter the permitted number of launchings at any time to protect public safety or welfare or to carry out the policies set forth in COMAR .08.08.01.01. The commercial permittee shall limit the number of daily launchings to that stated in the permit.

(3) A special permit holder who violates the terms of the permit or these regulations is liable for all damages to the buffer strip or lake resulting from the violation. Upon violation of the terms of the permit or regulations by a special permit holder, the lake manager may:

(a) Revoke the bond, if any;

(b) Recover from the special permit holder any additional damages not covered by the bond.

(4) The forfeiture of the bond and any damages due are in addition to any other penalties provided in these regulations.

C. Fee.

Upon receipt of a special permit, the permittee shall forward to the lake manager the fee specified in the permit. The permit shall be valid only after the lake manager receives the permit fee. This fee is in addition to any fee assessed for a buffer strip use permit.

.06 Development Permits.

A. Permit required. A person intending to develop property adjacent to the buffer strip, and who should reasonably anticipate future requests for one or more buffer strip use permits in connection with the development and use of the property, shall obtain a development permit, if the property or the buffer strip, or both, is to be used in any of the following ways:

(1) By constructing more than one residential unit which has or will have deeded access to the same area of buffer strip;

(2) By constructing multiple family dwellings with access to the buffer strip;

(3) By installing or expanding a common dock facility;

(4) By constructing or adding onto a hotel, motel, condominium, or convention center with access to the buffer strip.

B. Application. A person who wishes to obtain a development permit shall apply to the lake manager on a form provided by the Department. In addition, the application shall:

(1) Include a plan and plat showing the lake frontage to be used and the property to be developed for which the development permit is requested;

(2) State the number of dwellings to be placed upon the property, the number of persons who will use the lake frontage, and other information relevant to the use of the buffer strip by the occupiers of the property to be developed;

(3) Include a detailed plan for use of the buffer strip and the lake by persons using the area of the buffer strip to which the permit applies, including the proposed placement of a dock or docks, the number of slips, and any restrictions concerning number of boats and size of boats.

C. Request for Information. The lake manager may request information relevant to a decision as to the use of the buffer strip, and may request the applicant or parties who will use the buffer strip to prepare and execute appropriate covenants or contracts. Failure to comply with this section shall result in denial of the application.

D. Issuance.

(1) When a development permit is required for all or part of a property, the lake may not issue a buffer strip use permit in connection with the property unless the developer has obtained the development permit. The development permit is intended to facilitate a preliminary review process for development employing deeded access, common dock facilities, or multiple family dwellings, hotels, motels, and convention centers. After reviewing the application for a development permit, the lake manager may grant or deny the application as follows:

(a) If the lake manager determines that the plan for use of the lake and buffer strip is not consistent with these regulations, the lake manager shall deny the application for the development permit and for any associated applications for buffer strip use permits requested for the developer, the developer's successors in title, or the developer's lessees;

(b) If the manager approves the detailed plan for use of the lake and buffer strip that is submitted with the application, the lake manager may grant an application for a development permit and associated buffer strip use permits;

(c) The lake manager may approve or disapprove the proposed location, type and position of dock facilities and mooring areas, or otherwise condition the development permit as necessary considering the criteria set out in Regulation .01C;

(d) The lake manager may not approve more than one slip space or mooring buoy for each 50 feet of usable buffer strip frontage adjacent to the buffer strip to which the applicant has title;

(e) The lake manager may approve less than one slip space or mooring buoy for each 50 feet of frontage as described in §§ C(1)(d), above, if the lake manager determines that this action is necessary under the criteria set out in Regulation .01C.

(2) The lake manager may not issue a development permit to an applicant whose plan includes any of the following:

(a) The creation of a common area with less than 200 feet of usable buffer strip frontage;

(b) The use of more than one area of usable buffer strip frontage, which does not have a continuous, uninterrupted common line shared by the applicant and the Department;

(c) The placement of common dock facilities in an area not immediately next to the proposed common use area;

(d) The intent to enter into long term lease agreements with a commercially designated facility for the purpose of obtaining additional boat slips, or short term ramping access for those not assigned boat slips in the common use area;

(e) Separate docks for less than three boats in addition to a common dock;

(f) The use of buffer strip frontage for which a previously issued buffer strip use permit exists for a single residence, unless adequate steps are taken to clearly designate a minimum of 100 feet of separate usable buffer strip frontage for that parcel;

(g) The creation of lots which do not meet local zoning requirements for the construction of a residential dwelling unit;

(h) The use of a boat ramp facility, when the ramp is intended to facilitate day use or dry storage of a number of boats which, when combined with boats stored at docking or mooring facilities, exceed the number of slips and moorings which could be permitted under the criteria described in Regulation .01D.

(3) Before obtaining a development permit, a developer may not make any representation that a number or type of buffer strip facilities or use of the buffer strip or lake has been or will be approved by the lake manager in connection with the developed property.

(4) The lake manager may not issue a development permit to an applicant who proposes a plan for use of the buffer strip which includes a boat ramp facility, when the ramp is intended to facilitate day use or dry storage of a number of boats which, combined with boats stored at the docking and mooring facilities, exceeds the number of slips and moorings which could be permitted under the criteria described in Regulation .01D.

E. Fees.

Upon receipt of a development permit, the permittee shall forward to the lake manager the fee specified in the permit. The permit shall be valid only after the lake manager receives the fee. This fee is in addition to any fee assessed for a buffer strip use permit.

F. Activity under a Development Permit. The development permit, including the approved lake and buffer strip use plan, shall control the use of the buffer strip for the property included under the permit, and the lake manager shall issue buffer strip use permits to the developer, to his tenants, or to his successors in title, only in conformance with the development permit and plan.

