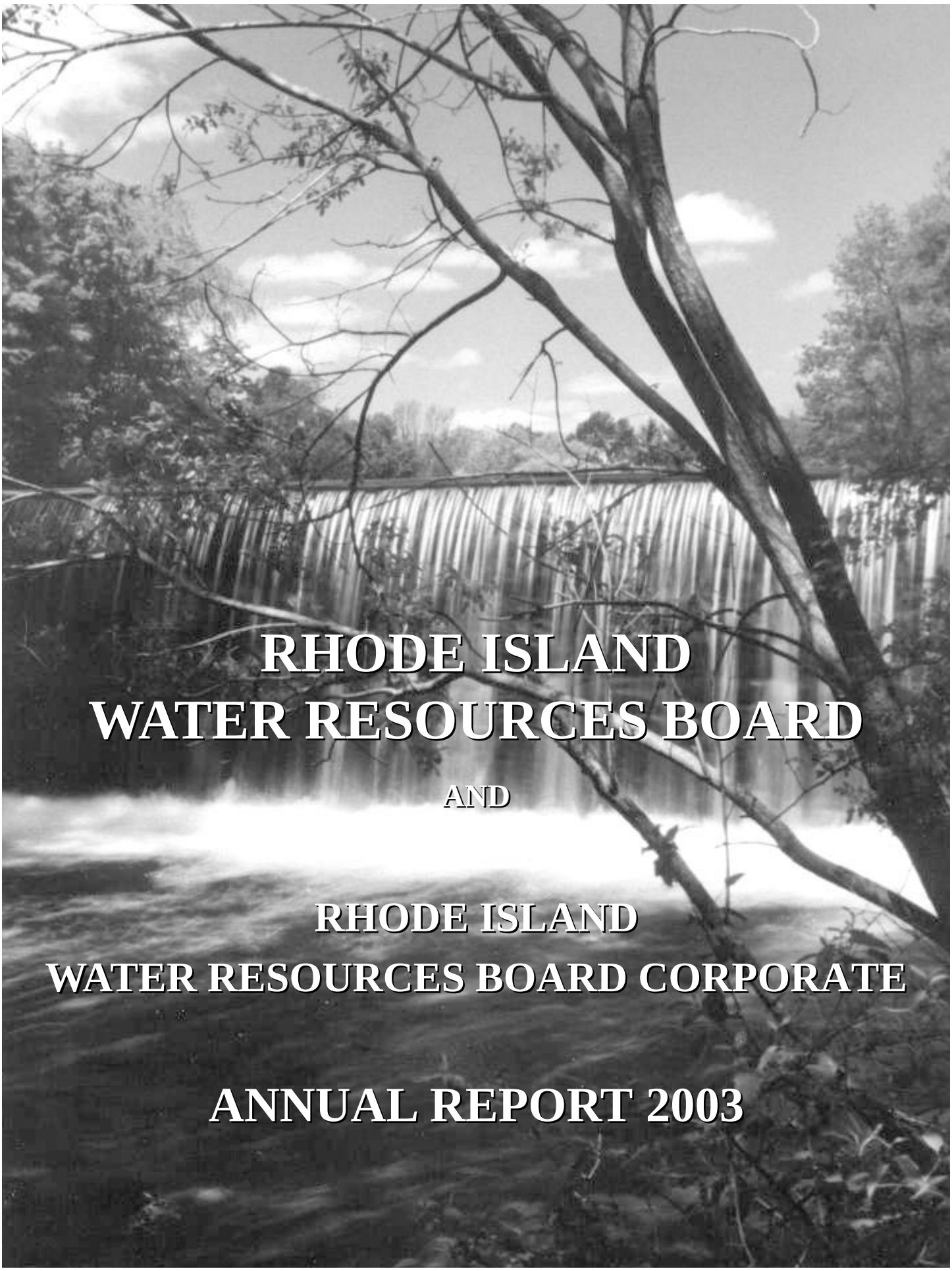

# RHODE ISLAND
# WATER RESOURCES BOARD

AND

# RHODE ISLAND
# WATER RESOURCES BOARD CORPORATE

# ANNUAL REPORT 2003

# MESSAGE FROM THE CHAIRMAN AND GENERAL MANAGER

Dear Governor Carcieri, Members of the General Assembly and Fellow Rhode Islanders:

The Rhode Island Water Resources Board and the Rhode Island Water Resources Board Corporate members, professional staff and the many volunteers who assist us in our work are pleased to submit the Fiscal Year 2003 Annual Report. Reflecting upon the significant inroads we have made in 2003 to improve the water community, there is no better way to begin this address than to say thank you to all those who worked with us to make last year a resounding success. Our accomplishments were realized through vision, partnership, hard work and collaboration, and are proudly showcased in this Annual Report—your Annual Report.

The Board's mission, to serve as a water-sourcing agency to ensure future water availability for residential growth and economic development for all Rhode Islanders, is guided by the Board of Directors. Many of the accomplishments which both the Board and Board Corporate have realized during 2003 were the product of hard work carried out by the many dedicated members of the General Assembly, collaborative work of federal and state agencies, water suppliers, representatives of conservation organizations, community groups and concerned citizens.

Therefore, it is not surprising that there is quite a "grassroots" feel to many of the big water successes of 2003. Consider the water allocation program guided by over 150 stalwart volunteers who have spent countless hours planning how to best manage the state's water resources for the future. Then, too, the major public water suppliers who worked with us to protect the state's watersheds through land acquisitions surrounding reservoirs and overlying groundwater aquifers. The Board also worked with suppliers to plan and implement emergency interconnections in order to "wheel water" between systems in time of drought, contamination or in the event of infrastructure failure. Moreover, the Supplemental Water Study was done concurrently with water suppliers with an eye to future water supply needs to ensure that Rhode Island's water independence continues. We continue to answer the needs of our state water suppliers who have made Rhode Island's water quality and quantity one of the best in the nation.

To all who played a role in helping the Board and professional staff to reach these goals, again, you have our thanks. You, as well as all Rhode Islanders, have much to look forward to in 2004. The Board anticipates a full plate of water projects that hold much promise, but the Board shall depend once more upon the shared commitment to partnership. We look forward to working not only *for* you the State of Rhode Island, but also *with* you to make 2004 a productive and dynamic year.

