



# Acton Water District

## **Annual Report**

for the year ending December 31, 1999



**Warrant Articles for the Annual Report**

March 15, 2000

## Index

Accountant's Report .....	25
By-Laws .....	51
Collector's Report .....	13
Commissioner's Report .....	14
District Manager's Report .....	16
District Meetings:	
Annual Meeting (March 17, 1999) .....	39
Annual Election (March 30, 1999) .....	43
Special Meeting (November 8, 1999) .....	41
District Regulations for VOCs .....	21
Environmental Manager's Report .....	20
Finance Committee's Report .....	19
Rules and Regulations .....	44
Treasurer's Report .....	13
Warrant .....	7

### **NEW OUTDOOR WATER USE RESTRICTIONS EFFECTIVE MAY 1, 2000**

- Those of you with even # addresses may water outdoors on Tuesdays, Thursdays and Saturdays.
- Those of you with odd # addresses may water outdoors on Wednesdays, Fridays and Sundays.
- No Lawn Watering may occur between 7:00 AM and 7:00 PM. (Watering mid-day wastes water to evaporation.)
- No Outdoor Usage will be allowed on Mondays.

The Monday restriction will give our storage tanks a chance to recover after the weekend. Maintenance of adequate storage levels is critical to serving both our domestic needs, as well as providing fire protection, if needed.

## **Water District Organization – 1999**

### **ELECTED OFFICIALS**

#### **COMMISSIONERS**

Ronald R. Parenti, Chairman	Term expires 2001
Stephen C. Stuntz	Term expires 2002
Leonard A. Phillips	Term expires 2000

#### **CLERK**

Jane Cutler	Term expires 2000
-------------	-------------------

#### **MODERATOR**

Richard P. O'Brien	Term expires 2000
--------------------	-------------------

#### **APPOINTED OFFICIALS**

##### **FINANCE COMMITTEE**

Charles Bradley, Chairman	Term expires 2002
Theodore Jarvis	Term expires 2001
William Kingman	Term expires 2000

#### **DISTRICT MANAGER**

James L. Deming	Contract expires 2002
-----------------	-----------------------

#### **TREASURER & COLLECTOR**

Linda M. Larson	Term expires 2000
-----------------	-------------------

#### **DISTRICT COUNSEL**

Mary Bassett-Stanford	Term expires 2000
-----------------------	-------------------

#### **COMMISSIONERS SECRETARY**

Debra A. Pyrro	Term expires 2000
----------------	-------------------

#### **ACCOUNTANTS**

Maureen Waters Mara, CPA, MST Scheid & Mara, P.C.	Term expires 2000
--	-------------------

#### **WATER DISTRICT STAFF**

Jane Ceraso	Environmental Manager
Debra A. Pyrro	Secretary/A/P Bookkeeper
Helen F. Argento	A/R Bookkeeper/Secretary
Robert Koch	General Foreman
Stephen G. Peterson	Assistant Foreman/Water Supply Treatment
Patrick DeCesare	Assistant Foreman/Water Distribution
Paul McGovern	Operator/Pump Stations
Ronald Davan, Charles Rouleau, Andrew Peterson	Operator/Distribution
Robert Murch	Backflow Technician/Computer Specialist

## Water-Wise Demonstration Garden



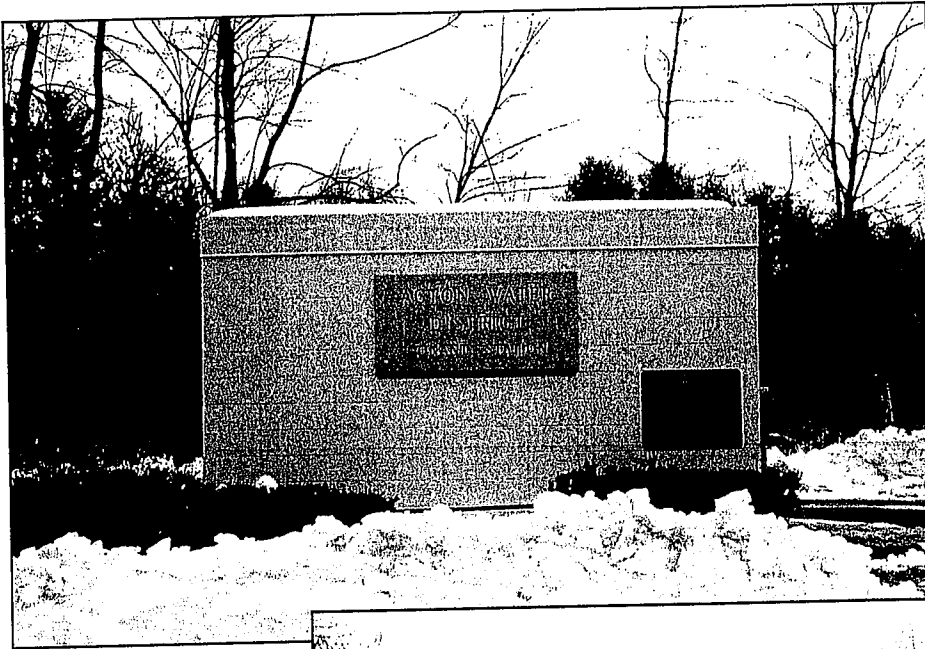
The Acton Water District invites you to visit our new water-wise garden, located in front of the District's office on 693 Massachusetts Avenue in West Acton. The garden is the Gold Badge project of Kathleen Niple, a Girl Scout with Acton Troop 2001. Kathleen designed the garden with water conservation in mind, using drought-resistant plants, organic mulches, and water-wise design principles. The organic-rich soil and drought tolerance of the plants will ensure a healthy garden throughout the growing season, with no watering except for that provided by the rain.

Kathleen worked with the Acton Garden Club, who provided consultation and donated plants for the garden. Idylwilde Farm, Kennedy and Lenox Nurseries and Acton True Value Hardware also contributed materials for the garden. We hope the garden encourages Acton residents to replace their water-thirsty lawns with attractive, conserving, and low-maintenance gardens. Please stop by the Water District's Information Center for instructions about how to plan and plant a water-wise garden in your yard.



## Acton Water District Wellfield Descriptions

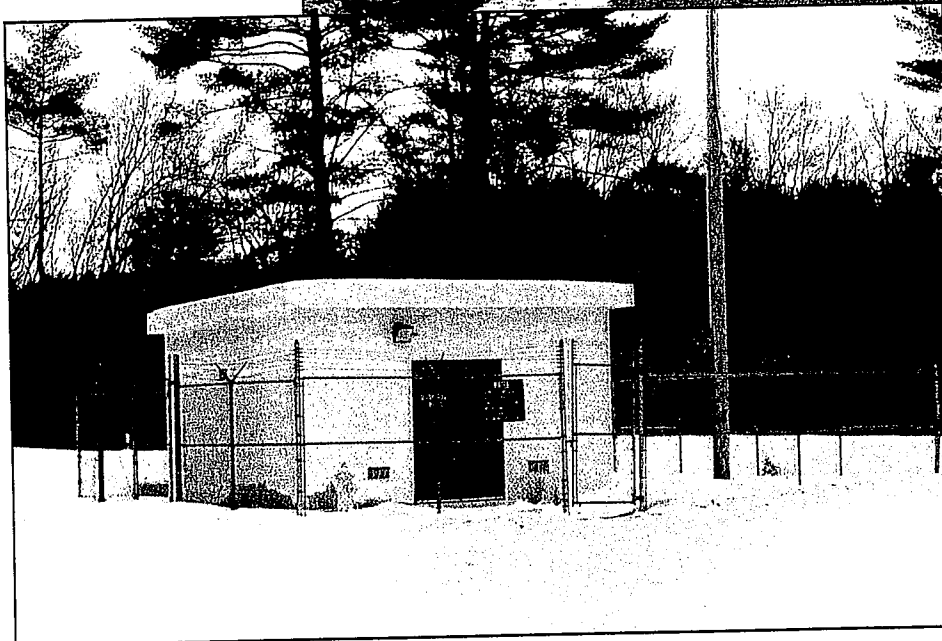
Conant I Well	The Conant well, located off Main Street just North of Acton's Town Center, is one of the District's oldest well. It is a 31-foot deep gravel-packed well that can deliver up to 350 gallons per minute. The Conant well is used mostly in the spring and summer months, when demand for water is high.
Marshall Well	The Marshall well, located in North Acton just off Route 27, is comprised of a tubular wellfield which ranges from 28 to 31 feet deep. When fully operational, the Marshall well can deliver up to 200 gallons per minute. There is no treatment facility at the Marshall well, and it is used only during periods of high demand (spring and summer months).
School Street Wellfield	The School Street wellfield, located off Lawsbrook Road in East Acton, pumps water from the Christofferson, Scribner and Lawsbrook wells, which range from 26 to 50 feet deep. The water is pumped to an on-site treatment facility located just off School Street. The School Street wellfield can deliver a maximum of 600 gallons per minute.
Kennedy Wellfield	The Kennedy wellfield, located in North Acton just off Route 27, is a series of 4 gravel-packed wells ranging in depth from 35 to 45 feet. Water from these wells is pumped to an on-site treatment facility, and then out into the distribution system. The Kennedy wellfield can deliver a maximum of 450 gallons per minute.
Clapp/Whitcomb Wellfield	The Clapp/Whitcomb wellfield, located in West Acton just off Route 111, draws water from the Whitcomb and Clapp wells. Water from the Whitcomb (32 foot deep gravel-packed well) and Clapp (42 foot deep gravel-packed well) are delivered to the on-site treatment facility where it is treated prior to entering the distribution system. When fully operational, the Clapp/Whitcomb wellfield can deliver a maximum of 525 gallons per minute.
Assabet Wellfield	The Assabet wellfield, located just off Powdermill Road in the southeastern corner of Acton, is the most productive of the District's sources. Water from the Assabet I (68 foot deep gravel-packed well) and Assabet II (54 foot deep naturally-developed well) is delivered to an on-site treatment facility prior to entering the distribution system. When in full operation, the Assabet wellfield can deliver 700 gallons per minute.
Conant II Wellfield	The Conant II wellfield, located behind Post Office Square (off Main Street) is the newest of the District's sources. There are five gravel-packed wells in the Conant II wellfield that are pumped to an on-site treatment facility prior to entering distribution. The average depth of these wells is 28 feet. The Conant II wellfield can deliver up to 275 gallons per minute.



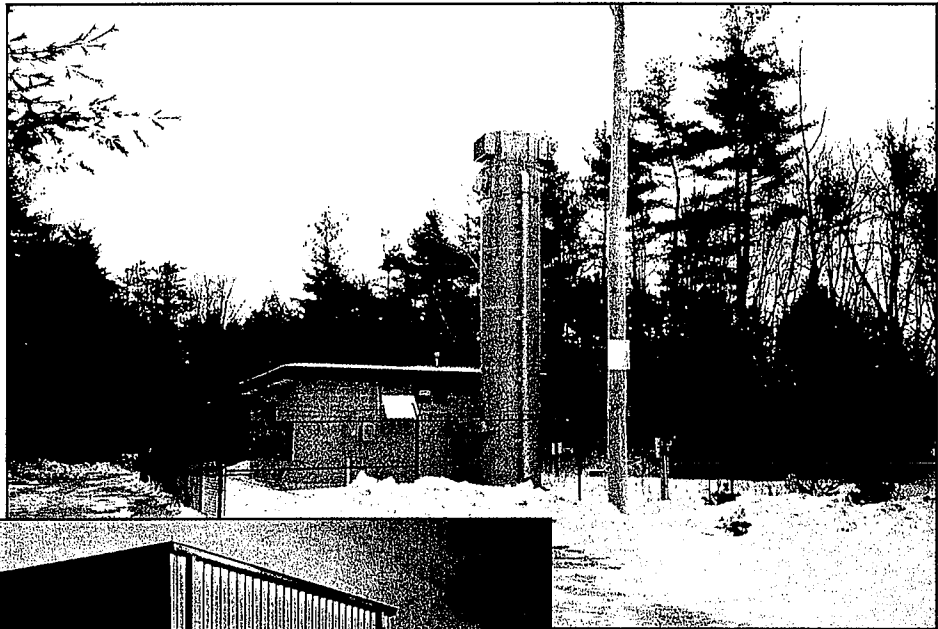
Conant I Well



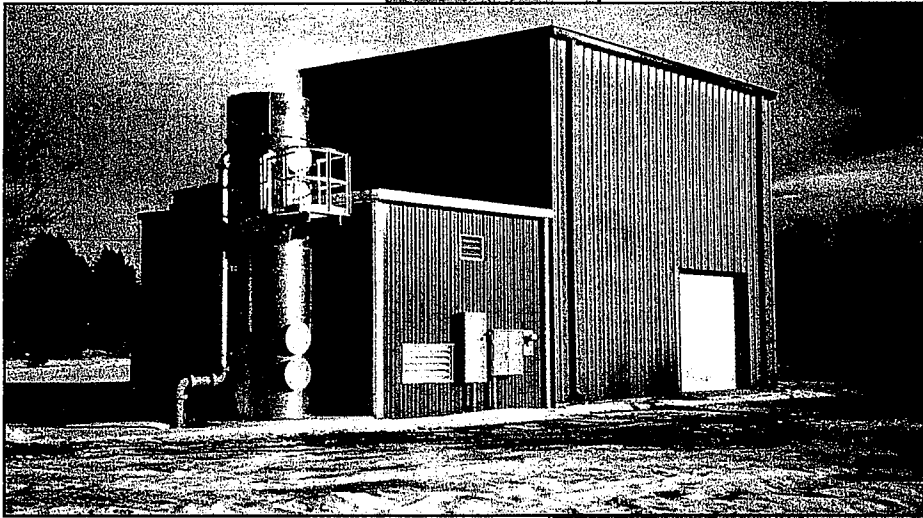
Marshall Well



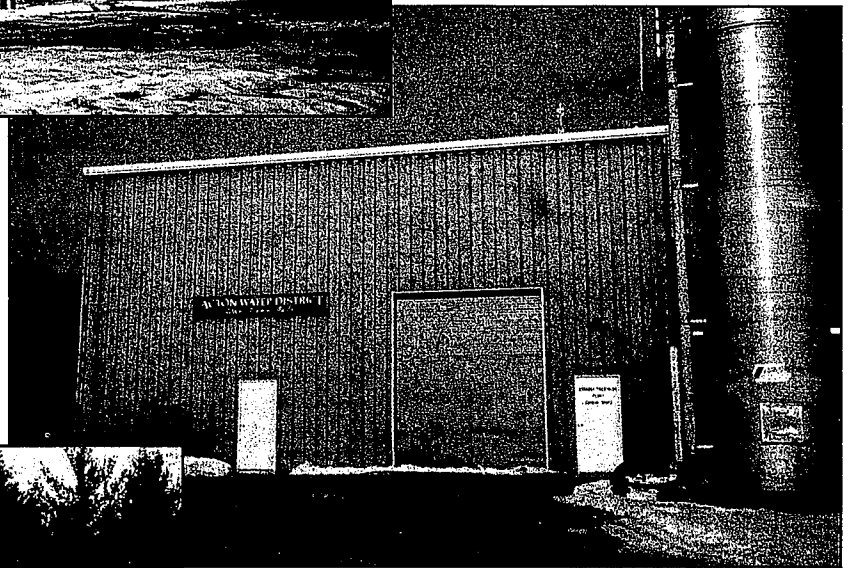
School Street Treatment Plant



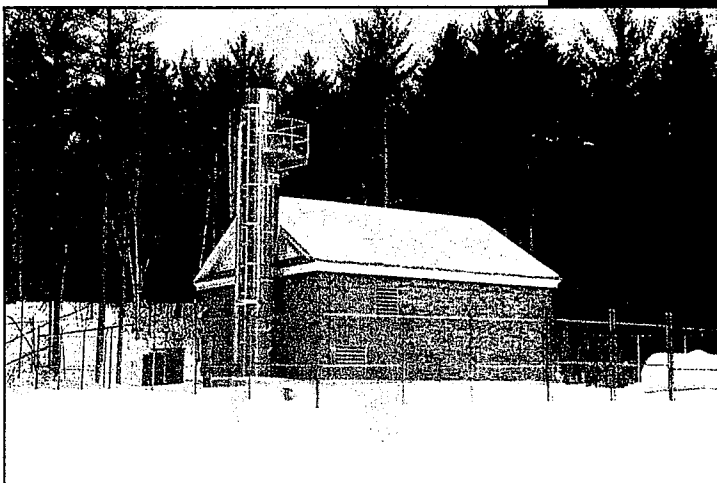
Kennedy Treatment Plant



Clapp/Whitcomb Treatment Plant



Assabet Treatment Plant



Conant II Treatment Plant



## Water Supply District of Acton

### WARRANT

March 15, 2000

You are further requested to notify the legal voters of the Town of Acton, as aforesaid, to assemble at:

R. J. Grey Junior High School Library  
16 Charter Road  
Acton, Massachusetts

On Wednesday, March 15, 2000  
At 7:30 P.M.

