

MAINE STATE LEGISLATURE

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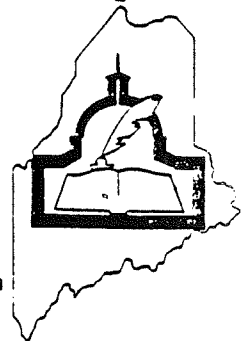
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Final Report
of the
COMMISSION ON MAINE LAKES
to the
Joint Standing Committee on
Energy and Natural Resources

January 28, 1990



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EXECUTIVE SUMMARY

INTRODUCTION

The Commission held three hearings around the state to determine which threats people deem most critical and what they believe should be done about them. We invited people with special expertise to meet informally with us before each hearing to share information about key issues. A summary of our findings and recommendations follows. With the exception of one recommendation, we offer a unanimous report.

FINDINGS

Maine is blessed with an abundance of lakes, a resource that the citizens of this state value highly. Most lakes have at least moderate water quality. A large proportion, however, are sensitive to degradation. Along with the coast, lakes are probably the most sought after recreational asset in the state, and are thus a critical part of our quality of life and economy. About fifty are used as primary sources by community water supplies, and hundreds more are designated for such use in legislative charters. At least one quarter of Maine's great ponds have resource values of state wide significance.

Phosphorus, a nutrient that stimulates the growth of algae, is the chief threat to lake water quality in Maine. Internal recycling of phosphorus has played a major role in triggering algal blooms on lakes. Maine's current water quality statute recognizes the problem, but measures need to be put in place to make the standards effective. Maine is a leader among states in developing control techniques. Sources of phosphorus that threaten lakes to varying degrees include:

- The conversion of vegetated land to development
- Short term construction activities and existing roads
- Agricultural sources and more intensive forest practices
- Malfunctioning septic systems
- Sludge, ash, and septage spreading
- Fertilizers and detergents used by homeowners
- Boating
- Direct discharges into lakes from municipal and industrial sources

We don't know enough about most other types of water quality threats to determine which ones are significant.

Increased recreational use and shoreland development are changing the meaning of how people experience lakes. There is a growing sameness among lakes where multiple use and conflicting uses are the norm. The reputation of Maine lakes as unspoiled places where one can psychologically escape from the fast pace of modern life is at risk.

Most surface uses of lakes are unmanaged, thus compounding the problem of increased use. Without explicit management goals about the kind of public access and surface uses that are appropriate for different kinds of lake settings, it is difficult to reach consensus between shoreland owners, the boating public, and state agencies as to when boat launching facilities should be provided. Water level management has also become controversial with increased demand and diversified use. Land acquisition to assure public access to Maine's lakes has not kept pace with increasing population and demand.

Maine has not implemented a clearly articulated approach for comprehensively managing lakes and their other special values. Public education, generally considered to be the strongest influence in assuring compliance with an environmental or surface use regulatory program, has received the least focus and support in the setting of program priorities. The effects of this neglect are apparent in the abundance of violations of Maine's environmental laws. Enforcement is the weakest link in the environmental protection system, both at the state and local levels; it may, however, be only a symptom of our lack of commitment to education and an effective permitting system. Surface laws are not adhered to either. Public perceptions about government competency have compromised the ability of state agencies and local governments to provide the level of protection for Maine lakes that the public deems appropriate.

RECOMMENDATIONS

GREAT POND MANAGEMENT POLICY

The Commission concludes that the special values of Maine's lakes will gradually erode unless the state and municipalities articulate and aggressively pursue clear management goals for them. This can only be accomplished in the context of a comprehensive policy and concerted

action among all levels of government. Accordingly the Commission recommends the following:

1. Establish a comprehensive policy for management of Maine's great ponds.
2. Establish a permanent Interagency Great Pond Task Force for implementing the state policy.

FIVE YEAR STRATEGY 1991-1996

OBJECTIVE 1:

Assure that threats to water quality are effectively controlled and give high priority to educating the public and training those engaged in construction, road maintenance and construction, forestry, agriculture, and other activities that impact water quality.

1. Require a local subdivision permit applicant in a great pond watershed to consider the long-term, cumulative impact of development in the watershed on lake phosphorus concentration.
2. Grant state approval only to local growth management programs that include a means of assuring that water quality will be protected from long-term and cumulative increases in phosphorus from development in great pond watersheds.
3. Continue to support the Department of Environmental Protection in its efforts to refine the phosphorus allocation method.
4. Revise, as necessary, the "best management practices" currently being developed to make clear which ones should be required in great pond watersheds to control phosphorus.
5. Assure that the "best management practices" are used in state-initiated land use activities in great pond watersheds.
6. Grant state approval only to local growth management programs that include a means of assuring that water quality will be protected from temporary contributions of phosphorus.
7. Require all permit applicants under existing state administered laws to use methods to control phosphorus.
8. Make water quality protection and the use of "best management practices" a top priority in training programs conducted by state agencies.

9. Require that those who are issued permits under state laws for site work in great pond watersheds display a notice of permit approval prominently on site .
10. Maintain at least the 1990 staffing levels for the Shoreland Zoning program and lakes technical assistance program of the Department of Environmental Protection.
11. Require that septic systems grandfathered as of 1974 and located within 100 feet of the shore of a great pond be upgraded, replaced, or certified as acceptable.
12. Require that landowners who convert seasonal property served by substandard systems install new ones that meet the present Plumbing Code.
13. Require a loam liner for septic systems in shallow and sand and gravel soils and make other changes that will maximize the efficiency of systems to remove phosphorus in shoreland areas.
14. Amend DEP regulations pertaining to sludge, septage, and ash spreading to require the use of "best management practices" for controlling phosphorus runoff.
15. Prohibit the spreading of manure on frozen fields in the winter time.
16. Require that fertilizers for home use containing phosphorus and pesticides for home use containing toxic chemicals be labeled with warnings and directions about their proper application in great pond watersheds.
17. Ban the use of detergents containing phosphorus in Maine.
18. Direct state agencies to provide permanent or portable public toilets at state boat launch facilities on heavily used lakes.

OBJECTIVE 2:

Reduce scientific uncertainty related to those threats that could result in serious environmental or fiscal impacts if decisions are made with inadequate data.

1. Establish an Environmental Research Fund.

OBJECTIVE 3:**Expand authority to control surface uses.**

1. Broaden the Commissioner of Inland Fisheries and Wildlife's authority to regulate the use of watercraft on lakes to protect wildlife habitat.
2. Enable local governments to regulate surface uses.
3. Develop guidelines for state and local regulations governing surface use of great ponds.
4. Develop an advisory list of lakes where additional boating regulations are appropriate . Direct public land holding agencies to establish surface use goals on water bodies completely within public land ownership.
5. Make it clear that municipalities have the authority to regulate the location of moorings on great ponds.
6. Rewrite the boating regulations and staple a copy to each boating registration, along with a summary of the regulations and information about protecting lake values.

OBJECTIVE 4:**Classify and set priorities among great ponds, clarify responsibilities, and assure greater coordination among state agencies and municipalities.**

1. Fund competitive grants for the development of land use management plans and implementation programs for great pond watersheds located in more than one jurisdiction.
2. Require municipalities and water utilities to cooperate early in the process of developing land use management programs and surface use regulations for lakes of mutual concern. Require regional councils to make regional lakes a priority in the development of regional policy plans.
3. Establish a classification system for great ponds based upon land use character and intensity of use, and make it available for municipalities to use in establishing management goals.
4. Assure that local growth management plans include goals pertaining to the management of shoreline character, intensity of surface use, protection of resources of state significance, and type of public access

appropriate for the type of classification that the town(s) recommends for lakes within its jurisdiction.

5. Develop siting procedures and standards for state construction of public access sites including the provision of toilets, and guidelines for state review of local watershed plans as they pertain to public access.
6. Require state agencies to conduct their activities consistent with the performance standards included in the state's mandatory shoreland zoning guidelines.

OBJECTIVE 5:

Improve education, administration, and enforcement of environmental and surface use laws.

1. Establish a fund supported by enforcement penalties to finance education and training efforts.
2. Require violators to mitigate in great pond watersheds. Require towns and state permitting agencies to develop compliance inspection programs. Enable the Department of Environmental Protection to contract for enforcement services with municipalities .
3. Establish and train a citizen's environmental enforcement corps,.
4. Work with the Environmental Law Committee of the Maine Bar to provide periodic training for judges in regard to the purpose and importance of Maine's environmental laws.
5. Develop recommendations and legislation for streamlining the enforcement process.
6. Encourage municipalities with interlocal surface use regulations to enter into interlocal agreements for the purpose of reciprocal enforcement.
7. Direct state, local and county public safety, conservation, and environmental protection agencies to intensify cross training programs for enforcement and regulatory personnel, and direct public safety personnel to intensify their enforcement of surface use violations of state laws.

OBJECTIVE 6:**Secure a reliable mix of revenue sources to support state and local great pond management efforts.**

1. Establish a system of user fees to augment general fund appropriations for state and local lake management efforts. Initially derive these funds through the assessment of user fees for motorized boats and a \$10 use fee for every residential dwelling in shoreland areas, to be collected along with the property tax.

Note: MINORITY REPORT. One member, Steven Duren, is opposed to any increase in boat registration fees.

2. Request a \$7 million bond issue to be used by the Land For Maine's Future Board for the purchase of shoreland property.

INTRODUCTION

I. LEGISLATIVE MANDATE

This study is the latest in a progression of efforts aimed at taking a comprehensive approach toward managing Maine's special resources. The Legislature first enacted landmark legislation protecting Maine rivers. Then it put the state among the leaders in the nation by establishing a program for helping communities manage growth and curb development sprawl. Most recently, it put in place the most ambitious solid waste management program in the country.