Daniel W. Varin
Chairman

M. Paul Sams
General Manager
Secretary-Treasurer

## HISTORY

The Rhode Island Water Resources Coordinating Board was formed in 1964 for the explicit purpose of acquiring 8600 acres in West Greenwich and Coventry for the proposed Big River Reservoir Water Supply Project. In 1967, under Governor John Chafee's leadership, the agency was renamed the RI Water Resources Board and empowered with broad legislative authority over statewide water supply. Shortly thereafter in 1970, the RI Water Resources Board Corporate was established as a water facilities and infrastructure financing arm of the Water Resources Board. Over the years, the two agencies collectively invested millions of dollars in scientific investigations, municipal water supply infrastructure design and construction, watershed protection, information systems, conservation education, policy development and program coordination.

In 1993, the General Assembly declared that the Big River Management Area would be considered "Open Space" until such time that the need for a reservoir could be absolutely demonstrated. Nonetheless, during this decade, several other major engineering projects were undertaken across the state in which the agency played a significant role. Those most familiar to the public include the East Bay Bristol County Pipeline and the Providence Project.

In 1997, the Water Resources Board assumed water supply planning duties previously carried out by the RI Dept. of Environmental Management. In 1999, legislation was passed clarifying the powers and duties of the agency regarding its sole, water allocation authority. The 1999 law also provided for a means to diversify the Board by adding two new members. The agency was also granted authority to investigate sources of groundwater in the Big River Management Area after a determination that exploration or development of groundwater for future supply was indeed needed.

In 2001, amidst a prolonged drought, the Board co-authored a new State Guide Plan Element #724, RI Drought Management Plan. The World Trade Towers tragedy on Sept. 11 pressed the Board to divert resources toward security of water facilities and information. Today, the Water Resources Board has a broad new focus on the business process of managing water, integrating water and wastewater considerations and factoring water quantity into local land use decisions.

## MISSION

The **Rhode Island Water Resources Board** is an executive agency in state government charged with managing the proper development, utilization and conservation of water resources. Its primary responsibility is to ensure that sufficient water supply is available for present and future generations, apportioning available water to all areas of the state, if necessary.

The **Rhode Island Water Resources Board Corporate** is a quasi-public corporation separate and apart from the Board. Its primary mission is to establish public water supply facilities, lease facilities or sell water derived from those facilities. Water facilities means wells, well sites, reservoirs, transmission or distribution systems and all associated real estate interests inclusive of water supply equipment. The Board Corporate has the power to revenue bond for the purpose of carrying out the mission of the Water Resources Board.

Since 1991, the Water Resources Board and Board Corporate have jointly administered a state surcharge levied on customers located in major water supply districts. The surcharge of $.0292 on every gallon of water used by customers (with the exception of senior citizens and commercial agricultural users) is collected by the state and deposited into the General Fund and a Corporate Trust account. The money is used to offset costs of new infrastructure, to pay down debt service on bonds and to cover a proportion of agency operations associated with supply functions. Approximately 6.9% of the $.0292 surcharge is retained by the water suppliers to administer the water supply systems management-planning program, 36.1% for watershed protection and 57% for the state general fund-debt service.

## POWERS, DUTIES & REGULATORY AUTHORITY

RI Gen. Laws §46-15 *et seq*.

The RI Water Resources Board and the RI Water Resources Board Corporate have broad authority in planning, developing, and managing public water supplies. The agencies work closely with the RI Dept. of Administration, Statewide Planning Program to develop and refine policies affecting water supply, including emergency planning.

The RI Water Resources Board and the RI Water Resources Board Corporate can also acquire lands, water rights, and easements for all water supply needs; design and/or construct water supply facilities; lease, sell or effect mergers of water supply systems; and loan or borrow money for water supply facility improvement and land acquisition to protect watersheds. If necessary, the agencies can "take" additional water from an existing water supply source or develop a new water source to supply water beyond the corporate or municipal limits of an existing water district. The agencies accomplish many objectives working in tandem with the twenty-nine major public water suppliers in the state.

## WATER SUPPLY SYSTEMS MANAGEMENT PLANNING

Since 1997, the Water Resources Board has administered the water supply planning process, which is integrated with the RI Dept. of Administration's Comprehensive Community Planning process. Water Supply System Management Plans (WSSMPs) are prepared by water suppliers that produce over fifty million gallons of water per year. These plans contain historical and current data on twenty-nine systems including source water, infrastructure, production data such as safe yield, volume of water withdrawn, water use by category, water quality, supply management and demand management. The submission of WSSMPs is a phased process; all remaining five-year updates should be delivered to the Board by the end of this year.

Chapachet River

During 2003, seven new plans were approved including those for the Town of South Kingstown Water Department, Stone Bridge Fire District, Pascoag Utility District, Town of Johnston Water Control Facility, United Water Rhode Island and the Providence Water Supply Board. Four WSSMPs are in various stages of review by multiple agencies including the RI Dept. of Environmental Management, RI Dept. of Health, RI Dept. of Administration- Statewide Planning Program, the RI Division of Public Utilities and the Water Resources Board. These plans include those for the University of Rhode Island, Portsmouth Water District, Bristol County Water Authority and the Woonsocket Public Works Department. In addition, the 30-month Interim Report has been approved for the Rhode Island Economic Development Corporation.

## SUPPLEMENTAL WATER SUPPLY STUDY PHASE I

During 2003, the Water Resources Board and the Providence Water Supply Board continued a joint venture to study the feasibility of developing supplemental water supplies for the central service area of the state. The study identifies sources and systems capable of augmenting up to 50 million gallons of water per day in emergency circumstances. It identifies a combination of nearby water system interconnections and new or abandoned groundwater sources to sustain water demand for over 600,000 people served within the central portion of the state. These supplies will provide an independent source of water in case of failure in the Scituate supply reservoir system. The program to date is Phase I of a statewide, supplemental water supply initiative. In Phase II, the program will be extended to include the remaining water supply services areas within the state. The results will identify potential methods for supply augmentation for individual water systems, as well as information germane to the administration of other Water Resources Board programs such as the Board's Emergency Interconnections Program.

## WATER FACILITIES ASSISTANCE

Since 1983, the Water Resources Board has administered a grant program to finance up to 50% of design and construction costs for new public water supply facilities. Funding for this program is provided through periodic general obligation bonds passed by statewide voter referendum. To date, over twenty major system improvements have been funded. The program allowed construction of the Bristol County Water Authority (BCWA) interconnection to the Providence and East Providence water systems, relieving the historically troublesome supply problems for Barrington, Bristol and Warren. The agency is continuing to work with BCWA regarding rehabilitation of aging supply, transmission, and treatment facilities. The Water Facilities Assistance Program has been a model of cooperation between state government and local water suppliers.