Then and there to act on the following articles:



COMMONWEALTH OF MASSACHUSETTS  
Middlesex, ss.



To the Clerk of the Water Supply District of Acton, GREETINGS:

You are directed to notify the inhabitants of the Town of Acton who are qualified to vote  
in elections and town affairs, to assemble at their precinct:

Precincts 1 & 2- Conant School, 80 Taylor Road  
Precinct 3-Douglas School, 21 Elm Street  
Precinct 4-West Acton Fire Station, 256 Central Street  
Precinct 5-South Acton Fire Station, 54 School Street  
Acton, Massachusetts

On Tuesday, March 28, 2000  
between 7 o'clock A.M. and 8 o'clock P.M.

Then and there to bring their votes on one ballot for the following officers:

Moderator for one year, one Commissioner for three years, Clerk for one year.

**Article 1.** To fix salaries of the elected officials.

**Article 2.** To act on the reports of the Commissioners, the Treasurer and other officers and committees of the District.

**Article 3.** To see if the District will vote to authorize the Treasurer, with the approval of the Commissioners, to borrow in anticipation of the revenue of the fiscal year beginning July 1, 2000, in accordance with the provisions of General Laws, Chapter 44, Section 4, and to renew any note or notes as may be given for a period of less than one year, in accordance with the provisions of the General Laws, Chapter 44, Section 17, or to take any other action relative thereto.

**Article 4.** To see what sums of money the District will vote to raise and appropriate to defray the usual expenses of the District.

**Article 5.** To see if the District will vote to transfer from Receipt Reserve for Appropriation Account (W.R. Grace settlement) the sum of \$75,000 for the maintenance, operation and carbon replacement costs at the various treatment plants operated by the District, or to take any other action relative thereto.

**Article 6.** To see if the District will vote to transfer from Surplus Revenue the sum of \$100,000 for the purchase of new radio read water meters for a continuing program for the installation of both new and existing services of the District, or to take any other action relative thereto.

**Article 7.** To see if the District will vote to transfer from Surplus Revenue the sum of \$25,000 to supplement Article 8 of the Annual Meeting of March 18, 1998 for the purpose of replacing old water mains, renewing numerous outdated water services from existing water mains to the property line, and to replace old outdated fire hydrants, or to take any other action relative thereto.

**Article 8.** To see if the District will vote to transfer from Surplus Revenue the sum of \$31,000 to purchase a new 4 WD pick-up with utility body and plow and to authorize the Commissioners to trade or sell the District's 1993 pick-up with utility body, or to take any other action relative thereto.

**Article 9.** To see if the District will vote to transfer from Surplus Revenue the sum of \$16,000 to purchase a new pick-up truck, and to authorize the Commissioners to trade or sell the District's 1994 Ford F-150 pick-up truck or to take any other action relative thereto.

**Article 10.** To see if the District will vote to transfer from Surplus Revenue the sum of \$25,000 to clean and rehabilitate existing wells throughout the District, or to take any other action relative thereto.

**Article 11.** To see if the District will vote to transfer the unexpended balance of the Conant II Well construction bond in the amount of \$25,043.45 to a "New Water Source Investigation Account" to be expended in funding the investigation into new as yet unidentified potential sources of water supply throughout the District, or to take any other action relative thereto.

**Article 12.** To see if the District will vote to amend its by-laws regarding water conservation by deleting Section XV in its entirety and replacing therewith the following by-law:

#### WATER USE RESTRICTION BY-LAW

##### Section 1 – Authority:

This by-law is adopted by the District under its police powers to protect public health and welfare and its powers under M.G.L. c.40, §§21 et seq. and implements the District's authority to regulate water use pursuant to M.G.L. c. 41, §69B. This by-law also implements the District's authority under M.G.L. c. 40, §41A, conditioned upon a declaration of water supply emergency issued by the Department of Environmental Protection.

## Section 2 – Purpose:

The purpose of this by-law is to protect, preserve and maintain the public health, safety and welfare whenever there is in force a State of Water Supply Conservation or State of Water Supply Emergency by providing for enforcement of any duly imposed restrictions, requirements, provisions or conditions imposed by the District or by the Department of Environmental Protection.

## Section 3 – Definitions:

Person shall mean any individual, corporation trust, partnership or association, or other entity. State of Water Supply Emergency shall mean a State of Water Supply Emergency declared by the Department of Environmental Protection under M.G.L. c.21G, §15-17.

State of Water Supply Conservation shall mean a State of Water Supply Conservation declared by the District pursuant to Section 4 of this by-law. Water Users or Water Consumers shall mean all public and private users of the District's public water system, irrespective of any person's responsibility for billing purposes for water used at any particular facility.

## Section 4 - Declaration of a State of Water Supply Conservation

The District, through its Board of Water Commissioners, may declare a State of Water Supply Conservation upon a determination by a majority vote of the Board that a shortage of water exists and conservation measures are appropriate to ensure an adequate supply of water to all water consumers. Public notice of a State of Water Conservation shall be given under Section 6 of this by-law before it may be enforced.

## Section 5 - Restricted Water Uses

The District, through its Board of Commissioners, in declaring a State of Water Supply Conservation may include any restrictions, conditions, or requirements limiting the use of water as they determine necessary to protect the water supply. The applicable restrictions, conditions or requirements shall be included in the public notice required under Section 6.

## Section 6 - Public Notification of a State of Water Supply Conservation; Notification of DEP

Notification of any provision, restriction, requirement or condition imposed by the District as part of a State of Water Supply Conservation shall be published in a newspaper of general circulation within the District, or by such other means reasonably calculated to reach and inform all users of water of the State of Water Supply Conservation. Any restriction imposed under Section 5 shall be effective once such notification is provided. Notification of the State of Water Supply Conservation shall also be simultaneously provided to the Massachusetts Department of Environmental Protection.

## Section 7 - Termination of a State of Water Supply Conservation; Notice

A State of Water Supply Conservation may be terminated by a majority vote of the Board of Water Commissioners, upon a determination that the water supply shortage no longer exists. Public notification of the termination of State of Water Supply Conservation shall be given in the same manner required by Section 6.

## Section 8 - State of Water Supply Emergency; Compliance with DEP Orders

Upon notification to the public that a declaration of a State of Water Supply Emergency has been issued by the Department of Environmental Protection, no person shall violate any provision, restriction, requirement, condition of any order approved or issued by the Department intended to bring about an end to the State of Emergency.

Section 9 – Penalty:

Any person or entity who violates this by-law, shall be liable to the District in the amount of \$100.00 for the first violation and \$200.00 for each subsequent violation which will inure to the District for such uses as the Board of Water Commissioners may direct. Fines will be recovered by indictment or on complaint before the District court, or by non-criminal disposition in accordance with Section 21D of Chapter 40 of the General Laws. Each separate instance of non-compliance following the issuance of any warning or citation pursuant to this Section shall constitute a separate violation.

Section 10 – Right of Entry:

Agents of the enforcement authority may enter any property, except the interior of a domicile, for the purpose of inspection or investigating any violation of the By-Law or enforcing the same.

Section 11 – Severability:

The invalidity of any portion or provision of this by-Law shall not invalidate any other portion, provision or section thereof.

**Article 13.** To see if the District will vote to authorize the Commissioners to acquire by purchase, gift or take by eminent domain, a three thousand, three hundred and thirty-five (3,335) square foot permanent easement along the westerly boundary of land owned partially by John D. Durkin and Stacey G. Durkin and partially owned by Wetherbee Road Realty Trust and shown on a plan entitled "Easement Plan of Land in Acton, Massachusetts" prepared for the Acton Water District by the Town of Acton Engineering Department, for the installation of a water main, together with a ten-foot wide temporary construction easement contiguous with the permanent easement which permanent easement is for the installation of the water main on Wetherbee Street as previously approved by the voters in Article 12 of the Annual Meeting of March 17, 1999 and supplemented by the appropriation of Article 1 at the Special Meeting held on November 8, 1999, or to take any other action relative thereto.

Hereof fail not and make due returns of this Warrant with your doings thereon to the Water Commissioners on or before the time of holding said meeting.

Given under our hands this 24th day of January in the year two thousand.

Ronald R. Parenti, Chairman  
Stephen C. Stuntz  
Leonard A. Phillips  
Water Commissioners

A true copy. ATTEST:

Jane Cutler,  
District Clerk

**FY2000 Appropriation and Six Month Expense**

**FY2001 Anticipated Appropriation and Revenue**

Account Name	FY2000 Appropriation	Six Month Expense	FY2001 Appropriation
<b>Expense</b>			
Accounting	5,000.00	1,660.00	5,000.00
Audit	13,500.00	13,500.00	13,500.00
Auto Maintenance/Fuel	15,000.00	5,585.12	15,000.00
BackFlow/CrossConnection	5,000.00	0.00	5,000.00
Bank Fees	1,000.00	0.00	1,000.00
Bonds, Interest, Fees	338,875.00	28,437.50	322,075.00
Chemicals	40,000.00	14,268.17	40,000.00
Computers	20,000.00	3,539.00	20,000.00
DEP Withdrawal	6,000.00	5,418.98	6,000.00
Employee Education	10,000.00	6,322.53	12,000.00
Engineering	10,000.00	3,874.91	10,000.00
Health/Life Insurance	118,000.00	57,186.12	123,000.00
Hydrants	10,000.00	6,620.54	10,000.00
Insurance	32,000.00	13,208.95	32,000.00
Laboratory Analysis	12,000.00	7,611.50	15,000.00
Legal	20,000.00	9,167.50	25,000.00
Lights/Power/Fuel	115,000.00	87,743.30	185,000.00
Maintenance & Operations	90,000.00	51,282.30	94,000.00
Middlesex Retirement	51,690.00	25,845.00	54,503.00
Meters	1,000.00	852.62	1,000.00
Office Supplies	15,000.00	7,850.20	15,000.00
Paving	12,000.00	3,929.24	12,000.00
Petty Cash	1,000.00	0.00	1,000.00
Postage	6,000.00	3,687.62	7,000.00
Reserve Fund	30,000.00	0.00	30,000.00
Salaries & Wages	720,000.00	375,446.44	790,000.00
Telephone	20,000.00	12,268.95	20,000.00
Information Reports	9,000.00	1,796.17	15,000.00
Totals:	\$1,727,065.00	\$747,102.66	\$1,879,078.00
<b>Revenue</b>			
Water Rates	1,315,065.00	875,049.85	1,391,578.00
Fire Protection Sprinklers	15,500.00	14,523.48	15,500.00
Rent/Lease	55,000.00	33,288.72	65,000.00
Repairs, Installation & Cross Connection	40,000.00	27,667.31	45,000.00
** Cross Connection FY2001			12,000.00
Demand Fees	301,500.00	196,880.00	350,000.00
Totals:	\$1,727,065.00	\$1,147,409.36	\$1,879,078.00

**Report of the Treasurer FY99**  
**Audited Account Balances**  
**As of June 30, 1999**

Fleet Bank A/P	54,277.43
Fleet Savings	121,580.88
MMDT	1,225,527.79
MMDT – Grace A/P	23,640.42
MMDT – Conant II	44,390.95
Middlesex Savings	5,058.01
BankBoston	1,073.92
US Trust	1,616.95
Certificate of Deposit Accounts	
BankBoston	100,000.00
US Trust	100,000.00
First Trade Union	100,000.00

**Report of the Collector FY99**  
**Audited Account Balances**  
**As of June 30, 1999**

Accounts Receivable June 30, 1998	51,728.98
Charges	2,032,067.39
Interest Charges	7,099.59
Refunds	<u>292.64</u>
	2,091,188.60
Payments	2,035,174.44
Abatements	9,496.05
Adjustments	127.95
Outstanding June 30, 1999	<u>46,390.16</u>
	2,091,188.60

**Free Cash as Certified**

FY99 – 1,032,816.72  
FY98 – 1,054,964.23  
FY97 – 871,603.94  
FY96 – 1,024,625.46

**Long-Term Debt**  
**Bond Issues as of June 30, 1999**

Description	Original Amount	Interest Rate	Date of Issue	Date of Maturity	Balance 06/30/99
Conant Well II	800,000	4.75%	06/15/98	06/15/05	700,000
Walsh Reservoir	2,100,000	6.70%	06/01/89	06/01/01	<u>350,000</u> 1,050,000

Respectfully Submitted  
Linda M. Larson, Treasurer/Collector

## Report of the Commissioners

The Commissioners are pleased to make the following report for 1999 to the members of the Acton Water District.

For many residents of Acton, 1999 will be remembered as the year of the drought. According to statistics compiled by the *Boston Globe* (1/2/00), only 55% of the normal rainfall was recorded during the six-month period between the months of March and August. This was one of the driest summers on record, and represented a severe test of the District's ability to supply water for both indoor domestic use and lawn watering. In early June the Commissioners voted to empower the District Manager to issue a total ban on lawn watering if the drought continued. The ban was subsequently issued on June 21, and resulted in a nearly immediate reduction in demand of 36%. The Commissioners were extremely gratified by this result, and would like to thank our customers for their cooperation in this difficult period.

The need to impose a strict watering ban motivated the Commissioners to reevaluate the District's ability to meet the Town's projected water demand. The distribution system presently includes 11 wells, which have a collective pumping capacity of over 3 million gallons per day under normal conditions. As indicated in Figure 1 this number is approximately 50% larger than the average daily demand for 1999, and a linear analysis indicates a near-term growth rate of only 1%. However, a number of other factors must also be considered, the most important of which is that essentially all of the highly productive aquifers within the District have now been exploited. This constraint is further exacerbated by the yearly-average pumping restriction of 1.92 million gallons/day established by the Massachusetts Department of Environmental Protection (DEP). Finally, it is important to recognize that the short-term supply/demand ratio can drop dramatically during the summer months, as the previous year has clearly demonstrated. To minimize the potential for a future shortfall the District is currently pursuing the development of at least one additional high-production well (Grace III), more restrictive summer watering regulations, and is negotiating with Massachusetts Department of Environmental Management (DEM) to obtain an increase in the demand projections upon which our withdrawal permit is based.

A number of additional activities have been pursued during the past year to improve service to the District's customers and control operational costs. A few of the more notable changes made in 1999 are listed below.

- 1) The new position of Environmental Manager has been filled by Jane Ceraso, who is currently in the process of revising and formalizing the water quality standards that the District adopted in 1982. Ms. Ceraso has also been working closely with the District Manager to restructure the water-use restriction by-law.
- 2) The process of installing an automated monitoring and control system is now underway. When completed, the District Manager will have the ability to remotely access all of the District's wells and storage facilities through a computerized network located in the District office building.
- 3) A substantial upgrade of the office computer network and software has been initiated, which will greatly simplify the District's billing and accounting activities.

4) The gradual replacement of obsolete residential water meters with state-of-the-art monitoring devices is continuing. These devices generate a very accurate record of water use, and generate data that can be remotely interrogated via hand-held radio devices and directly downloaded onto the District's computer network.

All of these improvements have been funded either through free cash or the Grace settlement account, and will therefore have no effect on future water rates.