Subsequently, the Joint Standing Committee on Energy and Natural Resources resolved that lakes would be the next major issue for such focused attention. During the Second Regular Session of the 114th Legislature, it proposed and won approval for a Commission on Maine Lakes. The Commission's task was to study the threats to the future of Maine lakes, look for direction from other states, and develop recommendations to address specifically:

1. The increasing levels of phosphorus runoff into Maine lakes and tributaries and the threat this runoff poses to lake water quality;
2. The threats to lake water quality for lakes that serve as public water supplies; and
3. The protection of natural resources on lakes identified by the State as having exemplary qualities.

II. COMMISSION DELIBERATIONS

The Commission divided its assignment into three parts. First it held three hearings around the state to determine which threats people deem most critical and what they believe should be done about them. It invited people with special expertise or knowledge to meet informally before each public hearing to share information about particular issues such as water quality trends, Department of Environmental Protection's phosphorus allocation method, public water supplies, land use activities that threaten water quality, enforcement, watershed districts, and surface uses.

Next, the Commission evaluated the information it had gained and prepared draft findings and recommendations with the help of land use consultant Holly Dominie, and technical advice from Jeff Dennis of the Department of Environmental Protection, Fred Todd of the Land Use Regulation Commission, and many other people representing state agencies and organizations. After a public hearing on the draft report, the Commission made some changes in response to public testimony. These are noted in the text.

FINDINGS

I. SPECIAL VALUES

Finding 1:

Maine is blessed with an abundance of lakes, a good many of which are shared by more than one political jurisdiction.

Maine has about 5855 lakes, depending upon how lakes are defined. Almost half (2787) are greater than 10 acres in size and are thus legally defined as great ponds. Of the 2110 great ponds included in the Department of Environmental Protection's water quality data base, 48% are located in the organized portion of the state; 44% are within the unorganized territory; and 8% straddle the boundaries between organized and unorganized portions of Maine. The watersheds of two fifths are shared by two or more jurisdictions, each comprising more than 10% of the watershed.

Finding 2:

Lakes represent a special kind of environment which the citizens of this state value highly.

Water is one of the most intriguing features of any landscape. Aside from its obvious role in assuring environmental survival, it fascinates us, rejuvenates our spirits, and provides a place of community where we come together to play, be close to nature, and enjoy the natural beauty and bounty of our surroundings. Here in Maine, the abundance of lakes is a prominent feature of the state's special character. All of our lakes provide one or more of these qualities; all are special in their own right as part of the environmental, historical, and social fabric of this state.

Finding 3:

Limited data for about half of Maine's lakes, primarily the great ponds, suggest that most have at least moderate water quality. A large proportion, however, are sensitive to degradation.

The value of Maine lakes is intimately tied to their water quality. Cold water sport and anadromous fisheries, ecological functions, swimming and boating, water supply, and property values are all positively correlated with clean, clear, well-oxygenated water. Clean water is a Maine hallmark, but recent experience suggests that it can not, and should not, be taken for granted. It is true that only about 51 lakes currently are known to have poor water quality. We have only begun

monitoring water quality in recent years, however, in a systematic way and then for only a portion of the total number of lakes. It takes decades for a noticeable change in water quality to register so there are most probably critical and irreversible trends yet undetected. The dramatic decline of China Lake offers a poignant and well-publicized example of how lake water quality can rapidly deteriorate with little warning. Nequasset Lake is an example of a lake recently discovered to be on the brink of algal blooms, a condition that surprised most people, even the Department of Environmental Protection. If we wait to take action until lakes reach the point of visible degradation, there will most certainly not be enough money to restore them. Protection is by far the strategy of least cost and the only one we can realistically afford.

DISTRIBUTION OF LAKE BASINS BY WATER QUALITY CATEGORY AND SIZE CLASS.

WATER QUALITY CATEGORY	LAKE SIZE (ACRES)									
	0-9	10-49	50-99	100- 249	250- 499	500- 999	1000- 1999	2000- 3999	4000- 7999	>7999
OUTSTANDING	0	1	0	2	3	1	1	3	2	1
GOOD	0	10	5	15	4	18	22	7	3	4
MODERATE/STABLE	7	39	14	33	35	27	20	12	7	3
MODERATE/SENSITIVE WITH DATA	5	26	27	49	36	29	18	8	5	2
MODERATE/SENSITIVE NO DATA	310	840	247	188	88	46	25	7	7	2
POOR/RESTORABLE	2	4	2	2	3	1	4	1	2	0
NONE ASSIGNED	2744	583	100	64	31	19	11	10	4	4
TOTALS	3068	1503	395	353	200	141	101	48	30	16

GRAND TOTAL = 5855

Finding 4:

Along with the coast, lakes are probably the most sought after recreational asset in the state, and are thus a critical part of our quality of life and economy.

There has been no comprehensive study of the recreational values of Maine lakes, but we all have an intuitive sense of, or direct experience with, how important they are. Summer and winter, people are lured onto lake surfaces to swim, boat, fish, cross-country ski or snowmobile, water ski or skate, wind or ice sail. Others enjoy sitting, picnicking, camping, lodging, or living on lakes shores. Life in Maine is synonymous with such activities. A recent study by researchers at the University of Maine estimated that the economic value of inland fishing alone in Maine is between \$300 to \$500 million annually, a large portion of which is derived from lakes. (1)

Finding 5:

About fifty lakes are used as primary sources by community water supplies, and hundreds more are designated for such use in legislative charters. Most lakes have the potential to be used for such purpose, providing that treatment costs are minimized.

Community water supplies are defined as those having at least 25 individual connections or 15 service connections used year round. Recent changes in federal regulations caused some water utilities to shift to groundwater supplies to avoid the high cost of filtering surface water supplies. Some districts such as Augusta and Bath are building the additional treatment facilities required for filtration; others such as Portland are working with communities to institute strict watershed control programs to avoid the increased costs. Most Maine lakes are suitable for use as water supplies with some degree of treatment. A few have natural conditions that preclude their use.

Finding 6:

About one quarter of Maine's great ponds have at least one resource value of state wide significance.

Maine's Finest Lakes (2) and its forerunner Maine Wildlands Lake Assessment (3) represent the only state wide assessment ever conducted of the resource values associated with Maine lakes. Since all lakes had not received the same attention for detailed study of particular resource values, comprehensive data was unavailable to the study for organized Maine and the results must be considered incomplete. They are indicative, however, of the prevalence of features of state significance. The results follow on the next page:

NUMBER OF LAKES BY SIGNIFICANCE RATING

<u>Rating</u>	<u>Unorgan.</u>	<u>Organized</u>	<u>Total</u>
Class 1A	123	38	161
Class 1B	207	189	396
Class 2	583	526	1109
<u>Class 3</u>	<u>598</u>	<u>114</u>	<u>712</u>
Total	1511	867*	2378

Class 1A: Two or more outstanding values or one outstanding and four or more significant values

Class 1B: One outstanding value

Class 2: One significant value

Class 3: All other

* The study included only 60% of the total number of great ponds in organized Maine

NUMBER OF LAKES WITH SPECIFIC RESOURCE VALUES

<u>Category</u>	<u># Rated Significant</u>			<u># Rated Outstanding</u>		
	<u>I</u>	<u>II</u>	<u>Total</u>	<u>I</u>	<u>II</u>	<u>Total</u>
Fisheries	536	587	1659	53	157	210
Wildlife	177	135	312	133	85	220
Scenic Quality	40	166	206	26	118	144
Shore Character	48	132	180	13	30	43
Botanic Features	30	13	43	24	44	68
Cultural Features	22	152	174	13	37	50
Physical features	62	98	160	6	62	68

I Organized part of state

II Unorganized part of state

II. THREATS TO SPECIAL VALUES

A. WATER QUALITY

Finding 7:

Phosphorus, a nutrient that stimulates the growth of algae, is the chief threat to lake water quality in Maine.

We now know that land use activities occurring *throughout* the land area that drains into a lake, what we call the lake's "watershed", can have a dramatic influence on water quality. Land use activities mobilize phosphorus, the plant nutrient that determines a lake's potential to produce algae. Usually there is not enough phosphorus available to stimulate noticeable algal growth. However, slight increases in the nutrient from the watershed can reduce lake clarity and deplete

oxygen in the deeper water that cold water fisheries depend upon. Such bottom depletion can cause phosphorus to be released from bottom sediments which can make the problem worse. Large increases in a lake's phosphorus content result in the excessive growth of algae that live near the water's surface. Their growth severely reduces water clarity and produces surface scums that make a lake unpleasant to look at or swim in.

The excessive plant growth can also increase the cost of treating lake water for public supplies. Public water supplies are at no greater risk of degradation from nutrient loading than other lakes. The costs of their degradation will be directly felt by utility customers, however, who will have to pay higher rates for increased treatment and monitoring. Public water utilities have no authority to impose land use controls. When towns attempt to apply such controls they are sometimes resisted when watershed landowners not served by the water supply want to know why they should "pay" to protect someone else's water.

Finding 8:

Internal recycling of phosphorus from bottom sediments has played a major role in triggering blooms on lakes where water quality has degraded.

Phosphorus that has already entered the lake system and settled in bottom sediments can be recycled into the system to sustain conditions that foster blooms. We do not know, however, whether internal recycling is the original precipitator of blooms or is triggered as a result of increased algal production brought on by phosphorus from other sources. We also do not know which kind of lake is most susceptible to this phenomenon. If we did, targeting vulnerable lakes for prevention programs might be much simpler, and we wouldn't necessarily have to make conservative assumptions in setting phosphorus levels for all lakes.

Finding 9:

Maine's current water quality statute recognizes the problem, providing standards that are the most protective in the nation. Practical measures need to be put in place, however, to make the standards effective.

