

BOARD MEMBERS

The Rhode Island Water Resources Board consists of thirteen members; five are public members appointed by the Governor, two of who must be affiliated with a municipal water supply system. Public members serve for three years. There are six Directors or their ex-officio members 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, the Chair of the Joint Legislative Committee on Water Resources and the President of the RI Agricultural Council. The remaining members include one state senator appointed by the Senate Majority Leader 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 State Planning. Mr. Varin is nationally recognized for his work in drafting the Rhode Island Comprehensive Planning and Land Use Act.

WILLIAM PENN, - VICE CHAIR

Mr. Penn is a Financial Advisor specializing in brownfields redevelopment. Mr. Penn is President & Chief Executive Officer of the Clean Land Fund, New Shoreham, RI.

JON SCHOCK, PE

Mr. Schock is the Public Services Director of the Town of South Kingstown and an Executive Board member and Past President of the RI Water Works Association.

JOHN MILANO

Mr. Milano, Bristol, RI, was a former engineering distribution manager for a major public utility and former Deputy Administrator for the RI Division of Public Utilities.

RICHARD RAFANOVIC, PE

Mr. Rafanovic is a consultant to government and the private sector providing management and engineering services. Mr. Rafanovic served as General Manager and Chief Engineer of the Providence Water Supply Board and is presently a consulting engineer. He is a member of numerous professional associations.

EX OFFICIO MEMBERS

Director of RI Dept. of Administration - Robert L. Carl, Jr., Ph.D.

Dr. Carl's 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 - Jan Reitsma, Esq.

Mr. Reitsma serves as the Board member.

Acting Executive Director of the RI Economic Development Corporation - William J. Parsons

Mr. William J. Parsons serves as the Board member.

Chair of the Joint Committee on Water Resources - Representative Stephen Anderson

Rep. Anderson (Coventry) was a teacher in the Exeter-West Greenwich School District and a member of the House Labor Committee. Rep. Anderson's designee is Francis Perry, PE, Special Assistant Clerk, Joint Committee on Water Resources.

Rhode Island Agricultural Council The Council's designee is Stephen Donohue, General Manager of Tuckahoe Turf Farms, Inc.

Mr. Donohue serves on the Southern RI Conservation District Committee, the DEM Agricultural Advisory Committee and the Wood-Pawcatuck Watershed Association.

Senator Leonidas P. Raptakis (Coventry-West Warwick)

Sen. Raptakis is self-employed in business. He serves on the Senate Finance and Special Legislation Committees as well as the Joint Committees of Veterans Affairs and Highway Safety.

Representative William Murphy, Esq. (Coventry-West Warwick)

Rep. Murphy is a self-employed attorney. He serves as Vice Chair of the House Judiciary Committee.

GENERAL INFORMATION

Administrative Offices:

100 North Main Street, 5th Floor
Providence, Rhode Island 02903
(401) 222-2217/2218
(401) 222-4707 FAX
www@wrb.state.ri.us

STAFF

M. Paul Sams, General Manager
William D. Falcone, Staff Director
Thomas R. Walker, PE, Supervising Engineer
Yolande C. Carrier, Chief Business Officer
Tracy A. Shields, Personnel Aide
Elaine A. Maguire, Real Estate Appraiser
William D. Riverso, Programming Services Officer
Kathleen M. Crawley, Supervising Planner
Connie L. McGreavy, Programming Services Officer

Board Legal Counsel

Rebecca Partington, Esq., Deputy Chief 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