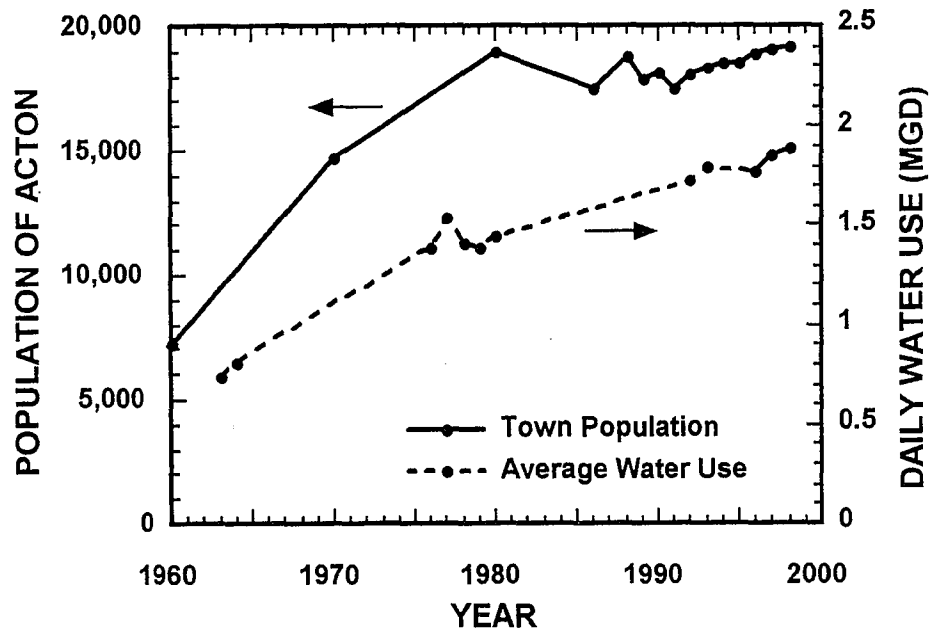


Figure 1. Comparison of population growth in the town of Acton and water use in the Acton Water District. The current rate of growth of both curves is about 1% per year.

The Commissioners wish to thank the District Manager, Jim Deming, for his outstanding performance this year. The services of the Treasurer/Collector Linda Larson and the Commissioner's secretary Debra Pyrro are also gratefully acknowledged. The Finance Committee is congratulated for their excellent job in managing the District's accounts and controlling expenditures.

Respectfully submitted

Ronald R. Parenti, Chairman  
Stephen C. Stuntz  
Leonard A. Phillips



## Report of the District Manager

The following report covers the activities of the District from 1999.

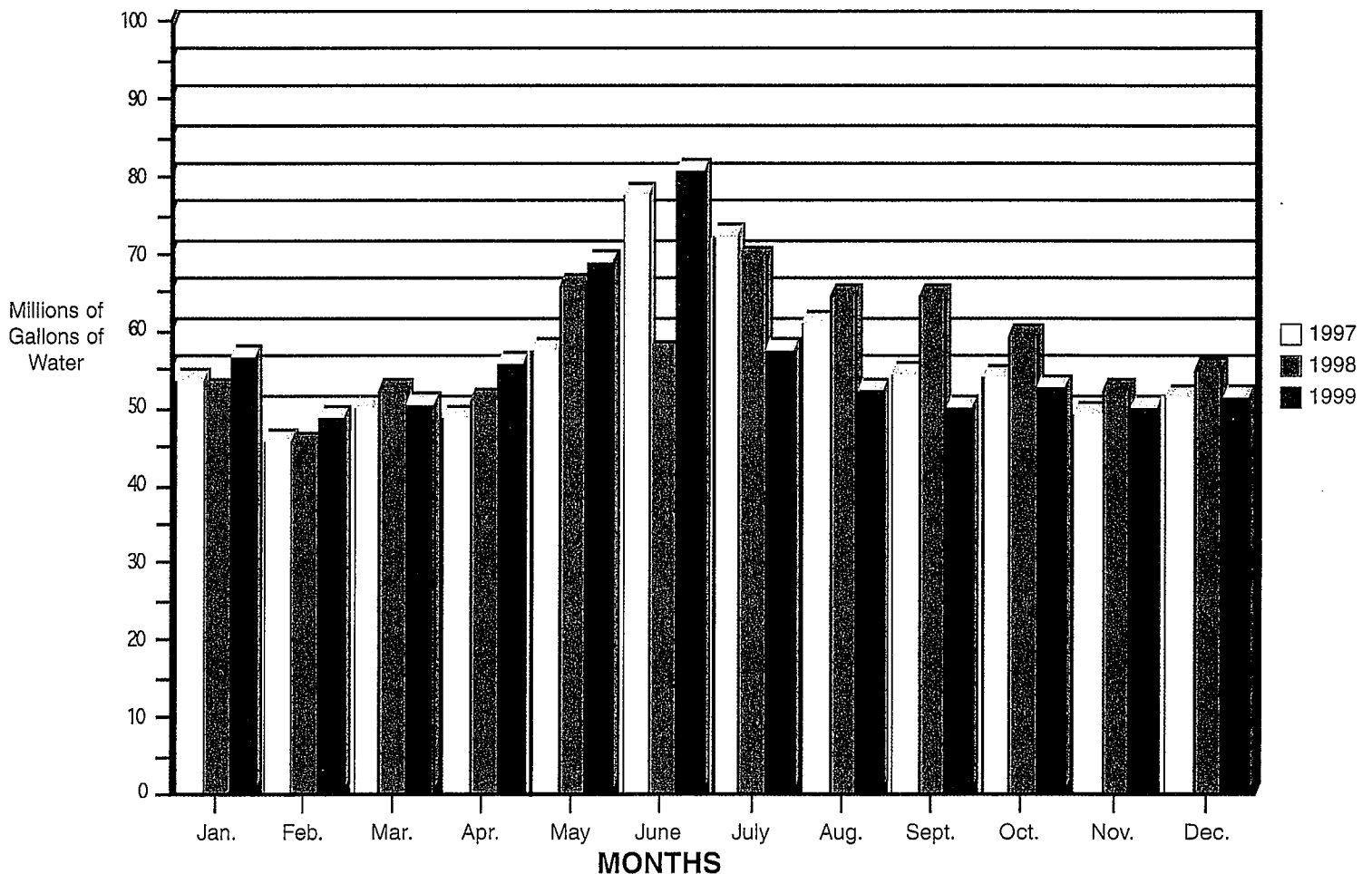
New installations	121
Old service lines replaced or renewed	32
Old meters replaced with new meters	375
Repair of water mains	18
Repair or replacement of fire hydrants	17

Water Mains installed in 1999 in the following areas:

Alexandria Way	Bellows Farm Road	Bittersweet Lane
Bramble Way	Briar Hill Road	Concord Place
Grace Path	Green Needle Way	Greybitch Lane
Jennifer Path	Ledge Rock Way Extension	Mossy Lane
Palmer Way	Samantha Way	Westside Drive

Total gallons pumped in 1999 – 676,234,000 gallons

## Calendar Years of Water Production



## Report of the District Manager

In 1895 a committee was formed to "study the need for a public water supply in the Villages of Acton." Acton's population had grown by more than 4% over the previous 5 years and the Town leaders saw a need to provide water service for its existing residents, as well as to plan for the future needs of the town.

As we enter the new millennium, the Acton Water District finds itself faced with many of the same issues as it did over 100 years ago. According to the town's most recent census figures, we have experienced virtually the same 4% increase in population over the last five years. In both instances the challenge to the District remains the same. How do we provide the best quality water available, in a quantity that meets everyone's needs, at an affordable price?

If we take a look back at some historical data, we discover some very interesting statistics:

	Total Water Pumped Year (million gallons per year)	Total # of Units	Average Usage Served Per Unit Per Day
1925	47,192,968	513	252 GPD
1960	185,805,000	2085	244 GPD
1990	550,537,000	5892	256 GPD
1996	647,291,000	6422	276 GPD
1998	688,896,000	6737	280 GPD

Between 1925 and 1990 the Acton Water District experienced a 1000% increase in services, and yet, our average usage per unit remained virtually the same!

Over the past decade, our system has increased in size by an additional 14%, however, unlike the previous 65 years, our average usage per unit has now increased by more than 10%. Why?

While there may be some legitimacy to suggesting that changes in lifestyles, and advances in technology have, to some extent, contributed to an increase in this number, it is apparent to many that increases in outdoor usage, particularly lawn watering, are the single most important factor in driving this number upwards. One only needs to look at the dramatic system wide reduction in water used, during this past summer when a complete lawn watering ban was instituted. In a period of less than two weeks our total usage was reduced by more than 1 million gallons per day, or over 35% of our previous consumption! Outdoor water usage, primarily lawn watering, must be controlled if we expect to meet all of the other demands of our existing customers, as well as to provide service for future development.

With this goal in mind, we have embarked on an aggressive educational campaign during which we hope to increase public awareness regarding water used on lawns. We have revised our Bylaw restricting water use. Beginning May 1, 2000:

- Those of you with even # addresses may water outdoors on Tuesdays, Thursdays and Saturdays.
- Those of you with odd # addresses may water outdoors on Wednesdays, Fridays and Sundays.

- No Lawn Watering may occur between 7:00 AM and 7:00 PM. (Watering at night has been proven to be much more beneficial to plants and grasses.)
- No Outdoor Usage will be allowed on Mondays.

The Monday restriction will give our storage tanks a chance to recover after the weekend. Maintenance of adequate storage levels is critical to serving both our domestic needs, as well as providing fire protection, if needed.

We are strongly encouraging the use of drought tolerant plants and grasses and would also remind everyone that just because it is "your day to water" does not necessarily mean that your lawn needs it. In our climate, natural rainfall is often sufficient to supply the water needs of most lawns.

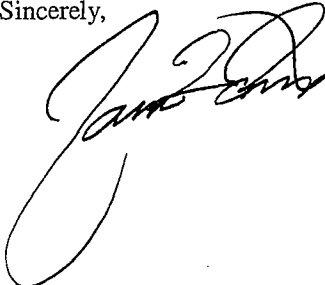
If everyone works to comply with these new restrictions, and if everyone uses water outdoors only when really needed, then we are confident that we can continue to provide water of the highest quality, in sufficient quantity to fulfill all of our needs, at a price that will continue to be affordable to all.

I would once again like to thank all of the town departments and their employees for their continued cooperation over this past year.

I would also like to thank all the District employees for their efforts, and to acknowledge the contributions of all of our elected and appointed officials.

Finally, I would like to express my gratitude to all of the District's residents for their cooperation and support throughout this past year.

Sincerely,

A handwritten signature in black ink, appearing to read "James L. Deming", written in a cursive style.

James L. Deming  
District Manager

## **Report of the Finance Committee for 1999**

The members of the AWD Finance Committee are appointed by the District Moderator. The usual term is three years and there are usually three members with one term expiring each year. The committee reviews the proposed budget and all adjustments to it during each fiscal year. The committee monitors the financial activities of the district and makes recommendations on financial matters to the Commissioners, the District Treasurer, and the District Manager. The Finance committee makes a public recommendation, at annual and special district meetings, on each article that has a financial impact on the district.

The Acton Water District is in a good financial position. For several years, the District's income has exceeded the expense of supplying water. Most of this excess comes from demand charges (hook up fees). The excess accumulates in a fund called "Free Cash." Because the new construction that generates the hook up fees will use more water in the future, Free Cash is primarily used to finance capital improvements, such as new water mains in newly developed sections of the town and larger mains in some other sections. The state certified the Free Cash as of July 1, 1999 to be \$1,032,816.72.

AWD has modest long-term debt. The total is less than one year's revenue. The district has two bond issues outstanding, one expiring in 2001 and one expiring in 2005. The Finance Committee believes bonded indebtedness can be a prudent method of financing long term capital assets such as well fields, water tanks, and the distribution network, as long as the life of the asset is much greater than the life of the loan. The water tank atop Great Hill in South Acton is old. The replacement tank, in the near future, will probably be bonded.

The district sued W. R. Grace when there was great concern that the water supply was contaminated. The Grace fund is a result of that suit. While the money can formally be used for any purpose related to water supply, we expect it will continue to be used for the treatment of water and to keep the water free from contamination. The initial investment from the W. R. Grace fund was \$1,750,000 in 1988, all in bonds. Over the years since then, the Finance Committee has moved to gradually add stocks to the portfolio. We now recommend 30%-50% be invested in quality stocks. The district takes about \$70,000 per year, most years, for water treatment projects and expenses. During 1998, the voters approved a total withdrawal of \$320,000. In spite of all the withdrawals, the fund has grown. At the end of the fiscal year, June 30, 1999, the Grace Fund had a market value of \$2,553,556, and at the end of the calendar year 1999 it had a value of \$2,667,261.

The district has leased space to several firms for communications antennas on district tanks and other property, subject to approval by various town boards. This provides a modest income to the district.

This report is formally about the calendar year 1999, but we will also report the district survived the transition to Y2K with no financial problems so far, and none expected. This was the anticipated result since the staff had everything tested about a year in advance.

We extend our thanks to the commissioners, the employees, and the other members of the district "family." It is easier to review and make recommendations on financial matters when both the water and the information flow freely. They are devoted to the district and they are a pleasure to work with.

Respectfully submitted

Charles Bradley, Chairman  
Theodore Jarvis  
William L. Kingman

## Report of the Environmental Manager

I joined the Water District in April 1999, to fill the new Environmental Manager position. The position was created to facilitate the District's compliance with the Safe Drinking Water Act, conduct special water quality investigations, develop a water conservation program, and develop a school education and outreach program.

Largely due to the fact that April, May and June – our high demand months – were also record dry months, the water conservation program took front burner. The drought provided both a challenge and an opportunity to implement some new conservation-related policies and activities. We were generally very pleased with the level of participation in these activities. Particularly notable were your conservation efforts during the lawn-watering ban, which resulted, according to DEP, in one of the most effective watering bans in the state!

Although the lawn-watering ban was successful in conserving water throughout the hot summer months, it did not offer a sustainable solution to the problem of managing water use in Acton during the peak seasons. The drought created an urgency to push forward on two important fronts, decreasing the demand for water (particularly during the peak season), and seeking to increase the supply of water in a time of burgeoning population growth. I hope you will continue to work with us on these challenging issues, and participate in some of the upcoming conservation-related events, listed below.

On the water quality front we conducted a study to examine how the addition of a buffering agent affects lead and copper levels in tap water; conducted pilot testing for radon in all of our wells; installed carbon filtration at the Clapp/Whitcomb wellfield to remove natural color in the water; issued our first Annual Report on Water Quality; and formalized our Volatile Organic Chemical (VOC) Regulation, giving Acton the most stringent program in the state to limit the amount of VOCs in drinking water. We will be sending out our 1999 Annual Report on Water Quality in April of 2000, in which more details on our water quality activities this year will be provided.

I am currently busy preparing materials and activities for our Education and Outreach Program. In the upcoming year you can anticipate the release of results of our customer survey on drinking water; the "launching" of our own Web site sometime during Spring 2000; the initiation of our School Education Program; a Spring "Open Garden" event to thank all those who participated in the installation of our Water Wise Garden; special activities during Drinking Water Week and Earth Day, 2000; and the continuation of our summer Drinking Water Internship program.

I encourage you all to continue to send in your thoughts and input, attend our upcoming informational meetings, attend our Annual and bi-monthly Meetings, visit our Water Wise Demonstration Garden and our new website (both should be ready for prime-time viewing by Spring 2000), call us, write us, email us, and become involved as your time allows. It is your water supply; I look forward to working closely with you to ensure its continued high quality and quantity!

### **You are invited to Attend:**

Information Meeting on Ecological Landscaping; Conducted jointly with OAR and Acton Stream Teams  
April 25, 2000  
7 PM – Acton Public Library

Water Wise Landscaping Course  
March 23rd and 25th  
(See Winter 2000 A/B Community Education Catalog)

Acton Water District's "Open Garden" Party

An afternoon to stop in for refreshments, view the "Water Wise Garden" and learn how you to make water conservation work for you. Held during Drinking Water Week 2000 (early May)

Check upcoming mailings/paper for details

Look for our display in the Acton Public Library during Late April and early May, and our display at Acton Earth Day

## **Acton Water District Regulations for VOCs**

Revised per January 10, 2000 Water Commissioners Meeting

In order to ensure that we provide the highest quality drinking water possible, the Acton Water District is proposing stringent regulations to limit the amount of Volatile Organic Chemicals in water delivered from all our wells. Although the Safe Drinking Water Act and 310 CMR 22.00 (Massachusetts Drinking Water Regulations) have established maximum contaminant levels (MCLs) for these chemicals, we feel confident that we can consistently provide water that is virtually free of VOCs. For customers of the District who are concerned about VOC contamination as a result of pollution from the W.R. Grace or other sites, this should provide an extra measure of safety and confidence.

This regulation has two parts, adoption of Action Levels (ALs), and adoption of a timeline and set of procedure that we will follow should any VOC exceed an AL for a specified period of time. Both parts of this regulation would be substantially more protective of public health than those required by either the state or EPA.

