

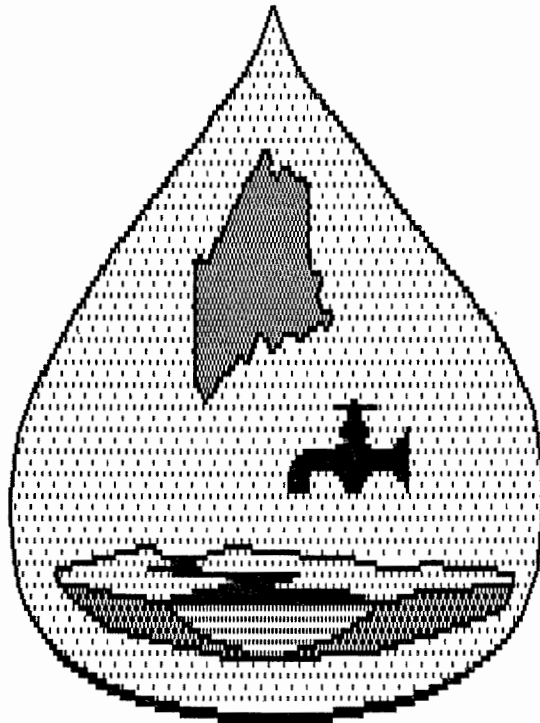
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BOARD FINDINGS AND RECOMMENDATIONS



MAINE WATER RESOURCES MANAGEMENT BOARD

FEBRUARY, 1991

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FINAL REPORT

FINDINGS AND RECOMMENDATIONS

MAINE WATER RESOURCES MANAGEMENT BOARD

February 19, 1991

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FINDINGS AND RECOMMENDATIONS

February 19, 1991

CONTENTS

	<u>Page</u>
INTRODUCTION	1
FINDINGS AND RECOMMENDATIONS	4
Water Use Rights	4
Water Use Priorities	6
Water Diversions	7
Water Conservation	10
A New Permanent Structure	11
Collection of Data	17
Technical Assistance	19
Agency Coordination	19
Dispute Resolution	20
Extent of Regulation	21
CONTENTS OF TECHNICAL REPORTS BY WRMB SUBCOMMITTEES	22

INTRODUCTION

The State's surface and ground water bodies comprise one of Maine's most important state resources, vital to human subsistence and public health, to the State's commerce and industry and to the quality of life enjoyed by all Maine people.

Unlike other states historically plagued with severe water shortages, Maine has always been considered "water-rich", and, in most areas, enjoys an abundance of freshwater resources. Although Maine people have experienced isolated water shortages and local tussles, and there are documented cases of local water shortages, Maine's history is not highlighted by major water resource management disputes.

Nevertheless, in recent years concern has grown about the comprehensive management of Maine's water resources. More local water shortages seem to be cropping up - with resulting disputes among competing users. Industrial users and public water suppliers continue to withdraw large amounts from some watersheds, commercial water marketing operations have increased in recent years, and from time to time there have been inquiries from out of state interests concerning the availability of Maine supplies. As a result, more people are concerned that the quality and availability of Maine's water resources are potentially vulnerable to excessive withdrawals and unwise land use. It may be prudent to establish and clarify the roles of state government in providing legitimate programs to protect and maintain the collective values of Maine's water resources for the benefit of all Maine people.

In response to emerging concerns, particularly over the use and transport of water in Maine, the Maine Legislature in 1987 called for a study of water supply and allocation by the Maine Public Utilities Commission (PUC). The PUC Study, completed in February, 1988, made a number of important findings and recommendations relating to the legal and organizational setting of water resources management in Maine. The most sweeping recommendation of the PUC Study - a resolve to establish a Water Resources Commission - was tabled by the Legislature at that time in favor of creating a legislative Maine Water Supply Study Commission in 1988. This Study Commission's Report, published in February, 1989 and followed by companion legislation, called for creation of this temporary Water Resources Management Board (WRMB) to study a variety of issues over the coming year relating to physical, economic and institutional factors of water resources management and make recommendations for a permanent structure to carry out the State's role in water resources management.

Some water management-related issues could not be fully reconciled in the short time this Board has had to complete its work. For example, much of the raw data needed to quantify water use, water supply and projected future demands, on a meaningful scale, simply is not available and could not be acquired during the Board's time frame. Nevertheless, the Board has obtained a much fuller understanding of the factors surrounding all water management issues, including those it cannot fully resolve, and has attempted to set out a program which will effectively address these discrepancies.

The Water Resource Management Board's central mission has been to recommend a permanent framework for the State's role in Water Resource Management. But the Board was also charged with a number of specific investigative tasks. In order to better utilize its time and resources the 16-member board divided into five separate subcommittees assigned to various study tasks. The subcommittees and their respective assignments were:

- Legal Framework Subcommittee; to identify and evaluate the current legal framework relating to water resource management in Maine and to identify and analyze options for changes.
- Operational Framework Subcommittee; to identify and evaluate the current institutional (governmental) framework relating to water resource management and to identify and analyze optional permanent structures.
- Water Use and Demand Subcommittee; to identify and quantify factors related to water consumption, use, demand and conservation, including study on use and demand data collection and utilization.
- Water Supply Subcommittee; to identify and quantify factors related to water supply, including study on water supply data collection and utilization.
- Dispute Resolution Subcommittee; to identify and analyze options for dispute resolution and priority use systems.