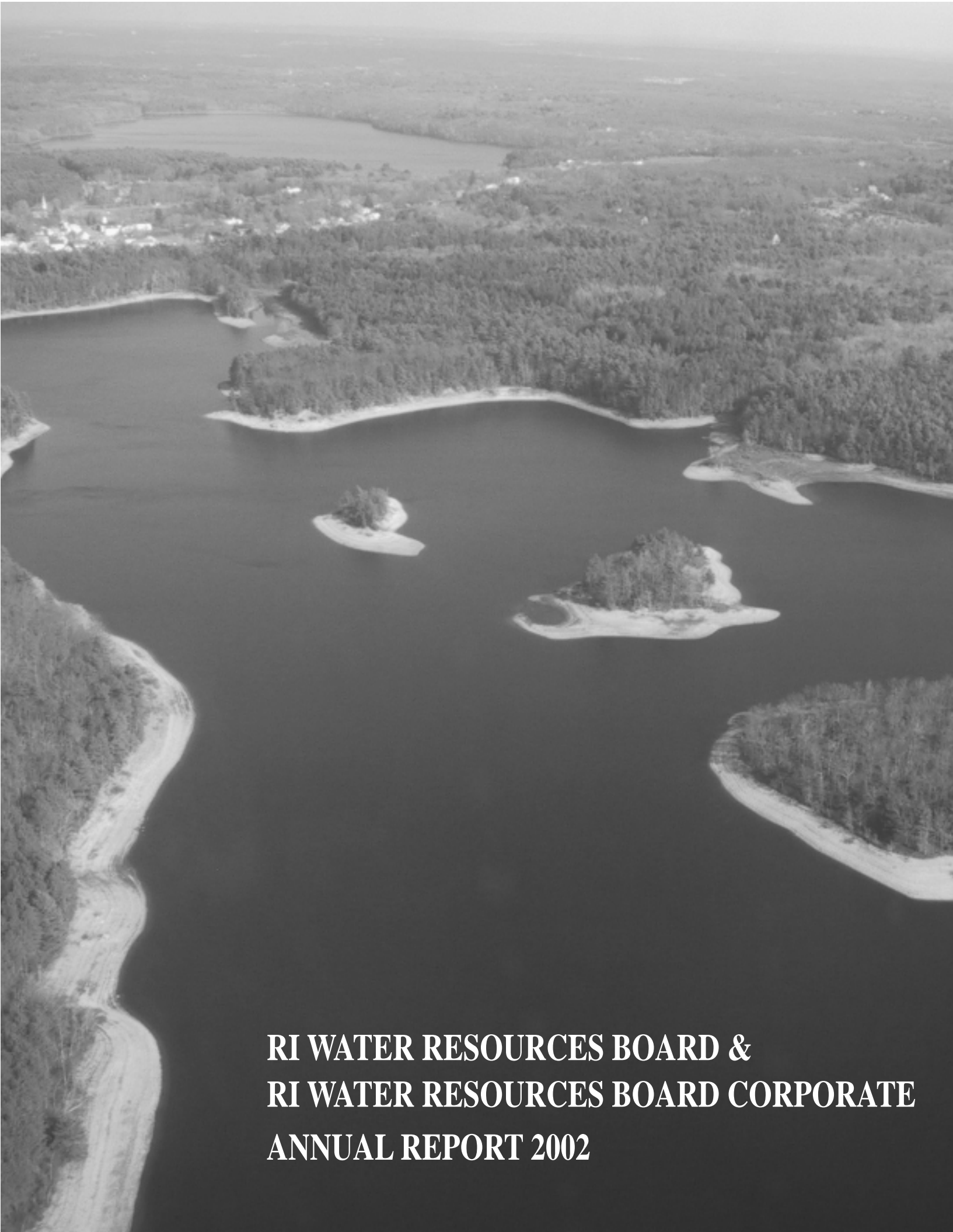
First Southwest Company

Trustee

Citizens Bank

Auditor

Casale, Caliri & Jaroma, LLP.



RI WATER RESOURCES BOARD &
RI WATER RESOURCES BOARD CORPORATE
ANNUAL REPORT 2002

CHAIRMAN AND GENERAL MANAGER'S MESSAGE

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

The Rhode Island Water Resources Board and 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 2002 Annual Report. Much has been accomplished, and more challenges are in front of us as we continue to adapt to changing conditions. This annual report highlights successes realized through vision, hard work, and collaboration with Rhode Island's water community.

A water allocation study has been initiated to look at the many and different issues and conditions that are affecting the state's water and will have major consequences in future water availability. The Board is working with multiple federal and state agencies, municipalities, universities, environmental, land and nature conservancy groups to determine whether there will be enough water for the Rhode Island's future residential growth and economic development.

A supplemental water study is ongoing with co-shared financing with the Providence Water Supply Board. The ultimate goal is to locate and determine the quantity of alternative water supply available for future use. The second program phase will look at the entire state to ensure Rhode Island's continued water independence. The statewide emergency water interconnection program, which provides 25 percent and 50 percent matching monies for emergency interconnections to "wheel water" during water crises, has been successfully implemented with six (6) emergency connections made in 2002. The drought management task force consisting of state consultants and agencies, concerned citizens, water suppliers, academia and watershed groups completed in record time the new State Guide Plan 724 Drought Management Plan as one of the first such plans in New England. The state's water supply systems management plans, concurrently developed and coordinated with the municipal comprehensive community plans has been implemented with the 30-month updates. Water planning information not only benefits many state departments with one plan submission relieving the state's water suppliers of multiple reporting. The plan is a working document to assist in improving the quantity and quality of water for Rhode Island citizens.