Maine statute states that "waters shall have a stable or decreasing trophic state, subject only to natural fluctuations and shall be free of culturally induced algal blooms which impair their use and enjoyment." This non-degradation goal is interpreted by state water quality managers as prohibiting any "perceivable" increase in trophic state. This allows some small, but absolute increase in phosphorus over time, provided that the lake does not already support algal blooms, and hence some limited latitude for allowing new activity in the watershed. It also

provides strong support for minimizing any new sources of phosphorus from that activity.

The method for allocating phosphorus loading among new developments that has been designed by the Department of Environmental Protection, along with "best management practices" being developed for eight kinds of land use activities, give Maine useful ways to enforce the standard (4). Ways need to be found, however, to implement these tools effectively. "Best management practices" describes the techniques available to contractors, foresters, farmers, road maintenance crews, and others for effectively controlling water quality impacts through stormwater management, erosion and sedimentation control, and other such measures. Unfortunately, those "best management practices" most appropriate for specifically controlling phosphorus have not been singled out for easy application in lake watersheds.

Finding 10:

The conversion of vegetated land to development in lake watersheds is the most significant new source of phosphorus in southern, central, and coastal Maine, and lake shores throughout the state. Land use conversion can have a highly detrimental long-term impact on water quality.

Under natural conditions, phosphorus is trapped in the forest soil complex and cycled within the forest vegetation. Stormwater that might have mobilized phosphorus pools in irregularities in the natural terrain, allowing it to percolate slowly into the soil. Development, however, changes the nutrient cycle and adds more phosphorus to the system. Flattening and removing vegetation from the terrain, paving it over, or building structures upon it, prevents phosphorus stormwater from infiltrating into the ground where any phosphorus would latch onto soil particles. Instead, it flows over the easily washed surfaces, picking up any phosphorus and phosphorus laden particles as it is channelized into ditches, intermittent stream channels and eventually into the lake.

The building boom of the 1980s precipitated an unprecedented conversion of undeveloped land to residential and commercial use, increasing phosphorus runoff in many lake watersheds. While data is unavailable in the organized portion of the state, we know that in the Land Use Commission's jurisdiction 43% of both the subdivision permits (1982-1990) and building permits (1985-1990) were on lake shores. Factoring in those sites located on back or upland lots in lake watersheds would make the percentage of developments influencing lakes much greater in unorganized Maine. Examples of lakes where land conversion has probably triggered algal blooms are China Lake and Chickawaukie Lake.

The Department of Environmental Protection has developed an innovative method for assuring that new subdivisions are designed to produce no more than their fair share of the additional phosphorus that a lake can absorb without a noticeable decline in water quality. The method is being used by the Department and the Land Use Regulation Commission, and a few towns, for review of subdivisions and site plans. LURC also uses it in reviewing zoning change permits and some lake concept plans. While it has been adapted for use for single lot development, it needs to be made more streamlined before it is easily and widely used for this purpose. Improving the single lot approach is especially important in light of the amount of incremental development that takes place without formal subdivision review.

Finding 11:

Short term construction activities and expanded or poorly maintained roads are a significant threat to water quality with a potentially high impact throughout the state.

Soils exposed by construction activity or eroded from improperly maintained roads or road ditches can contribute substantial amounts of phosphorus to lake systems. Fine materials in soil often contain high concentrations. Where improper construction and maintenance practices are used, they are washed away during storms and snowmelt into stream channels. While the impacts from a particular site are usually only temporary, the cumulative effect of site disturbance over time throughout a watershed can be substantial, especially when construction occurs between October and May.

Construction activities have had a high impact throughout the state, as have roads. The Maine Department of Transportation has not traditionally taken steps to control phosphorus runoff during construction and maintenance of its road system. The same holds true at the local level. While roads in lake watersheds have long been a source of phosphorus, the expansion of many camp roads to accommodate more seasonal and year-round use has aggravated the problem.

No performance standards have been compiled prescribing best management practices that will control phosphorus from these sources. The Department of Environmental Protection is, however, currently spearheading the development of a general compendium of "best management practices" for stormwater management, erosion and sedimentation control, and road construction and maintenance that could be adapted for this purpose.

Finding 12:

Agricultural sources have declined state wide, but are still having a significant, if not dominant, impact on lakes where farming is a major land use, primarily in Central Maine and Aroostook County.

Improper waste handling, especially the spreading of manure on frozen fields in the winter time, is a serious concern in Central Maine and in some lake watersheds elsewhere. Pasturing livestock in stream and lake shore areas poses a threat as well. Crop farming is mostly a serious threat in Aroostook County. Some soil conservation techniques still used by some farmers limit the loss of soil from agricultural operations, but they are not effective at trapping the smaller phosphorus-bearing particles. These practices have served to assure the long-term productivity of farming rather than other benefits to society. An important question centers on who should pay for the added cost of water quality protection, society or farmers? Commercial fertilizers used for agricultural purposes pose only a moderate threat state wide, except in Aroostook County where they are used more intensively.

No performance standards have been compiled prescribing best management practices that will control phosphorus from agricultural operations. However, the Department of Environmental Protection, along with the Department of Agriculture, Food and Rural Resources and other agencies, is currently spearheading the development of a general compendium of "best management practices" that could be adapted for this purpose. Such practices will need to be adopted by the U.S.D.A. Soil Conservation Service before they can be implemented by that agency in its efforts to assist farmers.

Fortunately, Maine has a system for helping farmers improve their practices that has been functioning effectively for years. The Maine Department of Agriculture's Soil and Water Conservation Districts, together with cooperating agencies such as the U.S.D.A. Soil Conservation Service, the U.S.D.A. Agricultural Stabilization Conservation Service, Cooperative Extension Service, and others, are available to help farmers develop farm plans and finance best practices to protect water quality.

Finding 13:

More intensive forest practices have increased phosphorus export.

The mechanization of the forest industry through increased use of skidders and other heavy equipment has increased the disturbance of soils and the release of phosphorus into stormwater runoff. Since the demise of the log drives, the industry has built an extensive system of haul roads that contribute to the problem as well. While the Land Use Regulation Commission's road construction standards are not entirely adequate for protecting lakes, if more strictly adhered to, they would

lessen the threat from forestry operations. In the Madawaska Lake watershed, extensive clear cutting and road building have contributed to algal blooms.

No performance standards have been compiled prescribing best management practices for control of phosphorus from forestry operations. The Department of Environmental Protection is, however, currently spearheading the development of a general compendium of "best management practices" that could be adapted for this purpose.

Finding 14:

Malfunctioning septic systems are not a major source of phosphorus state wide but are a significant threat to some lakes.

The sources mentioned previously usually have a greater impact on lake water quality than do septic systems. Septic systems should not be dismissed from consideration, however. Heavily developed shores with many old systems located on small lots in sandy or shallow soils can be a problem in small watersheds with little dilution from upstream tributaries. These conditions are especially prevalent in York and Cumberland Counties. In many cases, more people are using the same septic system, and the season of use has been extended longer during the year, if not throughout the entire year.

Many septic systems were grandfathered before 1974 when the state's first plumbing code was adopted. Systems were not as well designed before then. For this reason and because of their age, septic systems in shoreland areas are particularly suspect. Some new systems are still being installed without due consideration to phosphorus control in problematic soils. The Division of Health Engineering is intending to include measures to control phosphorus such as loam liners in its next revision of the Plumbing Code.

Finding 15:

Sludge, ash, and septage spreading can have a high impact on water quality if not properly managed.

The spreading of concentrated wastes has become an important component of Maine's waste handling system and must be permitted by the Department of Environmental Protection. Currently, sludge and ash are spread on agricultural lands as a substitute for chemical fertilizers. Septage is spread in much the same way on undeveloped land by commercial haulers and towns. If more waste is spread than is needed to meet the minimum requirements of the soil, and if measures specified in permits to control contamination of runoff from operations are not carried out, spreading could become a problem in some lake watersheds. Current regulations do not always take these issues into

account, and in fact may encourage problems because of the requirement that all towns designate a site within the town for handling septage.

Finding 16:

Fertilizers and detergents used by homeowners probably have a low impact currently state wide, but can have a high impact under certain circumstances.

Fertilizers can be a significant problem in lakes with small watersheds, and therefore low capacity to dilute phosphorus. Those with intensively maintained and extensive lawns, such as one finds especially in suburbanized areas, are at highest risk. As more lawn area is created in any lake watershed through the cumulative impacts of development, the lake is put at greater risk as this source of phosphorus contributes to the overall phosphorus load.

While specific data is not available, there is reason to believe that lakes in watersheds with sandy soils such as are found in York County can be influenced adversely by phosphorus from detergents. Maine law limits but does not prohibit phosphorus from being used in detergents; eight other states have banned the nutrient outright to protect lake water quality. People who use detergents are often not aware of the potential impact on water quality. The same is true for people who use fertilizers in lake watersheds.

Finding 17:

Boating appears to be an insignificant source of phosphorus state wide, but in certain circumstances might be a problem.

The use of large boats on lakes has increased dramatically over the last few years, although most are confined to the larger lakes. Such boats are now required to have sealed waste systems. Their contribution to phosphorus loading is estimated to have been minimal in the past, their impact more important as a public health and aesthetics issue.

Insufficient information exists to determine whether boat traffic has had any effect on the availability of phosphorus from bank erosion, or whether changing water level regimes such as have occurred on Sebago Lake in recent years do either. Heavy traffic in shallow, unchannelized areas, such as at the north end of Tripp Lake in Poland, may create problems by recycling phosphorus from bottom sediments.

Finding 18:

Maine is fortunate to have eliminated most of the direct discharges into lakes from municipal and industrial sources, known as "point sources". A few remain because they have proven difficult to address.