G. The lake manager, after consulting with the applicant, shall set a termination date for the development permit. The lake manager may extend the termination date if the applicant submits to the lake manager evidence of substantial progress. The following shall be considered evidence of substantial progress:

(1) Financing commitments which extend beyond the termination date of the permit;

(2) The installation of footers for more than 60 percent of the project;

(3) Contracts with subcontractors and material suppliers which extend beyond the termination date of the development permit;

(4) Sales contracts with prospective purchasers for more than 5 percent of the development.

.07 Notice of Application for Development Permit or Commercial Validation.

A. Upon receipt of an application for a development permit, or an application for a special permit filed by a person who requests validation of his buffer strip use permit for commercial use and desires to install more than one dock with three slip spaces, the lake manager shall take the following actions:

(1) Publish a notice of filing and a summary of the application in a Garrett County newspaper of general circulation for a least two consecutive weeks, beginning no later than 10 days from the date of filing of the application.

(2) Forward a copy of the application to each property owner whose property borders the application property and the buffer strip. Within 10 days of the filing:

(a) Mail a copy of the application to the bordering property owner by Certified Mail - Return Receipt, Requested, and the regular mail;

(b) Forward to each member of the Deep Creek Lake Advisory and Review Committee a copy of the application.

B. Applications on file with the lake manager are a matter of public record and shall be available to the public for inspection during the lake manager's regular weekly business hours.

C. Comments received on an application pending before the lake manager shall be considered in the lake manager's review of the application. A person who is, or may be, adversely affected by a decision of the lake manager may file an appeal in accordance with the appeals process under COMAR .08.08.08.

.08 Nonconforming Use Permits.

A. Any use, structure, dock or vessel which does not conform to these regulations is prohibited, unless the owner has obtained a nonconforming use permit by November 5, 1986, unless good cause for delay is shown.

B. A nonconforming use permit entitles the permittee to use the structure, dock, or vessel as provided in this regulation, and shall be obtained in addition to any other permits required under this subtitle.

C. Application. A person who desires to obtain a nonconforming use permit shall:

(1) Have applied to the lake manager on a form provided by the Department not later than November 6, 1986, unless good cause for delay is shown; and

(2) Submit evidence to the lake manager that the structure, building, dock, or vessel for which a nonconforming use permit is sought was in existence lawfully and was authorized by the Department before May, 5, 1986.

D. Issuance.

(1) After reviewing the application under the criteria set out in Regulation .01D, the lake manager may deny or approve all or any part of the application.

(2) If the lake manager approves all or part of the application, the lake manager shall issue a nonconforming use permit which specifies the use allowed and states the term of the permit.

(3) The lake manager may not issue a nonconforming use permit for use which:

(a) Is otherwise illegal under State or federal laws;

(b) The lake manager finds represents a danger to the operation of the Deep Creek Lake Hydroelectric Project; and

(c) Existed before May 5, 1986, and which violated any previous regulations or permit governing the use of the buffer strip or Deep Creek Lake.

E. Fee. Upon receipt of a nonconforming use permit, the permittee shall forward to the lake manager the fee specified in the permit. This fee is in addition to any fee assessed for a buffer strip use permit. The permit shall be valid only after the lake manager receives the fee.

F. Revocation. An alteration, expansion, or change in the character or size of the buildings, structures, docks, or boats, or all of these, aside from ordinary maintenance, shall result in the revocation of the permit and of the nonconforming use status resulting in the right of the Department to take action as if the use were illegal under these regulations and in accordance with COMAR 08.08.06.

Title .08
DEPARTMENT OF NATURAL RESOURCES
Subtitle 08 DEEP CREEK LAKE
Chapter 06 PERMIT SUSPENSION AND REVOCATION

.01 Cause for Suspension and Revocation.

A permit issued under these regulations may be suspended or revoked if the lake manager determines that the permittee or any person acting under the permit has violated these regulations or the terms of the permit.

.02 Procedure.

The following procedures shall apply to permit suspension and revocation for any permit by the lake manager:

A. All notices and determinations by the lake manager shall be made in writing and delivered in person or by mail. Mailing of a notice or determination by certified mail, return receipt requested, to the permittee at each address provided in the permittee's permit application shall constitute adequate constructive notice for further proceedings under this subtitle.

B. Upon determination that ground exist for permit suspension or revocation, the lake manager shall notify the permittee in writing of the intent to suspend or revoke the permit. The notice of intent to suspend or revoke shall describe the violation and state the corrective measures, if any, that the permittee may take within 15 days to remedy the violation.

C. Final Determination.

(1) If a violation is corrected, the lake manager may rescind the notice of intent to suspend or revoke.

(2) If a permittee fails to correct the violation within 15 days of receipt of the notice of intent to suspend or revoke, the lake manager shall suspend or revoke the permit.

(3) When a permit is suspended for 15 days or less, a person may not engage in activity authorized by the permit or use a facility installed under a permit for the period of permit suspension.

(4) When a permit is suspended or revoked for more than 15 days, a person may not engage in activity previously authorized by the permit, and within 15 days of receipt of the notice of revocation, the permittee shall remove any dock, mooring buoy or structure installed under the permit. Removal shall be in accordance with COMAR .08.08.07.

D. Except for a special permit validated for commercial use, all permits expire on an annual basis. The following permits terminate by virtue of these regulations, or upon action of the lake manager, under the following circumstances:

(1) Buffer strip use permits expire automatically upon the sale or transfer of the property covered by the permit, except in the case of a common dock facility where the privileges for a specific eligible

property which has been sold expire and the permit remains in effect for the remaining property owners.

(2) Recreational permits expire:

(a) Automatically and permanently upon sale or transfer of property covered by permit;

(b) For failure to renew the permit for more than 1 year.

(3) Special permits expire automatically upon the conversion of commercial property to noncommercial use or upon a significant change in the commercial operation requiring substantial modifications to the special permit.

(4) Nonconforming use permits expire:

(a) Upon the action of the lake manager when the permittee or any other person substantially changes or alters the structure, building, boat, or vessel.