During Phase I & II of the Water Quality Protection Program, the Board Corporate working with the state's water suppliers purchased approximately 2400 acres of watershed protection land and funded over \$4,200,000 of water quality improvement projects. The success of the two prior programs has the Board initiating a Phase III program in the forthcoming fiscal year. Working with U.S. Geological Survey, Brown University, University of Rhode Island and several watershed groups, the Hunt River study was completed and ten other watershed studies were undertaken as mandated by the General Assembly.

It is not surprising that there is quite a "grassroots" feel to many of the water successes of 2002. We continue to answer the water needs, but we do this only through successful partnerships developed in the Rhode Island water community. To all who played a role in helping Board and Board Corporate members and staff to reach these goals, we give our thanks. We, as well as Rhode Island as a whole, have much to look forward to in 2003. The Board and Board Corporate members and staff anticipate a full plate of water projects which hold many challenges and much promise. We shall depend once more on you in this shared commitment to partnership. We look forward to not only working for you, but with you, to make the 2003 water community the best Rhode Island has ever experienced.

Sincerely,



Daniel W. Varin

Daniel W. Varin
Chairman



M. Paul Sams

M. Paul Sams
General Manager
Secretary-Treasurer

Rhode Island Water Resources Board Corporate Balance Sheets - June 30, 2002, 2001, and 2000

	FY 2002	FY 2001	FY 2000
Assets			
Cash and cash equivalents	\$ 2,258,222	\$ 3,183,207	\$3,907,073
Cash - allocated to Phase II		155,893	1,665,996
Investments	5,626,373	4,160,783	2,614,498
Accounts Receivable	254,390	333,029	376,137
Lease Receivable	7,100,000	7,815,000	8,500,000
Accrued Interest Receivable	63,641	40,528	27,276
Due from Water Resources Board	75,964		
Bond issuance (net of amortization)	431,691	473,352	515,013
Total Assets	15,810,281	16,161,792	17,605,993
Liabilities and Fund Equity			
Liabilities:			
Due to State of Rhode Island	1,500,000	1,359,108	
Accounts payable	1,587	11,007	8,677
Deferred revenue	796,684	965,780	959,531
Accrued interest payable	262,107	280,587	294,508
Bonds payable	15,345,000	16,580,000	17,760,000
Excess cost of refunding	-612,637	-689,216	-765,796
Refunding premium	43,372	48,794	54,216
Total Liabilities	17,336,113	18,556,060	18,311,136
Fund Equity:			
Retained earnings:			
Reserved	-2,120,566	-3,066,226	-1,458,280
Unreserved	594,734	671,958	753,137
Total Fund Equity	-1,525,832	-2,394,268	-705,143
Total Liabilities and Fund Equity	\$15,810,281	\$16,161,792	\$17,605,993

FINANCIAL REPORTS

Rhode Island Water Resources Board Corporate Statement of Revenues, Expenses and Changes in Retained Earnings For the Fiscal Years Ended June 30, 2002, 2001, and 2000

	FY 2002	FY 2001	FY 2000
Operating revenues			
Rental income	333,153	321,291	\$366,595
Water quality protection charge	1,311,753	1,223,694	1,540,620
Total operating revenues	1,644,906	1,544,985	1,907,215
Operating expenses			
Administrative expenses	17,455	28,089	31,308
Amortization expense	112,819	112,819	112,819
Total operating expenses	130,274	140,908	144,127
Operating Income	1,514,632	1,404,077	1,763,088
Non-operating revenues (expenses)			
Watershed protection grants	-155,893	-1,510,104	-3,406,108
Interest income	330,477	444,519	494,550
Capital gains	32,105	76,040	-30,496
Interest expense	-852,885	-914,438	-961,957
Total non-operating revenues (expenses)	-646,196	-1,903,983	-3,904,011
Net Income (loss)	868,436	-499,906	-2,140,923
Retained earnings (deficit) July 1	-2,394,268	-1,894,362	-705,143
Adjustments to prior year			
Retained earnings - June 30, 2002, 2001 & 2000	-\$1,525,832	-\$2,394,268	-\$2,846,066

Rhode Island Water Resources Board Corporate Statement of Cash Flows Increases (Decreases) in Cash and Cash Equivalents For the Fiscal Years Ended June 30, 2002, 2001 and 2000