These subcommittees met frequently over the past year to work on their assigned tasks and prepare technical reports. Their reports, also submitted to the Legislature, are more than just appendages to these findings and recommendations. They provide, in greater depth and detail, the investigation and technical analyses which support these findings. The technical subcommittee reports are entitled:

- **WATER LAW IN MAINE**; Report of the Legal Framework Subcommittee
**
- **PUBLIC LAWS RELATING TO WATER**; Appendix A to the Legal Framework Subcommittee Report

- **PUBLIC LAWS RELATING TO GROUNDWATER;** Appendix A-1 to the Legal Framework Subcommittee Report.
- **CHARTERED OR REGULATED PUBLIC WATER SUPPLIERS IN MAINE;** Appendix B to the Legal Framework Subcommittee Report.
- **THE OPERATIONAL FRAMEWORK OF MAINE STATE GOVERNMENT RELATED TO WATER RESOURCES MANAGEMENT;** Report of the Operational Framework Subcommittee. **
- **INSTITUTIONAL OPTIONS FOR WATER RESOURCE PLANNING AND MANAGEMENT IN THE STATE OF MAINE;** Appendix A to the Operational Framework Subcommittee Report.
- **MAINE STATE AGENCY ROLES RELATING TO WATER RESOURCES;** Appendix B to the Operational Framework Subcommittee Report.
- **A DATA BASE OF STATE AGENCY ROLES RELATING TO WATER RESOURCES MANAGEMENT;** Appendix C to the Operational Subcommittee Report.
- **WATER SUPPLY AND USE IN MAINE;** Report of the Water Supply and Water Use and Demand Subcommittees. **
- **MAINE WATER SUPPLY AND USE;** Appendix A to the Report of the Water Supply and Water Use and Demand Subcommittees prepared by the U.S. Geological Survey.
- **FRESHWATER WITHDRAWALS IN MAINE DURING 1985;** Appendix B to the Report of the Water Supply and Water Use and Demand Subcommittees prepared by the Maine Geological Survey and the U.S. Geological Survey.
- **THE PRESUMSCOT RIVER BASIN STUDY;** Appendix C to the Report of the Water Supply and Water Use and Demand Subcommittees prepared by the U.S. Army Corps of Engineers.
- **THE ROLE OF MAINE STATE GOVERNMENT IN RESOLVING WATER RELATED DISPUTES;** Report of the Dispute Resolution Subcommittee. **

** A full listing of the contents of the subcommittee technical reports is provided at the end of these findings and recommendations.

FINDINGS AND RECOMMENDATIONS

The Water Resources Management Board's findings and recommendations, summarized below, are organized according to the mandates of the Board's enabling statute (5 MRSA Part 15-B). These specific mandates are reproduced in the shaded boxes. Major recommendations are highlighted by bold italics.

Water Use Rights

Review the methods by which water rights are obtained under the existing law and recommend appropriate changes.

The Legal Framework Subcommittee's technical report, and its appendices, have identified the salient features of water law as it is applied in Maine. Based on this report it is clear that the common law and statutory law relating to water in Maine are very complex topics. Under the common law, true water rights are "obtained" by virtue of ownership of land or property rights associated with the water resources; they may be privately or publicly held.

Traditionally, water district charters have been perceived as actual transmittals of rights to exclusive use of the water in question by the charter recipient. However, charters do not, of themselves, confer absolute rights. Water use charters issued by the Legislature authorize construction and operation of the public water supplies and define a service and source area for water districts. As explained in much greater depth in the Report of the Legal Framework Subcommittee, the legal water rights of a charter recipient are not exclusive of the common law rights that others may have to the water, e.g., riparian owners and owners of land overlying groundwater resources. However, statutory provisions which authorize municipalities and water utilities to take reasonable steps to protect their supplies, including governing the uses affecting water sources, indicate that the Legislature has placed a high priority on provision and protection of adequate water supplies for human consumption.

While the common law "methods of obtaining" water rights may be somewhat bewildering, there is no compelling need to change that aspect of the common law. However, there is a need to modify the law so that groundwater resources can be managed in conjunction with surface water resources and that a number of beneficial uses are clearly recognized as valid under the law of the State.

Unlike surface water users, under the current common law, groundwater users are not subject to a "test of reasonableness" that considers the impacts on other surface or groundwater uses. In order to effectively manage these interconnected resources, the rules governing the rights should be similar. Surface water resources and groundwater resources are interrelated as components of the hydrologic cycle and, therefore, should be managed under a comprehensive, conjunctive and integrated system of water use rights.

The Board recommends that the Legislature adopt a general definition of reasonable use that clarifies application of the reasonable use rule to groundwater uses, as well as surface water uses. Providing this definition will offer guidance to the courts and others in administering the reasonable use rule and will allow conjunctive treatment of surface and groundwater resources.

Further, there is a need to clarify that beneficial diversions and beneficial off-site uses may be reasonable today. Under the common law, diversions are disfavored. But in today's society, many necessary and acceptable water uses (such as public water supplies) are not strictly associated with the land at the water source. Although they do involve transfer of water to uses away from the actual riparian land or land overlying the water source, they should be considered as reasonable uses. Therefore, *the Board recommends that the Legislature clarify that "reasonable use" includes all socially and economically beneficial uses of water. Non-riparian as well as riparian beneficial uses of surface water, off-site as well as on-site beneficial uses of groundwater, and diversions for beneficial uses should be among the uses that may be considered as reasonable. The Legislature should also clarify that reasonable uses do not include uses that are patently wasteful, malicious or intentionally harmful.*

To achieve the above objectives, a general legislative definition of reasonable use could use language that says:

"That 'reasonable use' includes all socially and economically beneficial uses of water. Reasonable uses do not include uses that are patently wasteful, malicious or intentionally harmful."

The Board also recommends that the Legislature provide additional guidance to be used in resolving conflicts among competing uses. As a general statement, the legislation should indicate that beneficial uses of both surface and ground waters should be judged reasonable based on their impacts upon the sustainability of the water source, their impacts upon other legitimate surface and ground water uses as well as other factors bearing on the equities involved.