Once a significant problem, point sources have been eliminated except where finding a practical means of treatment has proved elusive such as in Corinna where the discharge reaches Sebasticook Lake in Newport

and on Long Lake in St. Agatha. Discharges in Rangely, Jackman, and Sanford have been minimized to the extent practical, but still have an impact on water quality. There are several concentrated settlements where overboard discharges from septic systems are a problem such as Sinclair in Aroostook County on the Fish River at the outlet of Long Lake. Four fish hatcheries still discharge but are considered low impact because of the low vulnerability of the lakes which they impact. They are located on the outlet of Rangely Lake which flows into Mooselookmeguntic Lake, Grand Lake Stream, Graham Lake, and Craig Brook which flows into Alamoosic Lake.

Finding 19:

We don't know enough about most other types of water quality threats to determine which ones are significant.

We do not know the extent to which, if any, toxics are a problem. Places that are suspect include coves where marinas are located, pesticide spray areas, and lakes affected by atmospheric deposition where metals could be mobilized by changing water chemistry. Limited testing has shown high levels of mercury in predatory fish (i.e. large mouth bass and chain pickerel) in some lakes in Maine, but the variables to predict which lakes are being affected can not be determined because of incomplete data. Other states in New England, and the country, most notably New York and Florida, have noted similar mercury levels. New York has placed a warning on all fishing licenses cautioning people not to eat too much fish.

The threat to water supplies from pathogens transmitted by swimmers is questionable except near intake areas, yet swimming is prohibited on some water supply lakes (Nequasset Lake) but not others (Cobbossee Lake). Gasoline evaporates and is less of a threat if spills occur far enough away from water supply intake pipes. Over a dozen vehicles were lost through the ice last year. This poses a potential problem because vehicle batteries from cars, trucks, planes, snowmobiles, and jet skis, and perhaps some other components are toxic. Debris and human wastes left behind from car and snowmobile racing and ice fishing are also perceived by many people to be a problem.

Old dumps and leaking landfills can sometimes be sources of lake pollution from groundwater. Annabesacook Lake has been controversial for this reason; so have a dump near Sebago Lake and one that has contaminated Lily Pond in Rockport.

Finding 20:

Maine is a leader among states in developing phosphorus controls.

Maine has made great strides in understanding how lake water quality is degraded and raising public consciousness. Indeed, the state is a leader nationally in establishing a scientifically-based method for managing development. Lake protection efforts, in the few other states that have attempted them, have, for the most part, concentrated on cleaning up point discharges and agricultural sources rather than preventing new ones (5). With rare exceptions, such as the Puget Sound Authority, planning for lakes is voluntary and usually carried out by regional governments or lake districts that cross political boundaries, although the latter usually focus on non-water quality issues such as water level management. Watershed districts in some states such as Wisconsin and Minnesota have the authority to regulate stormwater or nutrient runoff.

Within the Puget Sound Authority in Washington State, all counties are required to develop and implement water quality plans, taking into account nutrient impacts. Elsewhere in the state, watershed-wide management plans ("Basin Plans") are supported with state funding. The basin plans include provisions for controlling habitat loss and nutrient runoff and establishing future land use plans, among other objectives. One such plan that stresses municipal and county phosphorus management is expected to serve as a model for other watersheds.

While Chesapeake Bay is not a lake, it does offer perspective on nutrient management. States around it formed the Chesapeake Bay Commission and together spurred measurable improvements in phosphorus levels from point and agricultural sources. Except in Maryland which has instituted a 1000 foot protection zone where development is controlled, phosphorus from unmanaged development still poses a problem for the bay.

One of the earliest efforts to manage lakes was launched by the International Joint Commission for the Great Lakes in the 1970s. Lower phosphorus levels have been achieved by improved sewage treatment facilities, a ban on phosphorus detergents, and to some degree the voluntary "best management practices" established for agriculture.

Summit County in Colorado has instituted an approach to controlling phosphorus runoff from existing nonpoint sources that allows trading phosphorus credits. The county allows point sources to generate one pound of phosphorus for every two pounds of nonpoint source

phosphorus pollution removed. Florida has taken the most aggressive stand by mandating that state stormwater management permits must be obtained from counties for land use activities. All states are moving toward some level of application of "best management practices" at the urging of EPA and the federal Office of Coastal Resource Management.

B. TRADITIONAL CHARACTER

Finding 21:

Increased recreational use and shoreland development are changing the meaning of how people experience lakes. There is a growing sameness among lakes where multiple use and conflicting uses are the norm. The reputation of Maine lakes as unspoiled places where one can psychologically escape from the fast pace of modern life is at risk.

Lakes are hot spots for growth. More uses than ever compete for the same resource: recreation, water supply, wildlife habitat, fisheries, energy generation, tourism, residential development, agriculture, and forestry. Many factors have spurred demand, including changing demographics and lifestyles, increased publicity from news media and maps of remote areas, land speculation and sophisticated marketing techniques, increased access through the construction of boat landings and access roads, and the installation of power lines. Public policy has promoted their popularity as well, through the construction of public facilities, promotion of tourism and renewable forms of energy, higher taxation of shoreland property, and IRS deductions for interest on second homes. An aging population has meant more people with discretionary time and income, more people retiring to shoreland homes or able to afford pleasure boats. By 2010, over 50% of the state's population will be 40 or older. As a result, passive activities such as pleasure boating are expected to continue to increase (6).

Maine lakes historically have been used seasonally for low intensity uses. Their character has changed dramatically in the past decade or so, however - from remote and nearly pristine to busy, noisy, and suburbanized. One used to see little development in areas visible from most lakes, but development of hillsides and spotty enforcement of shoreland zoning have changed the visual appearance of many.

Finding 22:

Most surface uses of lakes are unmanaged, thus compounding the problem of increased use.

The trend toward bigger and faster boats is apparent on most lakes where boating access is available. Motor boats, canoes, kayaks, sailboats, jet skiers, sail boarders, water-skiers, people who swim or fish, and wildlife all must compete for the same space, and the faster speeds make for more conflicts, and especially on the smaller lakes.

The public has become very concerned about safety, noise, the disruption of solitude and loon nesting sites, and unrestrained public access as a result. Maine Audubon's annual loon study has found a significant increase in cases where the use of motorized watercraft has driven away wildlife, although overall the loon population in Maine increased during the 1980s (7).

Based upon public testimony delivered to this commission, boating issues continue to be major concern to people, despite the intense attention they received by the 1989 Special Commission on Boating (8). Many people have expressed concern about the limited authority and personnel with which the Department of Inland Fisheries and Wildlife manages surface uses.

The Department was asked to respond to seven petitions this past year requesting the restriction of horsepower on lakes where wildlife, public safety, and water quality were listed as concerns. The Department's authority to do so is currently limited to public safety. Maine also has a law restricting boat traffic to headway speed within 200 feet of shore, but the frequency of violations anecdotally cited leaves one wondering whether people are sufficiently familiar with it. Boat moorings are also an issue, although as a result of the Special Commission on Boating, the Department of Conservation restricts their location by rule to within 200 feet of shore or one-third the distance to the opposite shore, whichever is less, and providing that access to boat launch facilities or navigation channels is not restricted (9).

A number of states have enacted restrictions on motorized watercraft (7). New Hampshire prohibits jet skis on all lakes less than 75 acres in size and on other lakes by petition. Massachusetts restricts the use of jet skis, surf jets, and wetbikes unless the operator is at least 16 years old, traveling at headway speed when close to swimmers or the shore, on a lake over 75 acres, wearing appropriate flotation, and using it during daylight hours. It also requires people under 18 to take a safety course before using a personal motorized watercraft.

Vermont limits their use to people at least 16 years old. It also allows towns to prohibit the use of motor boats in zones established for swimming; and has restricted or prohibited motor boat use on a significant percentage of the state's lakes. Several states have established noise limits. For instance, Minnesota limits noise to 82 decibels at 50 feet. It also allows municipalities to restrict or prohibit motor boat use on lakes within their jurisdiction with approval from the Department of Natural Resources. In Wisconsin, boats cannot be

operated at greater than slow-no-wake speed on lakes less than 50 acres.

In Michigan, local governments can enact ordinances to resolve use conflicts, and, in the case of lakes crossing political boundaries, form "Lake Boards" for this and other purposes. Local governments must first petition the Department of Natural Resources, however, for permission. The state agency then holds a public hearing to assure that broader state interests are served by regulating the lake, such as assuring that provisions are consistent from lake to lake, and apply to all boaters equally. The local government and the state can both adopt the regulations, which are actually recommended by the state to the local government in response to the problems it has identified, to allow reciprocal enforcement capability.

Winter use has also intensified in Maine. The public perceives many of the same problems on the ice as with summer use. The Department of Inland Fisheries and Wildlife has the authority to restrict vehicles over a certain size from the ice on lakes used for public water supply.

Finding 23:

Without explicit management goals about the kind of public access and surface uses that are appropriate for different kinds of lake settings, it is difficult to reach consensus between shoreland owners, the boating public, and state agencies as to when boat launching facilities should be provided.

There is also some frustration at the local level that state agencies constructing boat launch facilities do not have to comply with local shoreland zoning and other controls, and that public toilets are not routinely provided. Instances have been cited where people perceive that the Department of Inland Fisheries and Wildlife has not responded to broadly-felt concerns that have been raised at public hearings concerning specific sites. Among other things, many people are concerned that the availability of public toilet facilities has not kept pace with increased use of lakes for recreation.

The boating public is concerned that shoreland owners are using tangential issues such as water quality to discourage state agencies from providing launching sites that will put more boats on the lake. They want to make sure that the public's right of access to great ponds is safeguarded, especially in light of skyrocketing land values in shoreland areas that preclude most Maine people from owning property on lakes. Others are concerned that public access will be used as the sole means of restricting the kinds of boats that can be used on lakes. They caution that developing a canoe launch facility on a small lake instead of one capable of accommodating larger boats is unfair if shoreland owners are

allowed to continue using the more powerful boats. Shoreland owners and lake associations are frustrated in turn that the smaller lakes and coves are being deluged with boats too powerful for the space.