(b) Upon the action of the lake manager when the nonconforming building, structure, dock, or boat has not been used for more than 1 year; and

(c) Automatically upon the transfer or sale of the property covered by the permit.

E. Development Permits. The lake manager shall specify the term of the development permit on the permit in accordance with COMAR .08.08.05.06G.

Title .08
DEPARTMENT OF NATURAL RESOURCES
Subtitle 08 DEEP CREEK LAKE
Chapter 07 REMOVAL OF DOCKS, MOORING BUOYS, STRUCTURES,
AND FACILITIES

.01 Lapse, Revocation, or Other Termination of Permits.

A. Upon lapse, revocation, or other termination of a permit, a permanent structure or facility under the permit shall remain with the land, unless the Department orders removal in writing for the following reasons:

- (1) The Department determines that the structure or facility is or may become a safety hazard;
- (2) The Department determines that the structure or facility is or may become an interference with the operation of the Deep Creek Lake Hydroelectric Project;
- (3) The Department determines that the structure or facility is or may become an interference with public use of the buffer strip; or
- (4) The Department determines the structure or facility should be removed for aesthetic reasons due to dilapidation.

B. Upon lapse, revocation, or other termination of a permit for a temporary structure or facility, the permittee shall remove, at the permittee's expense, the temporary structure or facility and restore the land to its natural condition.

.02 Removal of Safety Hazards.

The Department may immediately remove, or the lake manager may order the immediate removal of a safety hazard on the buffer strip or in the lake. The lake manager shall notify the permittee or other responsible person by mail. The person responsible for creating the safety hazard shall be liable to the department for all costs of the removal and damage to the lake or buffer strip, or both.

.03 Removal by Department.

A. Upon failure of a person to remove a structure or facility within 30 days after notice to remove has been sent by the lake manager, the Department may have the structure or facility removed. The person shall be liable to the Department for the cost of removal and storage.

B. A person who places or maintains a dock, mooring buoy, or other facility without first obtaining a permit from the lake manager, or after suspension or revocation of a permit, shall be subject to removal of the facility by the Department at the expense of that person.

.04 Reclamation.

A person may reclaim a dock, mooring buoy or structure removed and stored by the Department by reimbursing the Department for the cost incurred. If a person fails to reclaim the property within 6 months of its removal, the Department may dispose of the property.

.05 Failure to Comply.

If the lake manager orders the removal of the structure, facility, safety hazard, dock, or mooring buoy and the permittee fails to comply within the time allowed, then the bond in COMAR 08.08.05.05A(4), if required, shall be forfeited and the proceeds applied to:

- A. Removal;
- B. Damages to the lake or buffer strip, or both; and
- C. Storage.

Title .08
DEPARTMENT OF NATURAL RESOURCES
Subtitle 18 BOATING-SPEED LIMITS AND OPERATION OF
VESSELS
Chapter 33 DEEP CREEK LAKE

.01 Definitions.

A. In this chapter, the following terms have the meanings indicated.

B. Terms Defined.

(1) "Houseboat" means a boat constructed for use as a residence or used principally as a residence.

(2) "Lake" means the area of pooled water within the watershed of Deep Creek in Garrett County, Maryland, formed by the Penelec dam and the lake bottom.

(3) Length Overall.

(a) "Length overall" means the distance measured in a straight line from the foremost part of the vessel to the aftermost part of the vessel, exclusive of sheer.

(b) "Length overall" includes integrally formed, molded, or welded components and appendages including but not limited to:

- (i) Bow pulpits;
- (ii) Swim platforms;
- (iii) Attached structures for propulsion systems; and
- (iv) Structural rub rails installed by the builder.

(c) "Length overall" does not include:

- (i) Bowsprits;
- (ii) Bumpkins;
- (iii) Rudders;
- (iv) Outboard motors;
- (v) Outdrives;
- (vi) Brackets; or
- (vii) Items, including swim platforms, bolted on or secured to the

primary structure.

(4) "Penelec" means the Pennsylvania Electric Company.

(5) "Personal watercraft" means a Class A vessel which:

(a) Has an inboard motor using an internal combustion engine powering a water jet pump as its primary source of motive propulsion;

(b) Is designed with the concept that the operator and passenger ride on the outside surfaces of the vessel as opposed to riding inside the vessel;

(c) Has the probability that the operator and passenger may, in the normal course of use, fall overboard; and

(d) Is designed with no open load carrying area which would retain water.

(6) "Specialty prop craft" means a vessel less than 16 feet in length similar in appearance and operation to a personal watercraft, but the primary source of propulsion is a propeller. For the purpose of this chapter, a specialty prop craft is considered a personal watercraft.

.02 Boating on Deep Creek Lake.

A. An individual may not have or use on the waters of the lake a vessel 26 feet or more in length overall, except for a:

- (1) Pontoon boat, which may not exceed 30 feet in length overall; or
- (2) Vessel operating under a valid nonconforming use permit.

B. An individual may not operate a vessel with an engine or engines:

- (1) Exceeding the manufacturer's recommended maximum horsepower capacity; or
- (2) With a total displacement of greater than 550 cubic inches.

C. Except for an authorized patrol vessel, an individual may not use a siren on a vessel.

D. An individual may not have or use a houseboat on the waters of the lake.

E. An individual may not deposit or cause to be deposited garbage, sewage, waste of any kind, food stuff, paper, or other litter in the waters of Deep Creek Lake.

F. An individual may not operate a vessel with an installed marine sanitation device capable of discharging treated or untreated sewage into the waters of the lake.

G. The Department shall position buoys on the lake to mark hazards and public swimming areas. An individual may not operate a vessel inshore from a buoy which designates a public swimming area.