In similar fashion, the Board Corporate sold revenue bonds that enabled construction of a 12-million gallon addition to the Providence Water Supply Board's Longview Reservoir, a 3-million gallon, water storage tank, and the upgrade of three major pump stations. This was done to address the inadequate water pressure in the high service area and fire protection in the downtown Providence retail district.

Kent County Water Authority's 3-million gallon tank in the Big River Management Area

## EMERGENCY WATER SYSTEM INTERCONNECTIONS

The Water Resources Board is working with all public water suppliers throughout the state to establish much needed emergency interconnections between systems. This innovative program has drawn interest from several other states, which have expressed interest in establishing similar programs. A unique aspect of the program is that the Board and the major public water suppliers acted as partners in developing program rules and procedures, tailoring the program to the realistic needs of water systems and insuring sufficient flexibility to provide rapid response to emergencies. Eight interconnections have been constructed to date and two more are under construction or under agreement, representing grants exceeding $1.5 million dollars. System interconnections provide redundancy of supply and the ability to address water emergencies rapidly and efficiently should they occur. Large butterfly valves, 102 inches in diameter were installed in the Providence aquifer pipeline where it connects with the Warwick system eliminating any potential problems such as those experienced during the recent break in the 102" line. The North Tiverton Fire District is constructing interconnections with Fall River, Massachusetts, providing redundancy to Tiverton, Rhode Island's Stone Bridge treatment plant at Stafford Pond. This connection provides the important benefit of having access to Massachusetts' waters and lessens the reliance on Rhode Island's supplies.

Horizontal directional drilling, Galilee, RI

## WATER ALLOCATION

In 1999, the RI General Assembly granted the agency sole authority to devise a fair and equitable allocation of water resources among users and uses to ensure that long-range considerations of water supply prevail over short-term considerations. Towards this end, the Board is collecting scientific data on water use and available water in each basin and sub-basin. In addition, the Board has undertaken several water modeling efforts and is developing stream flow statistics. Together, these studies will provide needed information, identify areas where more information is necessary and assist in water management decision-making at all levels. Concurrently, the Board has been actively engaged in a major effort to develop a water allocation program.

Together, these initiatives assist state agencies and local communities to make projections regarding threatened sources, anticipate water shortages, and resolve potential water demand disputes. They provide valuable guidance for major capital improvement projects, residential growth and economic development consistent with state and local policies and plans.

Blackstone River - Valley Falls, RI one of the focus watersheds being studied as part of the Water Allocation Program development process.

### Water Use and Availability Studies - A Watershed Approach

Working with the US Geological Survey (USGS) and the University of Rhode Island (URI), the agency is completing a comprehensive statewide inventory of surface water and groundwater resources currently existing, used, or available to support future uses in nine basins, i.e., watersheds. The amount of water available is determined based on historical stream flow levels and areas of stratified drift in the watersheds. The USGS and URI collect known water use data from Water Supply Systems Management Plans prepared by major public water suppliers, other individual businesses that are metered, or by estimating

## WATER ALLOCATION (Cont.)

according to predetermined formulas. The Block Island study has been completed and two others are in draft form: the Wood-Pawcatuck and the Blackstone. A statewide summary report is planned once all the basin studies have been completed. All water data is being compiled in a database under development by USGS for use by New England states. Once complete, the studies will provide important trend data to be compared to the findings and recommendations of the 1990 study titled *Water Supply Analysis for the State of Rhode Island* (later adopted as State Guide Plan Element 722).

Members of the Out-of-Basin Transfer Subcommittee relax after presenting their findings to the Board's Water Allocation Program Advisory Committee

**Low Flow Analysis**

The Board has begun a two-phased project to assess existing stream flow data, develop estimates and ultimately a web-based, stream statistics program compatible with the National Hydrologic Database (NHD).

Hydrogeologic Models: Optimizing Water Use

The Board is conducting specialized modeling activities in the Usquepaug-Queen sub-basin of the Wood Pawcatuck watershed, the Big River Management Area and the Blackstone River basin. A future study is planned for the Chipuxet sub-basin. The Board has also contracted with USGS and the Natural Resources Conservation Service (NRCS) to create an optimization model in the Wood-Pawcatuck. Models will evaluate the effect of present and future water withdrawals by public suppliers, industry, agriculture, and other water users on stream flow and water supply. Various rates of population growth, pumping, and stream flow can be plugged into the model to evaluate alternatives for future water use. The optimization model study for the Hunt River aquifer was completed and published. The model illustrates various scenarios by which groundwater withdrawals [pumping] can be managed to minimize stream flow depletion and maximize supply.

**Water Allocation Program Development**

In July 2002, the Board launched an inclusive effort to develop a water allocation program for the state that properly considers the social, economic, environmental and legal aspects of water allocation. The process is outcome based aimed at designing a water reporting program in eighteen months. Other goals includes the development of interim and long term stream flow standards, water allocation criteria, technical assistance programs, an educational website, conservation-based water rates and shared decision support systems. To accomplish the mission, the Board has engaged multiple partners with expertise, jurisdictional, and/or legal authority over water resource management to serve on the Water Allocation Program Advisory Committee (WAPAC). Subcommittees have been working for a year to address ten issue areas:

- Water withdrawal registration/reporting
- Stream flow standards
- Priority uses
- Water rights, regulatory authority, and compliance
- Out-of-basin transfer
- Fees, water rates, and alternatives
- Education, outreach and public relations
- Integrated water and wastewater considerations and technical assistance
- Impact analysis
- Joint advocacy, funding, reporting and program evaluation

**Drought Planning and Management**

The Water Resources Board led an interdisciplinary task force to develop first interim drought guidelines and ultimately State Guide Plan Element 724: The Rhode Island Drought Management Plan. The plan was passed under emergency proceedings in March 2002 by the State Planning Council with final adoption in June 2002.

The plan charges the Water Resources Board with a continuing leadership role in drought management. During normal times, the Board assesses conditions. When drought conditions occur, the Board convenes the Drought Steering Committee comprised of state agencies, suppliers, academics, and scientists. The collaborative drought management and planning process pools resources, minimizes duplication of effort, coordinates response and provides a forum for on-going assessment of drought conditions, impacts and mitigation strategies. This year, the Water Resources Board prepared a report to evaluate the 2002 drought process and response as well as to identify future needs.