Finding 24:

Water level management has also become controversial with increased demand and diversified use.

The issue of water levels has surfaced on many lakes as evidenced by numerous requests to the Department of Environmental Protection to mediate disputes, but nowhere has it been more charged than on Sebago Lake. Erosion of shorefront property, destruction of fish spawning habitat, flooding of beaches, and creation of submerged hazards are some of the possible consequences of fluctuating water levels. The issue is further compounded by the fact that those with a stake in the outcome can seldom agree upon an optimum level.

Finding 25:

Land acquisition to assure public access to Maine's lakes has not kept pace with increasing population and recreational demand.

Maine has one of the lowest percentages of public land in the nation. The Land For Maine's Future Board and the \$35 million bond issue approved in 1987 have helped improve the situation but much more property needs to be acquired to meet present needs. With the economic slowdown, and presumably lowered prices for even shorefront property, it makes great sense to continue the Board's work with a focus on shorefront property for public use for swimming, boating, camping, and other uses. Increased access can help disperse recreational pressures, as long as the kind of access and uses planned are in keeping with the capacity of the lake to accommodate them.

III. COMPREHENSIVE LAKE MANAGEMENT

Finding 26:

Notwithstanding the development of innovative tools for protecting lake water quality, Maine has not implemented a clearly articulated approach for comprehensively managing lakes and their special values.

State policy on lakes is a patchwork of provisions, scattered among the statutes and carried out by more than a dozen bureaus and agencies (see Exhibit 1). The system for planning and managing lakes is thus fragmented, without strong coordination among state agencies, inconsistent among jurisdictions, and incomplete in its scope as discussed in earlier findings. Jurisdictionally, it takes little account of watershed and shoreline boundaries, except for lake watersheds that are totally within a single town or the Land Use Regulation Commission's bounds.

EXHIBIT 1: STATE LAKES MANAGEMENT RESPONSIBILITIES

Department	Responsibility	Planning	Invent-ory & Analysis	Re-search	Education Programs For:	Capital In-vestments	Technical Assistance For:	Regulation	Land Manage-ment
<u>Envir. Pro.</u>	Water quality Water levels		X	X	Public Lake Assoc.	WW.treat- ment fac.	Towns & Applicants Wastewater	Land use Water levels	
<u>Conservation</u>									
1. LURC	Land use	X	X		Landowners		Towns/Pls.	Land use	
2. BPR	Recreation	X	X			Boat access	Towns		X
3. BPL	Multiple use	X	X		Parks Users			Subm. lands	X
4. BF	Forestry		X		Landowners		Landowners	Forest prac.	
<u>Inland Fish.</u>	Fish/wildlife	X	X	X	Users	Boat access Fishways	Towns	Res. use	X
<u>Marine Res.</u>	Anad. fisheries		X	X	Public, users, towns	Fishways	Towns	Res. use	
<u>Executive</u>									
1. SPO	Natural res.	X	X		Public/LOs		Landowners		
2. MHPC	Historic/Arch.		X	X	Public/LO's		Towns/LOs		
3. MSHA	Housing	X			Public/LO's	Housing	Towns		
<u>Muman Ser.</u>	Drinking water Septic systems		X		Public	Water treat- ment	Water suppliers	Water supp.	
<u>DECD</u>	Growth man. Tourism Econ develop.	X			Towns Business Public	Housing Infrastr. Business	Towns & Business	Growth man	
<u>Agriculture</u>	Agriculture	X	X	X	Farmers, Public, towns		Farmers, Towns	Pesticides	
<u>FAME</u>	Econ Dev.					Buildings Infrastr.			
<u>Finance</u>	Taxation							Property taxes	

LOs means landowners. Pls. means plantations.

The Land Use Regulation Commission's land use plan and rule amendments regarding lakes is a bright spot (10). In addition to adopting management goals for each of the lakes under its jurisdiction, the Commission requires landowners to take into account watershed-wide phosphorus impacts in preparing lake concept plans.

Towns in the Cobbossee Lake chain formed the Cobbossee Watershed District which assists member towns with technical studies, permit reviews, and enforcement actions. The concept of watershed districts, however, has been a great disappointment in triggering interlocal cooperation because of people's concern that they create yet another layer of government.

As an alternative, Woolwich, Dresden, and Wiscasset are working toward adopting consistent plans and regulations for managing Nequasset Lake's watershed (11). The opportunity exists to encourage all towns to coordinate in similar fashion, and with the Land Use Regulation Commission and water utilities, through the state's mandated local growth management program. The opportunity exists also to conduct regional plans for lakes of regional significance, but so far, regional agencies have not taken up the challenge. Some people believe, however, that the state should develop management goals for each lake similar to the approach taken by the Land Use Regulation Commission, and modeled after the Maine Rivers Act.

Other problems include:

- Mandated growth management planning is directed toward individual towns rather than watershed and ecological boundaries. While interlocal coordination is required, grants are made without regard to assuring that towns sharing responsibility for watersheds will conduct their planning simultaneously in a coordinated and consistent fashion, and with the Land Use Regulation Commission where necessary. There is some evidence of frustration, inefficiency, and inconsistency as a result. While informally the Office of Comprehensive Planning has said it will use adoption of DEP's phosphorus method as its criteria in determining whether a town has satisfied state goals in its growth management plan, there is no formal assurance of this. There are also no overall management goals set for many features of state significance on Maine lakes for use in determining whether such features have been adequately protected by local plans and state agency decisions.
- Regulatory controls and technical knowledge that could make a big difference in managing lakes have been underused, in great

measure for lack of financial resources and technical assistance (i.e. local subdivision law, best management practices). This is the case even for state agencies, i.e. DOT.

- Years of piecemeal amendments to the Site Location Act and its regulations have resulted in what is universally considered to be a highly unworkable and confusing review process. Maine people support the substance of the law, but complain bitterly about the inefficiencies, "red tape," and cost of the permitting system.
- Many people perceive the Natural Resource Protection Act to be primarily a water quality control mechanism. They get confused about the equity and rationale for some provisions, such as the prohibition on developing sand beaches. This provision is intended to protect productive near shore habitat for fish and other essential aquatic life rather than water quality. Shoreland property owners wonder why back lot owners can haul in sand for fill that will erode into a lake, and they can't do the same for beaches. Inconsistencies jeopardize the credibility of the Department of Environmental Protection. Shoreland Zoning and the Natural Resources Protection Act have lulled people into thinking their lakes were protected, yet effective controls require watershed-wide attention.
- The State Planning Office's "Maine's Finest Lakes" analysis is useful, but incomplete, and, more importantly, does nothing to guide, encourage, or require protection of the exceptional resources it identifies..

Finding 27:

Public education, generally considered to be the strongest influence in assuring compliance with an environmental or surface use regulatory program, has received the least focus and support in the setting of program priorities. The effects of this neglect are apparent in the abundance of violations.

Education fostering a more responsible and informed citizenry would be much cheaper than beefing up enforcement to assure compliance with state and local laws affecting lakes, but it has been given very short shrift. In 1989, the Commission on Maine's Future recommended using "state-of-the-art techniques to raise public consciousness about the special values of the state (12). The study acknowledged that "Maine has demonstrated time after time that if the public understands the nature of the problem, and how they are connected to the solution, they will take the steps necessary to address the issue more effectively". Study after study makes such a pronouncement, yet crucial funding never seems forthcoming, or educational and technical assistance programs are among the first to go in times of budgetary crisis.

There are bright spots. The Land Use Regulation Commission has long strived to acquaint people with regulations in the unorganized part of the state. The Department of Environmental Protection has won wide respect for its efforts to inform the public about the vulnerability of lakes. Still, the citizen is rare who knows the law governing his or her use of land in watersheds or the surface of lakes.

Finding 28:

Enforcement of Maine's environmental laws is the weakest link in the environmental protection system, both at the state and local levels; it may, however, be only a symptom of our lack of commitment to education and an effective permitting system.

Maine's land use system places heavy emphasis on enforcement, yet the resources to do the job effectively have never been provided. Despite numerous efforts to shore up enforcement at both local and state levels, existing land use laws are not being enforced effectively. Most violations go unaddressed for lack of field personnel and political will. We don't know whether conditions imposed through permitting processes are being complied with, either, for there is very little follow-up after permits are granted.

The Growth Management Act may have a positive influence at the local level in better preparing code enforcement officers technically for their jobs, but salary levels do not support a professionalized local staff. 80K bestowed greater authority, but district courts do not support efforts, presumably for lack of a well-informed cadre of judges who understand the environment and its requirements and the implication that environmental infractions pale in comparison to murder and other such crimes. The enforcement process is still cumbersome and resource-intensive. Fines do not discourage people from breaking the law. Except in shoreland areas, violators are not required to restore or mitigate the damage they have done; thus it is often worth it to them to "buy a violation". Many do not even bother to seek a permit as a result as evidenced by the plethora of such violations identified by the DEP.

Finding 29:

Surface laws are not adhered to either.

People have been vocal at public hearings about the inadequacy of enforcement of surface use laws. They have cited such problems as vehicles traveling at excessive and unsafe speeds on ice and water; paying little respect to the 200 foot "headway speed only" zone, swimmers, or non-motorized boats; and driven by inebriated or inexperienced drivers.

People also feel that the present system with multiple jurisdictions responsible for environmental and conservation enforcement is highly inefficient in this era of scarce financial resources. With state and local government finances and personnel stretched to the maximum, it is difficult to make enforcement a priority in either area. Yet cross-training has been given little priority, and enforcers are thus reluctant to get involved in violations concerning a different agency.

Finding 30:

Public perceptions about government competency have compromised the ability of state agencies and local governments to provide the level of protection for Maine lakes that the public deems appropriate.