	FY 2002	FY 2001	FY 2000
Cash flows from operating activities			
Cash received for:			
Rents	879,057	1,012,540	\$925,616
Water quality protection	1,455,319	1,439,019	1,504,271
Cash payments for goods and services	-26,874	-28,089	-23,919
Net cash provided by operating activities	2,307,502	2,423,470	2,405,968
Cash flows from noncapital financing activities			
Watershed protection grants	-155,893	-1,510,104	-3,406,108
Net cash used for noncapital financing activities	-155,893	-1,510,104	-3,406,108
Cash flows from capital and related financing activities			
Acquisition and construction of capital assets			
Principal paid on revenue bonds	-1,235,000	-1,180,000	-1,125,000
Interest paid on revenue bonds	-871,365	-928,357	-981,569
Net cash used for capital and related financing activities	-2,106,365	-2,108,357	-2,106,569
Cash flows from investing activities			
(Purchase) sale of investment securities	-1,477,161	-1,546,285	11,662
Net (decrease) in fair value of investments	32,105	76,040	-30,496
Interest on investments	318,934	431,267	510,384
Net cash provided by investing activities	-1,126,122	-1,038,978	491,550
Net increase in cash and cash equivalents	-1,080,878	-2,233,969	-2,615,159
Cash and cash equivalents at beginning of year	3,339,100	5,573,069	8,187,928
Cash and cash equivalents at end of year	\$2,258,222	\$3,339,100	\$5,572,769
Reconciliation of operating income to net cash provided by (used for) operating activities			
Operating income	\$1,514,632	\$1,404,077	\$1,763,088
Items in net income not affecting cash and cash equivalents:			
Amortization expense	112,819	112,819	112,819
Increase (decrease) in cash and cash equivalents from changes in assets and liabilities:			
Accounts receivable	78,639	43,106	12,811
Due to State of Rhode Island	140,892	169,889	
Due from Water Resources Board	-75,964		
Lease receivable	715,000	685,000	650,000
Accounts payable	-9,420	2,330	-41,471
Deferred revenue	-169,096	6,249	-90,979
Net cash provided by operating activities	\$2,307,502	\$2,423,470	\$2,406,268

FINANCIAL REPORTS

Rhode Island Water Resources Board
Detailed Listing of Expenditures as of June 30, 1998, 1999, 2000, 2001 and 2002

Account	BOC	FY 1998 Actual	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Actual
2835-10000						
Classified Permanent	210	265,873	296,916	404,911	395,230	422,764
Classified Permanent Overtime	215	3,427	229	347	5,000	82
Unclassified Permanent	230	75,933	81,330	46,766	88,895	99,042
Employees Retirement	280	36,185	36,689	39,194	38,554	29,169
FICA	281	25,789	28,288	33,860	36,591	38,886
WC Self Ins. Employer Assess.	283			876	18,772	19,828
Emp. Group Life	284					
Employee Cost Retiree Health	294	2,490	2,584	2,782	4,808	4,524
Medical	295	24,467	26,073	41,705	48,755	48,079
Dental Care	297	2,590	2,872	4,155	4,178	3,995
Vision Care	298	352	382	550	550	541
Salaries and Benefits		437,106	475,361	575,146	641,333	666,910
Architect/Engineering Serv	262	301,080	418,827	90,250	40,550	75,000
Bldg & Grounds Maint.	264	6,985	3,900	5,511	7,200	7,271
Security Services	265	1,016	4,192	3,303		2,858
Management/Audit	267	3,385		12,596	20,739	63,674
Special Clerical	268	77	314			
All Other Special Serv	269	120	10,033			
Contractual Services		312,663	437,266	111,660	68,489	148,803
Personnel Services		749,769	912,628	686,805	709,822	815,713
Postage	321	1,281	1,489	1,364	1,538	1,522
Telephone	322	2,071	1,796	504	707	1,133
Supplies	323	4,159	5,232	4,950	7,123	3,884
Dues And Sub.	324	1,721	2,257	2,284	2,139	3,019
Insurance	326	75,275	73,218	77,336	81,939	96,622
Centrex Telephone	327	4,714	5,610	6,271	6,716	6,730
Printing	331	3,237	3,049	3,913	2,009	1,167
Advertising	332	405	781	1,285	982	939
Mileage In	341	6,511	6,271	5,856	6,067	5,905
Out of State Travel	342	1,215	753	702	2,046	
Other Travel	343		10	61	495	446
Repair - Buildings and Structure	361	39,770	329	462	769	(5,451)
Repair highways	362	10,250	10,000	10,000	10,000	10,000
Other Repairs	363	1,951	2,582	1,529	2,926	1,458
Replace Office Equipment	378	6,269	2,138	4,107		
Rental Property	381	41,528	49,368	56,399	58,894	59,859
Rental Equip	382	4,839	3,360	2,172	2,172	3,579
Fuel Oil	402	878	444	955	1,074	579
Electricity	409	381	5,233	966		10
Highway & Landscaping Exp.	436	17	663		356	15
Central Services	438	300	1,117	2,946	3,816	6,389
Education	441	1,155	2,985	1,445	1,830	55
Computer supplies	442	1,036	1,884	4,336	2,738	4,818
Computer Software	445		1,270	2,030	892	24
Other	455	17,250	2,798	1,454	1,638	2,073
Other Equipment	659	20,099	791		745	0
Computer Equipment	660		1,853	6,196	5,949	1,200
Total Operating Expenses		246,312	187,279	199,521	205,560	205,975
Education Grant	582	50,472	27,358	38,871	40,939	45,156
Grants	589	3,953	3,953	5,157	5,276	5,253
Supple Pension	477	612	612	612	612	51
Grants and Benefits		55,037	31,923	44,640	46,827	50,460
Improvements		13,900				
Interest on Bonds	791	1,353,009	1,337,625			
Redemption of Bonds	792	1,151,437	1,129,341			
Debt Service		2,518,346	2,466,966	0	0	0
Total 2835-10000		3,569,464	3,598,796	930,967	962,209	1,072,148
2835-90100						
Capital Development Funds						
BRMA Maintenance			54,373	225,264	89,958	82,425
BRMA Water Survey				67,738	112,261	0
Water Allocation Program				270,245	464,867	266,304
Ground Water Protection					83,334	14,441
Supplemental Water						54,487
Total Capital Development			54,373	563,247	667,086	417,657
2835-90400						
Restricted Receipts						
Water Allocation Program						79,334
Supplemental Water						16,970
Total Retriected Receipts			0	0	0	96,304
Agency Total		3,569,464	3,653,169	1,494,214	1,629,295	1,586,109