## SAFE DRINKING WATER ACT REVOLVING LOAN FUND

Any infrastructure improvement that is required under the federal Safe Drinking Water Act may be funded under this program. The fund will continue to address construction of facilities throughout the state as needed to protect and enhance the ability of the state's water systems to provide ample supplies of potable water. Administration of the Safe Drinking Water Act Revolving Loan Fund is a cooperative effort lead by the RI Department of Health and the Water Resources Board.

## PUMP CENTER INVESTIGATIONS & GROUNDWATER RESOURCES PROTECTION

It is the policy of the Rhode Island Water Resources Board to encourage the development and management of the state's groundwater resources and to minimize stream flow depletion during summer months and drought periods when stream flow can be critically low. Thus, the Board revived the groundwater investigations program that began in 1970 in cooperation with the US Geological Survey. That study consisted of hydrologic well testing by drilling 8-inch production wells and 2-1/2-inch groundwater observation wells, as well as aquifer testing and mapping. The purpose was to identify the most favorable sites for developing high capacity wells that would yield water of suitable quantity and quality located in the Wood-Pawcatuck Watershed, a sole source aquifer in southern Rhode Island. Thirty-three pumping centers were identified as being capable of producing approximately 1 million gallons or more of water per day.

Staff Member Will Riverso conducting water quality testing at potential future water supply site

In 2003, the Board began the appraisal and negotiation process for four sites seeking to protect them from future development. The Rhode Island water supply community, the RI General Assembly and the citizens of Rhode Island voted to approve general obligation bonds for this groundwater protection/acquisition program financed over FY 2002 – FY 2006. More importantly, it is through collaborating with other agencies and lands conservancy groups that maximizing additional funding will expand this program.

## THE RI PUBLIC DRINKING WATER PROTECTION PROGRAM

This popular program is often referred to by municipal water suppliers as the "penny per hundred" program. For every one hundred gallons of water pumped [by major water suppliers] one cent is collected and set aside specifically for land acquisition or for water quality improvement projects. Land acquisition in proximity to a water source is a proven technique to protect the quality of drinking water supplies. Other projects that contribute to improved water quality include nonpoint source pollution or run-off prevention measures, treatment facility upgrades, water main cleaning or relining, and even the purchase of water conservation kits or watershed signage.

Since 1994, the Board Corporate has successfully administered Phases I & II of the program, which consisted of disbursing $18,343,382. Of this total, $12,881,343 was spent on watershed protection land and easement acquisitions (2,410 acres), $732,922 was spent on associated land and easement costs, and $244,254 was spent on watershed protection plan preparation costs. A total of $4,484,863 was spent on forty-nine water quality improvement projects. These results reflect significant progress made to improve the state's valuable water resources.

In November of 2002, the Water Resources Board Corporate issued approximately $7.2 million in new bonds for Phase III of this successful program. Phase III will run through February of 2006. The objective of protecting the quality of the public drinking water supply—not only for today, but also for future generations—is an on-going challenge. The success of this program could not have been realized without the partnership and cooperation of the land conservation groups and the water supply community. The Board is appreciative of all those who played a role in helping the agency reach these goals.

"Check Presentation" in Cumberland, RI (left to right), RI WRB Chairman Dan Varin, Pamela Marchand of Pawtucket Water Supply Board, Cumberland Mayor Daniel J. Okeefe, Mary Kay of RI Dept. of Environmental Management, RI WRB General Manager M. Paul Sams

It is becoming increasingly clear that more work needs to be done to educate the public regarding the value of water, the availability of supply in relationship to demand, the cost to produce water and maintain reliable infrastructure, the effect of water use on the environment, and the need to conserve the resource, especially during dry periods.

Working in conjunction with the RI Water Works Association (RIWWA), the Board promoted education and outreach activities during RI Water Week. Along with RIWWA, staff participated in the State Science Fair judging water supply-related science projects for high school and junior high school students. Board staff participated with representatives of the Natural Resources Conservation Service in a habitat restoration project. School children from Exeter and West Greenwich were treated to a field trip to observe a gravel pit that had been replanted with several varieties of indigenous and drought-tolerant grasses.

In 2003, the Board provided outreach and assistance to many citizens groups, state and local units of government and commissions, quasi-public boards and made available significant resources to assist the RI Rivers Council. At the state level, the Board continued active roles on watershed councils regarding growth planning and water management.

# BIG RIVER MANAGEMENT AREA

The Big River Management Area (BRMA) consists of approximately 8600 acres of open space, and is the largest publicly owned land parcel in Rhode Island. Its borders extend through portions of the towns of West Greenwich, East Greenwich, Coventry, and Exeter. Largely undeveloped, the land was originally condemned for water supply purposes, though some two-hundred, single family dwellings were located there. The survey of the parcel initiated by the Water Resources Board to clearly define and monument the boundary of the original tract continues.

Today, the land is officially classified as Open Space, yet the BRMA's intended use designation remains water oriented. The property is largely managed according to recommendations put forth in a 1996 land use study. The report laid out a Use Evaluation Protocol—a framework to evaluate suitability and permissibility of various land uses such as water resource management, wildlife management, forestry, historical preservation and environmental education.

The Water Resources Board has maintained a solid relationship with nearby communities and residents living in the area by providing a broad range of services including education and recreation opportunities in the management area. A multi-year, habitat restoration project on twenty acres is ongoing with help from the Natural Resources Conservation Service. Elementary school students have taken field trips to learn first-hand about the biology in the BRMA. The agency continues to take an active role in the planning, zoning and administrative decisions of the towns as they pertain to the BRMA.

In 2003, the Board embarked on Phase IV of a model forestry management program on approximately seventy acres. The Board established a research and education partnership led by Dr. Josef Gorres of URI's Dept. of Natural Resources Science, with Dr. Steven Hamburg of Brown University and the RI Dept. of Environmental Management–Forest Environment Division. The objective of the project is to improve the health of the forest and preserve diverse fish and wildlife habitat while protecting the watershed. This effort is part of a larger undertaking to monitor biodiversity, soil, water, and forest quality in the timber harvest areas. The RI National Guard and the United States Marine Corps continue to utilize the property for vital training exercises in the interest of national security. The University of Rhode Island (URI), Brown University and other environmental groups conduct nature walks and routine field explorations. This year, the Board began implementing recommendations from a study of roads and bridges as part of a long-range road maintenance program, which included paving all of Hopkins Hill Road

Loggers in the Big River Management Area use a skidder for hauling logs that were selectively cut from the white pine forest.

and an extension of Cogdon Mill Road. The agency continues to take an active role in the planning, zoning and administrative decisions of the towns as they pertain to the BRMA.