Many people are frustrated that:

- Violations of the law are for the most part going unaddressed.
- It takes so long to move a project through the permitting process at the DEP.
- They can not get the help they need. As mentioned earlier, program priorities are usually given to permitting before technical assistance.
- Environmental protection is sometimes sacrificed for the short term economic gain of permit applicants and the public will have to pay considerably much more in the future for high priced restoration efforts.
- The rules of the game as mandated by the state appear to keep changing in the organized part of the state. Little by little, more and more parts of the landscape are being declared important for protection, along the same lines as has occurred within LURC jurisdiction. This is because we continue to add to our technical knowledge; and legislators compromise on what needs to be protected in the organized part of the state, designating sensitive areas for protection piecemeal as political will is mustered. (An example is the extent of streams and wetlands covered by Shoreland Zoning.)



RECOMMENDATIONS

I. GREAT POND MANAGEMENT POLICY AND STRATEGIC PLANNING PROCESS

Conclusion:

Maine's great ponds are an important element of the state's economy and quality of life. The Commission concludes that their special values will gradually erode unless the state and municipalities articulate and aggressively pursue clear management goals for them. This can only be accomplished in the context of a comprehensive policy identifying what level of government and which agencies are responsible for various aspects of great pond management.

1. Enact legislation to establish the comprehensive policy for management of Maine's great ponds shown on the following five pages. This applies to all great ponds, except for those riverine impoundments that are specifically excluded from the GPA classification of the state's water quality classification system.
2. As part of the legislation, require that a permanent Interagency Great Pond Task Force be formed to develop, implement, and update every five years a strategic plan for implementing the state policy. The task force should include the State Planning Office whose Director shall serve as chair, and the Departments of Environmental Protection, Conservation, Inland Fisheries and Wildlife, Transportation, and Agriculture, Food and Rural Resources, and the Office of Comprehensive Planning and Division of Health Engineering. It should report progress on implementation of the strategy to the legislature each year, with special emphasis on the effectiveness of the permitting process and rate of compliance with lake-related environmental and surface use laws. It should consult broadly with the public, municipalities, and interested organizations in its deliberations. The legislation should direct all affected agencies to implement the first five-year strategy as recommended in this report of the Commission on Maine Lakes, and prepare the first update in 1996.

PROPOSED GREAT POND MANAGEMENT POLICY FOR THE STATE OF MAINE

Preamble. All of Maine's great ponds are special. Together, they are an important element of the state's economy and traditional way of life. Their abundance and relatively high water quality is a precious resource in light of the growing inadequacy of water supplies and deterioration of natural settings in many other states. Many are already used for drinking water to some extent, or may someday be needed for such use. All are used for recreation; several for power production.

Watershed Management

1. To protect the public trust, Maine's great ponds and their special values shall be protected from unacceptable degradation. They shall be managed according to watershed boundaries, and with the goals of maintaining a diversity of lake setting types within each region of the state, ranging from remote to developed, and from low to higher intensity use; and assuring potable water quality that requires minimal treatment.
2. A primary goal is to assure that consistent land use management policies and regulations are applied throughout the direct watershed of each great pond, defined as that land area where all surface waters drain into the lake without first passing through another lake. Toward this end, land use activities in great pond watersheds shall be planned and conducted in a manner that:
 - a. Maintains water quality in keeping with the capacity of each lake to tolerate increases in phosphorus, or other nutrients or contaminants that may be found to be detrimental, without a perceivable decline in water quality; or, where water quality is already degraded, restores it so that algal blooms do not recur.
 - b. Maintains the ecological functions, biological diversity, and important habitat of the natural ecosystem,
 - c. Avoids increasing natural hazards such as flooding,
 - d. Protects the quality of drinking water,
 - e. Maintains the traditional character of a lake and its environs, defined as its natural beauty, historic values, and resource-based economic uses such as farming and forestry, and appropriate recreational uses,
 - f. Assures that the public can gain reasonable access to all great ponds, providing that the type of access complements the type and intensity of surface use appropriate for each lake.
3. Municipalities and the Land Use Regulation Commission shall have primary responsibility for establishing future land use plans for each great pond and its watershed and regulating non-agricultural land use activities accordingly. Towns shall develop and update land use management plans and regulations for lake watershed areas within their jurisdiction every five years as part of their growth management programs. Such land use management programs shall protect the state's interest as specified in Policies 1 and 2 above and take into consideration studies that identify resources of state significance. The Office of Comprehensive Planning, in conjunction with other state agencies, shall review land use management programs for great pond watersheds every five years to assure that the state interest is being served over the long term, and that management efforts are modified should they prove inadequate for managing significant threats.

Local governments, water utilities, regional agencies, and the Land Use Regulation Commission shall cooperate with one another as appropriate in planning for and managing great pond watersheds of mutual concern. Municipalities shall involve water utilities early on in the development of land use plans and ordinances that protect public water supply lakes. Water utilities shall provide technical information or financial assistance for technical studies to these communities, such as water quality monitoring, water levels data, sanitary surveys, or assistance with permit reviews as they pertain to water quality.

To facilitate cooperation for great pond watersheds encompassed by more than one jurisdiction, the state shall offer competitive grants for the development of watershed-wide plans and regulations, when jurisdictions representing at least 80% of the land area of a watershed agree to participate.

4. The Maine Department of Agriculture and Rural Resources, along with county Soil and Water Conservation Districts and cooperating agencies, shall have primary responsibility for working with farmers to assure that "best management practices" are followed for agricultural operations in a manner consistent with lake management goals.
5. The Commission recognizes that programs for managing land use in watersheds will be the most effective means of protecting water quality and other special resources, but that it will take years to fully develop and implement them state wide. Accordingly, state agencies, local and regional governments, private organizations, and individuals are encouraged to take whatever interim steps they can to protect great ponds. Note: Among the myriad of steps that can be taken are included: upgrading local and state road maintenance techniques, adopting local erosion and control ordinances or a phosphorus allocation method for new development, local cost sharing with camp owners to upgrade seasonal roads, shoreland restoration programs such as was recently conducted by the Kennebec County Sheriff's Office for Webber Pond and by high school students on China Lake, and intensifying state education and training programs.

Surface Use Management

6. Maine's goals in managing the surface uses of great ponds are to avoid conflicts where possible, or minimize them where it is not, among and between recreational users, energy producers, shoreland owners, and other users; maintain traditional water-dependent businesses; and assure that the intensity of use allowed on a great pond is in keeping with its capacity to accommodate such use. Public safety, health, environmental quality, and wildlife shall be protected; noise controlled; and incompatible uses separated by using such management techniques as:
 - a. Limiting the speed of watercraft and other vehicles in sensitive areas or on lakes or portions of lakes where the character or traditional use patterns will not accommodate intensive use.
 - b. Establishing noise limits for motorized vehicles or restricting their use to certain times of day.
 - c. Prohibiting the use of certain types of watercraft, aircraft, or other vehicles when they threaten water quality, wildlife, or public safety,

- or when the character or traditional use patterns of a lake, or portion of it, will not accommodate intensive use.
- d. Regulating the age of operators of motorized watercraft and the type of equipment used for safety purposes.
 - e. Managing the location, type, and number of boat moorings to assure that individuals, businesses, or other organizations do not benefit unfairly and to protect the public safety, water quality, wildlife habitat, and traditional character of lakes.
7. Local governments and the Land Use Regulation Commission may adopt regulations governing surface uses of great ponds within their jurisdiction that are more restrictive than those adopted by the state, provided that local governments electing to do so take primary responsibility for enforcement. Surface use regulations shall explicitly state their purpose, linking each provision to a specific public interest, and shall identify the means by which the regulations will be enforced. Where more than one local jurisdiction shares the same lake shore, the surface use regulations must be consistent and coordinated among jurisdictions.

The Department of Inland Fisheries and Wildlife must approve any regulations before they can be adopted by local jurisdictions, and shall provide training for local enforcement personnel. The state's interest is to assure that the proposed regulations conform to Policy 6, are consistently applied from lake to lake and to all boaters equally, and that the public is given an opportunity to comment upon them before adoption. The Great Ponds Interagency Task Force (see Policy 8) shall develop guidelines for the development of local regulations. Surface use enforcement programs shall be financially supported by boat registration fees.

Strategic Planning

8. A state strategy for implementing state lake management policy shall be developed and updated every 5 years. The strategy shall be used for allocating state resources to assure that critical lake management needs are addressed, and for providing clear guidance to local governments and the Land Use Regulation Commission as to how state interests can best be served. A permanent Interagency Great Ponds Task Force chaired by the State Planning Office, and including the Department of Environmental Protection, Department of Conservation, Department of Inland Fisheries and Wildlife, Office of Comprehensive Planning, Division of Health Engineering, Department of Transportation, and Department of Agriculture, Food and Rural Resources, shall coordinate the implementation and update process. The Task Force shall consult with other agencies that share responsibility for managing lakes or whose decisions influence growth and development in lake watersheds, along with the public, municipalities, and interested organizations. The Task Force shall report annually to the Legislature on progress in implementing the great ponds policy and strategy, and shall prepare the first update in 1996.

Note: The Commission discussed the desirability of including public members on the Task Force, and received public testimony to that effect. Some members recommended public representation in order to heighten

the Task Force's sense of responsibility in carrying out the state policy and strategy. Others suggested that representation from the scientific community would be useful. The Commission, somewhat reluctantly, decided to recommend keeping the Task Force a "state agency working group" rather than a policy-making body. (Did I get this correct?)