More specifically, like many other states, Maine should provide, through legislation, a non-exhaustive list of factors to be considered in determining reasonable uses that can be applied in disputes over reasonable use. While the board is not in full agreement as to whether such specific guidelines should be adopted immediately or at some later time, the following factors in determining reasonableness of one use in relation to other uses may be considered as effective guidelines in legislation:

- the purpose of the respective uses or activities affected;
- the economic, social and environmental value of respective uses, including protection of public health;
- the nature and extent of the harm caused;
- whether the utility of the use outweighs the gravity of its harms;
- the maintenance or improvement of groundwater and surface water quality;
- the suitability of the use to the watercourse or water body where it is intended (i.e., are there ill-planned increases in use?);
- the protection of existing values of land, investments, enterprises and productive uses;
- the practicality of adjusting the quantities used by each proprietor (i.e., can there be equal sharing of shortages or will that put some out of business?);
- the extent to which the use in question occurred prior to the competing use; and
- the burden and fairness of requiring a person who causes harm to bear the loss.

Water Use Priorities

Recommend priority uses for preferential access to water supplies when supplies are inadequate to meet all demands.

Establishing priorities among specific water uses may be prudent in the face of severe shortages of water. In some states, priorities are established simply according to which use is older. In others, some very important public needs may be given the highest priorities, with all other uses competing equally among themselves. However, inasmuch as Maine is not facing a state-wide shortage of water, setting state-wide priorities may not be the most appropriate course at this time. A state-wide priority setting process would likely be controversial and the result may be too simplistic to be the basis for meaningful decisions in real water allocation crises.

Priority systems may, and in some cases should, be considered as potential management tools in areas of insufficient supply. If such priorities are established through a basin-wide planning process, the resulting system would benefit from a comprehensive and impartial analysis of all relevant factors, including public input that identifies and places relative values on the local uses of the water. Generally, provision of adequate quantities of water to meet human needs should be of the highest consideration.

Failure to plan for provision of adequate local water supplies is likely to result in alternatives costly to Maine's citizens, towns and commercial interests. Before setting priorities in areas of known or suspected shortages, the Board recommends, that, as a first step, local water basin management plans be prepared and adopted. Such a plan should provide an estimate of the sustainable yield of the water resources within the boundaries of the water basin, identify the current and foreseeable growth in consumptive water use within the basin and identify and evaluate any regulatory or other measures necessary to assure that safe yields of the water resources in the basin are not exceeded and any measures necessary to respond to periods of water shortage, including any measures to restrict water uses or set priorities among local uses.

Consistent with previous recommendations relating to beneficial uses, the Board recommends that the only state-wide action needed at this time regarding water use priorities is to clarify equal standing among riparian and non-riparian beneficial uses of surface waters and among on-site and off-site beneficial uses of groundwater.

Further, the legislature should consider establishing a non-exhaustive list of basic tenets which might be used to help resolve disputes among reasonable uses. These guidelines might indicate that:

- uses that maintain or protect public health and safety are superior over other uses;
- all other lawful uses are equal in priority;
- one lawful use cannot destroy a previous lawful use; and
- when one use damages another there is a need to determine the relative reasonableness of the uses and whether or not equitable adjustment is possible.

Water Diversions

Recommend a policy regarding water diversion which addresses the implications of diversion from the State and the regions and sub-basins within the state.

As indicated in previous recommendations relating to beneficial uses, the Board recommends that water diversions for beneficial uses should be among the water uses that may be presumed reasonable. Many uses that involve transfer of water out of a watershed do not necessarily create adverse impacts. In fact, a policy which permits the transfer of water from one watershed to another can, in many cases, protect scarce resources by allowing communities to rely on water sources of relative abundance, rather than forcing them to rely on local, perhaps more environmentally sensitive sources.

The Board also recommends that the current Water Transport Law (22 MRSA Chapter 601, Subchapter VI) be replaced by a simple permitting process for all inter-basin diversions, not otherwise subject to federal regulation, in excess of 500,000 gallons per day, averaged over any 30-day period¹. While the current Water Transport Law may or may not address other state objectives, its value is dubious in terms of meeting water management goals because it applies equally to uses which have an impact on the water resource and those which do not. In many cases water transports are regulated which have no impact on the water resource or other uses. The types of diversions that should be regulated are those which involve actual physical withdrawals and removal of the water from the basin. Generally, diversions which are temporary, and involve return of the water to the basin, need not be regulated.

A permitting requirement for water diversions in excess of 500,000 gallons per day, is recommended because it would allow advanced knowledge of, and some control over, diversions of a magnitude which could have adverse impacts upon the supply of water and other uses of that supply. In the board's judgement, a diversion of 500,000 gallons per day is a quantity which could have a significant impact on some water sources and local watersheds. However, that quantity is, in the board's judgement, less likely than a diversion of 1,000,000 gallons or more per day to have a significant impact the majority of Maine watersheds and uses.

Therefore, in view of the comparative risks involved, the board further recommends that between 500,000 and 1,000,000 gallons per day, an applicant for a permit should be entitled to the permit as long as it has furnished public notice of the proposed diversion, including specific notice to water utilities and no evidence is brought forth that the proposed diversion, in addition to current uses, potentially would exceed safe yield or otherwise be unreasonable. In such cases, if a water utility or other affected water user produces evidence that the diversion (in addition to existing uses) potentially would exceed safe yield of the water source, or unreasonably impact existing uses, then the applicant would be required to demonstrate the contrary to receive a permit. Above 1,000,000 gallons per day, the burden would be on the applicant in all cases to demonstrate that the diversion would not exceed safe yield of the source and would not cause unreasonable impacts.