In the spring, Board staff coordinated restoration of a gravel bank with the Natural Resources Conservation Service. A 20-acre parcel was planted with nine different varieties of grasses known to thrive in gravel banks. A local farmer seeded the gravel bank and applied composting material donated by the City of Warwick. Elementary-aged students from the Metcalf Elementary School in Exeter- West Greenwich were treated to a science lesson in the field delivered by two biologists from the US Dept. of Agriculture. The children sampled materials in the gravel bank in order to learn about soil profiles and reseeding procedures. Phase III restoration has been completed. Phase IV site has been chosen and planting will commence in April of 2004.

In addition, during 2003 a parking lot was approved for Amgen Corporation to park 1,600 vehicles on site in the gravel pit of the Management Area. The site consists of 35 acres of parking, a fenced area for the guard shack, vending machines and landscaping abutting the site, all for a two year agreement with three one year approvals. Additionally, under the supervision of Dr. Josef Gorres, construction took place in existing disturbed areas under environmentally safe management practices. Special plans for each catch basin was equipped with simple oil/water separators. Additionally, in 2003 the Water Resources Board along with State Properties negotiated with Cardi Corporation to pass and repass on Management Area roads to gain access to the Cardi farm, which abuts the Management Area. A Supreme Court decision for Cardi grand-fathered the farm for a quarry operation. The use of this access road was also negotiated with the Town of West Greenwich to prevent construction of a quarry in a residential area.

Open Space designation precludes many types of development; thus, steps have been taken to remove or relocate structures from the property to better protect the watershed while maintaining passive recreational, educational, and conservation benefits for the public. The Water Resources Board, working cooperatively with the US Geological Survey, is undertaking groundwater investigations in order to develop the potential of BRMA as a drinking water source. Working with the Board and the State Properties Committee, Kent County Water Authority constructed a three–million–gallon water storage tank in BRMA. The water in this tank will provide emergency service and increased water pressure to residents in the Authority's service area. The tank is located on the highest point in the Management Area on Carr's Pond Road.

## PUBLIC EDUCATION AND OUTREACH

It is becoming increasingly clear that more work needs to be done to educate the public regarding the value of water, the availability of supply in relationship to demand, the cost to produce water and maintain reliable infrastructure, the effect of water use on the environment, and the need to conserve the resource, especially during dry periods.

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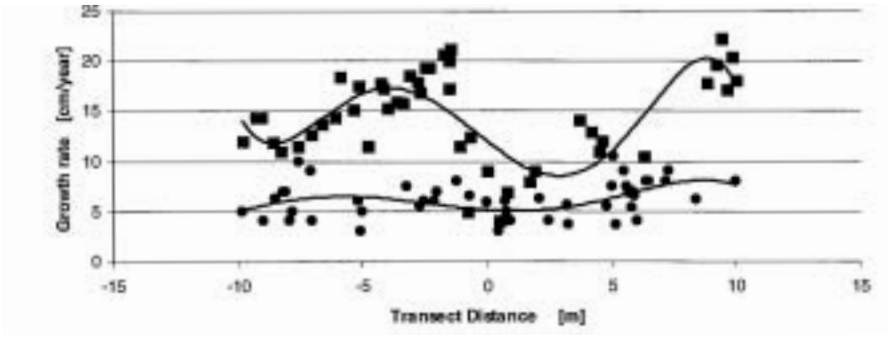


Figure: Regeneration of white pine at the Burnt Saw Mill Road site cut 4 years ago. Average annual growth rate in cut areas was 2 to 3 times greater in cut areas ( ■ ) than in uncut areas ( ● ). Forest management practices, such as conservation cuts for releasing pine saplings are effective ways of helping forest regeneration. Data was gathered by Karlis Antons and Alex Finnamore, seniors in the Natural Resources Science Department at URI.

## MANAGEMENT INFORMATION SYSTEMS

The ability of the state to provide dependable, high quality water for multiple purposes, including economic development, is highly contingent upon having the technological means to do so. A critical management issue faced by the Water Resources Board is how to improve the collection, availability, and usefulness of water-related information, regardless of whether it is generated by government, the water supply community or other contributing sectors.

Management Information Systems (MIS) includes software application development and maintenance for the Board's core Water Resources Management and Property Management programs, as well as centralized financial management applications such as RISAIL (RI Statewide Automated Information Link). In addition to maintaining a secure internal computing environment, MIS entails integration with external computer systems such as RI Geographic Information System (RIGIS), the state's Incident Command System and eventually, the Health Alert Network.

Primary MIS goals include: a) Automate as many business processes as possible—independently, or with other agencies as appropriate—to increase efficiency and customer service; b) Provide technical support to water districts, local government, nonprofit organizations and other customers; c) Maintain consistent funding through the operating and/or capital budgets to support essential MIS initiatives including design and maintenance of the web page.

This year, work progressed on a joint effort with the US Geological Survey to create and populate two databases for water data collected as part of the water allocation program and from Water Supply Systems Management Plans. The hydrologic database is called the New England Water Use Data System (NEWUDS). Analysis performed in NEWUDS will enable the Board to understand how peak demands vary against available water supply around the state and assess geographic areas in terms of future supply. The database is being populated with data from statewide water use studies as they are completed. The WSSMP database will contain information in WSSMP plans, which is not captured in NEWUDS. These two systems will be the core databases for water resources management. GIS will be the core data system for the Big River Management Area.

Tony Veltri (second from right) engages GIS specialists in a day of metadata training at the RI Dept. of Transportation's "high-tech" Transportation Management Center.

As a member of the RI Geographic Information Systems consortium, the Board is responsible for updating statewide geographic data for water district boundaries, water system transmission lines in roads, emergency interconnections, major facilities and pumping points. This data had not been updated for over ten years, though it is heavily relied upon by government and the private sector. The Board, in collaboration with the RI Dept. of Transportation, provided funding to make the data current. Once all GIS coverages are thoroughly reviewed, certain RIGIS data layers will be updated, as permitted by law.