* Transferred to Dept. of Administration

RI WATER RESOURCES COORDINATING BOARD

HISTORY

The Rhode Island Water Resources Coordinating Board was formed in 1964 for the explicit purpose of acquiring 8,600 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, 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 appropriate.

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 the 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. 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 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, State-wide Planning Program to develop and refine policies affecting water supply, including emergency planning. This year, a drought management plan was completed and a water allocation policy is being coordinated at many levels of government.

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 now integrated with the RI Dept. of Administration's Comprehensive Community Planning process. This year marks the fourth year of five-year updates to Water Supply System Management Plans (WSSMPs) submitted by water suppliers producing 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 and demand management. The submission of WSSMPs is a phased process with all updates due by December 31, 2002.

During 2002, 10 plans were approved including those for the East Providence Water Department, East Smithfield Water District, Kingston Water District, North Kingstown Water Department, Kent County Water Authority, North Tiverton Fire District, Smithfield Water Supply Board, Warwick Water Department, Stone Bridge Fire District and the Westerly Water Department. Ten 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 Board. These plans include those for the cities of Woonsocket and Providence as well as the towns and/or public water supply districts of Johnston, the University of Rhode Island, South Kingstown, Portsmouth, United Water RI, Bristol County, Lincoln, and Pascoag. The program's Rules & Procedures were updated and filed with the Secretary of State in 2002.

During 2002, the Board and the Providence Water Supply Board continued on a joint venture to study the Feasibility of Supplemental Water Supplies for the central service area of the state. The study will identify additional water supplies and delivery systems in the amount of 50-million gallons per day for emergency purposes from a combination of nearby systems, rivers, groundwater, desalted water, and other supplies to sustain over 600,000 people served within the central portion of the state. These supplies and systems will provide an independent source of water in case of failure in the Scituate supply. The program is Phase I of a statewide supplemental water supply program to include the remaining water supply services areas of Rhode Island.

WATER FACILITIES ASSISTANCE



Since 1983, the Water Resources Board has administered a grant program to finance up to 50% of design/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 Corporate Board sold revenue bonds that enabled construction of a 12 million gallon addition to Providence

Water supply Board's Longview Reservoir, a 3 million gallon storage tank, and upgraded three major pump stations. This was done to address the inadequate water pressure in the high service area and the fire protection in the downtown Providence retail district.