¹ The unit of gallons per day, used throughout this text, should be understood (and established in any subsequent legislation or regulation) as an average taken over some period of time. Using an average amount over time allows for exemption of unusual high water use events which would be of little long-term significance. Most states which have regulatory water use thresholds, use the unit of gallons per day, averaged over any 30 day period, which is generally recommended because it makes these permitting requirements applicable to any large seasonal uses that can have significant impacts on the resource.

Like the Water Transport Law, the new permitting requirement should apply equally to intra- and inter-state diversions. The permitting criteria of approval for proposed diversions should be straightforward:

- A. *The board shall approve the proposed permit upon demonstration by the applicant that:*
 - 1. *The proposed diversion will not exceed or threaten safe yield of the water source.*
 - 2. *Other current water uses are not unreasonably impacted.*
 - 3. *All other state laws are adhered to.*

- B. *Upon adequate public notice, water diversions of greater than 500,000 gallons per day and less than 1,000,000 gallons per day averaged over any 30-day period, shall be entitled to a permit without the above demonstrations unless the permit is opposed by someone who would potentially incur actual damage as a result of the diversion and that opponent produces evidence that the proposed diversion (along with other current uses) would potentially exceed safe yield of the water source or otherwise be unreasonable, in which case the above demonstrations would have to be met by the applicant prior to permit approval by the board.*

The board members are not in full agreement regarding who should be able to submit evidence regarding a proposed diversion between 500,000 and 1,000,000 gallons per day. Some board members maintain that during the notification period, the only evidence to be considered in determining whether a full demonstration by the applicant is necessary should be that submitted by parties who are adversely affected by the proposal (e.g., another water user who's use may be diminished). These members suggest that allowing any other entities to present evidence regarding a proposed diversion would only add an unnecessary layer of involvement and uncertainty to the notification process and for potential applicants; and that there are other avenues for resource agencies and other "unaffected parties" to affect management of the resources in question (i.e., through basin planning and, in some cases, through other adjudicatory proceedings).

While all members seem to agree that evidence from anonymous and unaffected individuals need not be admitted in this notification process, others on the board maintain that evidence should be accepted from appropriate state and other public agencies, e.g., the Maine Geological Survey (MGS), the Department of Human Services (DHS), municipalities or the board's staff, even though they may not in fact be "opponents who would incur actual damage". A number of agencies may have resource management or data management responsibilities relating to the resource in question,

which may be pertinent to the permitting decision. The board members who support agency participation in the notification process do not want to restrict the new board from considering relevant agency information (i.e. data regarding safe yield of the resource) in its decision to grant an automatic permit, simply because an "opposing water user" does not come forward with this information.

There is agreement, however, that any legislation should minimize duplicative permitting requirements and decisions to the extent that these decisions are based on similar facts and considerations. For example, if an applicant demonstrated safe yield in order to obtain a diversion permit, it should not be required to file additional studies and analysis to demonstrate safe yield in order to obtain a site location approval from the Department of Environmental Protection (DEP). Alternatively, if safe yield has been demonstrated in order to obtain site location approval, the demonstration submitted to DEP and DEP findings in that regard should be presumed adequate to meet this criteria for permitting the diversion.

Water Conservation

Recommend ways to improve and encourage conservation of water resources.

Conservation of water is generally desirable. In Maine homes, water conservation can result in individual and collective savings beyond just the water bill. For example, low-flow showers not only save water, but also lower the cost of heating the water. Further, the large potential water savings by large industrial users and municipal suppliers should be of particular concern where there may be insufficient supplies. Based on current reporting of "unaccounted for" water use by public water suppliers, measures to maintain or improve infrastructural integrity and other efficiencies should be among the chief priorities of industrial users and public water suppliers.

The Board recommends that state agencies continue to encourage cost effective conservation measures by individuals, commercial and industrial interests. The Board also recommends that such water saving methods and technologies should be considered in the course of local water basin planning and should be among the management tools that address local supply deficiencies.

As indicated in the paper on Water Conservation in Maine (see report of the water supply and water use subcommittees), some conservation measures are of less overall value statewide than others. For example, more meaningful conservation gains are likely to take place in repairs to water supply infrastructure than in restricting outdoor water uses. If the state is to expend a state-wide effort to promote water conservation

techniques, it should focus on the most effective options. While measures such as water saving toilets or low-flow showerheads should be encouraged, there appears to be no immediate need for state-wide requirements to install these devices.

A New Permanent Structure

Recommend a permanent structure for centralized and coordinated conduct of the role of the State in water supply management.

The Operational Framework Subcommittee investigated the framework in Maine state government relating to water management and investigated water management institutions in some similarly situated states. From these investigations, the subcommittee identified the roles necessary for support and coordination of water management activities, which are not fulfilled within Maine's current governmental structure.

Sound planning and management of Maine's water resources will necessarily rely upon a state governmental structure that will help assure adequate water supplies, provide a balance among the legitimate multiple uses of water resources and seek harmony rather than conflict among these uses. Yet, the subcommittee has found that many state government functions essential to efficient and effective management of Maine's water resources are currently not carried out fully or are fragmented among numerous state agencies. Among these necessary functions are:

- Comprehensive watershed planning;
- Determination and evaluation of watershed supply and demand parameters;
- Identification and effective management of areas of insufficient water supplies;
- Management of inter-basin and interstate water diversions;
- A process for the efficient and orderly resolution of water use conflicts;
- A process to foster cooperation among federal state and local water management activities; and

- Coordination of the management, evaluation and dissemination of water data.