# FINANCIAL REPORTS

## Rhode Island Water Resources Board

Detailed Listing of Expenditures as of June 30, 2003

| Account | | BOC | FY 1999 Actual | FY 2000 Actual | FY 2001 Actual | FY 2002 Actual | FY 2003 Actual |
|---|---|---|---|---|---|---|---|
| **2835-10000** | | | | | | | |
| Classified Permanent | | 210 | 296,916 | 404,911 | 395,230 | 422,764 | 468,348 |
| Classified Permanent Overtime | | 215 | 229 | 347 | 5,000 | 82 | 0 |
| Unclassified Permanent | | 230 | 81,330 | 46,766 | 88,895 | 99,042 | 111,225 |
| Employees Retirement | | 280 | 36,689 | 39,194 | 38,554 | 29,169 | 44,555 |
| FICA | | 281 | 28,288 | 33,860 | 36,591 | 38,886 | 43,045 |
| WC Self Ins. Employer Assess. | | 283 | | 876 | 18,772 | 19,828 | 22,024 |
| Emp. Group Life | | 284 | | | | | |
| Employee Cost Retiree Health | | 294 | 2,584 | 2,782 | 4,808 | 4,524 | 6,067 |
| Medical | | 295 | 26,073 | 41,705 | 48,755 | 48,079 | 57,775 |
| Dental Care | | 297 | 2,872 | 4,155 | 4,178 | 3,995 | 4,497 |
| Vision Care | | 298 | 382 | 550 | 550 | 541 | 1,305 |
| **Salaries and Benefits** | | | **475,361** | **575,146** | **641,333** | **666,910** | **758,841** |
| Architect/Engineering Serv | | 262 | 418,827 | 90,250 | 40,550 | 75,000 | 0 |
| Bldg & Grounds Maint. | | 264 | 3,900 | 5,511 | 7,200 | 7,271 | 7,200 |
| Security Services | | 265 | 4,192 | 3,303 | | 2,858 | 2,541 |
| Management/Audit | | 267 | | 12,596 | 20,739 | 63,674 | 8,721 |
| Special Clerical | | 268 | 314 | | | | |
| All Other Special Serv | | 269 | 10,033 | | | | |
| **Contractual Services** | | | **437,266** | **111,660** | **68,489** | **148,803** | **18,462** |
| **Personnel Services** | | | **912,628** | **686,805** | **709,822** | **815,713** | **777,303** |
| Postage | | 321 | 1,489 | 1,364 | 1,538 | 1,522 | 1,093 |
| Telephone | | 322 | 1,796 | 504 | 707 | 1,133 | 230 |
| Supplies | | 323 | 5,232 | 4,950 | 7,123 | 3,884 | 4,448 |
| Dues And Sub. | | 324 | 2,257 | 2,284 | 2,139 | 3,019 | 1,216 |
| Insurance | | 326 | 73,218 | 77,336 | 81,939 | 96,622 | 93,440 |
| Centrex Telephone | | 327 | 5,610 | 6,271 | 6,716 | 6,730 | 6,589 |
| Printing | | 331 | 3,049 | 3,913 | 2,009 | 1,167 | 1,513 |
| Advertising | | 332 | 781 | 1,285 | 982 | 939 | 484 |
| Mileage In | | 341 | 6,271 | 5,856 | 6,067 | 5,905 | 5,073 |
| Out of State Travel | | 342 | 753 | 702 | 2,046 | | 1,787 |
| Other Travel | | 343 | 10 | 61 | 495 | 446 | 832 |
| Repair - Buildings and Structure | | 361 | 329 | 462 | 769 | (5,451) | 3,528 |
| Repair highways | | 362 | 10,000 | 10,000 | 10,000 | 10,000 | 7,000 |
| Other Repairs | | 363 | 2,582 | 1,529 | 2,926 | 1,458 | 2,414 |
| Replace Office Equipment | | 378 | 2,138 | 4,107 | | | 0 |
| Rental Property | | 381 | 49,368 | 56,399 | 58,894 | 59,859 | 61,027 |
| Rental Equip | | 382 | 3,360 | 2,172 | 2,172 | 3,579 | 15 |
| Fuel Oil | | 402 | 444 | 955 | 1,074 | 579 | 1,421 |
| Electricity | | 409 | 5,233 | 966 | | 10 | 0 |
| Highway & Landscaping Exp. | | 436 | 663 | | 356 | 15 | 0 |
| Central Services | | 438 | 1,117 | 2,946 | 3,816 | 6,389 | 8,565 |
| Education | | 441 | 2,985 | 1,445 | 1,830 | 55 | 0 |
| Computer supplies | | 442 | 1,884 | 4,336 | 2,738 | 4,818 | 2,968 |
| Computer Software | | 445 | 1,270 | 2,030 | 892 | 24 | 285 |
| Other | | 455 | 2,798 | 1,454 | 1,638 | 2,073 | 1,441 |
| Other Equipment | | 659 | 791 | | 745 | 0 | 0 |
| Computer Equipment | | 660 | 1,853 | 6,196 | 5,949 | 1,200 | 1,272 |
| **Total Operating Expenses** | | | **187,279** | **199,521** | **205,560** | **205,975** | **206,641** |
| Education Grant | | 582 | 27,358 | 38,871 | 40,939 | 45,156 | 44,453 |
| Grants | | 589 | 3,953 | 5,157 | 5,276 | 5,253 | 3,461 |
| Supple Pension | | 477 | 612 | 612 | 612 | 51 | 0 |
| **Grants and Benefits** | | | **31,923** | **44,640** | **46,827** | **50,460** | **47,914** |
| Improvements | | | | | | | |
| * Interest on Bonds | | 791 | 1,337,625 | | | | |
| * Redemption of Bonds | | 792 | 1,129,341 | | | | |
| **Debt Service** | | | 2,466,966 | 0 | 0 | **0** | **0** |
| **Total 2835-10000** | | | **3,598,796** | **930,967** | **962,209** | **1,072,148** | **1,031,858** |
| | **2835-90100** | | | | | | |
| **Capital Development Funds** | | | | | | | |
| BRMA Maintenance | | | 54,373 | 225,264 | 89,958 | 82,425 | 49,208 |
| BRMA Water Survey | | | | 67,738 | 112,261 | 0 | 0 |
| Water Allocation Program | | | | 270,245 | 464,867 | 266,304 | 97,405 |
| Ground Water Protection | | | | | 83,334 | 14,441 | 0 |
| Supplemental Water | | | | | | 54,487 | 0 |
| **Total Capital Development** | | | **54,373** | **563,247** | **667,086** | **417,657** | **146,613** |
| **Restricted Receipts** | | | | | | | |
| Water Allocation Program | 2835-80100 | | | | | 79,334 | 504,519 |
| Supplemental Water | 2835-80600 | | | | | 16,970 | 92,036 |
| Water Development | 2835-50100 | | | | | 0 | 172,500 |
| **Total Restricted Receipts** | | | 0 | 0 | 0 | **96,304** | **769,055** |
| **Agency Total** | | | **3,653,169** | **1,494,214** | **1,629,295** | **1,586,109** | **1,947,526** |