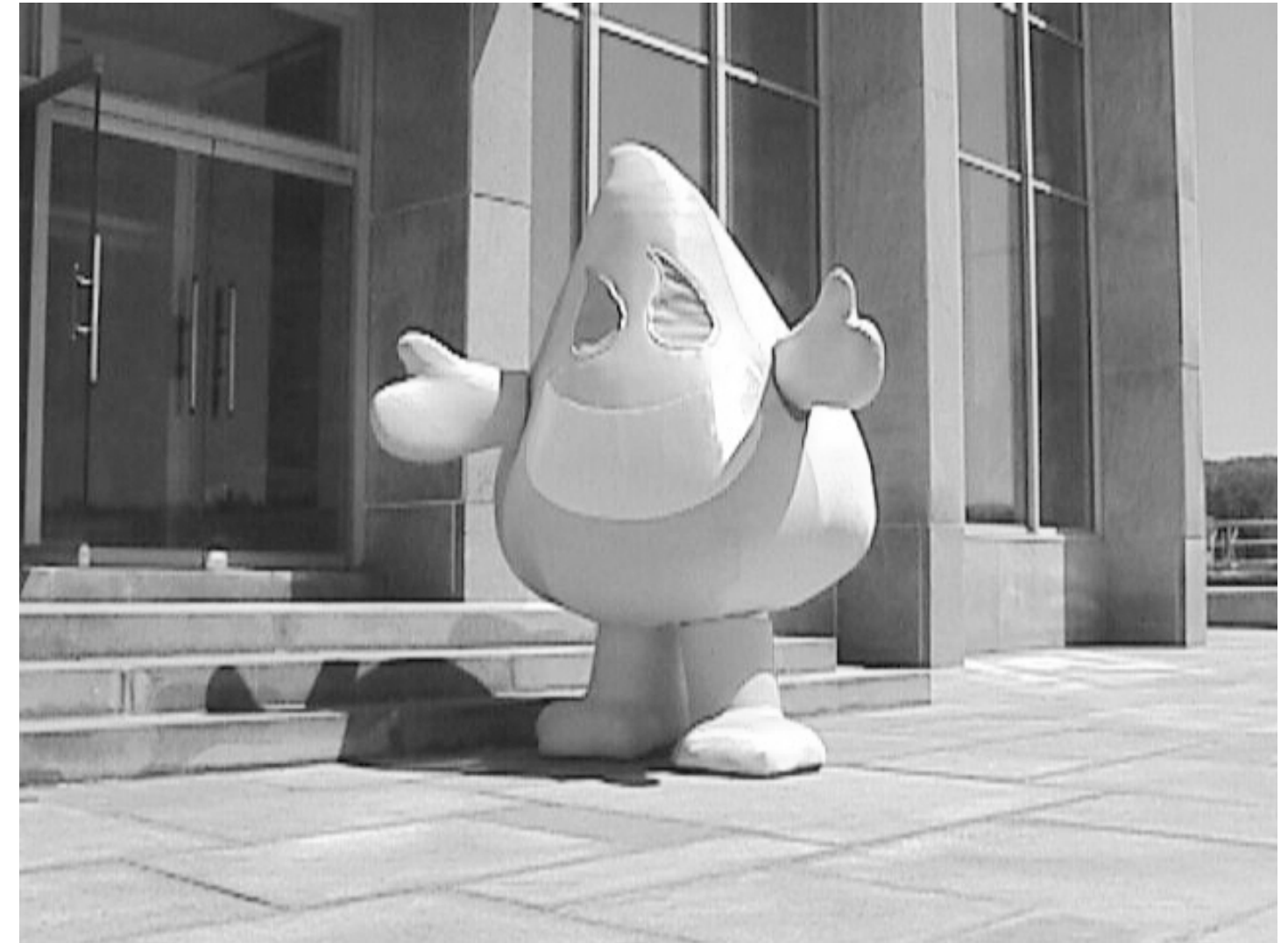
EMERGENCY WATER SYSTEM INTERCONNECTIONS

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 that have expressed interest in establishing similar programs. A unique aspect of the program is that the Board and the 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. Five interconnections have been constructed to date funded by grants exceeding One Million Dollars. They provide redundancy of supply and ability to address water emergencies rapidly and efficiently should they occur. The newly interconnected Water systems include Lincoln with Woonsocket, Kent County Water Authority with Warwick, East Smithfield Water District with Providence Water Supply Board, Pascoag Utility District with Harrisville Fire District, Kingston Water District with the University of Rhode Island and a sub aqueous crossing from Galilee to Jerusalem in Narragansett. A \$674,000 grant has been awarded to North Tiverton Fire District to construct interconnections with Fall River and with Stone Bridge. This connection allows addressing emergencies without taxing any other Rhode Island System as the connection involves Massachusetts waters.