H. Only Penelec may position buoys associated with the operation of the dam, intake, and spillway.

I. An individual may not:

- (1) Operate on the lake a vessel which is towing another individual who is attached to a parachute or other device which causes that individual to become airborne;
- (2) Be towed by a vessel while attached to a parachute or other device which causes that individual to become airborne.

J. Personal Watercraft and Air-Cushioned Vessels. Except for vessels owned and operated by the State or local government, an individual may not operate a personal watercraft or air-cushioned vessel on the lake from 11 a.m. to 4 p.m. on:

- (1) The Saturday, Sunday, and holiday of Memorial Day weekend; and
- (2) The Saturdays, Sundays, and holidays from July 1 through Labor Day.

.03 Speed Limits and Restrictions.

A. Restricted Skiing Area-----North Glade Cove. From 12 noon until sunset on each Saturday, Sunday, and each holiday officially recognized by the State or federal government, or both, an individual may not operate a vessel towing an individual on a ski, aquaplane, or similar device in that area of Deep Creek Lake described as that portion of North Glade Cove lying eastward of a line beginning at the Penelec monument designated Y-84 and extending to the Penelec monument designated N-351.

B. Speed Limit. The following areas are designated minimum wake zones:

- (1) Within 100 feet of shoreline, except that an individual may operate a vessel at a speed in excess of minimum wake through the 100-foot area when towing a

skier from a dock or the shore, if the individual immediately leaves the 100-foot area;

(2) The area of Meadow Mountain Run lying east of Meadow Mountain Bridge as it enters Deep Creek Lake State Park;

(3) North of a line drawn from Penelec monument N-266 in an easterly direction to the southernmost point on a peninsula in McHenry Cove, then continuing on in an easterly direction to Penelec monument N-683;

(4) That portion of Red Run Cove lying southwest of a line drawn between Penelec monuments SS-78 and N-181-1/2;

(5) That portion of Thayerville Cove lying southwest of a line drawn from the easternmost point of the Arrowhead peninsula extending in a southeasterly direction to the Penelec monument designated Y-60;

(6) That portion of Hoop Pole Cove which lies southwest of a line drawn from Penelec monument N-518 to Penelec monument N-764;

(7) Those portions of Pawn Run Cove which lie northwest of a line drawn from Penelec monument N-467 to the southeasternmost point of the Penn Cove Peninsula, and southwest of a line drawn from that same point on the peninsula to Penelec monument N-468;

(8) From 11 a.m. to 4 p.m., each Saturday and Sunday, and each holiday from Memorial Day holiday weekend through Labor Day, that area of North Glade Cove which connects to Beckman's Cove, lying north of a line drawn from Penelec monument Y-82 to monument S-317c and south of a line drawn from Penelec monument N-330 to monument Y-80.

.04 Aircraft.

Except for aircraft owned by government agencies, aircraft may not land on, remain on, or take off from the waters of the lake without obtaining advance written permission from the Department and Penelec.

Title .08
DEPARTMENT OF NATURAL RESOURCES
Subtitle 07 FORESTS AND PARKS
Chapter 06 USE OF STATE PARKS

.01 Definitions.

A. In this chapter, the following terms have the meanings indicated.

B. Terms Defined.

- (1) "Commissioned officer" means a Forest and Park Warden or Forest and Park Ranger having the meaning stated in Natural Resources Article, §5-206, Annotated Code of Maryland.
- (2) "Developed areas" means those areas within a State park that have permanent facilities and those areas surrounding the facilities.
- (3) "General recreation area" means an area suitable for light to medium recreational development and use. Development may include any of the facilities found in a multi-use State park, but on a lesser scale.
- (4) "Multiple-use State park" means an area, generally 1,000 acres or more, with physiographic features suitable for intensive recreation, development, and use. Development may include roads, parking, picnic areas, camping areas, cabins, beaches or pools, bathhouses, sanitary facilities, marinas and vessel launching facilities, hiking, visitor centers, nature study for historic or scenic areas, and facilities for individuals with disabilities.
- (5) "Park officer" means a commissioned officer, and may include the manager, rangers, or other personnel employed by the State to manage and regulate the use of State parks.
- (6) "Roadside picnic area" means a roadside area developed for picnicking, including a parking area, and water and sanitary facilities.
(State park" means a unit of the State park system.
- (10) "State park road" means a road on or adjacent to a State park which is maintained or constructed and maintained by the Service.
- (11) "Superintendent" means the Superintendent of the State Forest and Park Service, which are agencies of the Department of Natural Resources.
- (12) "Undeveloped area" means those areas within a State park not having permanent facilities.
- (13) Vehicle.
 - (a) "Vehicle" means a mode of transportation by which an individual or property may be transported on a waterway or highway.

(b) "Vehicle" includes:

- (i) Vessels;
- (ii) Trailers;
- (iii) Automobiles;
- (iv) Trucks;
- (v) Buses;
- (vi) Mopeds;
- (vii) Animals;
- (viii) Animal-drawn vehicles; and
- (ix) Bicycles.

(14) Vessel.

(a) "Vessel" means a type of watercraft, other than a seaplane, used or capable of being used as a means of transportation on water or ice.

b) "Vessel" includes:

- (i) The vessel's motor, spars, sails, and accessories; and
- (ii) Ice boats.

(15) "Waterfront park" means an area with a waterfront on the ocean, a bay, or a lake as its principal attraction.

.02 State Park System.

A. Historic or Scenic Area.

- (1) In this regulation, "historic or scenic area" means an area of special or unique State historic interest or scenic interest.
- (2) Development depends on the size and the significance of the area and may include any facility found in a multi-use State park.
- (3) Development may not intrude on the historical or scenic features of the area.

B. Natural Environment Area.

- (1) In this regulation, "natural environment area" means an area generally 1,000 acres or more of significant natural attraction or of unique geological, botanical, or biological significance.
- (2) Development is generally confined to trails, interpretative facilities, and picnicking facilities.
- (3) Water and sanitary facilities are provided and limited parking is

available.