Note * Transferred to Dept. of Administration

## Rhode Island Water Resources Board Corporate
**Balance Sheets - June 30, 2003, 2002, and 2001**

| | FY 2003 | FY 2002 | FY 2001 |
|---|---|---|---|
| **Assets** | | | |
| Cash and cash equivalents | $ 918,308 | $ 2,258,222 | $ 3,183,207 |
| Cash - allocated to Phase III | 7,184,836 | | |
| Cash - allocated to Phase II | 320,000 | | 155,893 |
| Investments | 10,007,891 | 5,626,373 | 4,160,783 |
| Accounts Receivable | 217,454 | 254,390 | 333,029 |
| Lease Receivable | 6,345,000 | 7,100,000 | 7,815,000 |
| Accrued Interest Receivable | 74,294 | 63,641 | 40,528 |
| Due from Water Resources Board | 8,221 | 75,964 | |
| Bond issuance ( net of amortization) | 636,615 | 431,691 | 473,352 |
| **Total Assets** | $ 25,712,619 | $ 15,810,281 | $ 16,161,792 |
| **Liabilities and Fund Equity** | | | |
| **Liabilities:** | | | |
| Due to State of Rhode Island | $ - | $ 1,500,000 | $ 1,359,108 |
| Accounts payable | 10,294 | 1,587 | 11,007 |
| Deferred revenue | 721,545 | 796,684 | 965,780 |
| Deferred watershed grant | 320,000 | | |
| Accrued interest payable | 373,454 | 262,107 | 280,587 |
| Bonds payable | 25,265,000 | 15,345,000 | 16,580,000 |
| Excess cost of refunding | (536,057) | (612,637) | (689,216) |
| Refunding premium | 102,320 | 43,372 | 48,794 |
| **Total Liabilities** | 26,256,555 | 17,336,113 | 18,556,060 |
| **Fund Equity:** | | | |
| Retained earnings: | | | |
| Reserved | (1,061,970) | (2,120,566) | (3,066,226) |
| Unreserved | 518,034 | 594,734 | 671,958 |
| **Total fund equity** | (543,936) | (1,525,832) | (2,394,268) |
| **Total Liabilities and Fund Equity** | $ 25,712,619 | $ 15,810,281 | $ 16,161,792 |

## Rhode Island Water Resources Board Corporate
**Statement of Revenues, Expenses and Changes in Retained Earnings**
**For the Fiscal Years Ended June 30, 2003, 2002, and 2001**

| **Operating revenues** | FY 2003 | FY 2002 | FY 2001 |
|---|---|---|---|
| Rental income | $ 310,068 | $ 333,153 | $ 321,291 |
| Water quality protection charge | 1,252,599 | 1,311,753 | 1,223,694 |
| **Total operating revenues** | 1,562,667 | 1,644,906 | 1,544,985 |
| **Operating expenses** | | | |
| Administrative expenses | 53,261 | 17,455 | 28,089 |
| Amortization expense | 124,926 | 112,819 | 112,819 |
| **Total operating expenses** | 178,187 | 130,274 | 140,908 |
| **Operating Income** | 1,384,480 | 1,514,632 | 1,404,077 |
| **Non-operating revenues (expenses)** | | | |
| Watershed protection grants | - | (155,893) | (1,510,104) |
| Interest income | 288,640 | 330,477 | 444,519 |
| Capital gains | (6,095) | 32,105 | 76,040 |
| Interest expense | (1,040,952) | (852,885) | (914,438) |
| **Total non-operating revenues ( expenses)** | (758,407) | (646,196) | (1,903,983) |
| Net Income (loss) | 626,073 | 868,436 | (499,906) |
| **Retained earnings (deficit) July 1** | (1,525,832) | (2,394,268) | (1,894,362) |
| Adjustments to prior year | 355,823 | | |
| **Retained earnings - June 30, 2003, 2002 & 2001** | $ (543,936) | $ (1,525,832) | $ (2,394,268) |

## Rhode Island Water Resources Board Corporate
**Statement of Cash Flows**
**Increases (Decreases) in Cash and Cash Equivalents**
**For the Fiscal Years Ended June 30, 2003, 2002 and 2001**

| **Cash flows from operating activities** | FY 2003 | FY 2002 | FY 2001 |
|---|---|---|---|
| Cash received for: | | | |
| Rents | $ 990,229 | $ 879,057 | $ 1,012,540 |
| Water quality protection | 1,357,277 | 1,455,319 | 1,439,019 |
| Cash payments for goods and services | (44,553) | (26,874) | (28,089) |
| **Net cash provided by operating activities** | 2,302,953 | 2,307,502 | 2,423,470 |
| **Cash flows from noncapital financing activities** | | | |
| Due to State of Rhode Island | (1,144,177) | | |
| Deferred watershed grants | 320,000 | | |
| Watershed protection grants | - | (155,893) | (1,510,104) |
| **Net cash used for noncapital financing activities** | (824,177) | (155,893) | (1,510,104) |
| **Cash flows from capital and related financing activities** | | | |
| Acquisition and construction of capital assets | | | |
| Proceeds on bond issuance | 11,193,837 | | |
| Principal paid on revenue bonds | (1,465,000) | (1,235,000) | (1,180,000) |
| Interest paid on revenue bonds | (929,604) | (871,365) | (928,357) |
| **Net cash used for capital and related financing activities** | 8,799,233 | (2,106,365) | (2,108,357) |
| **Cash flows from investing activities** | | | |
| (Purchase) sale of investment securities | (11,889,515) | (1,477,161) | (1,546,285) |
| Net (decrease) in fair value of investments | (6,095) | 32,105 | 76,040 |
| Interest on investments | 277,687 | 318,934 | 431,267 |
| **Net cash provided by investing activities** | (11,617,923) | (1,126,122) | (1,038,978) |
| **Net increase in cash and cash equivalents** | (1,339,914) | (1,080,878) | (2,233,969) |
| **Cash and cash equivalents at beginning of year** | 2,258,222 | 3,339,100 | 5,573,069 |
| **Cash and cash equivalents at end of year** | $ 918,308 | $ 2,258,222 | $ 3,339,100 |