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 Dept. of Health and the Water Resources Board.



Walter Splash!

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 has promoted education and outreach activities during RI Water Week. Along with RIWWA, staff participated in the Spring State Science Fair judging water supply-related science projects for high school and junior high school students. The Board, in partnership with the Providence Water Supply Board in May and June, developed and aired public education radio spots concerning water conservation and wise water use. The Board participated with Natural Resources Conservation Services in the gravel bank restoration program and area school children from Exeter and West Greenwich on a field trip to the gravel pit to learn about habitat restoration from two spring plantings.

The Board provided outreach and assistance to many citizens groups, commissions and quasi-public boards. In FY 2002, the Board provided a significant amount of resources in the RI Rivers Council assisting in reorganization and liaison with various watershed and land planning associations. At the state level, the Board continued active roles on watershed councils, growth planning and management information groups.

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 (GIS), the state's Incident Command System and potentially 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.

Design work progressed on a joint effort with the US Geological Survey to create a database for water data collected as part of the water allocation program and from Water Supply Systems Management Plans. This database is called the New England Water Use Data System (NEWUDS). This investment will enable the Board to understand how peak demands vary against available supply around the state, assess geographic areas in terms of future water supply and land use regarding water quantity.

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. The Board is currently in the process of devising a Master Price Agreement so that suppliers can afford the cost of hydraulic modeling software and enable more prudent management of critical water system infrastructure. The drought of 2001-2002 resulted in a necessary resource shift of funds away from less critical MIS initiatives to web page design and maintenance. Specifically, the Governor provided contingency funds to continually post water restrictions and drought information. Because of the terrorist events of September 11, 2001, the Board decided to modify an earlier "Drought Alert Network" software application to accommodate emergency response. The program was redesigned to coordinate emergency measures and manage communication during water-supply crisis. The initiative would assist public water suppliers in preparing for threats, visually depict and track threat events, and communicate during emergencies with the State Incident Command and



Kingston Water District Tank



Scada - United Water RI

major media outlets. The Board is advocating for federal funds to pay for distribution system modeling, mapping, and other technical assistance for water suppliers. In 2002, new legislation was passed restricting the distribution of "sensitive" water data.

BIG RIVER MANAGEMENT AREA



Big River Management Area - Forest Management

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 boundaries 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 the affected communities and residents living in the area by providing a broad range of services including education and recreation. The property is utilized by the RI National Guard and the United States Marine Corps for training exercises while 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, paving all of Hopkins Hill Road, and extension of Congdon 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. The second phase of the project was completed in May 2002, Phase III has been approved to commence in April 2003. It will consist of two sites, to connect to Phase II and surround a pond in the gravel pit to prevent erosion.

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

The Board embarked on Phase III of a model forestry management program on approximately seventy acres in the BRMA at Camp Bosco. Forestry is an acceptable use as noted in the 1996 land use study. The Board has established a research and education partnership with URI Department of Natural Resources Science, the RI Dept. of Environmental Management – Forest Environment Division, and Brown University. The objective of the selective cutting project is to improve the health of the forest and preserve diverse fish and wildlife habitat while protecting the watershed. This effort is the first phase of a larger undertaking to monitor biodiversity, soil, water, and forest quality in the timber harvest areas. Phase III was completed in 2002. Phase IV of the selective cutting program will take place in 2003 in the Burnt Sawmill and Division Road area.

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 solid scientific data on water use and available water in each basin and sub basin. In addition, the Board has undertaken several water modeling efforts. Together, these studies will provide needed information, identify areas where more information is necessary and assist in water management decision-making. Concurrently, the Board has been actively engaged in drought planning and management and has embarked on a major effort to develop a water allocation program. Both are inclusive collaborative efforts bringing diverse interests and multiple authorities together to address complex water management issues.