9. State agency decisions shall be consistent with state policy on lakes, the 5-year strategy, and state-approved watershed and surface use management programs developed by towns and/or the Land Use Regulation Commission. Capital investments and policies that encourage growth and high intensity land uses shall be directed toward "growth areas" or "high intensity use" lakes, and discouraged in other watershed settings.
10. The Interagency Task Force, in consultation with municipalities and regional agencies, and other state agencies, shall coordinate the development of a plan, similar to the Land Use Regulation Commission's, for assuring that a diversity of lake setting character types is maintained within each region of the organized part of the state. The Task Force shall develop a system for classifying lakes according to intensity of development and surface use (i.e. high natural character-low intensity use lake; conspicuous development-high intensity use). Municipalities shall recommend how lakes within their bounds shall be classified within the system in order to protect their traditional and environmental character.

As part of the process, the Interagency Task Force shall also coordinate the development of siting procedures and standards for state construction of public access sites within each type of lake setting, and guidelines for state review of local watershed management programs in regard to public access. These activities shall have the goal of assuring state compliance with local and Land Use Regulation Commission watershed management plans and regulations protecting water quality; as well as local compliance with the state interest of providing reasonable public access in keeping with the traditional character of Maine lakes.

11. Preventing water quality deterioration shall be given priority over lake restoration efforts in allocating state resources for lake management efforts. State funding of lake restoration projects shall be undertaken only when measures to protect a lake from further deterioration have been adopted within its direct watershed, and if funding is available beyond that needed for addressing high priority protection needs state-wide as identified in the 5-year strategy.
12. The state shall conduct sufficient research to understand well how significant existing or potential threats will influence water quality and other special values. If insufficient data is available to fully determine the potential impacts of management options, regulations, "best management practices", and other tools shall be designed to provide a high level of protection while appropriate research is undertaken.

Mutual Responsibility

13. People who use, live adjacent to, or pollute lakes shall help pay for programs protecting lake values. Recognizing the broader public

interest, the state shall also financially support local and state lake management efforts.

14. Recognizing that most people want to protect lakes and will follow regulations if they are familiar with and understand the reasons for them, the Departments of Environmental Protection, Inland Fisheries and Wildlife, and Conservation shall give high priority to public education and training related to regulations that they administer, as well as those mandated by the state and administered locally.
15. Protecting the environment shall be the first concern in the enforcement of environmental laws. Breaking laws that protect water quality shall be more costly than complying with them in order to discourage people and organizations from "buying" violations. Restoration in shoreland areas and mitigation in great pond watersheds shall be mandatory for those who break the law. (Note: restoration and mitigation are currently required in the Shoreland Zone under state law.)

II. FIVE YEAR STRATEGY - 1991-1996

Conclusion

The state must purposefully concentrate actions and resources in the next five years on those activities that are most crucial to achieving meaningful management. Financial resources are too scarce and people resources stretched too far to implement the policy on an ad hoc and fragmented basis, as has been our mode of great pond management in the past. The following objectives and actions constitute the first five year strategy for implementing the comprehensive policy on great ponds.

A. MANAGEMENT OF SPECIFIC THREATS

OBJECTIVE 1:

Assure that threats to water quality are effectively controlled and give high priority to educating the public and training those engaged in construction, road maintenance and construction, forestry, agriculture, and other activities that impact water quality.

Permanent increases in phosphorus from development

1. Amend the Subdivision Law (30-AMRSA Sec. 4401 et seq) to insert a new review criterion requiring that a permit applicant in a great pond watershed consider the long-term, cumulative impact of development in the watershed on lake phosphorus concentration.
2. Direct the Office of Comprehensive Planning to grant state approval only to local growth management programs that include a means of assuring that water quality will be protected from long-term and cumulative increases in phosphorus from development in great pond watersheds. Programs shall provide for a permit fee structure that covers the cost of technical review of applications, as they relate to water quality protection, and compliance inspection once the work

has been completed. Until the deadlines stated in the law for the completion of each community's zoning ordinance and consistent with the availability of state funds, the DEP phosphorus allocation method, or acceptable variation of it, shall be advisory. After such deadlines, application of a phosphorus allocation method shall be mandatory.

3. Continue to support the Department of Environmental Protection in its efforts to refine the phosphorus allocation method, especially use of the method in the design and permitting of single lot, incremental development. Municipalities should be given flexibility in how they choose to implement this method for incremental development until a satisfactory method(s) is developed by the DEP that can be universally applied. The Interagency Task Force should reevaluate this issue in updating the strategy in 1996.

Temporary increases in phosphorus from land use activities

4. Direct the Department of Environmental Protection to revise, as necessary, the "best management practices" currently being developed to make clear which ones should be required in great pond watersheds to control phosphorus from development, construction, road building and maintenance, forestry, resource extraction, and agricultural activities. The DEP should consult municipalities, Soil and Water Conservation Districts and their cooperating agencies, and interested organizations in the process to assure that the practices selected are appropriate and their presentation format is easy to adopt and use. The DEP should formally request the U.S.D.A. Soil Conservation Service to adopt the state's "best management practices" for use in its technical assistance programs.
5. Direct state agencies to assure that the "best management practices" mentioned in Recommendation 4 above are used in building and maintaining state buildings, roads, and other capital improvements, and conducting other state-initiated land use activities in great pond watersheds.
6. Direct the Office of Comprehensive Planning to grant state approval only to local growth management programs that include a means of assuring that water quality will be protected from temporary contributions of phosphorus from land use activities occurring within great pond watersheds. Programs shall also be required to include a permit fee structure that fully covers the cost of technical review of

an application, as it relates to water quality protection, and compliance inspection once the work has been completed. During the next five years, the state's "best management practices" for phosphorus control should be advisory. In updating the strategy, the Interagency Task Force should consider whether a mandatory approach is needed.

7. Direct DEP and LURC to require all permit applicants under existing laws to use "best management practices" for great pond watersheds; apply the phosphorus allocation method as appropriate; and set a permit fee structure that fully covers the cost of technical review of an application as it relates to water quality protection, and compliance inspection once the work has been completed. Note: One person who testified at the hearing on our draft recommendations expressed concern in particular about gravel mining in eskers adjacent to lakes.
8. Direct state agencies to make water quality protection and the use of "best management practices" a top priority in their existing programs for training people who conduct land use activities, and in their efforts to develop training aids and educational materials. To the extent necessary, enrollment fees should cover the cost of training programs. Those who participate should receive a statement of certification. The Department of Environmental Protection should maintain a master list of individuals who have received statements of certification and make it available to landowners, towns, and others who contract for services. It should also maintain a master list of training opportunities. Examples of existing state agency training programs include the Department of Transportation's Local Road Program (which could produce and distribute a training video on best management practices and road designs that minimize water quality impacts); the Department of Conservation's Forestry Management Training Program; the Soil and Water Conservation Districts' programs for farmers, planners and engineers.
9. Amend the Subdivision (30-AMRSA Sec. 4401 et seq), Shoreland Zoning (38MRSA Sec. 435 et seq) , Site Location (38MRSA Sec. 481 et seq), and Natural Resources Protection (38MRSA Sec. 480-A et seq) laws to require that those who are issued permits for site work in great pond watersheds display a notice of permit approval prominently on site while such work is being conducted. The permit should state where the full permit is available for inspection by interested parties. Note: the Land Use Regulation currently requires such notice for its permits.

10. Maintain at least the 1990 staffing levels for the Shoreland Zoning program and lakes technical assistance program of the Department of Environmental Protection. Note: The Commission also notes that staffing cutbacks may also jeopardize the effectiveness of the state's dam management program that, among other things, helps interested parties negotiate water level management plans in controversial situations. Without state oversight, the outcomes of such controversies could become unpredictable and inconsistent.

Septic systems near great pond shores

11. Amend the Plumbing Code statute (22MRSA SEc 42 and 30-AMRSA Sec 4201 et seq) to require that septic systems grandfathered as of 1974 and located within 100 feet of the shore of a great pond within five years be:
- a. Upgraded to present standards; or
 - b. Replaced by a non-discharge toilet(s), or out house, and gray water system which meets the existing code to the maximum extent possible; or
 - c. Certified for five year periods by a licensed site evaluator that the system is used less than a specified threshold level as measured by a water meter installed on the property; or
 - d. Certified by a licensed site evaluator that the system is located in soils that have adequate long-term phosphorus attenuation capacity as defined by the Department of Environmental Protection and Division of Health Engineering.
12. Amend the Seasonal Conversion statute (30-AMRSA SEc. 4215 subsec 2) to require that landowners who convert seasonal property served by substandard systems install new ones that meet the present code before a permit for conversion is obtained.
13. Amend the Plumbing Code through administrative procedures to require a loam liner for shallow and sand and gravel soils and make other changes that will maximize the efficiency of systems to remove phosphorus in shoreland areas of great pond watersheds.

Sludge, ash, manure, and septage spreading in great pond watersheds

14. Amend DEP regulations pertaining to sludge, septage, and ash spreading to require the use of "best management practices" for controlling phosphorus runoff. In particular,

- Require that the minimum phosphorus, rather than nitrogen, needs of the soil be used in calculating the total soil amendments that can be spread on a parcel within a great pond watershed;
 - Assure adequate buffer widths;
 - As pertains to septage spreading and methods of sludge spreading, require that the applicant hire a qualified third party to monitor application activities and submit periodic reports to the Department of Environmental Protection.
15. Enact legislation prohibiting the spreading of manure on frozen fields in the winter time.

Sale of harmful chemicals

16. Enact legislation (perhaps a new Sec 418-B in 38MRSA) to require that fertilizers for home use containing phosphorus and pesticides for home use containing toxic chemicals be labeled with warnings about their potential effect on water quality and directions about their proper application in great pond watersheds. The measure should also require that posters explaining this information be displayed in places where such chemicals are sold. Distributors should be required to provide posters to their retailers for display. Amend the Shoreland Zoning mandatory guidelines to ban the use of fertilizers containing phosphorus in maintaining lawns in the shoreland zone.
17. Amend 38 MRSA Sec 419 to ban the use of detergents containing phosphorus in Maine.