### **Acton Water District VOC Action Levels**

The Acton Water District will set an Action Level of one part per billion (ppb) for all regulated VOCs (those that have MCLs specified by Massachusetts DEP or EPA-see Attachment 1.) These 22 VOCs currently have MCLs that range from 2 ppb to 10,000 ppb, depending upon their health effects. The methodology for VOC analysis requires detection levels of 0.5 ppb or less, so any certified laboratory could accurately report a level of 1 ppb.

If at any time the DEP or EPA sets a new MCL for any VOC, that VOC would automatically fall under these regulations. If at any time the DEP or EPA sets an MCL for a VOC that is lower than 1 part per billion, the lower standard will prevail and become a revised standard for the Acton Water District.

The detection of any VOC at or above state or federal MCLs would require the Acton Water District to follow, in addition to these regulations, all applicable requirements of 310 CMR 22.00.

### **Action Level Detection: Follow Up Procedures**

If at any time one of the attached VOCs is detected at or above 1 part per billion, the District will conduct follow up testing within 10 days of receipt of original results to confirm the test results. If the average of follow up testing and original results are confirmed at greater than 1 ppb, the data will be presented at the next Water Commissioner's meeting. Unless the Commissioners decide that immediate action is warranted, the District will continue to monitor the well for three additional quarters. If, at the end of the third quarter of sampling, the average of the initial results and the three quarters is greater than the Action Level, the District shall develop a Plan of Action.

## **Action Level Exceedance: Follow Up Procedures**

### **Development of Draft Plan of Action**

Within 30 days of discovering an Action Level exceedance, the Water District will develop a draft plan of action that includes:

1. Detailed list of all detections of VOCs for the source(s) in question
2. Anticipated and possible health effects
3. Plans to investigate source of VOCs
4. If multiple VOCs present, anticipated interactive effects
5. Source of VOCs, if known
6. Remediation options with estimated costs/timeframes of each option
7. Recommended option/timeframes, with rationale for recommendation

### **Development of Final Plan of Action**

The draft plan will be presented at special (publicized) Water Commissioner's Meeting where input from registered town voters will be solicited. A copy will be sent to the Board of Health. The plan will then be finalized within 30 days of receipt of comments, and described in the District's next Water Words, in a Beacon article, and posted on the District's web site.

### **Implementation of Plan of Action**

The District shall follow the implementation schedule set in the final Plan of Action and detail all accomplishments in subsequent Water Words notices and on the District's website.

**Attachment I.**  
**Acton Water District VOC Regulation**  
**List of VOCs with 1 part per billion**  
**Action Level**

**MCLG: Maximum Contaminant Level Goal**

**MCL: Maximum Contaminant Level**

<b>Regulated VOC</b>	<b>MCLG (ppb)</b>	<b>MCL (ppb)</b>	<b>Health Effects</b>
Benzene	zero	5	Anemia; decrease in blood platelets; increased risk of cancer
Carbon tetrachloride	zero	5	Liver problems; increased risk of cancer
Chlorobenzene	100	100	Liver or kidney problems
o-Dichlorobenzene	600	600	Liver, kidney, or circulatory system problems
p-Dichlorobenzene	5	5	Anemia; liver, kidney or spleen damage; changes in blood
1,2-Dichloroethane	zero	5	Increased risk of cancer
1-1-Dichloroethylene	7	7	Liver problems
c-1, 2-Dichloroethylene	70	70	Liver problems
t-1,2-Dichloroethylene	100	100	Liver problems
Dichloromethane	zero	5	Liver problems; increased risk of cancer
1-2-Dichloropropane	zero	5	Increased risk of cancer
Ethylbenzene	700	700	Liver or kidney problems
Styrene	100	100	Liver, kidney, and circulatory problems
Tetrachloroethylene	zero	5	Liver problems; increased risk of cancer
Toluene	1000	1000	Nervous system, kidney, or liver problems



1,2,4-Trichlorobenzene	70	70	Changes in adrenal glands
1,1,1-Trichloroethane	200	200	Liver, nervous system, or circulatory problems
1,1,2-Trichloroethane	3	5	Liver, kidney, or immune system problems
Trichloroethylene	zero	5	Liver problems; increased risk of cancer
Vinyl chloride	zero	2	Increased risk of cancer
Xylenes (total)	10,000	10,000	Nervous system damage

**WATER SUPPLY DISTRICT OF ACTON**

**FINANCIAL STATEMENTS**

---

**JUNE 30, 1999**

WATER SUPPLY DISTRICT OF ACTON

FINANCIAL STATEMENTS

---

JUNE 30, 1999

C O N T E N T S

Independent Auditor's Report

Combined Statement of Assets, Liabilities and Fund Balances  
- All Fund Types and Account Groups - Statutory Basis

Combined Statement of Revenues, Expenditures and Changes in  
Fund Balances - All Governmental Fund Types  
- Statutory Basis

Statement of Revenues, Expenditures and Changes in Fund Balance  
- Budget and Actual - General Fund - Statutory Basis

Statement of Revenues, Expenditures and Changes in Fund Balance  
- Fiduciary Fund Type - Statutory Basis

Notes to the Financial Statements

Supplemental Schedule of Capital Projects Fund Activity  
- Statutory Basis

Supplemental Schedule of W.R. Grace Fiduciary Fund Activity  
- Statutory Basis

# SCHEID & MARA, PC

CERTIFIED PUBLIC ACCOUNTANTS

William E. Scheid, CPA  
Maureen Waters Mara, CPA

70 Junction Square Drive  
Concord, MA 01742

TEL 978 369-9905  
FAX 978 371-2931

## Independent Auditor's Report

Board of Water Commissioners  
Water Supply District of Acton  
Acton, Massachusetts

We have audited the financial statements of the Water Supply District of Acton as of and for the year ended June 30, 1999, as listed in the table of contents. These financial statements are the responsibility of the Water Supply District of Acton management. Our responsibility is to express an opinion on these financial statements based on our audit.

Except as discussed in the following paragraph, we conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

Governmental Accounting Standard Board Technical Bulletin 98-1, *Disclosures about Year 2000 Issues*, requires disclosure of certain matters regarding the year 2000 issue. The Water Supply District of Acton has included such disclosures in Note 7. Because of the unprecedented nature of the year 2000 issue, its effects and the success of related remediation effort will not be fully determinable until the year 2000 and thereafter. Accordingly, insufficient audit evidence exists to support the Water Supply District of Acton's disclosures with respect to the year 2000 issue made in Note 7. Further, we do not provide assurance that the Water Supply District of Acton is or will be year 2000 ready, that the Water Supply District of Acton year 2000 remediation efforts will be successful in whole or in part, or that parties with which the Water Supply District of Acton does business will be year 2000 ready.

As described in Note 2, the Water Supply District of Acton prepares its financial statements on a prescribed basis of accounting that demonstrates compliance with the laws of the Commonwealth of Massachusetts which is a comprehensive basis of accounting other than generally accepted accounting principles.

SCHEID & MARA, PC  
CERTIFIED PUBLIC ACCOUNTANTS

Independent Auditor's Report (continued)

In our opinion, because of the Water Supply District of Acton's policy to prepare its financial statements on the basis of accounting discussed in the preceding paragraph, the financial statements referred to in the first paragraph do not present fairly, in conformity with generally accepted accounting principles, the financial position of the Water Supply District of Acton as of June 30, 1999, or the results of its operations or the changes in its fund balances for the year then ended.

However, in our opinion, except for the effects of such adjustments, if any, as might have been determined to be necessary had we been able to examine evidence regarding year 2000 disclosures, the financial statements referred to in the first paragraph present fairly, in all material respects, the cash and investment balances of the Water Supply District of Acton as of June 30, 1999, and the revenues it received and expenditures it paid for the year then ended, on the basis of accounting described in Note 2.

Our audit was made for the purpose of forming an opinion on the financial statements taken as a whole. The Supplemental Schedules of Capital Projects Fund Activity and W.R. Grace Fiduciary Fund Activity are presented for purposes of additional analysis and are not a required part of the financial statements of the Water Supply District of Acton. Such information has been subjected to the auditing procedures applied in the audit of the financial statements, and is fairly presented, in all material respects, in relation to the financial statements taken as a whole on the basis of accounting described in Note 2.

*Scheid & Mara, PC*

Scheid & Mara, PC  
Concord, Massachusetts  
July 28, 1999

**WATER SUPPLY DISTRICT OF ACTON**

## Combined Statement of Assets, Liabilities and Fund Balances -

All Fund Types and Account Groups - Statutory Basis

June 30, 1999

	GOVERNMENTAL FUND TYPE		FIDUCIARY FUND TYPE	ACCOUNT GROUP	TOTAL
	GENERAL FUND	CAPITAL PROJECTS	W.R. GRACE FUND	GENERAL LONG TERM DEBT	(MEMO ONLY)
<i>ASSETS</i>					
Cash	\$1,709,135	\$44,391	\$28,761		\$1,782,287
Investments			2,524,795		2,524,795
Accounts Receivable	46,390				46,390
Less Reserve For					
Uncollectible Receivables	(46,390)				(46,390)
Due From General Fund		676,318			676,318
Amount To Be Provided For					
Long Term Debt				\$1,050,000	1,050,000
Total Assets	\$1,709,135	\$720,709	\$2,553,556	\$1,050,000	\$6,033,400
<i>LIABILITIES AND FUND BALANCES</i>					
<i>LIABILITIES</i>					
Long Term Debt				\$1,050,000	\$1,050,000
Due to Capital Projects Fund	\$676,318				676,318
Total Liabilities	676,318	0	0	1,050,000	1,726,318
<i>FUND BALANCES</i>					
Unreserved	1,032,817				1,032,817
Reserved For Capital Projects		720,709			720,709
Reserved For W.R. Grace			2,553,556		2,553,556
Total Fund Balances	1,032,817	720,709	2,553,556	0	4,307,082
Total Liabilities and Fund Balances	\$1,709,135	\$720,709	\$2,553,556	\$1,050,000	\$6,033,400

SEE ACCOMPANYING NOTES AND ACCOUNTANT'S REPORT.

SCHEID & MARA, P.C.  
CERTIFIED PUBLIC ACCOUNTANTS

**WATER SUPPLY DISTRICT OF ACTON**

## Combined Statement of Revenues, Expenditures and Changes in Fund Balances -

All Governmental Fund Types - Statutory Basis

For the Year Ended June 30, 1999

	GENERAL FUND	CAPITAL PROJECTS	TOTAL (MEMO ONLY)
<b>REVENUES</b>			
Water Rates	\$1,530,953		\$1,530,953
Water Services	502,519		502,519
Interest Income	89,942 ✓		89,942
Total Revenues	2,123,414		2,123,414
<b>EXPENDITURES</b>			
Accounting	975		975
Audit	13,500		13,500
Auto, Maintenance and Fuel	12,536		12,536
Capital Project Expenditures		\$890,550	890,550
Chemicals	33,693		33,693
Computers	14,084		14,084
Cross Connection	4,702		4,702
D.E.P. Withdrawal	5,178		5,178
Education	9,000		9,000
Engineering	8,645		8,645
Health and Life Insurance	82,978		82,978
Hydrants	10,000		10,000
Insurance	25,184		25,184
Laboratory Analysis	11,000		11,000
Legal	20,000		20,000
Lights, Power and Fuel	115,000		115,000
Maintenance and Operations	90,000		90,000
Maturing Debt and Interest	348,350		348,350
Meters	2,000		2,000
Middlesex Retirement	53,876		53,876
Petty Cash	904		904
Office Supplies	13,057		13,057
Permanent Paving	9,912		9,912
Postage	5,517		5,517
Reserve Fund	3,847		3,847
Salaries and Wages	540,142		540,142
Telephone	20,000		20,000
Information Reports	2,000		2,000
Total Expenditures	1,456,080	890,550	2,346,630
<b>REVENUES OVER (UNDER) EXPENDITURES</b>	667,334	(890,550)	(223,216)
<b>OTHER FINANCING SOURCES (USES)</b>			
Transfers from General Fund to Capital Projects Fund	(699,270)	699,270	0
Transfers from Capital Projects Fund to General Fund	9,790	(9,790)	0
Net Other Financing Sources (Uses)	(689,480)	689,480	0
<b>Excess of Revenues and Other Sources Over (Under)</b>			
Expenditures and Other Uses	(22,146)	(201,070)	(223,216)
Fund Balance - Beginning of Year	1,054,963	921,779	1,976,742
<b>Fund Balance - End of Year</b>	<b>\$1,032,817</b>	<b>\$720,709</b>	<b>\$1,753,526</b>

**SCHEID & MARA, P.C.**  
CERTIFIED PUBLIC ACCOUNTANTS

SEE ACCOMPANYING NOTES AND ACCOUNTANT'S REPORT.

**WATER SUPPLY DISTRICT OF ACTON**

## Statement of Revenues, Expenditures and Changes in Fund Balances -

Budget and Actual - General Fund - Statutory Basis

For the Year Ended June 30, 1999

	ACTUAL	BUDGET	VARIANCE FAVORABLE (UNFAVOR- ABLE)
<i>REVENUES</i>			
Water Rates	\$1,530,953	\$1,349,930	\$181,023
Water Services	502,519	238,920	263,599
Interest Income	89,942	0	89,942
Total Revenues	2,123,414	1,588,850	534,564
<i>EXPENDITURES</i>			
Salaries and Wages	540,142	583,000	42,858
Maturing Debt and Interest	348,350	351,350	3,000
Lights, Power and Fuel	115,000	115,000	0
Maintenance and Operations	90,000	90,000	0
Health and Life Insurance	82,978	110,000	27,022
Middlesex Retirement	53,876	57,500	3,624
Chemicals	33,693	38,000	4,307
Insurance	25,184	32,000	6,816
Legal	20,000	20,000	0
Telephone	20,000	20,000	0
Computers	14,084	15,000	916
Audit	13,500	13,500	0
Office Supplies	13,057	14,000	943
Auto, Maintenance, and Fuel	12,536	16,500	3,964
Laboratory Analysis	11,000	11,000	0
Hydrants	10,000	10,000	0
Permanent Paving	9,912	12,000	2,088
Education	9,000	9,000	0
Engineering	8,645	10,000	1,355
Postage	5,517	6,000	483
D.E.P. Withdrawal	5,178	6,000	822
Cross Connection	4,702	5,000	298
Reserve Fund	3,847	30,000	26,153
Information Reports	2,000	2,000	0
Meters	2,000	2,000	0
Accounting	975	5,000	4,025
Miscellaneous	904	1,000	96
Bank Fees	0	1,000	1,000
Equipment Rent	0	3,000	3,000
Total Expenditures	1,456,080	1,588,850	132,770
Revenues Over Expenditures	667,334	0	667,334
Net Transfers Between General Fund and Capital Projects Fund	(689,480)	(689,480)	0
Excess of Revenues Over (Under) Expenditures and Net Transfers	(22,146)	(689,480)	667,334
Fund Balance - Beginning of Year	1,054,963	1,054,963	0
Fund Balance - End of Year	\$1,032,817	\$365,483	\$667,334

SEE ACCOMPANYING NOTES AND ACCOUNTANT'S REPORT.

SCHEID & MARA, P.C.  
CERTIFIED PUBLIC ACCOUNTANTS



**WATER SUPPLY DISTRICT OF ACTON**

Statement of Revenues, Expenditures and Changes in Fund Balance -

Fiduciary Fund Type - Statutory Basis

For the Year Ended June 30, 1999

*W.R. GRACE  
FUND*

---

*REVENUES*

Dividend and Interest Income	\$111,309
Net Increase in the Fair Value of Investments	158,344
	<hr/>
Total Revenues	269,653

*EXPENDITURES*

Maintenance and Operations	102,696
Air Stripper	13,501
Clapp/Whitcomb Well Expenses	535,462
Investment Management Fees	23,776
	<hr/>
Total Expenditures	675,435
	<hr/>
Revenues Over (Under) Expenditures	(405,782)
Fund Balance - Beginning of Year	2,959,338
	<hr/>
Fund Balance - End of Year	\$2,553,556

SEE ACCOMPANYING NOTES AND ACCOUNTANT'S REPORT.