Water Use and Availability Studies - A Watershed Approach

Working with the US Geological Survey (USGS) and the University of Rhode Island (URI), the agency will complete a comprehensive inventory of the quantity of surface water and groundwater resources currently existing, used, or available to support future uses in watersheds around the state. 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 according to predetermined formulas. Three studies are in draft form: the Wood-Pawcatuck, Blackstone and Block Island. A statewide summary will be produced once all the basin studies have been completed. In addition, all water data is being compiled in a database under development by USGS for use by New England states. The Board initiated new water availability studies in the East Bay, West Bay and South Coastal basins. Further studies for the remainder of the state will be completed by 2004 consistent with the recommendations of a 1990 study titled Water Supply Analysis for the State of Rhode Island (later adopted as State Guide Plan Element 722). Once complete, the new studies will provide important trend data to be compared to the findings and recommendations of the 1990 plan. This will increase the agency's ability to make projections regarding threatened sources, anticipate water shortages, resolve potential water demand disputes and make recommendations for major capital improvement projects that are consistent with state policies and plans.

Hydrogeologic Models: Optimizing Water Use

The Board is conducting specialized modeling activities in the Usquepaug-Queen sub-basin of the Wood Pawcatuck watershed and in the Big River Management Area. A future study is planned for the Chipuxet sub-basin. The Board has also contracted with USGS and NRCS to create an optimization model in the Wood-Pawcatuck and has entered into a contract for a multi-year modeling study in the Blackstone. 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 manipulated to maintain optimum stream flow and supply.

Water Allocation Program Development

The Board has launched an inclusive effort to develop a water allocation program for the state. The process is outcome-based aimed at crafting a pilot water registration/reporting program in eighteen months. Other goals include 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 invited multiple agencies and 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 formed to address eleven issue areas:

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

To date, over one hundred people have signed on to build the program. The group is diverse by design, to ensure that organizations with authority and expertise assist in developing, implementing and sustaining a program that properly considers the social, economic, environmental and legal aspects of water allocation.

Drought Planning and Management

The Water Resources Board lead an interdisciplinary taskforce 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. The Water Resources Board began convening members of the Task Force and others as suggested in the draft drought plan on a monthly basis in January of 2002 and twice a month during the dry summer of 2002. By August roughly half the state had entered into a drought warning, the third of four drought stages identified in the plan. On behalf of the Committee, the board updates and distributes water restriction information and drought conditions to the governor, legislature, municipal officials, water suppliers, and the general public through a web-based monthly conditions report and press releases.

PROTECTION

PUMP CENTER INVESTIGATIONS & GROUNDWATER RESOURCES PROTECTION

It is the policy of the Rhode Island Water Resources Board (RIWRB) to encourage the development and management of the state's groundwater resources to minimize stream flow depletion during summer months and drought periods when stream flow can be critically low. Thus the Board revived the pump center investigations program (PCIP), which is a follow-up examination to a previous study program conducted in cooperation with U.S. Geological Survey that began in 1970-1986. That study consisted of hydrologic well testing by drilling 8-inch production wells and 2-1/2-inch observation wells, aquifer testing and mapping designed to identify the most favorable sites for developing high capacity wells that would yield water of suitable quantity and quality as water supplies the principal groundwater reservoirs of the Pawcatuck River basin in southern Rhode Island. These well sites span five ground-water reservoirs, located in the Wood - Pawcatuck River Watershed, a sole source aquifer in southern Rhode Island. The study located 33 water supply well pumping centers in Washington County. All of these locations are capable of producing approximately 1 million gallons or more of water per day.



Groundwater well testing

The Rhode Island water community, the state General Assembly and the citizens of Rhode Island voted to approve through general obligation bond proceeds be made available for this groundwater protection/acquisition program spread out 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.



Groundwater well drilling

PUBLIC DRINKING WATER PROTECTION

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 Phase's I & II of the program, which consisted of disbursing \$18,343,382.

In Phase I, \$12,618,585 was disbursed: \$10,687,246 was spent on watershed protection land and easement acquisitions (1,926 acres). \$489,861 was spent on indirect land and easement costs and \$233,995 was spent on watershed protection plan preparation costs. \$1,207,483 was spent on water quality improvement projects consisting of 14 projects.

In Phase II, \$5,724,797 was disbursed: \$2,194,097 was spent on watershed protection land and easement acquisitions (484 acres); \$243,061 was spent on indirect land and easement costs and \$10,259 was spent on watershed protection plan preparation costs; \$3,277,380 was spent on water quality improvement projects consisting of 35 projects. These results reflect significant progress made to improve the state's valuable water resources.

In November of 2002, the State of Rhode Island wrapped up an additional issuance of bonds for approximately \$6 million resulting in establishing Phase III of this successful program. Phase III will commence in February of 2003 and run through December of 2005. 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. As the Board looks forward to Phase III challenges, we will continue to respond to water quality and watershed protection needs of the state. 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.



Block Island Watershed Protection Land Purchase