C. Natural Resources Management Area.

(1) In this regulation, "natural resources management area" means an area where multiple-use management practices are employed for the maximum use of the natural resources of the area.

(2) Preparation of plans for the development and management of an area is the joint responsibility of the Service and other Department of Natural Resources agencies.

(3) The Secretary of Natural Resources shall designate the responsibility for coordinating the management of the area after plan approval.

D. The Superintendent may regulate activities and uses of each State park in accordance with the designations provided in Regulation .01 of this chapter in order to promote the designated uses for the benefit of each individual.

E. The State park system consists of the following areas in F-----N of this regulation, as delineated on maps filed in the Office of the Secretary of Natural Resources.

F. Multi-Use State Parks.

Name of Area	Project Acreage	County
(1) Cunningham Falls	5,364	Frederick
(2) Greenbrier	1,436	Washington
(3) Gunpowder Falls	15,787	Baltimore, Harford
(4) Patapsco Valley	16,083	Anne Arundel, Baltimore, Carroll, Howard
(5) Patuxent River	7,416	Howard, Montgomery
(6) Pocomoke River	17,285	Worcester
(a) Shad Landing Area	544	Worcester
(b) Milburn Landing Area	370	Worcester
(7) Rocky Gap	3,329	Allegany
(8) Seneca Creek	6,502	Montgomery
(9) Susquehanna	3,636	Harford, Cecil
(10) Tuckahoe	4,609	Caroline, Queen Anne's

G. General Recreation Parks.

Name of Area	Project Acreage	County
(1) Big Run	300	Garrett
(2) Calvert Cliffs	1,313	Calvert
(3) Chapel Point	828	Charles
(4) Dans Mountain	481	Allegany
(5) Gambrill	1,161	Frederick
(6) Greenwell	596	St. Mary's

(7) Herrington Manor	365	Garrett
(8) Martinak	105	Caroline
(9) New Germany	455	Garrett
(10) Palmer	485	Harford
(11) Purse	149	Charles
(12) Rocks	1,574	Harford
(13) South Mountain	10,886	Frederick, Washington
(14) St. Mary's River	2,550	St. Mary's
(15) Swallow Falls	257	Garrett

H. Waterfront Parks.

Name of Area	Project Acreage	County
(1) Assateague	756	Worcester
(2) Choptank River Fishing Piers	27	Talbot, Dorchester
(3) Deep Creek Lake	1,876	Garrett
(4) Elk Neck	2,202	Cecil
(5) Elk Neck-----Welch Point Area	77	Cecil
(6) Janes Island	3,151	Somerset
(7) Matapeake	30	Queen Anne's
(8) North Point	1,320	Baltimore
(9) Point Lookout	727	St. Mary's
(10) Sandy Point	786	Anne Arundel
(11) Hart-Miller Island	1,214	Baltimore

I. Natural Environment Areas.

Name of Area	Project Acreage	County
(1) Mattawoman	3,572	Charles, Prince George's
(2) Morgan Run	4,486	Carroll
(3) Severn Run	1,883	Anne Arundel
(4) Soldiers Delight	1,989	Baltimore
(5) Youghiogheny Wild River	4,731	Garrett
(6) Zekiah Swamp	5,000	Prince George's

J. Historic or Scenic Parks.

Name of Area	Project Acreage	County
(1) Casselman Bridge	4	Garrett
(2) Fort Frederick	561	Washington
(3) Fort Tonoloway	26	Washington
(4) Gathland	140	Frederick, Washington
(5) Rosaryville	990	Prince George's

- (6) St. Clements ----- 63 ----- St. Mary's
- (7) Smallwood ----- 631 ----- Charles
- (8) Washington Monument ----- 167 ----- Washington
- (9) Wills Mountain ----- 52 ----- Allegany
- (10) Wye Oak ----- 29 ----- Talbot

K. Roadside Picnic Areas.

Name of Area -----	Project Acreage -----	County
Jonas Green -----	6 -----	Anne Arundel

L. Natural Resources Management Areas.

Name of Area -----	Project Acreage -----	County
(1) Black Walnut Point -----	58 -----	Talbot
(2) Bush Declaration -----	333 -----	Harford
(3) Deep Creek Lake -----	3,900 -----	Garrett
(4) Fair Hill -----	5,622 -----	Cecil
(5) Merkle -----	2,189 ---	Calvert, Prince George's
(6) Monocacy -----	2,176 -----	Frederick, Montgomery
(7) Patuxent River -----	7,419 -----	Anne Arundel, Calvert, Charles, Prince George's
(a) Full Mill Branch -----	189 -----	Prince George's
(b) Hall Creek -----	330 -----	Calvert
(c) House Creek -----	242 -----	Anne Arundel
(d) Indian Creek -----	580 -----	Charles
(e) Kings Landing -----	1,195 -----	Calvert
(f) Spice Creek -----	780 -----	Prince George's
(g) Upper Patuxent -----	383 -----	Prince George's
(8) Wye Island -----	2,681 -----	Queen Anne's

M. Sensitive Management Areas.

Name of Area -----	Project Acreage -----	County
(1) Appalachian Trail Buffer Zone -	3,999 ---	Frederick, Washington
(2) Point Lookout Barrier Island ----	45 -----	St. Mary's
(3) Youghiogheny Grove -----	37 -----	Garrett

N. Marinas.

Name of Area -----	Project Acreage -----	County
Somers Cove -----	68 -----	Somerset

.03 Hunting.