SCHEID & MARA, PC  
CERTIFIED PUBLIC ACCOUNTANTS

# WATER SUPPLY DISTRICT OF ACTON

Notes to the Financial Statements

June 30, 1999

## NOTE 1 - GENERAL STATEMENT AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Water Supply District of Acton ("the District") is a municipality incorporated in the Commonwealth of Massachusetts with the purpose of providing water and related services to the residents and businesses of Acton. The District is a separate municipality, distinct from the Town of Acton. The basic operations of the District are financed by water rate and services charges. In the Combined Statement of Revenues, Expenditures and Changes in Fund Balances, these operations are reflected in the General Fund.

### Summary of Significant Accounting Policies

The accounting and reporting policies of the District relating to the funds and account groups included in the accompanying financial statements conform with the Commonwealth of Massachusetts' uniform reporting system. The following significant accounting policies were applied in the preparation of the accompanying financial statements:

### Reporting Entity

The District's financial statements include the accounts of all District operations. Inhabitants of the Town of Acton who are qualified to vote in elections and town affairs are eligible to vote on matters concerning the District and to act on articles of the District.

### Basis of Presentation: Fund Accounting

The accounts of the Water Supply District of Acton are organized on the basis of funds and account groups, each of which is a separate entity with its own self-balancing accounts that comprise its assets, liabilities, fund balances, revenues, and expenditures. Resources are accounted for in individual funds based upon the purposes for which they are to be spent and the restrictions, if any, on the spending activities. The District uses the following generic fund types to record its activities:

#### Governmental Fund Types

General Fund - accounts for all financial resources of the District that are not required to be accounted for in another fund.

Capital Projects - accounts for all resources used for the acquisition or construction of capital projects, facilities, or studies.

#### Fiduciary Fund Type

W.R. Grace Fund - accounts for activity of the W.R. Grace Settlement and is restricted to cover expenditures for treatment and maintenance of the water system.

#### Account Group

General Long-Term Debt Account Group - accounts for all long-term obligations of the District, which consist of bonds payable for capital projects.

### Basis of Accounting

The accounts of all funds and general long-term debt group of accounts are maintained and presented in accordance with the Commonwealth of Massachusetts' uniform reporting system. Under this method, revenues are recorded when received and expenditures are recorded when they are paid. Accounts receivable are fully reserved until they are collected and recorded as income.

## **WATER SUPPLY DISTRICT OF ACTON**

Notes to the Financial Statements

June 30, 1999

### NOTE 1 - GENERAL STATEMENT AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Property, plant and equipment are not recorded on the Combined Statement of Assets, Liabilities and Fund Balances of the District. Funds used to acquire property, plant and equipment are accounted for as expenditures in the Capital Projects Fund in the fiscal year payment is made. Appropriation balances of capital projects are carried forward in the Capital Projects Fund until completion of the project or until unexpended balances are transferred to the General Fund by approval of the Annual Meeting.

#### Budgets and Budgetary Accounting

The District's annual budget is a legally adopted budget that is approved at the District's Annual Meeting. Appropriations for the Capital Projects Fund and the W.R. Grace Fiduciary Fund are also approved at the Annual Meeting. Any budget overrides must be approved at a specially called District Meeting.

#### Total Columns on Combined Statements

Total columns on the Combined Statements are captioned "Memo Only" to indicate that they are presented only to facilitate financial analysis. Data in these columns do not present financial position, results of operations, or changes in financial position in conformity with generally accepted accounting principles. Neither is such data comparable to a consolidation.

### NOTE 2 - DEPARTURES FROM GENERALLY ACCEPTED ACCOUNTING PRINCIPLES

As indicated in Note 1, the District prepares its financial statements using the Commonwealth of Massachusetts' uniform reporting system which is a comprehensive basis of accounting other than generally accepted accounting principles. Although the Commonwealth of Massachusetts' uniform reporting system is not in conformity with generally accepted accounting principles, cities, towns and other municipal entities use it extensively throughout the Commonwealth.

The District uses the Commonwealth of Massachusetts' uniform reporting system whereby revenues are recorded when received and expenditures are recorded when they are paid. Under generally accepted accounting principles, the District's General Fund would be accounted for on the accrual method of accounting whereby revenues are recognized in the accounting period in which they are earned and become measurable and expenses are recognized in the accounting period incurred.

The District also uses the Commonwealth of Massachusetts' uniform reporting system whereby the costs of property, plant and equipment are reported as expenditures from the Capital Projects Fund. Under generally accepted accounting principles, the property, plant and equipment would be capitalized on the balance sheet and depreciated over the useful lives of the various assets.

## WATER SUPPLY DISTRICT OF ACTON

Notes to the Financial Statements

June 30, 1999

### NOTE 3 - INVESTMENTS

The W.R. Grace Fund includes investments that are managed by the firm Brown Brothers Harriman and Co. The investments are carried at fair value. During the year ended June 30, 1999, the District realized a net gain of \$32,297 from the sale of investments. The calculation of realized gains is independent of the calculation of the net increase in the fair value of the investments. The net increase in the fair value of investments during the year was \$158,344. This amount takes into account all changes in fair value (including purchases and sales) that occurred during the year. The unrealized gain on investments held at year end was \$126,047.

### NOTE 4 - INTERFUND RECEIVABLE AND PAYABLE

At June 30, 1999, \$676,318 is due to the Capital Projects Fund from the General Fund.

### NOTE 5 - GENERAL LONG-TERM DEBT

General Long-Term Debt consists of the following general obligation bonds at June 30, 1999:

Description	Original Amount	Interest Rate	Date of Issue	Date of Maturity	Balance 6/30/99
Conant Well II	\$ 800,000	4.75%	06/15/98	06/15/05	\$ 700,000
Walsh Reservoir	<u>2,100,000</u>	6.75%	06/01/89	06/01/01	<u>350,000</u>
Total	<u>\$2,900,000</u>				<u>\$1,050,000</u>

During the year ended June 30, 1999, \$275,000 of principal and \$73,350 of interest were paid on the bonds, for a total of \$348,350. This total is reported as "Maturing Debt & Interest" in the Combined Statement of Revenues, Expenditures and Changes in Fund Balances - All Governmental Fund Types. The annual requirements to amortize all debt outstanding as of June 30, 1999 are as follows:

Fiscal Year Ending June 30,

2000	\$ 280,000
2001	280,000
2002	115,000
2003	120,000
2004	125,000
2005	<u>130,000</u>
Total	<u>\$1,050,000</u>

## WATER SUPPLY DISTRICT OF ACTON

Notes to the Financial Statements

June 30, 1999

### NOTE 6 - RETIREMENT PLAN

Substantially all employees of the District are members of the Middlesex County Retirement Fund. The retirement system is funded by both employer and employee contributions. The District's annual contributions to the retirement system are determined on a "pay-as-you-go" basis by the State Division of Insurance and are estimates of pensions actually payable during an accounting period. In addition, employees contribute 5%, 7%, 8% or 10% of their base pay depending on when they entered the system. The District's contributions for the year ended June 30, 1999, were \$53,876.

In addition, the District has a voluntary Section 457 retirement plan. Employees may make pre-tax contributions, and the District will match contributions up to 3% of the participating employee's salary. The maximum employee and District combined contribution is \$8,000 per year. District match contributions for the year ended June 30, 1999 were \$13,248, which is included in Salary and Wages.

### NOTE 7 - YEAR 2000 ISSUE

The year 2000 issue is the result of shortcomings in many electronic data processing systems and other equipment that may adversely affect the District's operations. The District had its computer systems tested for year 2000 compliance by the Division of Local Services of the Commonwealth of Massachusetts. Their testing did not identify any non-compliance in the water delivery system that cannot be mitigated with manual intervention. Their testing indicated that certain personal computers on which financial records are kept are not year 2000 compliant. However, the District is undertaking remediation efforts, and with manual intervention, the personal computers become year 2000 compliant. The District also engaged the services of a computer consultant who has given limited assurance that the four digit date fields in the financial reporting applications are year 2000 compliant.

Because of the unprecedented nature of the year 2000 issue, its effects and the success of related remediation efforts will not be fully determinable until the year 2000 and thereafter. Management cannot assure that the District is or will be year 2000 ready, that the District's remediation efforts will be successful in whole or in part, or that parties with whom the District does business will be year 2000 ready.

### NOTE 8 - COMMITMENTS

The District has entered into certain contracts for well construction, for upgrading water services and meters to existing homes, for improvements to existing water lines, and for improving water quality.

### CONCLUDED.

**WATER SUPPLY DISTRICT OF ACTON**

Supplemental Schedule of Capital Projects Fund Activity - Statutory Basis

For the Year Ended June 30, 1999

	<i>BEGINNING BALANCE 06/30/98</i>	<i>TRANSFERS FROM GENERAL FUND</i>	<i>TRANSFERS TO GENERAL FUND</i>	<i>PAYMENTS MADE</i>	<i>ENDING BALANCE 06/30/99</i>
Cargo Van 99	\$0	\$25,000			\$25,000
Clapp Whitcomb 97	697			\$697	0
Clapp/Whitcomb Color	578			578	0
Compressor 98	1,219			1,219	0
Conant II Well	718,884		\$1,558	692,283	25,043
Conant Station Repairs 96	1,345			1,345	0
Digital Copier 99	0	9,970		9,950	20
Dump Truck 99	0	50,000			50,000
Electronic Equipment 95	795				795
Employees 99	0	60,000		14,182	45,818
GIS Equipment 98	14,965			14,965	0
Great Hill 99	0	5,300		2,811	2,489
Hydrant Flushing 99	0	9,500			9,500
Leak Detection 94	3,000			3,000	0
Leak Detection 99	0	9,500		6,500	3,000
Marshall Pumping Rehab 98	1,035			341	694
Meter Reading Equipment 95	3,419			1,740	1,679
Meter Replacement 98	73,318			73,318	0
Pick-up Truck 98	8,232		8,232		0
Radio Read Meter 99	0	100,000		2,680	97,320
SCADA System 98	25,000			16,800	8,200
SCADA System 99	0	250,000			250,000
School/Weatherbee Mains 99	0	135,000		5,670	129,330
Small Tools 98	2,818			2,755	63
Update Services 97	1,373			1,373	0
Vacuum Priming System 98	8,168			8,168	0
Water Main Break Repairs 98	26,933	15,000		11,871	30,062
Water Mains/Hydrants 98	30,000	30,000		18,304	41,696
	<u>\$921,779</u>	<u>\$699,270</u>	<u>\$9,790</u>	<u>\$890,550</u>	<u>\$720,709</u>

SEE ACCOUNTANT'S REPORT.

SCHEID & MARA, PC  
CERTIFIED PUBLIC ACCOUNTANTS

**WATER SUPPLY DISTRICT OF ACTON**

Supplemental Schedule of W.R. Grace Fiduciary Fund Activity - Statutory Basis

For the Year Ended June 30, 1999

	<i>BEGINNING BALANCE 6/30/98</i>	<i>APPROPRIA- TIONS PER ANNUAL MEETING</i>	<i>REVENUES OVER(UNDER) EXPENDI- TURES</i>	<i>ENDING BALANCE 6/30/99</i>
Maintenance and Operations	\$40,869	\$105,000	(\$102,696)	\$43,173
Air Stripper	15,236		(13,501)	1,735
Clapp Whitcomb Well	558,070		(535,462)	22,608
Unappropriated	2,345,163	(105,000)	245,877	2,486,040
	<u>\$2,959,338</u>	<u>\$0</u>	<u>(\$405,782)</u>	<u>\$2,553,556</u>

SEE ACCOUNTANT'S REPORT.

SCHEID & MARA, PC  
CERTIFIED PUBLIC ACCOUNTANTS

## **Annual Meeting – Water Supply District of Acton**

March 17, 1999

**Article One:** VOTED to fix the salaries of the elected officials as follows:

Chairman of the Commissioners:	\$1,200 per year
Two Commissioners:	\$1,000 per year
Moderator:	\$ 50 per meeting
Clerk:	\$ 600 per year

VOTED UNANIMOUSLY

**Article Two:** VOTED to accept the reports of the Commissioners, the Treasurer and other officers of the District.

VOTED UNANIMOUSLY

**Article Three:** VOTED that the District authorize the Treasurer, with the approval of the Commissioners to borrow in anticipation of the revenue of the fiscal year beginning July 1, 1999, in accordance with the provisions of the General Laws, Chapter 44, Section 4, and to renew any note or notes as may be given for a period of less than one year, in accordance with the provisions of the General Laws, Chapter 44, Section 17.

VOTED UNANIMOUSLY

**Article Four:** VOTED that the District votes to raise and appropriate to defray the usual expenses of the District.

VOTED UNANIMOUSLY

**Article Five:** VOTED that the District transfer from Receipt Reserve for Appropriation Account (W.R. Grace settlement) the sum of \$75,000 for the maintenance and operations, carbon replacement, and power costs at the various treatment plants operated by the District.

VOTED UNANIMOUSLY

**Article Six:** VOTED that the District transfer from Surplus Revenue the sum of \$100,000 for the purchase of new radio read water meters for a continuing program for the installation of new radio read water meters for a continuing program for the installation of both new and existing services of the District.

VOTED UNANIMOUSLY

**Article Seven:** VOTED that the District transfer from Surplus Revenue the sum of \$30,000 to supplement Article 8 of the Annual Meeting of March 18, 1998 for the purpose of replacing old water mains, renewing numerous outdated water services from existing water mains to the property line, and to replace old outdated fire hydrants.

VOTED UNANIMOUSLY



**Article Eight:** VOTED that the District transfer from Surplus Revenue the sum of \$60,000 to purchase a new dump truck and to authorize the Commissioners to trade or sell the District's 1985 dump truck.

VOTED UNANIMOUSLY

The District voted to amend the pending motion by changing the \$60,000 to \$50,000 based on review of bids received for the vehicle.

VOTED UNANIMOUSLY

**Article Nine:** VOTED to transfer from Surplus Revenue the sum of \$30,000 to purchase a new cargo van.

VOTED UNANIMOUSLY

The District voted to amend the pending motion by changing the \$30,000 to \$25,000 based on review of bids received for the vehicle.

VOTED UNANIMOUSLY

**Article Ten:** VOTED to transfer from Surplus Revenue the sum of \$9,500 for a leak detection survey, for pipes and water mains owned by the District.

VOTED UNANIMOUSLY

**Article Eleven:** VOTED to transfer from Surplus Revenue the sum of \$9,970 to purchase a new digital copier.

VOTED UNANIMOUSLY

**Article Twelve:** VOTED to transfer from Surplus Revenue the sum of \$135,000 for the design, engineering plans for preliminary construction for the future water main project on School Street and Wetherbee Street.

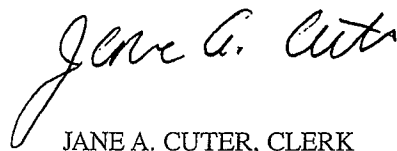
VOTED UNANIMOUSLY

**Article Thirteen:** VOTED to transfer from Surplus Revenue the sum of \$15,000 to supplement Article 3 of the Special Meeting of December 8, 1997 for emergency water main breaks and repairs.

VOTED UNANIMOUSLY

**Article Fourteen:** VOTED to transfer from Surplus Revenue the sum of \$9,500 for the implementation of a hydrant flushing program for the District's water system. VOTED UNANIMOUSLY

A TRUE COPY ATTEST:

  
JANE A. CUTER, CLERK

MEETING OF MONDAY, NOVEMBER 8, 1999

**Article 1:** VOTED to see if the District will vote to transfer from Surplus Revenue, the sum of \$450,00 to supplement Article 12 of the Annual Meeting of March 17, 1999 for the purpose and designing and constructing a new water main on School Street and Weatherbee Street. VOTED UNANIMOUSLY.

**Article 2:** To see if the District will vote to transfer from Receipt Reserve for Appropriation Account (W.R. Grace settlement) the sum of \$175,000 for the purpose of designing and constructing improvements to the School Street treatment facility including, but not limited to electrical upgrades and a stand-by generator. VOTED UNANIMOUSLY.

**Article 3:** VOTED to see if the District will vote to transfer from Receipt Reserve for Appropriation Account (W.R. Grace Settlement) the sum of \$67,000 for the purpose of designing and constructing a replacement well for the Assabet II well. VOTED UNANIMOUSLY.

**Article 4:** VOTED to see if the District will vote to transfer from Receipt Reserve for Appropriation Account (W.R. Grace settlement) the sum of \$33,000 for the purpose of designing and construction of a new pump and motor for the Conant I well. VOTED UNANIMOUSLY.