Based on the subcommittee's analysis, *the Board recommends creation of a new water resources management board comprised of a citizen's board and supporting staff. Principal responsibilities of the board and its staff would be to:*

- *Assist the Legislative and the Executive Branches in development of water management policies.*
- *Prepare and maintain an official map of water basin divisions to be used for planning and management activities.*
- *Determine and designate areas of limited local water supplies and establish priorities for undertaking water resource planning and management activities in these designated areas.*
- *Develop, review, adopt and, as necessary, amend local water basin management plans in coordination with any local water planning agencies or committees.*
- *Approve or deny water withdrawal permits for large diversions or any water withdrawal permits required as part of a management plan for a water basin of insufficient supply. In the latter cases, the Board may delegate permitting authority to local water management districts, regional or municipal authorities.*
- *Provide a forum to assist through, fact finding, mediation and facilitation, in the resolution of water-related disputes that are not otherwise resolved through concurrent state agency proceedings.*
- *Foster cooperation among federal, state, regional and local agencies involved in activities that affect water resources management.*
- *In cooperation with other agencies, collect, develop, evaluate, manage and disseminate water resource data.*
- *Provide assistance to other state, regional and local authorities, water management planning committees and water districts in preparing study plans and action plans toward local water basin planning and toward determining availability of local water supplies. All state agencies should be required to provide information and support requested by the Board for these purposes to the extent practicable.*

In order to assure a fair and evenhanded approach to resource planning and dispute resolution challenges, the new board should be a citizens board comprised of people knowledgeable in relevant areas. The board should include a state government member as well as a cross section of public members knowledgeable in water resources management, local government, industry, public water utilities and non-consumptive uses of water.

Staffing and Funding

One of the most difficult tasks of the Water Resources Management Board has been to determine what should be the level of funding and personnel needed to adequately meet the above responsibilities. Appendix A of the Operational Subcommittee's Report provides information about water planning and management budgets for other states similar to Maine. We believe that an appropriate level of initial staffing and funding for a new water management unit in Maine can be substantially lower than might be required in other eastern states, because water shortages are not widespread in Maine and, by and large, few potential supply problems are immediate. Also, initial costs and staffing needs could be minimized by incorporating any water resource management unit into an existing agency structure, rather than creating a stand-alone agency which would have greater overhead.

We believe the board and staff responsibilities listed above would initially require a full-time clerk and two professional staff people, (i.e., with groundwater and surface water management and data management expertise) to prepare water management plans, provide analysis of water-related disputes, to gather, manage and coordinate water data, to review and comment on permit applications and related tasks.

Making a recommendation for staffing and funding is further frustrated by the realities of the current state budget. At this time, there appears to be little or no likelihood of State funding for new mandates or positions without additional revenues. Yet, to carry out the above tasks even at a minimal level, some staffing and operational budget is needed. To at least initially undertake the most important of the Board's functions, we believe that a board, supported by one professional and one clerical position would be needed. Such an arrangement is estimated to require about \$ 115,000 in salary and all other funds.

Among the options considered for funding, the board believes the most favorable option would be to establish a fee associated with required reporting by the significant water users (see: section below entitled, "Collection of Data"). Revenues from this reporting fee would be returned to a dedicated fund which would support the new board and its programs. Smaller water users who are not required to report their use (e.g., those using or diverting less than 50,000 gallons per day or public water suppliers serving less than 100 people) would, of course, be exempt from the fee. The reporting fees could be structured based upon the amount of water use, so that users would pay an equitable proportion.

According to the most current records, there are 228 public water suppliers that serve over 100 people and 204 private water users that withdraw over 50,000 gallons per day who would be required to report their water use and, therefore, would pay a reporting fee. If these fees are graduated to reflect the amount of use, a level of funding necessary to sustain a permanent board, with minimal staff and water resource management programs, would amount to less than the equivalent of 11 cents a year for each person² now using a public water supply and for each person-equivalent of non-public water uses. A likely range of fees under this scenario, would be about \$11 for a user serving 100 people to about \$1,100 per year for a user serving 10,000 people.

State involvement in water resources management without additional funding.

The board also considered what program elements could be implemented without additional funding - in other words, what kind of water resource management improvements can be absorbed by current programs. Below is a likely scenario of how the principal responsibilities of a new board and staff, recommended on page 12, might otherwise be carried out. This scenario presumes that some level of related program activities will continue at DHS, PUC, DEP, MGS and other state agencies even though they all are presently dealing with budget shortfalls. But more importantly, it suggests there are at least a few changes that can be made in the direction of improved water resource management without additional funding. For example, where possible, water management tasks currently carried out by multiple agencies could, in some cases, be transferred to a single agency to avoid duplication.

- **Assist the Legislative and the Executive Branches in development of water management policies.**

Individual agencies will continue to provide advice to the Legislature and administration on matters relating to water resources management and their specific mandates, as staffing and funding permit. However, these activities will generally be limited to those directly associated with their specific concerns and mandates. The direction and input received by decision makers will not benefit from any coordinated approach among agency staff, although policy development will continue to be coordinated at the cabinet level.

² The population data used for this analysis was calculated based on an assumption of three persons per utility connection. Therefore, the cost could be as much as 33 cents a year per hook-up or household. To meet the proposed funding objective, there would be no need to charge any additional amount per hook-up. In other words, there would be no need to charge more for larger families.

- **Prepare and maintain an official map of water basin divisions to be used for planning and management activities.**

An adequate mapping effort would involve a significant amount of staff time and cost in digitizing maps on the State's Geographic Information System, in determining what the divisions should ultimately be, and in undertaking the necessary administrative procedures to adopt the map. This will not be done unless some agency is clearly required to do so, and is given sufficient additional funds.

- **Determine and designate areas of limited local water supplies and establish priorities for undertaking water resource planning and management activities in these designated areas.**

Without funding and staffing for additional data collection, for coordinating involvement by the agencies and for collectively reaching decisions on needs and priorities, this cannot be done in any formal manner. However, some local problems will be brought to the Legislature's and agency's attention through contact with constituents and through the media. Some, but not all, of these problems will be individually remedied through legislative or regulatory actions.