Boating impacts on water quality

18. Direct state agencies to provide permanent or portable public toilets at state boat launch facilities on heavily used lakes.

OBJECTIVE 2:

Reduce scientific uncertainty related to those threats that could result in serious environmental or fiscal impacts if decisions are made with inadequate data.

1. Enact legislation (perhaps 38MRSA Sec 410-H et seq or amend the Lake Restoration and Protection Fund 38MRSA Sec 480-N) to establish an Environmental Research Fund and a board to administer it. The board should include representation from state agencies, the university, and private colleges. The fund should be set up so as to be able to accept federal funds, private and corporate donations, and fines from the resolution of enforcement actions. The board should

develop a state-wide environmental research policy and agenda, and make grants to accomplish it. It should consider the following high priority research needed for great ponds in developing its agenda:

- a. Can indicators be developed to predict internal recycling?
- b. What relationship do algae growing on the bottom (periphyton) have to declining water quality?
- c. How are metals mobilized in fresh water and how is the process being affected by atmospheric deposition?
- d. How much and under what conditions do septic systems contribute to water quality decline?
- e. What impacts do motorized watercraft have on water quality?
- f. What kinds of vegetation absorb high levels of phosphorus and so should be promoted for planting in shoreland areas to restore buffer areas?

OBJECTIVE 3:

Expand authority to control surface uses.

Regulation of surface uses

1. Amend 12MRSA Sec 7792 subsec 4 to broaden the Commissioner of Inland Fisheries and Wildlife's authority to regulate the use of watercraft on lakes to protect wildlife habitat in keeping with Policy 6 of the proposed "Great Pond Management Policy".
2. Enact legislation enabling local governments to regulate surface uses in keeping with Policies 6 and 7 of the proposed "Great Pond Management Policy". Note: The Commission recommends modeling the legislation after a similar program in Michigan.)
3. Direct the Interagency Task Force to develop guidelines for state and local regulations governing surface use of great ponds and require the Department of Inland Fisheries to use them in enacting state regulations and approving local regulations.
4. Direct the Interagency Task Force to develop a list of lakes where additional boating regulations are appropriate to protect high value resources and maintain a diversity of recreational experiences. The list should be advisory to the Department of Inland Fisheries and Wildlife and municipalities in their decisions about whether to restrict surface uses. Direct public land holding agencies to establish surface use goals on water bodies completely within public land

ownership, and work with the Department of Inland Fisheries and Wildlife and Land Use Regulation Commission in implementing them.

5. Amend the Harbor Master Legislation (38MRSA Sect. 1 et seq) to make clear that municipalities have the authority to regulate the location of moorings on great ponds.
6. Require the Department of Inland Fisheries and Wildlife, in conjunction with the DEP, to rewrite the boating regulations in layman's language and staple a copy to each boating registration, along with a short summary of the regulations and information about steps that boaters can take to avoid contaminating water quality or disturbing wildlife. (For example, boats with bilges should keep an inexpensive boom in the bilge water to absorb oil and dispose of it properly. Boats should not be washed, or the bilge drained, in a lake.)

B. UNIFYING AND STRENGTHENING INSTITUTIONAL ARRANGEMENTS

OBJECTIVE 4:

Classify and set priorities among great ponds, clarify responsibilities, and assure greater coordination among state agencies and municipalities.

1. Amend the Growth Management law (30-AMRSA Sec 4301 et seq) to require the Office of Comprehensive Planning to allocate a portion of its grant money for the purpose of funding competitive grants for the development, periodic update, and review of land use management plans and implementation programs for great pond watersheds located in more than one jurisdiction, as described in Policy 3 of the recommended "Great Pond Management Policy". The grants should be offered on a first-come, first-served basis for projects on lakes that have at least one significant state value and are at least 100 acres in size. Priority should be given to lakes, or lake chains, with high intensities of surface use or watershed development pressures, used for public water supply, or hydrologically sensitive to phosphorus, and where many jurisdictions have agreed to participate.
2. Amend the Growth Management law (30-AMRSA Sec 4301 et seq) to require municipalities and water utilities to cooperate early in the process of developing land use management programs and surface use regulations for lakes of mutual concern as described in Policy 3 of the "Great Pond Management Policy". Direct the Office of Comprehensive Planning to require regional councils to make regional lakes a priority in the development of regional policy plans.

3. Request the Interagency Great Pond Task Force, with advice from communities, to establish a classification system for great ponds based upon land use character and intensity of use and to make it available for municipalities to use in establishing management goals. The intent is to provide the framework for a simple classification system that will allow communities to use the same terminology and criteria in determining management goals, i.e. when should a lake be designated as "remote-low intensity use"; and to make it as consistent with LURC designations as possible and responsive to existing data identifying resources of state significance on lakes.
4. Direct the Office of Comprehensive Planning to assure that local growth management plans include management goals pertaining to the type of shoreline character, intensity of surface use, protection of resources of state significance, and type of public access appropriate for the type of classification that the town(s) recommends for lakes within its jurisdiction.
5. Request the Interagency Great Pond Task Force to develop siting procedures and standards for state construction of public access sites including the provision of toilets, and guidelines for state review of local watershed plans as they pertain to public access.
6. Amend Shoreland Zoning (38MRSA Sec. 435 et seq) to require state agencies to conduct their activities consistent with the performance standards included in the state's mandatory shoreland zoning guidelines.

OBJECTIVE 5:

Improve education, administration, and enforcement of environmental and surface use laws.

1. Enact legislation enabling the Department of Environmental Protection to establish a fund supported by enforcement penalties to finance efforts to educate the public regarding the purpose and content of Maine's environmental laws, and provide training and technical assistance related to the use of water quality protection techniques.
2. Amend the Subdivision (30-AMRSA Sec. 4401 et seq), Shoreland Zoning (38MRSA Sec. 435 et seq) , Site Location (38MRSA Sec. 481 et seq), and Natural Resources Protection (38MRSA Sec. 480-A et seq) laws, as appropriate, to:

- Require violators to mitigate actions that do not receive after-the-fact permits related to the protection of water quality in great pond watersheds.
 - Require towns and state permitting agencies to develop compliance inspection programs for permits; and enable them to enter into reciprocal agreements to accomplish same.
 - Enable the Department of Environmental Protection to contract for enforcement services with municipalities that have the appropriate capability.
3. Direct the Department of Environmental Protection to establish and train a citizen's environmental enforcement corps, similar to the lay water quality monitoring program, for the purpose of properly identifying environmental law violations and notifying the department accordingly.
 4. Direct the Department of Environmental Protection and Attorney General's Office to work with the Environmental Law Committee of the Maine Bar to provide periodic training for judges in regard to the purpose and importance of Maine's environmental laws.
 5. Direct the Interagency Task Force to develop recommendations and legislation for streamlining the enforcement process for consideration during the second regular session of the 115th legislature.
 6. Encourage municipalities with interlocal surface use regulations to enter into interlocal agreements for the purpose of crossing town boundaries for enforcement purposes.
 7. Direct state, local and county public safety, conservation, and environmental protection agencies to intensify cross training programs for enforcement and regulatory personnel, and direct public safety personnel to intensify their enforcement of surface use violations of state laws. Note: The Commission recommends that the Legislature, at some future time, consider creating a separate agency or division within the Department of Public Safety for the purpose of enforcing laws related to recreational vehicles. New Hampshire has established such an agency. The Department of Inland Fisheries' oversight may have been appropriate in the past when most boaters were fishermen, but expanded recreational use demands a more comprehensive approach.

OBJECTIVE 6:**Secure a reliable mix of revenue sources to support state and local great pond management efforts.**

1. Establish a system of user fees to augment general fund appropriations for state and local lake management efforts. Enable communities to keep a substantial portion of the fees for managing surface uses, developing watershed management programs, and providing public access. Put the remainder into a dedicated state account for state enforcement activities, training and education, technical assistance, research, and other lake management needs specified in this and subsequent strategies.

Initially derive these funds through:

- Increasing registrations for motorized boats and personal watercraft to a base of \$10;
- Requiring out of state motorized boats to display a \$10 user fee sticker, obtained from participating locations (town offices, camp grounds, marinas, "mom and pop" stores, vending machines at boat launch facilities); and non-motorized ones to display a \$5 sticker; and
- Assessing a \$10 use fee for every residential dwelling in shoreland areas, to be collected along with the property tax.

Notes:

1. MINORITY REPORT. One member, Steven Duren, is opposed to any increase in boat registration fees.
2. We can only speculate on the revenue that could be raised from these sources. There are currently about 130,000 boats registered. This means that about \$780,000 additional dollars could be raised and dedicated for this purpose. We don't know how many non-motorized or total out of state boats there are; presumably there are many more non-motorized than motorized boats.
3. The Commission is reticent about recommending user fees, but believes that they, and general funding, are essential if lake values are truly to be safeguarded. If fees are to be applied, the Commission believes that eventually every user group of reasonable size must contribute. The problem is how to collect such fees efficiently, without spending more than is gained.

Testimony on our draft report showed that most people agree, although several expressed concern that some groups are already pulling their weight, and have for some time, i.e. people who boat and fish. The Commission initially proposed a user fee for non-motorized boats, but public testimony was substantially against such a measure and it was dropped from the recommendations. Some members of the Commission believe that towns already have a potential source of income through the boat excise tax program, and are frustrated that towns do not dedicate them to this purpose. Others, however, caution that requiring towns to use this source for lake management would be in bad faith since boats used to be taxed as personal property.

The Commission suggests that the Legislature consider how best to reach other groups over the long term. The following were brought to the Commission's attention:

- Those who erect ice shacks
- Users of parks
- Energy generators on lake outlet dams

2. Request a \$7 million bond issue to be used by the Land For Maine's Future Board for the purchase of shoreland property.

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