**Article 5:** VOTED to see if the District will vote to transfer from Surplus Revenue the sum of \$135,000 to supplement Article 1 of the Special District Meeting held December 7, 1998 for the purpose of designing, implementing, installing and constructing a supervisory control and data acquisition system (SCADA) to control and monitor the District's water sources and storage facilities. VOTED UNANIMOUSLY.

**Article 6:** VOTED to see if the District will vote to transfer from Surplus Revenue the sum of \$20,000. to implement a computer network and upgrade existing computer hardware at the District offices at 693 Massachusetts Avenue. VOTED UNANIMOUSLY.

**Article 7:** VOTED to see if the District will authorize the Commissioners to enter into a long-term written lease, with options to extend for a period not to exceed twenty (20) years with NEXTEL Communications of the Mid-Atlantic, Inc. d/b/a Nextel Communications a Delaware corporation for the purpose of allowing the lessee to construct a building and communication tower on the land owned by the District on Great Hill located off Main Street in South Acton. The written lease shall include an annual rental during the initial five-year term based on the consumer price index. The lease shall include such other terms, conditions and limitations as the Commissioners shall deem necessary and proper to protect the public water supply, to satisfy the requirements and regulations of the Department of Environmental Protection, and to be subject to and in compliance with all conditions of a special permit issued by the Town of Acton Board of Appeals after hearing. VOTE: 19 yes, 14 no. MOTION CARRIED.

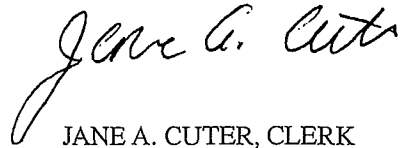
**Article 8:** VOTED to see if the District will authorize the Commissioners to enter into a long term written lease, with option to extend for a period not to exceed twenty (20) years with Sprint Spectrum L.P. d/b/a Sprint PCS, a Delaware corporation for the purpose of allowing the lessee to construct a building and communication tower on the land owned by the District at 684-686 Massachusetts Avenue in Acton. The written lease shall include an annual rental during the initial five-year term in the amount of \$20,000. with annual adjustments for each subsequent year during the term based on the consumer price index. The lease shall include such other terms, conditions and limitations as the Commissioners shall deem necessary and proper to protect the public water supply, to satisfy the requirements and regulations of the Department of Environmental Protection, and to be subject to and in compliance with all conditions of a special permit issued by the Town of Acton, Board of Appeals after hearing. VOTE: 16 yes, 21 no. MOTION FAILS.

**Article 9:** VOTED to see if the District will vote to transfer from Surplus Revenue the sum of \$40,000 to clean and rehabilitate various wells throughout the District, or to take any other action. VOTED UNANIMOUSLY.

**Article 10:** VOTED to see if the District will vote to transfer from Receipt Reserve for Appropriation Account (W.R. Grace settlement) the sum of \$55,000 for the maintenance, operation and power costs at the various treatment plants operated by the District. VOTED UNANIMOUSLY.

Meeting adjourned at 8:30 P.M.

A TRUE COPY ATTEST:

  
JANE A. CUTER, CLERK

## Water District Elections

Abstract of the proceedings of the annual election of officers of the  
Water Supply District of Acton:

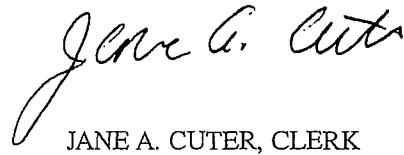
Tuesday, March 30, 1999  
held at the five (5) Precincts of the Town of Acton.  
(The polls were open from 7AM to 8PM.)

Total number of ballots cast: 3354

Commissioner for 3 years:  
Stephen Stuntz 1311

Moderator for one year:  
Richard O'Brien 1367

Clerk for 1 year:  
Jane Cutler 1365

  
JANE A. CUTER, CLERK

A TRUE COPY ATTEST:

**Water Supply District of Acton**  
**Rules, Regulations and Rates**  
Revised January 10, 2000

The following Rules and Regulations shall be considered a part of the Contract with every person using the water.

- A. All applications for the use of water are available at the Water District office, 693 Massachusetts Avenue. Demand charge schedule is set forth as follows:

PIPE SIZE	DEMAND CHARGE
1 inch	2520.00
1 1/2 inch	7440.00
2 inch	15840.00
Over 2 inch	20000.00
Multi-dwelling (per apt. or each living unit)	1200.00

	SPRINKLER DEMAND CHARGES
Buildings up to 20,000 square feet	500.00
Buildings between 20,000 square feet and 40,000 square feet	1000.00
Buildings between 40,000 square feet and 60,000 square feet	1500.00
Buildings between 60,000 square feet and 80,000 square feet	2000.00
Buildings over 80,000 square feet	2500.00

1. The demand charges are payable prior to meter installation. Pipe size and type of any installation will be determined by the Water Commissioners or their agents. Costs of installation service will be charged to applicant separate of the demand charge. Costs will be paid before the water is turned on.
2. Costs of new service installations from the water main into the unit, including meter, will be paid for by the owner or applicant before water will be turned on.
3. No person will connect, or cause to be connected, any service pipe with the main or any distributing pipes, except by order of the Water Commissioners made on such application for new service. Permanent outside sprinkler system may be installed in conformance with regulations adopted as of September 8, 1997.
4. Periodic inspection of pipes to the meter may be made by the Water District personnel. When equipment is found defective all payment for the necessary repairs between the property line and the meter will be assessed to the owner. Persons allowing their meter to be damaged by frost or otherwise will be held responsible therefore. The District will keep meters in repair from ordinary derangements.

5. All apparatus and all places supplied with water must be accessible at all reasonable times to the inspection of the Commissioners or their agents.
6. Any alteration made to any service within the Acton Water District may only be made by the Acton Water District, or authorized agents of the Water District.
7. The Water District will not in any way, nor under any circumstances, be held liable or responsible to any person or persons for any loss or damage from any excess or deficiency in the pressure, volume or supply of water, due to any cause whatsoever. The Water District will undertake to use all reasonable care and diligence to avoid interruptions and fluctuations in the service, but cannot and does not guarantee that such will not occur.
8. The Water District will not be responsible for damages caused by dirty water resulting from the opening or closing of any gates for repairs or any other reasons, the use of hydrants, or the breaking of any supply lines.
9. The Water District will endeavor to give due notice to as many of the consumers affected as time and character of the work permit whenever it may be necessary to shut off the supply from any section of the District to make repairs or changes or because of broken main, and will as far as practicable, use every effort to prevent damage or inconvenience; but failure to give such notice will not involve the Water District in any responsibility or liability for damage arising from the shutting off of any supply or any subsequent conditions arising therefrom.
10. The Water District reserves the right at any time without notice to shut off the water supply for purpose of making repairs, extensions, or other reasons, and all consumers having boilers or other appliances on their premises are hereby warned against danger of collapse from these sources and are urged to provide safety devices for their own protection. In any event the District expressly stipulates that there shall be no liability for damages resulting therefrom.
11. The Water District will not assume any liability for conditions in the consumer's plumbing or appliances, which may be the cause of trouble, coincident with, or following repairs made to any part for the supply system by the District.
12. Service pipes or fixtures of any description, that are connected with the mains of the Water District, will not under any circumstances be connected with any other sources of water supply.
13. The Water Commissioners, or their agent reserve the right to shut off water for the purpose of making alterations or repairs. A water service may be shut off from any taker for non-compliance with the Rules and Regulations, for non-payment of the water rates and for violation of Massachusetts General Laws relating to water supply. When water has been shut off because of disregard of rules or non-payment of rates it will be turned on again when the Commissioners, or their agent are satisfied that there will be no further cause of complaint and on the payment of twenty-five dollars. With the approval of the Department of Environmental Quality Engineering (Chapter 40, Section 41A of the Massachusetts General Laws), the Commissioners, or their agent reserve the right to restrict the use of water if necessary in any manner deemed appropriate.
14. The fire department will have control of the hydrants in case of fires and for necessary practice. In no other case will any persons be allowed to handle hydrants or other waste apparatus without permission of the Water Commissioners, or their agent.

15. No water taker will be allowed to supply water to others, except by special permit from the Board of Water Commissioners, or their agent and found doing so without a permit, the supply will be shut off.
16. Owners should notify the Water District to shut off water if the building becomes vacant. Water will be turned on again when the owner notifies the Water District, and upon the payment of twenty-five dollars for turn-on.
17. Water bills and repairs of existing services, must be paid in full within 30 days of the billing date. All bills for new installations, including supplies and labor must be paid in full prior to the water service turn-on.
18. The water may be turned off with proper notice when bills for water remain unpaid for fifteen days after they become due, thirty days from the date of issue. Owners of premises will be held responsible for the water bills of their tenants. Unpaid water bills are a lien on real estate, and collections may be made on the sale of the property: Massachusetts Legislature, Acts of 1923, Chapter 391.
19. Any person who shall remove, change, alter or willfully damage or injure any meter will be liable for all damages. Any change in meter location will be done under the direction of the District Manager or authorized District personnel.
20. Voted: That the District amend the By-Laws by adding a new section ten which reads as follows: "Any person violating any order restricting water use imposed by a vote of the Commissioners will be fined not more than \$200.00 for each offense, which will inure to the District for such uses as the Commissioners may direct. Fines will be recovered by the indictment or on a complaint before the District Court, or by non-criminal disposition in accordance with section twenty-one D of Chapter 40 of the General Laws. Every day that such violation continues constitutes a separate offense."
21. The District Manager, or his authorized agent, will be empowered by the Commissioners to confer with the owner to establish the number of units, measured by a given meter, to which the following rate structure will apply. The break points of the inclining block rate structure will then be multiplied by the agreed upon number of units to determine the appropriate charges.
22. Beginning July 1, 1997, the Acton Water District will be issuing two (2) bills per year. Meter reading will begin the first week in September and the first week in March. Bills will be mailed as soon as reading is complete, but no later than the first week in October and the first week in April. All bills will be based upon actual readings and all minimum charges have been eliminated. The following inclining block rate structure has been adopted, and will go into effect immediately following the final billing cycle under the old system which will be completed in April of 1997.

0 - 500 cu. ft.	billed at	.015 pr cu. ft.
501 - 5000 cu. ft.	billed at	.022 pr cu. ft.
5001 - 10000 cu. ft.	billed at	.024 pr cu. ft.
10001 - and up cu. ft.	billed at	.025 pr cu. Ft.

All owners having used less than 100 cubic feet of water will be billed at the next actual water billing cycle.

There is a minimum charge of \$5.00 for closing costs on property transfers where there has been no water use from the date of the last actual water bill.

Water rates, demand charges, rental fees, hydrants and sprinklers and other charges imposed by the District will be determined by vote of the Commissioners at a regular or special meeting of the Commissioners.

23. If a meter is out of order and fails to register, the consumer will be charged at the average daily consumption as shown by the meter when in order. An average will be taken of the last three (3) corresponding readings.
24. Any and all penalties for violations of these regulations or arrearages for non-payment of water rates or charges may be collected as authorized by law in a civil action.
25. The Commissioners will regulate the use of water in such manner as they deem for the best interest of the District, fix and collect prices and rates for the use thereof, prescribe the time and manner of the payment of such prices and rates. The Commissioners will have exclusive charge and control of the water department and water system, subject to all lawful by-laws, and subject to such instructions as the District may from time to time impose by its vote.
26. The Water District will have an inspector on sites where new water main and necessary fittings are installed in new developments, private roads, business and commercial sites. The Water District will charge an hourly fee which will be paid to the Water District by the owner, contractor or developer. All materials used will meet the specifications of the Water Supply District of Acton.
27. No person will turn on or tamper with a water main or hydrant or other device used for water supply. Any person violating said section will be fined not more than \$200.00 for each offense, which will inure to the District or recovered by indictment or on complaint before the District Court or by non-criminal disposition in accordance with Section 21D of Chapter 40 of the General Laws. Every day that such violation continues will constitute a separate offense. This section will not curtail the fire department or Water District in the normal course of providing fire protection or water supply.
28. Any person making application for water use having a design demand in excess of 5,000 gallons per day, will submit a concept plan with sufficient information so that the Water District can generate a Water Impact Report. This report will: 1) define the plans impact on the District's current/future water demand and existing water supply system, and 2) stipulate conditions that the applicant will meet to mitigate the effects of this impact. The Water Impact Report will be reviewed and approved by the Water Commissioners. Costs associated with generating the Water Impact Report will be borne by the applicant.
29. All new Industrial and Commercial Establishments attached to the Acton Water System may be required to install, at the service entrance and immediately downstream of the meter, a Reduced Pressure (RP) Back Flow Device. A survey of the new industrial or commercial establishment will determine the need for said device. The device must be approved by the Acton Water District, and all costs will be paid by the owner/s, and or the person/s to whom the bills are so assigned.
30. Effective September 8, 1997, the Board of Water Commissioners voted to remove the moratorium on underground lawn sprinkler systems.



31. Underground Lawn Sprinkler Regulations Effective September 8, 1997

- i. All automatic lawn watering systems, connected to the public water supply, must be equipped with a timing device that can be set to make the system conform to the District's odd/even outdoor watering restrictions.
  - ii. All automatic lawn watering systems must be equipped with some type of moisture sensing device that will prevent the system from starting automatically when not needed.
  - iii. All automatic lawn watering systems must be installed with an approved backflow prevention device (Watts 800 or equal). Said device will be inspected initially by the plumbing inspector, and may be inspected periodically after that by water district employees.
  - iv. Any person who now has, or who intends to install an automatic lawn watering system, must notify the Water District office of the existence of said system, or of their intention to install a new system prior to the actual installation. All systems, those currently in existence, as well as any installed in the future, must comply with all the Rules and Regulations adopted on this date.
  - v. Any system not in conformance with the above criteria may be disconnected from the public water supply system.
32. Any new water service or fire line from the water main to a dwelling, building or structure will be in a separate, underground trench. No other utility (i.e., gas, electric, telephone, cable TV) will be in the same trench unless the District Manager determines that the ground conditions prevent a separate trench. In such cases, a suitable plan prepared by a registered professional engineer will be submitted to the District Manager and DigSafe for approval to insure safety and accessibility for repair, replacement or inspection of the lines located in the same trench.
33. Insufficient fund checks will be charged as provided by Section 44 of Chapter 69, Massachusetts General Laws, and the "Rules and Regulations" of the District as adopted December 12, 1994.
34. Acton Water District Regulations for VOCs  
Revised per January 10, 2000 Water Commissioners Meeting

**Acton Water District VOC Action Levels**

The Acton Water District will set an Action Level of one part per billion (ppb) for all regulated VOCs (those that have MCLs specified by Massachusetts DEP or EPA). These 22 VOCs currently have MCLs that range from 2 ppb to 10,000 ppb, depending upon their health effects.

If at any time the DEP or EPA sets a new MCL for any VOC, that VOC would automatically fall under these regulations. If at any time the DEP or EPA sets an MCL for a VOC that is lower than 1 part per billion, the lower standard will prevail and become a revised standard for the Acton Water District.

The detection of any VOC at or above state or federal MCLs would require the Acton Water District to follow, in addition to these regulations, all applicable requirements of 310 CMR 22.00.

### **Action Level Detection: Follow Up Procedures**

If at any time one of the attached VOCs is detected at or above 1 part per billion, the District will conduct follow up testing within 10 days of receipt of original results to confirm the test results. If the average of follow up testing and original results are confirmed at greater than 1 ppb, the data will be presented at the next Water Commissioner's meeting. Unless the Commissioners decide that immediate action is warranted, the District will continue to monitor the well for three additional quarters. If, at the end of the third quarter of sampling, the average of the initial results and the three quarters is greater than the Action Level, the District shall develop a Plan of Action.

### **Action Level Exceedance: Follow Up Procedures**

#### **Development of Draft Plan of Action**

Within 30 days of discovering an Action Level exceedance, the Water District will develop a draft plan of action that includes:

1. Detailed list of all detections of VOCs for the source(s) in question
2. Anticipated and possible health effects
3. Plans to investigate source of VOCs
4. If multiple VOCs present, anticipated interactive effects
5. Source of VOCs, if known
6. Remediation options with estimated costs/timeframes of each option
7. Recommended option/timeframes, with rationale for recommendation

#### **Development of Final Plan of Action**

The draft plan will be presented at special (publicized) Water Commissioner's Meeting where input from registered town voters will be solicited. A copy will be sent to the Board of Health. The plan will then be finalized within 30 days of receipt of comments, and described in the District's next Water Words, in a *Beacon* article, and posted on the District's web site.