- **Develop, review, adopt and, as necessary, amend local water basin management plans in coordination with any local water planning agencies or committees.**

Some local water management options will be reviewed by state agencies, as staff resources permit, as part of local comprehensive planning. However, the planning will not be for basin-level management. Water resources which overlap the individual towns may not receive comprehensive treatment.

- **Approve or deny water withdrawal permits for large diversions or any water withdrawal permits required as part of a management plan for a water basin of insufficient supply.**

Without a changes to the current law, diversions which transfer water in containers exceeding ten gallons will continue to fall under provisions of the Water Transport Law, administered by DHS. The water transport law, administered by DHS, might be improved without significant cost by amending it to conform to the kind of permitting scheme proposed above for a new Water Resources Board. For example, the transport law could be amended to recognize presumptive reasonableness of diversions, and, perhaps, to reflect the permitting thresholds and criteria discussed in the above section on diversions (i.e., to use 500,000 gallons per day as a permitting threshold, rather than transfer in containers exceeding ten gallons).

- **Provide a forum for resolution of water-related disputes that are not otherwise resolved through concurrent state agency proceedings.**

Without a new board, a greater number of water-related disputes are likely to be taken directly to the Legislature and any formal mechanism to coordinate dispute resolution activities and ensure comprehensive fact finding will not exist. Regulatory agencies will be involved in settling some disputes that fall within their permitting mandates and, as before, some disputes will be resolved by courts. The fullness of state agency and legislative fact finding will be limited by available staff and funding.

Some of the legal changes proposed earlier in this report (conjunctive management and reasonable use clarifications) will not, of themselves, have any direct fiscal impact. If enacted by the Legislature, they will provide additional clarity and direction for whomever is involved in resolving water-related disputes.

- **Provide for coordination among federal, state, regional and local agencies involved in activities that affect water resources management.**

Whether or not a new board is created, intergovernmental and interagency coordination will continue to occur to some degree at the staff and administrative level. However, this will generally be limited to initiatives by individual agencies and their staff. There will be no formal mechanism to assure all relevant agencies are participants in water management activities.

- **In cooperation with other agencies, collect, develop, evaluate, manage and disseminate water resource data.**

Water resource data will continue to be collected by DHS, DEP, MGS and other agencies as staffing and funding permits, but these data collection activities will not be broadly focused on water resources management. To some degree, standardization of this data is possible without additional staffing and funding. For example, all resource agencies should be required to include site-specific information with each data set (i.e., latitude and longitude coordinates) and to devise and adhere to a set of standards for surface water data collection, similar to the groundwater data standards adopted by the Groundwater Standing Committee. It is unclear how any differences of opinion about desired sophistication of data sets might be resolved. Agencies may not be able to make data collection and management priorities collectively. Data would continue to be disseminated, *ad hoc*, by individual agencies.

- **Provide assistance to other state, regional and local authorities, water management planning committees and water districts in preparing study plans and action plans toward local water basin planning and toward determining availability of local water supplies.**

Individual agencies would continue to assist municipalities in comprehensive planning and other water-related endeavors, but only as limited staffing and funding permits. Hopefully, the documents prepared by the Legal Framework and Operational Framework Subcommittees will help individuals and agencies determine what are the water-related agency responsibilities and in locating the agencies associated with particular issues and programs. To improve responsiveness, the Legislature could designate one agency (i.e., DHS, DEP, SPO or MGS) to serve as a clearinghouse for water-related inquiries and requests for technical assistance.

Collection of Data

Implement a strategy for coordinated collection of water supply and use data and compile that data in a readily accessible form.

Presently, water data are collected at various points throughout state government. These data are collected for specific purposes by numerous agencies but, combined, they comprise a considerable share of data necessary for rational water management decisions. The most conspicuous deficiencies are of data reflecting water use by the private sector and data needed to estimate the water yield of hydrologic basins. Based on the investigations of the Water Supply and Water Use Subcommittees, the Board makes a number of recommendations about data collection and use:

- *The new board should designate hydrologic management units within the state, either initially on a statewide basis or gradually by basin as planning efforts are crystallized. All state agencies collecting water data should encode these data by latitude/longitude coordinates so they can be retrievable by management unit.*
- *The new board, and its staff, should serve to initiate and carry measures necessary to standardize data collection among all state agencies and to develop uniform standards for collection and storage of all water data.*

- *In addition to all public water suppliers, non-public water users (withdrawing over 50,000 gallons per day, averaged over any 30-day period) should be required to report water use.* Using the current public water supply data base structure at DHS, either DHS or the new board's staff should collect and manage comparable water use data from private users in order to have a complete picture of the water use in each basin.

An alternate recommendation by some board members is that users withdrawing over 50,000 gallons per day (some recommend this be limited to withdrawals from subsurface sources only) should report quarterly so that the state may adequately monitor these uses to assure there are no significant immediate effects on the water resources and other local uses. Those withdrawing between 15,000 and 50,000 gallons per day (again some recommend this be limited to withdrawals from subsurface sources only) could report their withdrawals annually, because the primary need is to have accurate aggregate information about these uses in a water basin, rather than to monitor their more immediate impacts.

- *If at all possible, the state should continue to support the cooperative MGS/USGS water data collection project and future research and field efforts by MGS on quantifying safe yields from mapped sand and gravel aquifers in priority water basins. MGS should make study priorities in coordination with the new board to focus on suspected areas of insufficient supply.*
- *In coordination with other agencies, the new board should also develop and maintain a listing of priority research needs and produce an annual report on water-related studies.*

The state need not undertake a program to immediately collect all necessary water yield data statewide. Rather, the new board could prioritize and direct data collection and yield analysis on water basins where there are known or suspected supply deficiencies. Individual agencies (PUC, DHS, MGS and DEP) should continue current data collection and management systems and share these data with WRMB staff. Whenever possible, the agencies should coordinate their data collection efforts with the WRMB and other agencies. To assure that data are readily available to the public and other agencies, the WRMB staff could collate and maintain its own data base files and act as a data clearinghouse to locate and obtain any requested data from other agencies.