A. General.

- (1) The Superintendent may establish designated hunting areas, species to be hunted, methods of harvest, seasons, and weapons to be used within the State park system.
- (2) The designated areas shall be published annually in the Guide to Hunting and Trapping in Maryland, available from the Department. The areas open to hunting shall be posted.
- (3) The Superintendent shall establish areas for training and running of hunting dogs.
- (4) The hunting season in all designated areas shall be in accordance with State and federal laws and regulations.
- (5) An individual may not construct permanent game shooting stands, or use stationary blinds for hunting in State parks. The Service reserves the right to construct these facilities and regulate their use.
- (6) An individual may not hunt within 150 yards of a dwelling, public road, property line, or developed area of a State park.
- (7) Except by written permit, an individual may not trap or attempt to trap game in a State park. The permit shall be issued by the Superintendent.
- (8) An individual may not hunt in violation of provisions of a permit issued for the purpose of hunting in a State park.

B. Baiting or Feeding.

- (1) Except by written permit issued by the Service, on any State-owned or State-controlled properties open to public hunting, an individual may not place or cause to be placed or scatter or distribute:
 - (a) Shucked or unshucked corn, wheat, or other grain;
 - (b) Salt; or
 - (c) Other feed.
- (2) An individual may not hunt, shoot, or kill, or attempt to hunt, shoot, or kill a game bird or a mammal by the aid of bait, on or over a baited area.

.04 Weapons.

A. Definition. In this regulation, "weapon" means:

- (1) A device capable of propelling a projectile at high velocity by mechanical means, by explosion, or by expanding gas, including, but not limited to a firearm, crossbow, or longbow;

(2) A dirk knife, bowie knife, switchblade, sand club, metal knuckles, razor, or nunchaku; and

(3) A device capable of:

- (a) Inflicting death or bodily harm to an individual;
- (b) Maiming or destroying wildlife; or
- (c) Destroying property.

B. Except as provided in Regulation .03 of this chapter and in C and D of this regulation, an individual other than a law enforcement officer may not possess a weapon in a State park. The Service may approve an exception for an archery range, firearms range, or an exhibition.

C. During hunting season, a licensed hunter may carry firearms and bows and arrows across State parks in order to get to hunting areas or to other State or private property which is open to hunting. The firearms shall be carried unloaded and cased, or carried unloaded with breech open or broken. Arrows shall be carried in a quiver or case.

D. Target shooting is permitted at designated shooting ranges. The regulations governing the use of these ranges shall be posted and strictly observed.

.05 Fishing.

A. Except in a posted area, an individual may fish in the waters of a State park for finfish, if the individual complies with State fishing laws.

B. Permit.

- (1) Fishing for other than finfish is by permit only.
- (2) A permit shall be issued by the Superintendent.

.06 Closing Against Entry.

A. This regulation does not apply to employees of the Department on official business.

B. The Superintendent may, by notice, close areas of State parks to public entry and travel.

C. An individual, vehicle, or vessel may not enter or remain on lands or waters owned or managed by the Service after posted hours of closing to public use.

D. A vehicle remaining on lands or waters after the posted hours of closing to public use, or on areas closed to public entry, may be removed and placed in storage at the owner's expense.

.07 Swimming.

Unless posted as prohibited, an individual may wade or swim in State park waters.

.08 Camping.

A. An individual may establish a camp or occupy a cabin in a State park, if a permit is obtained from the Service. The use of the camp or cabin is limited to the:

- (1) Area;
- (2) Number of individuals specified; and
- (3) Period specified in the permit.

B. A permit may be revoked by a park official.

.09 Commercial Enterprise.

A. An individual may not use the property or resources of a State park for commercial gain without obtaining a permit from the Superintendent.

B. Unless a permit is obtained from the Service, an individual may not sell, hire, or lease an object of merchandise, or a vessel or vehicle designed or used for the transportation of passengers or property.

.10 Fires.

A. An individual shall obtain a permit from the Service before kindling, building, maintaining, or using a fire in an area of a State park not designated for fires. The Service may revoke the permit for violation of this condition.

B. A fire permit may be revoked at any time by a park officer.

C. A fire shall be continuously under the surveillance of a competent individual 16 years old or older. A fire shall be extinguished before the responsibility of the permittee ends.

D. An individual may not discard a burning object within a State park.

.11 Advertising.

Unless a permit is obtained from the Service, an individual may not erect or post a sign, notice, or literature in a State park.

.12 Refuse, Rubbish, and Glass Containers.

A. Except in containers provided by the Service, an individual may not deposit garbage, sewage, waste, foodstuffs, paper, or other litter in a State park.

B. An individual may not possess a glass container or other hazardous object in a swimming area, beach, or other area of a State park where this is prohibited.

C. An individual may not deposit in Service-provided containers any garbage, sewage, foodstuffs, paper, or other litter originating from a private residence, commercial business, or other source outside of State park boundaries.

.13 Plants, Rocks, Minerals, and Animals.

A. This regulation does not apply to park personnel in the performance of their duties.

B. In a State Park an individual may not:

- (1) Remove, disturb, damage, or destroy a plant, rock, mineral, or animal;
- (2) Cut down, remove, or destroy a tree; or
- (3) Feed, touch, tease, frighten, or intentionally disturb wildlife.

C. The Service may issue permits for the removal of any item listed in this regulation.

D. The collection or possession of animals shall be in accordance with Natural Resources Article, §10-902, Annotated Code of Maryland, and COMAR 08.03.08.

.14 Traffic and Parking.

A. The Service shall regulate the use of State park roads. Roads may be closed to traffic if the Service determines this action is necessary. Instruction from a park officer to reduce the speed of a vehicle, to bring it to a stop, to alter its direction, or remove it from a restricted area shall be obeyed immediately.