**Reconciliation of operating income to net cash provided by (used for) operating activities**

| | | | |
|---|---|---|---|
| Operating income | $ 1,384,480 | $ 1,514,632 | $ 1,404,077 |
| Items in net income not affecting cash and cash equivalents: | | | |
| Amortization expense | 124,926 | 112,819 | 112,819 |
| Increase (decrease) in cash and cash equivalents from changes in assets and liabilities: | | | |
| Accounts receivable | 36,936 | 78,639 | 43,106 |
| Due to State of Rhode Island | - | 140,892 | 169,889 |
| Due from Water Resources Board | 67,743 | (75,964) | |
| Lease receivable | 755,000 | 715,000 | 685,000 |
| Accounts payable | 8,707 | (9,420) | 2,330 |
| Deferred revenue | (74,839) | (169,096) | 6,249 |
| **Net cash provided by operating activities** | $ 2,302,953 | $ 2,307,502 | $ 2,423,470 |

# BOARD MEMBERS

The Rhode Island Water Resources Board consists of thirteen members; five are public members appointed by the Governor, two of which must be affiliated with public water supply systems. Public members serve for three years. There are five directors or their ex-officio designees including the Director of the RI Dept. of Administration, the Director of the RI Dept. of Environmental Management, the Director of the RI Dept. of Health, the Director of the RI Economic Development Corporation, and the Chair of the Joint Legislative Committee on Water Resources. The remaining members include a representative of the RI Agricultural Council, one state senator appointed by the Senate President and one state representative appointed by the Speaker of the House. Water Resources Board members are also members of the Board Corporate.

## PUBLIC MEMBERS:

**Daniel W. Varin, PCP** - Chair
Mr. Varin is planner emeritus of the State of Rhode Island, having served for over 31 years as Associate Director of the RI Dept. of Administration and Chief of the Division of Statewide Planning. Mr. Varin is nationally recognized for his work in drafting the Rhode Island Comprehensive Planning and Land Use Regulation Act.

**William Penn,** - Vice Chair
Mr. Penn is a Financial Advisor specializing in Brownfield's redevelopment. He is President & Chief Executive Officer of the Clean Land Fund in New Shoreham, RI. Mr. Penn is an Adjunct Professor at the Steven L. Newman Real Estate Institute at Baruch College of the City University of New York.

**Jon Schock**
Mr. Schock is the Public Services Director for the Town of South Kingstown and past President of the RI Water Works Association. He is also a member of the Board of Certification of Operators of Wastewater Treatment Facilities.

**John Milano**
Mr. Milano of Bristol, RI spent 37 years in engineering and management positions for public and private utility-related organizations. Up until 1999, he was Administrator for the RI Division of Public Utilities and Carriers.

**Timothy J. Brown, PE**
Mr. Brown is the General Manager and Chief Engineer at the Kent County Water Authority. He is past President of both the RI Society of Civil Engineers and American Society of Civil Engineers-Rhode Island Section.

## EX OFFICIO MEMBERS

**Director of RI Dept. of Administration** -
Robert J. Higgins
Mr. Higgins' designee is Robert Griffith, Ph.D., Chief, Office of Strategic Planning, Monitoring and Evaluation.

**Director of RI Dept. of Health** -
Patricia A. Nolan, MD, MPH
Dr. Nolan's designee is June Swallow, PE, Chief, Office of Drinking Water Quality.

**Director of RI Dept. of Environmental Management** - Frederick J. Vincent (Acting)

**Executive Director of the RI Economic Development Corporation** – Michael McMahon
Mr. McMahon's designee is William J. Parsons, Deputy Director.

**Chair of the Joint Committee on Water Resources**
Mr. Francis Perry, PE, is the designee of the Chairman to the Joint Committee on Water Resources. He is Vice Chairman at Kent County Water Authority and an Engineering Consultant in private practice. Mr. Perry is retired from RIDOT after 30 years service.EMBERS

**Rhode Island Agricultural Council**
The Council's designee is William M. Stamp III, a third generation, family farmer in Rhode Island. Mr. Stamp is the President of the Rhode Island Farm Bureau and Chairman of the RI Greenhouse and Vegetable Growers Committee.

**Senator Leonidas P. Raptakis**
Sen. Raptakis (Coventry-West Warwick) is a Restaurant Owner/Operator. Sen. Raptakis serves on the Senate Judiciary and Government Oversight Committees as well as the Joint Committee on Highway Safety.

**Representative William Murphy, Esq.**
Rep. Murphy (Coventry-West Warwick) is a self-employed attorney. Rep. Murphy serves as Speaker of the House.

## STAFF

M. Paul Sams, General Manager
Kathleen M. Crawley, Staff Director
Thomas R. Walker, PE, Supervising Engineer
Yolande C. Carrier, Chief Business Officer
Elaine A. Maguire, Real Estate Appraiser
William D. Riverso, Program Officer
Connie L. McGreavy, Program Officer
Tracy A. Shields, Personnel Aide
Beverly O'Keefe, Supervising Planner
Juan Mariscal, Adjunct Policy Administrator

**Board Legal Counsel**
Rebecca Partington, Esq., Deputy Chief –Civil Division, Office of Attorney General

**Board Corporate Legal Counsel**
Armando O. Monaco, II, Esq.

**Bond Counsel**
Normand G. Benoit, Esq., Partridge, Snow & Hahn
Karen Grande, Esq. Tillinghast, Licht, Perkins, Smith & Cohen

**Financial Advisor**
First Southwest Company

**Trustee**
J.P. Morgan Trust Company

**Auditor**
Casale, Caliri & Jaroma, LLP.

## GENERAL INFORMATION

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*Courtesy of Rick Antuono, Seekonk, MA*

*BRMA water storage tank* Kent County Water Authority

*Horizontal drilling:* Town of Narragansett

*Loggers at BRMA, Figure–white pine:*