Technical Assistance

Develop technical assistance programs for municipalities, communities or individuals adversely affected by water use decisions.

The new board and its staff should serve to coordinate water management activities among state agencies to facilitate interaction between other agencies and parties. The board should also provide technical assistance as a coordinator and provider of water data; as a fact-finder and mediator in addressing disputes; and by providing or arranging technical assistance by other agencies for those involved in water resource planning and use demand forecasting.

Agency Coordination

Develop a strategy for Coordination of all state and local agencies involved in water supply management.

The new board and its staff should provide a point of contact for, and collaboration among, all involved in water resources. The board should become a principle source of data and technical assistance, a dispute mediation forum, and a planning body. As such, provided that agencies are required to coordinate relevant activities and share relevant information with the WRMB, a coordination mechanism is established.

As reported by the Operational Framework Subcommittee, the state government currently lacks a framework for information gathering and sharing with the public and other levels of government on the broad water management issues. *To address this deficiency, the new board should sponsor a biennial information exchange conference among state, federal, regional, and local agencies.*

Dispute Resolution

Recommend a process for adjudication of disputes over the right to use water and over the establishment of water levels for water supply ponds.

The board recommends that *the state modify responsibilities as necessary to achieve a complete and coordinated state agency approach to water-related dispute resolution. Disputes which are appropriately adjudicated under current regulatory programs should still be resolved that way while disputes that have no such forum should be dealt with by the new board.*

As a principal forum for addressing water-related disputes, the new Board should serve to:

- *Coordinate and initiate dispute resolution strategies, including water basin planning activities.*
- *Assist other state agencies involved with water management issues by participating in their related planning, regulatory and adjudicatory processes.*
- *Provide fact finding and technical assistance for individuals, state agencies and the Legislature seeking solutions to water related disputes that are not subject to any other adjudicatory or judicial proceedings.*
- *Serve as a mediation and facilitation forum for resolving water disputes which are not resolved by other state agency proceedings. Specifically, the Board shall not be a review or appeals forum for disputes that have been adjudicated under other regulatory programs.*

The new board should become a venue of first resort for disputes that are not associated with other state adjudicatory proceedings and are not pending court cases. When appropriate, the board should serve as a fact finder for agencies and the Legislature and as a mediator of disputes that come before it. *Although the Legislature has called for a recommended process for adjudication of disputes, we recommend that the new board should not, initially, take on the role of water rights arbitrator or final decision maker in water disputes.* This would involve an additional and costly adjudicatory set-up that we are not convinced will be necessary, particularly if the fact finding and mediation activities of the new board are effective. Adjudication and establishment of water rights should, for now, remain with the courts and the Legislature.

This Board further suggests that new legislation include an exhaustion of remedies statement for water disputes. Such a statement, similar to language pertaining to PUC activities, would ensure that the Legislature would be the last resort for resolving disputes and, if legislative action is necessary, would benefit from the prior fact finding and mediation efforts by the board. This would ease the Legislature from the initial burdens of dealing with many disputes that are not of statewide significance. The statement could be worded as follows:

"No person may apply to the Legislature to grant it a right, privilege or immunity relating to water use until the person has exhausted its rights regarding its request before the Water Resources Management Board. In applying to the Legislature, the person shall state in writing that it has requested assistance from the Water Resources Management Board in determining or mediating the right, privilege or immunity requested and that the Board has deferred, declined, or undertaken action on its request."

Extent of Regulation

Recommend the appropriate extent and level of state regulation of water use.

As established by the foregoing recommendations, the state should regulate large inter-basin transfers (transfers greater than 500,000 gallons per day, averaged over any 30-day period) to assure that safe yields are maintained and other current uses are not unreasonably diminished. Regulation of other water withdrawals can be limited to those in areas of insufficient water supply, as determined necessary by an appropriately-adopted local basin management plan. The new board should be able to delegate regulation of local water uses if there is an appropriate local authority willing to administer them. State agency regulation of water uses, other than large inter-basin transfers, would, therefore, only occur in areas of insufficient supply where local basin authorities have not prepared or are not implementing a local basin management plan.

Finally, any state permitting or regulatory requirements should be designed to assure that existing beneficial water uses are integrated into the new system. As indicated in the report by the Legal Framework Subcommittee, generally states have protected investment-backed expectations by preserving pre-existing water rights to the extent they were put in actual use, but have regulated proposals based on future possibilities and speculation of future water uses. *Consistent with this suggestion, the board recommends that the legislation enacted as a result of these findings and conclusions should be conditioned so as not to diminish clearly-established beneficial water uses that exist prior to the date of enactment.*