B. Docking. An individual may not dock a vessel in an area posted against docking.

C. Traffic on State park roads is subject to motor vehicle laws.

D. The following acts are prohibited on State park roads not under the jurisdiction of the State Highway Administration or a county:

- (1) Driving or parking a vehicle within or on a safety zone, walk, trail, or other area not designated and customarily used for vehicular traffic;
- (2) Except for the time required to receive or discharge passengers, permitting a vehicle to stand outside a designated parking space;
- (3) Permitting a vehicle to obstruct traffic by unnecessary stopping;
- (4) Driving a vehicle over a State park road at a speed greater than that posted by the Service;
- (5) Riding an animal, or driving or parking an animal-drawn vehicle in a developed area without permission of the Service;
- (6) Driving a vehicle over a State park road in violation of traffic control devices placed by the Service;
- (7) Permitting a vehicle to stand, park, or remain in a State park area after posted closing hours; and
- (8) Permitting a vehicle to be parked or remain in a parking space exceeding the posted time without paying the parking fees.

E. Parking Violations.

- (1) Fines or penalties for parking violations shall be paid directly to the Service.
- (2) An individual issued a citation for a parking violation may elect to stand trial by notifying the Service.
- (3) An illegally parked vehicle may be removed and placed in storage at the owner's expense.

.15 Fees and Charges.

A. An individual may not make use of, or gain admittance to, a facility or activity in a State park for which there is a fee, unless the fee is paid.

B. An individual 62 years old or older shall be admitted to day-use areas free of an admittance charge, if the individual submits proof of age and registers with the Service.

C. An individual who has a disability that is permanent and substantially limits one or more major life activities shall be admitted to day-use areas free of an admittance charge, if the individual registers with the Service.

.16 Grazing.

Except under special permit, or lease from the Service, grazing of cattle, horses, sheep, goats, or domestic animals is not allowed in a State park.

.17 Pets.

A. Developed Areas.

(1) Except for guide service dogs, pets of any kind are not allowed on a picnic area, cabin area, camping area, or other restricted area of a State park.

(2) The Service reserves the right to designate pet areas in a State park. In these areas pets shall be on a leash with a maximum length of 6 feet.

B. Undeveloped Areas. Pets are permitted on a leash with a maximum length of 10 feet.

.18 Relics, Treasures, and Metal Detectors.

A. The policy of the Service is to safeguard the archeological resources under its care. The guidelines in B and C of this regulation shall be followed.

B. Without a permit from the Office of Archeology, Maryland Historical Trust, Department of Housing and Community Development, and the Department, an individual may not dig in search of buried relics or treasures, remove prehistoric or

historic artifacts, or use metal detectors, except as provided in §D of this regulation, within the boundaries of lands, beaches, or under waters controlled by the Service.

C. Permits are issued to archeologists and other qualified individuals who present a plan for scientific investigation to be carried out under provisions of the Maryland Archeological Historic Properties Act, Article 83B, 5-623-----5-628, Annotated Code of Maryland. Copies of the law and application for permit can be obtained from the Chief, Office of Archeology, Maryland Historical Trust, 100 Community Place, Crownsville, MD 21032.

D. Metal Detector Exception.

(1) An exception to the permit requirements of this regulation is for the use of a metal detector in the search for modern coins, jewelry, and other items on designated swimming beaches operated by the Service, with the exceptions of Point Lookout and Calvert Cliffs.

(2) An individual shall obtain permission to use a metal detector as set forth in this regulation from the Service.

(3) A metal detector may be used during normal park hours with the following exceptions:

(a) 9 a.m. through dusk from May 30 through Labor Day; and

(b) Other times at the discretion of the park manager.

.19 Intoxicants.

A. An individual younger than 21 years old may not transport or possess an intoxicating beverage within a State park.

B. An individual may not consume or possess an open container of an intoxicating beverage on a parking lot, roadway, trail, or other designated area within a State park.

C. The Superintendent may prohibit intoxicating beverages in an area of a State park.

.20 Disorderly Conduct.

An individual may not act in a disorderly manner in a State park by:

A. Making loud and unseemly noises or profanely cursing, swearing, or using obscene language;

- B. Indecently exposing their person or performing an indecent act;
- C. Throwing missiles, to the annoyance of the public;
- D. Interfering with, encumbering, obstructing, or rendering dangerous any public place;
- E. Engaging in, instigating, or encouraging a confrontation or fight;
- F. Operating a generator or electronic audio equipment, or playing a musical instrument at a sound level annoying to other park users, with the use of these prohibited after posted hours of permissible operation; or
- G. Causing a disturbance of the public peace.

.21 Lawful Order of Park Officer.

An individual shall obey a lawful or reasonable order of a park warden or law enforcement officer in connection with the enforcement of Natural Resources laws, regulations, or other State laws.

.22 Fireworks.

Without a permit, an individual may not possess or use fireworks or other explosive or combustible devices intended for the creation of a display of noise, light, or smoke in a State park.

.23 Shooting Ranges.

A. Bow and Arrow Ranges.

- (1) The following restrictions apply on field archery courses, as established by or with the permission of the Service:
 - (a) Only field tip or blunt arrows shall be used;
 - (b) An individual may shoot only at established targets; and
 - (c) An individual may not use the range outside the posted hours of operation.
- (2) The Superintendent may establish regulations for the use of the range.

B. Firearms Range. The following restrictions apply on firearms ranges established by or with the permission of the Service:

- (1) The number of shooters using a range may not exceed the posted range capacity;
- (2) Shooting is permitted at paper targets only;
- (3) Targets may not be placed on a portion of a baffle, and shall be located 3 to 4 feet from ground level;
- (4) Fully automatic weapons are prohibited;
- (5) An individual may not use the range outside the posted hours of operation; and
- (6) An individual younger than 18 years old shall be accompanied by an adult when shooting.

.24 Encroachment.

A. Private encroachments are prohibited on State park land. Encroachments include, but are not limited to:

- (1) Fences;
- (2) Walls;
- (3) Dog runs;
- (4) Dog houses;
- (5) Storage structures;
- (6) Driveways;
- (7) Compost piles;
- (8) Swimming pools;
- (9) Tree houses;
- (10) Play houses;
- (11) Woodpiles;
- (12) Gardens;
- (13) Play equipment;
- (14) Television or radio reception devices; and
- (15) Other devices, structures, refuse, or material.