By Order of The Acton Water Commissioners  
Ronald R. Parenti, Chairman  
Stephen C. Stuntz  
Leonard A. Phillips

## **Water Filters**

The Acton Water District has adopted a guideline concerning the public use of filter devices on the water supply system. This is based on a general policy promulgated by the D.E.Q.E. (DWS Policy 88-07), advising water purveyors to prohibit the use of such devices on the drinking water supply. Although properly designed barrier filters have proven effective on screening contaminants out of influent streams, concern exists regarding an efficiently implemented maintenance program to assure successful and continued operation. A clogged or abused water filter could foster potential conditions for bacteria to thrive, thus contributing to in-line contamination of the drinking water supply.

## **Water Filter Guidelines**

The Water Supply District of Acton prohibits the installation by public water consumers of any device in the domestic water supply, including, but not limited to Point of Entry or Point of Use filters that are utilized within the confines of the consumer's premises. Regulatory Agencies, including the Department of Environmental Quality Engineering and the Department of Health are not recommending these systems for utilization in the drinking water supply system. Such devices are considered potentially deleterious to Public Health, because they promote the proliferation of bacterial and viral growth and development.

## **Underground Lawn Sprinkler Regulations Effective September 8, 1997**

1. All automatic lawn watering systems, connected to the public water supply, must be equipped with a timing device that can be set to make the system conform to the District's odd/even outdoor watering restrictions.
2. All automatic lawn watering systems must be equipped with some type of moisture sensing device that will prevent the system from starting automatically when not needed.
3. All automatic lawn watering systems must be installed with an approved backflow prevention device (Watts 800 or equal). Said device will be inspected initially by the plumbing inspector, and may be inspected periodically after that by water district employees.
4. Any person who now has, or who intends to install an automatic lawn watering system, must notify the Water District office of the existence of said system, or of their intention to install a new system prior to the actual installation. All systems, those currently in existence, as well as any installed in the future, must comply with all the Rules and Regulations adopted on this date.
5. Any system not in conformance with the above criteria may be disconnected from the public water supply system.

## **BY-LAWS TO REGULATE THE NOMINATION AND ELECTION OF OFFICERS OF THE DISTRICT**

- i The purpose of the By-Laws hereinafter set forth are to regulate the nomination and election of officers for the District so that the voter's of the District may have knowledge of the candidate prior to an election.
- ii All elections to any office in the District shall be by means of a printed ballot. This ballot shall be caused to be printed by the Commissioners acting as election officers from information furnished to them by the Clerk of the District as provided hereinafter.
- iii No person's name shall be printed on the ballot unless he or someone on his behalf has submitted nomination papers signed by fifty registered voters of the District, setting forth the office for which he is a candidate and containing a statement signed by the candidate that he will accept the office, if elected. Nomination papers of a candidate for office of the District shall be filed with the Clerk of the District in accordance with Chapter 53, Section 10 of General Laws, Submission to the Registrar of Voters shall be in accordance with Chapter 41, Section 115 of the General Laws.
- iv Nothing here-in shall be construed as preventing a vote by sticker's or writing in the name of a candidate, all as provided in the General Laws, except that not such sticker or write-in candidate shall be deemed to be elected unless he has received valid votes equivalent to 1% of the total of the number of registered voters in the District, as hereinafter determined.
- v The Commissioners, acting as election officer's, shall prepare as of twenty (20) days prior to the Annual Election, a list of eligible voters from the official voting list of the Town of Acton as of that time. This list will remain closed until after the Annual Meeting of the District. The list will then be reviewed and revised for all subsequent Special Meetings, up to the day of the Special Meeting. These lists will then be used to determine the night of any person to vote at any election or any meeting of the District.
- vi All candidates elected to offices in the District will be sworn to the performance of their duties by the Clerk of the District, except in the case of the Clerk, who will be sworn by any of the Commissioners. The Clerk will record the facts in the minutes of the meeting.
- vii Elections and Nominations of District officers will be conducted in accordance with chapters fifty-six, inclusive, of the General Laws so far as applicable, except as otherwise provided in sections one hundred and fourteen to one hundred and seventeen of Chapter 41 of the General Laws, inclusive, and except as otherwise provided by the District By-Law.

## By-Laws

as (adopted and amended to March, 1994)

- i The Annual Meeting of the Water Supply District will be held on the third Wednesday of March, of each year for the transaction of the necessary business connected with the District, and Election of Officers will be held on the last Tuesday of March of each year. The time and place of holding such election and vote shall be stated in the warrant for the Annual Meeting and such election and vote shall be deemed part of the Annual District Meeting.
- ii All meetings may be called by a majority of the Board of Water Commissioners, directed to the Clerk, or as specified in Chapter 326 of the Acts of 1912, Section 8.
- iii All warrants shall be posted at least fourteen (14) days before the time of the meeting.
- iv The Clerk will preside at each meeting until a Moderator is chosen.
- v At each Annual Election Day there will be elected by ballot, one Commissioner for a term of three years, a Clerk and a Moderator who will serve for one year.
- vi If a vacancy should occur for any cause in the office of Clerk, Treasurer, or any other officer of the District except the Board of Water Commissioners, it may be filled for any such unexpired term by the Water Commissioners.
- vii The Board of Commissioners will annually in the report of the District, give an estimated budget for the ensuing year.
- viii a.) The moderator will appoint a Finance Committee to advise the Commissioners. The Committee will consist of three voters of the District and will be appointed in the following manner:
  - One member will be appointed for one year;
  - One member will be appointed for two years; and
  - One member will be appointed for a term of three years.Thereafter, each appointment will be for a term of three years.
- b) No member of the Finance Committee may serve any other standing committee of the District or the Town of Acton having to do with expenditure of funds.
- c) The Finance Committee will review the budget for the Annual Meeting and will make recommendations to the Commissioners on any matters of a financial nature arising out of an Annual or Special Meeting, and will make recommendations as to the long range fiscal plans of the District.
- ix The Commissioners will appoint annually a Treasurer/Collector, which office will have all the powers and duties conferred by law upon a Collector of Taxes and District Treasurer.
- x Any person violating any order restricting water use imposed by vote of the Commissioners will be fined not more than \$200.00 for each offense, which will inure to the District for such uses as the Commissioners may direct. Fines will be recovered by indictment or on a complaint before a District Court, or by non-criminal disposition in accordance with section Twenty-one D of Chapter 40 of the General Laws. Every day that such violation continues will constitute a separate offense.
- xi a) A five member Water-Land Management Advisory Committee is hereby established. Two members to be appointed by the Commissioners for a term of three years, two members to be appointed by the Moderator of the District for a term of two years, one member to be appointed by the Selectmen for a term of one year. Thereafter, each appointment will be for a term of three years.

- b) The Advisory Committee will review and make recommendations to the Commissioners on matters relating to water and land management policies of the District, and will make recommendations to the Commissioners on any matter relating to agreement authorized under the "By-Law to Regulate the Removal of Sale, of Sand and Gravel, from Lands in District Use," and will undertake such other tasks related to water and land management as the Commissioners deem appropriate.
- xii No person will turn on or tamper with a water main or hydrant or other device used for water supply or install a bypass around a water meter without first procuring a written permit to do so from the Manager of the Water District. Any person violating said section will be fined not more than \$200.00 for each offense, which will inure to the District for such uses as the Commissioners may direct. Fines will be recovered by the indictment, on complaint before the District Court, or by non-criminal disposition in accordance with Section 21D of Chapter 40 of the General Laws. Every day that such violation continues will constitute a separate offense. This section will not curtail the fire department or Water District in the normal course of providing fire protection or water supply.
- xiii a) No person will maintain upon premises which they own or occupy, a physical cross connection between distribution system of a public water supply, the water which is being used for drinking, domestic, or culinary purposes, and the distribution system of any unapproved water supply, unless the installation has been reviewed and approved by the Water District and permits have been issued in accordance with the Drinking Water Regulations of the Department of Environmental Quality Engineering.
- b) That the Water District will have the authority to terminate any water source to any facility where cross connections are maintained without required backflow prevention devices which have been approved by the District.
- c) That the Commissioners will enact such Cross Connection Control Program and Regulations as are necessary to protect the public potable water supply served by the District from the possibility of contamination or pollution by isolating within its customer's internal distribution system, such contaminants or pollutants which could backflow or back-siphon into the public water system; and to promote the elimination or control of existing cross connections between its customers; in-plant potable water system, and non-potable water system; and to provide for maintenance of a continuing program of cross connection control which will effectively prevent the contamination or pollution of all potable water systems by cross connection.
- xv Section 1 - Authority:

This By-Law is adopted by the District under Chapter 326 of the Acts of 1912, its police powers to protect public health and welfare and its specific authorization under Massachusetts General laws Ch. 41, Section 69B: Ch. 40 Section 41A.

#### Section 2 - Purpose:

The purpose of this By-Law is to protect, preserve, and maintain the public health, safety and welfare whenever there is a state of water supply emergency in force, by providing for enforcement of any duty imposed restrictions, requirements, provisions or conditions imposed by the District or by the Department and included in the District's plan approved by the Department of Environmental Protection to abate the emergency.

#### Section 3 - Definitions:

For the purpose of the By-Law: Enforcement authority will mean the District's Board of Water Commissioners having the responsibility for the operation and maintenance of the water supply; the Town police, special police, and any other locally designed body having police powers.

State of water supply emergency means a state of water supply emergency declared by the Department of Environmental Protection pursuant to G.L.c.21G, Section 15, 16, 17:G.L.c111, Section 160, or by the Governor.

#### Section 4 –

The following applies to all users of water supplied by the District. Following notification by the District of the existence of a state of water restriction included in a plan approved by the Department of Environmental Protection which has as its purpose the abatement of a water supply emergency. Notification of any provision, restriction, requirement, or condition with which users of water supplied by the District are required to comply to abate a situation of water emergency will be sufficient for purposes of this By-Law if it is published in a newspaper of general circulation within the Town of Acton or by such users of the District Supply.

#### Section 5 - Penalty:

Any person or entity who violates this By-Law, shall be liable to the District in the amount of \$50.00 for the first violation and \$100.00 for each subsequent violation which will inure to the District for such uses as the Board of Water Commissioners may direct. Fines will be recovered by indictment or on complaint before the District court, or by will inure to the District for such uses as the Board of Water Commissioners may direct. Fines will be recovered by indictment or on complaint before the District court, or by non-criminal disposition in accordance with Section 21D of Chapter 40 of the General Laws. Each separate instance of noncompliance following the issuance of any warning or citation pursuant to this section shall constitute a separate violation.

#### Section 6 - Right of Entry:

Agents of the enforcement authority may enter any property, except the interior of a domicile, for the purpose of inspection or investigating any violation of the By-Law or enforcing against the same.

#### Section 7 - Severability:

The invalidity of any portion or provision of this By-Law shall not invalidate any other portion, provision or section hereof.

#### xvi By-Law to Regulate Underground Water Sprinklers

- a) No person shall install, repair, replace, or alter a permanent outdoor underground water sprinkler connected to the public water supply except as provided by this By-Law.
- b) Applications to the District for the installation and use of permanent outdoor underground lawn sprinklers will be signed by the owner(s) of the premises where it is desired, or by a duly authorized agent, and will be made in writing. The application will contain such information as shall be prescribed by the Commissioners.
- c) The Commissioners will make such rules and regulations relating to the installation, repair, maintenance, replacement or alteration of permanent outdoor underground lawn sprinklers, which rules and regulations may specifically prohibit the installation of same, or may regulate such maintenance replacement or alteration; and may provide for design criteria which includes, but are not limited to, rain gauges, automatic timers, back-flow devices, shut-off devices, electric controls, and the like, and will include fees to be paid to the District by the applicant or owner.

- d) The Commissioners will have the authority and the duty to adopt, issue and administer rules and regulations, for the administration and operation of permanent outdoor underground lawn sprinklers connected to the public water supply.
- e) No permit granted prior to the effective date of this By-Law will be deemed invalid because of having been granted either by the Board of Health of the Town of Acton, or the District Manager, or both; provided, however, it will be the responsibility of the owner(s) to produce written evidence of the same. Any permanent underground water sprinkler legally installed prior to the effective date of this By-Law which becomes defective or requires replacement or repair will be subject to this By-Law and the rules and regulations adopted by the Commissioners from time to time.
- f) If the Commissioners find that any provision of this By-Law is being violated, the Commissioners will notify in writing the person(s) deemed responsible for such violation, indicating the nature of the violation, and ordering the necessary to correct it.
- g) Any person violating this By-Law will be fined not more than \$200.00 for each offense, which will inure to the District for such uses as the Commissioners may direct. Fines will be recovered by indictment or on complaint before the District Court or by noncriminal disposition in accordance with 21D of Chapter 40 of the General Laws. Every day that such violation continues will constitute a separate offense. This section will not curtail the Board of Health or Plumbing Inspector, Town of Acton, from seeking enforcement under other applicable provisions of law.
- h) The provisions of this By-Law, as amended from time to time, are separable. If any provisions of the By-Law, or any amendments thereto, is held invalid, the other provisions of the By-Law will not be affected thereby. If the applicant of such provision, or any amendments thereto, is held invalid the applications of such provision to other person and circumstance will be affected thereby.

xvii      Addition to By-Laws

The owner of property supplied will be charged for all water furnished to the premises during ownership of the premises. When ownership changes, the name and mailing address of the new owner will be given to the Treasurer/Collector of the District, at once, so that bills may be properly rendered.

The property owner must keep the water meter on the premises easily accessible for reading at all times, and will not tamper with the meter in any way. Each ownership must be separately served and metered so that each water user can be denied water service without disrupting service to other owners.

All new construction will require separate service lines and meters.

xviii      By-Law as amended March 16, 1994 (Article 28)

Section One:

By-Law to reduce the local daily and seasonal peak water use.



#### Section Two:

The purpose of this By-Law is to implement a number of water efficiency and conservation measures and by so doing provide reductions in overall demand in the District's service area. The goal is to achieve maximum water efficiency in the local public water system, domestic and non-domestic users. The overall objectives are:

- a) To make water conservation a priority in all water related decision making at the local level.
- b) To reduce or eliminate the waste of water through appropriate water supply management practices.
- c) To promote conservation of all water resources by all consumers through the introduction of technology, methods and procedures designed to increase the efficient use of water.
- d) To encourage innovations in technology, policy and management.
- e) To maximize the efficient use of existing supplies prior to allocating additional resources.
- f) To promote public awareness of the long term economic environmental benefits of conserving water by implementing practical measures within the District's service area.
- g) To monitor consumption and facilitate accurate annual billing of users and collection of water rates.

#### Section Three:

##### Definition:

For the purpose of this By-Law: Enforcement authority will mean the District's Board of Water Commissioners, or District Manager, having the responsibility for the operation and maintenance of the water supply; the Town police, special police and other locally designated bodies having police powers.

#### Section Four:

- a) The following applies to all user's of water supplied by the District. Following appropriate notification of the District of the necessity to impose water restrictions, including, but not limited to, regulating the outside use of water for any purpose, the Commissioner may impose restrictions by a vote of the Commissioner's at a regular or special meeting of the Board.
- b) Notification of any restriction, requirement or condition to conserve water will be sufficient for the purpose of this By-Law if it is published in a newspaper of general circulation within the Town of Acton, or by such other notice as is reasonably calculated to reach and inform users of the District's supply.

Upon notification to the water takers, violators will be subject to lawful order of the Commissioners, including, but not limited to, shutting off the water meter or at the curb cock, or by other means as the case may be, during drought, hurricane, conflagration or other disaster which in the opinion of the Commissioners may exist.

Section Five:

Penalty:

Any person or entity who violates this By-Law, or order or notification, will be liable to the District in the amount of \$300.00 which will inure to the District for such use as the Commissioners may direct. Fines will be recovered by indictment or upon complaint before the District Court or by non-criminal disposition in accordance with Section 21D of Chapter 40 of the General Laws as amended. Each separate instance of non-compliance following issuance of a warning or citation pursuant to this section will constitute a separate violation.