**CONTENTS OF TECHNICAL REPORTS BY WRMB
SUBCOMMITTEES**

**WATER LAW IN MAINE
REPORT OF THE LEGAL FRAMEWORK SUBCOMMITTEE**

INTRODUCTION	1
DESCRIPTION OF MAINE WATER LAW	2
THE COMMON LAW OF SURFACE WATER	2
The Riparian Doctrine of Surface Water	2
Prescriptive Rights	4
Waters Subject to Riparian Rights	4
Non-tidal Streams and Rivers (5); Great Ponds and Tidal Rivers (5); Navigable Waters (5); Artificial Watercourses, Springs and Subsurface Streams (6)	
Use of Surface Waters	7
Determining Reasonable Uses	7
THE COMMON LAW OF GROUNDWATER	10
WATER LAW RELATING TO USE BY PUBLIC WATER SUPPLIES	11
MAINE STATUTORY MODIFICATIONS TO THE COMMON LAW	12
Source of State Authority	12
General Provisions	12
Rivers and Streams	13
Great Ponds	13
Groundwater	14
Municipalities	16
HOW MAINE'S CURRENT WATER LAW RELATES TO CONCERNS ABOUT WATER RESOURCE MANAGEMENT	17
STATE RESPONSES TO WATER RESOURCE MANAGEMENT ISSUES	20
Conjunctive Management of Surface and Groundwater	20
Determining Allowable/Reasonable Use	21
State-wide Planning and Management	22
State Registration/Permitting of Surface and Groundwater Withdrawals ..	22
Pre-existing water uses and the "Takings" Issue	23
Diversion from Water Basins	24
LITERATURE CITED	29
MAINE CASES RELATING TO WATER RESOURCE MANAGEMENT	30
OTHER RELEVANT READINGS	30
APPENDIX A Public Laws Relating to Water	
APPENDIX A - 1 Public Laws Relating to Groundwater	
APPENDIX B Public Water Suppliers Chartered or Regulated by State Agencies	

THE OPERATIONAL FRAMEWORK OF MAINE STATE GOVERNMENT
RELATED TO WATER RESOURCES MANAGEMENT

REPORT OF THE OPERATIONAL FRAMEWORK SUBCOMMITTEE

INTRODUCTION	1
AGENCY RESPONSIBILITIES	1
THE STATE/FEDERAL/REGIONAL PARTNERSHIP	3
MAINE'S CURRENT OPERATIONAL FRAMEWORK FOR WATER RESOURCE MANAGEMENT	4
ARE THERE FLAWS IN THE NETWORK IN THE FORM OF EITHER DUPLICATION OF RESPONSIBILITIES OR THE LACK OF COVERAGE OF IMPORTANT RESPONSIBILITIES?	5
DOES THIS NETWORK CONTAIN ANY "BRAIN AND/OR CENTRAL NERVOUS SYSTEM" THAT PROVIDE SOME ORDER AND DIRECTION TO THE COMPONENTS OF THE SYSTEM, OR IS THE SYSTEM EFFECTIVELY FRAGMENTED?	7
IS THE NETWORK AS A WHOLE FUNCTIONALLY ADEQUATE IN RESPONDING TO EMERGING WATER RESOURCES MANAGEMENT CONCERNS? WHAT ARE ITS ADVANTAGES AND DISADVANTAGES IN PROVIDING OR FACILITATING RESPONSIVE AND RESPONSIBLE WATER RESOURCES MANAGEMENT?	8
CONCLUSIONS	9
APPENDIX A	Institutional Options for Water Resource Planning and Management in the State of Maine - by Susan H. MacKenzie
APPENDIX B	State Agency involvement in Water Resources Management
APPENDIX C	A Data Base of State Agency Roles Related to Water Resources Management

WATER SUPPLY AND USE IN MAINE

**REPORT OF THE WATER SUPPLY AND
WATER USE AND DEMAND SUBCOMMITTEES**

Pages

Introduction 1

Assessment of Water Supply Data Collection and Needs ... WS-1 through WS-13

Assessment of Water Use Data Collection and Needs WU-1 through WU-4

Proposed Hydrological Management Units in Maine HMU-1 through HMU-4

Water Conservation in Maine CON-1 through CON-8

APPENDIX A - Maine Water Supply and Use

APPENDIX B - Report on Freshwater Withdrawals in Maine during 1985

**APPENDIX C - Presumpscot River Basin Study by the U.S. Army, Corps of
Engineers**

**THE ROLE OF MAINE STATE GOVERNMENT IN RESOLVING
WATER RELATED DISPUTES**

REPORT OF THE CONFLICT RESOLUTION SUBCOMMITTEE

INTRODUCTION	1
<u>SECTION ONE</u> - WATER USE CONFLICTS IN MAINE	2
What are Water Use Conflicts?	2
Three Case Studies	3
Water Levels at Sebago Lake	3
The Camden and Rockland Water Supply	4
The Nequasset Watershed	5
The Nature of Water-related Conflicts	6
<u>SECTION TWO</u> - BUILDING AN EFFECTIVE RESOLUTION SYSTEM BASED ON THE NATURE OF WATER CONFLICTS	8
Dispute Resolution Concepts	8
Problem Definition	8
Fact Finding	8
Mediation/Negotiation	8
Collaborative Negotiation	9
Arbitration	9
Aspects of Water-Related Conflicts that Might be Particularly Useful in	
Shaping a Conflict Resolution Strategy	9
Some water related conflicts can be resolved through existing adjudicatory and administrative processes, while others have no forum for resolution in state government	9
Frequently, in water-resource disputes the perceived size of the water resource "pie" may not be the actual size	10
Water conflicts often involve multiple interests in the water resources in question	10
For many water-related conflicts, there is a possibility of designing and using some objective problem-solving criteria	10
Many water disputes can be best resolved through a "team approach" involving all parties	11
Most of the parties involved in water-related conflicts are bound to have long-term relationships	11
Elements of an Effective Conflict Resolution Strategy	11

REPORT OF THE CONFLICT RESOLUTION SUBCOMMITTEE (CONTINUED)

<u>SECTION THREE - A SYSTEMATIC APPROACH TO CONFLICT</u> RESOLUTION	13
Proactive strategies to resolve potential conflicts and disputes.	13
Setting parameters to determine what are reasonable uses and how they may be viewed in relation to one another	13
Legislative Guidance	14
Establishing priorities to be applied in times of scarcity.	17
Creation of an administrative structure to respond to water-related conflicts that cannot be resolved through concurrent regulatory processes.	18
The Advantages and Disadvantages of a Multi-Faceted Approach	21