B. Private mowing, clearing, application of chemicals, and other maintenance activities are prohibited on State park lands.

C. Exceptions to this regulation may be issued by the Superintendent to lessees of the State and to private concerns when an activity would be in the best interest of the State.

.25 Use of Trails.

The Service may restrict the use of bicycles, mountain bikes, and animals on certain trails in a State park.

.26 Amplifiers.

Unless a permit is obtained from the Service an individual may not use an amplifier, loudspeaker, or other similar equipment in a State park. The permit may specify conditions for use, and the Service may revoke the permit for violation of conditions of the permit.

.27 Private Vessels.

A. An individual may launch a vessel only in designated areas.

B. Motors.

(1) Gasoline Engines. Except by park personnel in the performance of their duties, a vessel with a gasoline engine may not be operated on a lake, pond, or other impoundment of water in a State park. The Service may waive this prohibition for programs and events sponsored by the Department of Natural Resources.

(2) Electric Motors. An individual may not use an electric motor exceeding 30 pounds of thrust.

C. Restricted Areas. Vessels are prohibited in swimming areas and other designated areas.

D. Limited Capacity of Lake. The number of private vessels permitted on a lake at a given time may not exceed the posted limit.

E. Swimming from Vessels. An individual may not swim or dive from a vessel in a lake or impoundment operated by the Service.

F. Harbor of Refuge. Except in designated areas or when used as a harbor of refuge, the overnight storage of private vessels in a State park is prohibited.

Department of Natural Resources
Deep Creek Lake Natural Resource Management Area

Guidelines for Special Permits

The following guidelines are provided to assist you in preparing special permit applications for alterations or improvements to the park buffer strip. These are general guidelines only. Your special permit may be conditioned or restricted due to physical site limitations, public safety considerations, physical site factors, and the need to protect the environmental integrity of park property.

If you are considering improvements on a conservation easement/buydown parcel, these guidelines may be helpful at understanding what DNR may permit by way of improvements to your land. The conservation easement for that property supersedes these guidelines.

STRUCTURES – DECKS, SHEDS, GAZEBOS AND SIMILAR STRUCTURES:

- nominal 10 X 12 OR 120 square feet maximum permissible size
- non-permanent installation required, must be easily removable, built on skids or otherwise moved easily
- setback required of a minimum of 20 feet uphill from the 2642 ft. lake elevation
- must be installed within established area of use for buffer strip use permittee
- must be constructed of natural materials and colors
- maximum permissible height – 12 ft.
- may not restrict public access across or use of the buffer strip

STAIRS / WALKWAYS

- maximum 4 ft. in width
- must be constructed of non-permanent materials
- railroad/landscape tie borders acceptable with pathways of wood chips, gravel or paving stones
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- steps must have a handrail on one side, and a landing every tenth step, and a break in the railing may be needed to provide for public access across the pathway
- stairs permitted to assist in safe access and foot travel across buffer strip
- path must follow the path of least disturbance
- fences are not permitted

PLAY AREAS / PLAYGROUND EQUIPMENT, SWINGS, ETC.:

- must be located above 2462 ft. elevation
- sand areas permitted on slopes of 5% or less. Maximum 20 X 20 size, filter cloth installed beneath sand
- swings and hammocks may not be attached to trees with bolts or other hardware
- non-permanent installation of recreation facilities required

LIGHTS / ELECTRICAL IMPROVEMENTS:

- all electrical improvements must be installed according to National Electric Code
- must utilize PVC conduit underground, installation along pathways preferred
- cannot extend below the 2462 ft. elevation
- all lights must be mounted on nominal 4 X 4 or 6 X 6 treated posts, or low wattage lighting fixtures.
- The quantity of lights should be kept to a minimum, and limited to pathway lights and dock security.
- circuits must be equipped with a GFI circuit breaker
- lights must be directed downward and not toward the lake or other residences

GUIDELINES FOR CUTTING OF TREES AND OTHER VEGETATION:

- only permitted to provide access to approved dock facilities
- in open woodland – max. 10 ft. width clearing of underbrush, 6 ft. in height or less to facilitate placement and maintenance of an approved pathway and security of dock facilities.
- Lake Management personnel maintain discretion for final location of the path.

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- absolutely no cutting of trees to accommodate a pathway or a view to the lake
- pathway should be located and laid out to preserve trees and brush as much as possible.
- no cutting or clearing of vegetation to accommodate buildings, gazebos, decks etc. for an area larger than 120 sq. ft.
- cutting of vegetation for building placement limited to 3 ft. in height or less
- no cutting or clearing of wetland areas, except that ramps approved docks may immediately cross shoreline vegetation
- docks should be located to minimize impact to wetlands or sensitive environmental sites

SAND AND PLAY AREAS:

- maximum size: 20 feet x 20 feet or 400 square feet
- must be enclosed with treated timbers and designed to prevent sand from moving out of area
- placement of filter cloth under sand is required
- must be located 20 ft. above the high water mark (2462 ft. elevation)
- sand or any other material may not be dumped or installed below the 2462 ft. elevation for play areas or a beach

SHORELINE EROSION CONTROL:

- applications are processed through various regulatory agencies by DNR lake management office
- may install hand stacked stone, rip-rap or gabion baskets (on steep slopes) only
- property owner responsible for all costs of improvement
- with a permit, permittee may relocate unsafe rocks and stumps to facilitate safe dock location and swim sites at DNR lake management staff discretion

OTHER IMPROVEMENTS:

- all other requests for improvements to park property are evaluated on a case by case basis with specific emphasis given to safety and environmental protection
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- fire rings are permitted under a special permit provided that they are made of stone, steel or masonry

Maryland Department of Natural Resources
 State Forest and Park Service
 Deep Creek Lake NRMA
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 Swanton, Maryland 21561
 phone 301-387-4111

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