Section Six:

Permanent Orders of the Commissioners:

Unless discontinued, or modified, in whole or in part, the following orders will be considered in effect as of March 16, 1994:

- a) Outside use of water will be restricted between May 1st and October 1st each year on such terms as the Commissioners may determine.
- b) All final water bills requested by owners, purchasers, or others, serviced by the District's authorized personnel will require an inside meter reading by authorized District personnel.

Section Seven:

Right of Entry:

Except as provided in Section 6(b), Agents of the enforcement authority may enter any property, except the interior of a domicile, for the purpose of inspecting or investigating any violation of the By-Law or enforcing against the same.

Section Eight:

Severability:

The invalidity of any portion or provision of the By-Law will not invalidate any other portion, provision or section thereof.

xix Regulate the Removal and Sale of Sand and Gravel from Lands in District Use

Section 1. The purpose of this By-Law is to regulate the removal of sand and gravel on lands owned or leased by the District so as to promote safe and sound economic development, improvement and management of said land; and protect and preserve the purity of the water supply, wells and aquifers.

Section 2. The Commissioners will fix a reasonable time for a public hearing on any proposal for removal and sale of sand and gravel from land in District use. Notice of the public hearing will be given at least two weeks prior to the hearing in a local newspaper, and by mailing a copy of said notice to the owners of all property within five hundred (500) feet of the property line of the District land as they appear on the most recent applicable tax list. Included in the list of owners shall be abutters, owners of land directly opposite on any public or private street, and abutters to abutters within the five hundred (500) feet aforesaid.

The public hearing will be held no later than 21 days prior to the business meeting of the District which includes an appropriate warrant article for action by voters of the District. Action by voters of the District on any article permitting the Commissioners to enter into a written contract for removal and/or sale of earth materials from lands of the District shall require a two-thirds vote. At the public hearing the Commissioners will present evidence of the need for excavation; a site specific map of wetlands, limits of 100 year flood plain, vegetation, surface topography (before and after,) property lines and adjacent land uses, and estimation of high water table on the land.

Section 3. In entering into a written contract not to exceed one year, the Commissioners will impose conditions and specifications including but not limited to the following:

- A. A detailed plan showing limits and phases of excavation.
- B. Specific and reasonable hours of operation, including truck arrival and departure.
- C. Required stockpiling of topsoil for use in restoration.
- D. Prohibition of excavation within 10 feet of the annual high water table.
- E. Prohibition of removal within 100 feet of property lines and existing public ways.
- F. Limitation of work faces to 10 vertical feet and requirement that all faces will be broken down to their natural angle of repose at the end of each working day. Any existing non-complying faces will be reduced as fast as safety and practical engineering permit.
- G. Maintenance of natural vegetation on undisturbed land for screening and noise reduction purposes, and provision for dust suppression on the site.
- H. A requirement that restoration be carried on simultaneously with excavation, so that when any three acres operation area has been excavated, at least two acres will be restored before work commences on the next contiguous three acres, so that at no time, will anymore than four acres be unrestored.
- I. Provisions to grade slopes safely, loam and revegetate all disturbed areas.
- J. Removal of debris, stumps, boulders, etc. from the site and dispose of in an approved location or in the case of inorganic matter, buried and covered with at least two feet of soil.
- K. A requirement that all retained subsoil and topsoil be spread over the disturbed area and seeded. Trees or shrubs of prescribed species will be planted to provide screening and reduce erosion during the establishment period.
- L. A requirement that final restoration work be completed within 60 days, weather permitting, after completion of excavation operations.
- M. A requirement of posting of surety bond, performance and payment bond, or other adequate security to insure compliance with terms of the contract.
- N. Regular inspection by the Commissioners or their agent at reasonable hour to insure that contract provisions are being adhered to, and provision for halting operation for any violation.
- O. Other appropriate conditions, limitations and safeguards as the Commissioners deem necessary for the protection of the public health, safety, convenience and welfare, and for protection and preservation of the purity of the water.

# **Regulations for the Control of Backflow and Cross-Connections Water Supply District of Acton**

June 11, 1990

## **SECTION 1. CROSS-CONNECTION CONTROL AUTHORITY**

As provided in the Federal Safe Drinking Water Act of 1974 (Public Law 93-523); and under the provisions of Massachusetts General Laws, Chapter 41, Section 69B; Massachusetts Drinking Water, Regulations, 310 C.M.R., Section 22.22; and Section 13, of the By-Laws of the Water Supply District of Acton, the water purveyor, has the primary control and responsibility for preventing water from unapproved sources, or any substances, from entering the public potable water system. The said Water Supply District of Protection, "As Corrected", is acting as the Department's designee as provided in 310 C.M.R., Section 22.22.

## **SECTION 2. CROSS-CONNECTION CONTROL - GENERAL POLICY**

2.1 Purpose The purpose of this regulation is:

2.1.1 To protect the public potable water supply of the area served by the Water Supply District of Acton (hereinafter referred to as Water Supply District) from the possibility of contamination or pollution by isolating within its customer's internal distribution system(s) or its customers private water system(s) such contaminants or pollutants which could backflow or backsiphon into the public water supply system; and

2.1.2 To promote the elimination or control of existing cross-connections, actual or potential, between its customers in-plant potable water system(s) and nonpotable systems, plumbing fixtures and industrial piping systems; and

2.1.3 To provide for the maintenance of a continuing program of cross connection control which will systematically and effectively prevent the contamination or pollution of all potable water systems by cross-connection.

2.2 Responsibility The Manager of the Water Supply District of Acton (hereinafter referred to as District Manager) will be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow or backsiphonage of contaminants or pollutants through the water service connection. If, in the judgement of said District Manager an approved backflow prevention device is required, at the District's water service Connection to any customers premises, for the safety of the water system, the District Manager or his designated agent will give notice in writing to said customer to install such an approved backflow prevention device at each service connection to his premises. The customer will, within 30 days, install such approved device or devices at his own expense, and failure, refusal or inability on the part of the customer to install said device or devices within 30 days constitutes grounds for discontinuing water service to the premises until such device or devices have been properly installed.

## **SECTION 3. DEFINITIONS**

3.1 District Manager The District Manager, or his designated agent, in charge of Water District is invested with the authority and responsibility for the implementation of an effective cross- connection control program and for the enforcement of the provisions of this ordinance.

3.2 Approved Accepted by the District Manager as meeting an applicable specification stated or cited in this regulation, or as suitable for the proposed use.

3.3 Auxiliary Water Supply Any water supply on or available to the premises other than the purveyor's approved public potable water supply.

3.4 Backflow The flow of water or other liquids, mixtures, or substances under pressure into the distributing pipes of a potable water supply system from any source or sources other than its intended source.

3.5 Back-siphonage The flow of water or other liquids, mixtures, or substances into the distribution pipes of a potable water supply system from any source other than its intended source caused by the sudden reduction of pressure in the potable water supply system.

3.6 Backflow Preventer A device or means designed to prevent backflow siphonage.

3.6.1 Air-Gap The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device and the flood rim of said vessel. An approved air-gap shall be as required by Water District standards.

3.6.2 Reduced Pressure Principle Device An assembly of two independently operating approved check valves with an automatically operating differential relief valve between the two check valves, tightly closing shut-off valves on either side of the check valves, plus properly located test cocks for the testing of the check and relief valves.

3.6.3 Double Check Valve Assembly An assembly of two independently operating approved check valves with tightly closing shut-off valves on each side of the check valves, plus properly located test cocks for the testing of each check valve.

3.6.4 Pressure Vacuum Breaker A device containing one or two independently loaded check valves and an independently operating loaded air inlet valve located on the discharge side of the check or checks.

3.7 Contamination Means an impairment of the quality of the potable water by sewage, industrial fluids or waste liquids, compounds or other materials to a degree which creates an actual hazard to the public health through poisoning or other serious health effects or otherwise be hazardous to the health and safety, or through the spread of disease.

3.8 Cross-Connection Any physical connection or arrangement of piping or fixtures between two otherwise separate piping systems one of which contains potable water and the other non-potable water, or industrial fluids of questionable safety, through which, or because of which, backflow or back-siphonage may occur into the potable water system.

3.9 Cross-Connections - Controlled A connection between a potable water system and a non-potable water system with an approved backflow prevention device properly installed that will continuously afford the protection commensurate with the degree of hazard.

3.10 Cross-Connection Control by Containment The installation of any approved backflow prevention device at the water service connection to any customers premises, or the installation of an approved backflow prevention device on the service line leading to and supplying a portion of a customers water system where there are actual or potential cross-connections which cannot be effectively eliminated or controlled at the point of cross-connection.

3.11 Hazard, Degree of The term is derived from an evaluation of the potential risk to public health and the adverse effect of the hazard upon the potable water system.

3.11.1 Hazard - Health (High Hazard) Any condition, device, or practice in the water supply system and its operation which could create, or, in the judgement of the Water District Manager, may create a danger to the health and well being of the water consumer.

3.11.2 Hazard - Plumbing (High Hazard) A plumbing type cross-connection in a consumers potable water system that has not been properly protected by a vacuum breaker, air-gap separation or back-flow prevention device. Unprotected plumbing type cross-connections are considered to be a health hazard.

3.11.3 Hazard - Pollution (Low Hazard) An actual or potential threat to physical properties of the water system or to the potability of the public or the consumers potable water system, but which would constitute a nuisance or be aesthetically objectionable, or could cause damage to the system or its appurtenances, but would not be dangerous to health.

3.12 Industrial Fluids System Any system containing a fluid or solution which may be chemically biologically, or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollutional or plumbing hazard if introduced into an approved water supply.

3.13 Pollution Means the presence of any foreign substance (organic, inorganic, or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health, but which does adversely and unreasonably affect such waters for domestic use.

3.14 Water - Potable Water from a source which has been approved by the Massachusetts Water Supply and Pollution Control Commission for human consumption.

3.15 Water - Non-Potable Water which is not safe for human consumption, or which is of questionable potability.

3.16 Water - Service Connections The terminal end of a service connection from the public potable water system; i.e., where the water purveyor loses jurisdiction and sanitary control over the water at its point of delivery to the customers water system. If a meter is installed at the end of the service connection, then the service connection will mean the downstream end of the water. Service connection shall also include water service connection from a fire hydrant and all other temporary or emergency water service connections from the public potable water system.

3.17 Water - Used Any water supplied by a water purveyor from a public potable water system to a consumer's water system after it has passed through the point of delivery, and is no longer under the sanitary control of the water purveyor.

## **SECTION 4. REQUIREMENTS**

### **4.1 Water System**

4.1.1 The water system will be considered as made up of two parts; the utility system and the customer system.

4.1.2 Utility system shall consist of the source facilities and the distribution system; and will include all those facilities of the water system under the complete control of the utility, up to the point where the customer's system begins.

4.1.3 The source will include all components of the facilities utilized in the production treatment, storage, and delivery of water to the distribution system.

4.1.4 The distribution system will include the network of conduits used for the delivery of water from the source to the customers system.

4.1.5 The customers system will include those parts of the distribution system which provide domestic drinking water to all internal areas of the customers facilities. The customers system begins at the end of the Water District's distribution providing potable water.

## 4.2 Policy

4.2.1 No water service connection to any premises will be installed or maintained by the Water District unless the water supply is protected as required by Massachusetts State Law, and this regulation. Service of water to any premises will be discontinued by the Water District if a backflow prevention device required by this regulation is not installed, tested and maintained, or if it is found that a backflow prevention device has been removed, by-passed, or if an unprotected cross-connection exists on the premises. Service will not be restored until such conditions or defects are corrected.

4.2.2 The customers system should be open for inspection at all reasonable times to authorized representatives of the Water District to determine whether cross-connections or other structural or sanitary hazards, including violations of this regulation exist. When such a condition becomes known, the District Manager shall deny or immediately discontinue service to the premises by providing for a physical break in the service line until the customer has corrected the condition(s) in conformance with state and local statutes relating to plumbing and water supplies and the regulations adopted pursuant thereto. All expenses relating to the disconnection and reconnection will be at the customers expense.

4.2.3 An approved backflow prevention device where required in accordance with Section 2.2 above, will be installed on each service line to a customer's water system at or near the property line or immediately inside the building being served; but, in all cases, before the first branch line leading off the service line wherever the following conditions exist.

4.2.3A In the case of premises having an auxiliary water supply which is not or may be of safe bacteriological or chemical quality and which is not acceptable as an additional source by the Water District or Department of Environmental Protection, or the Acton Board of Health, the public water system will be protected against backflow from the premises by installing a backflow prevention device in the service line appropriate to the degree of hazard.

4.2.3B In the case of premises on which any industrial fluids or any other objectionable substance is handled in such a fashion as to create an actual or potential hazard to the public water system, the public water system will be protected against backflow from the premises by installing a backflow prevention device in the service line appropriate to the degree of hazard.

4.2.3C In the case of premises having (1) internal cross-connection that cannot be permanently corrected and controlled or (2) intricate plumbing and piping arrangements, or where entry to all portions of the premises is not readily accessible for inspection purposes, making it impracticable or impossible to ascertain whether or not dangerous cross-connections exist, the public water system will be protected against backflow from the premises by installing a backflow device in the service line.

4.2.4 The type of protective device required under subsections 4.2.3A, B, C will depend upon the degree of hazard which exists as follows:

4.2.4A In the case of any premises where there is an auxiliary water supply as stated in subsection 4.2.3A of this section; or

4.2.4B Where there is any material dangerous to health which is handled in a fashion as to create an actual or potential hazard to the water system; or

4.2.4C Where there are "uncontrolled" cross-connections, either actual or potential, the public water system will be protected by an approved air-gap separation or an approved reduced pressure principal backflow prevention device at the service connector.

4.2.4D In the case of any premises where there is water or substance that would be objectionable but not hazardous to health, if introduced into the public water system, the public water system will be protected by an approved double check valve assembly.

4.2.4E In the case of any premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete implant cross-connection survey, the public water system will be protected against backflow or back-siphonage from the premises by the installation of a back-flow prevention device in the service line. In this case, maximum protection will be required; that is; an approved air-gap separation or an approved reduced pressure principle backflow prevention device will be installed in each service to the premises.

4.2.5 Any backflow prevention device required herein will be of a mode and size approved by the District Manager. The term "approved backflow prevention device" will mean a device that is on the "approved list of backflow preventers and double check valves" as described in the Drinking Water Regulations of Mass., (310 C.M.R., 22.22) Department of Environmental Protection, as the same may be amended from time to time. Said approval lists have been adopted by the District Manager.

4.2.6 It will be the duty of the customer-user at any premise where backflow prevention devices installed to have certified inspections and operational tests made at least once per year as required under Mass. regulations and this regulation. The Water District will conduct testing on these devices twice a year. The owner of the device will be charged for these tests. The Water District may have these tests performed by a designated representative.

In those instances where the District Manager deems the hazard to be great enough, he may require certified inspections at more frequent intervals. These inspections and tests will be at the expense of the water user and will be performed by Water District personnel, or by a certified tester approved by the District Manager, and approved by the State of Massachusetts. It will be the duty of the District Manager to see that these timely tests are made. The District Manager will notify the customer-user in advance when the tests are to be undertaken so that he or his representatives may witness the test if so desired. These devices will be repaired, overhauled, or replaced at the expense of the customer-user whenever said devices are found to be defective. Records of such tests shall be kept by the District Manager.

4.2.7 All presently installed backflow prevention devices which do not meet the requirements of this section, but were approved devices for the purposes described herein at the time of installation and which have been properly maintained, will, except for the inspection and maintenance requirements under subsection 4.2.6, be excluded from the requirements of these rules, so long as the District Manager is assured that they will satisfactorily protect the utility system. Whenever the existing device is moved from the present location or requires more than the maintenance, or when the District Manager finds that the maintenance constitutes a hazard to health, the unit will be replaced by a backflow prevention device meeting the requirements of this section.

4.2.8 All industrial and commercial establishments attached to the Water District are required to install at the service entrance immediately downstream of the meter, a reduced pressure (RP) backflow device.

4.2.9 All decisions relating to determination of backflow devices will be made by the Commissioners or District Manager. Failure to comply with any directive from this office will result in termination of service.

5.1 All testing and or maintenance performed on backflow devices by the Water District or its agent will be charged to the owner of the device.

Rules and Regulations adopted by the Commissioners of the Water Supply District of Acton, June 11, 1990, at a Regular meeting of said Commissioners.

Ronald R. Parenti  
Leonard A. Phillips  
Stephen C. Stuntz



## Fee Schedule for Backflow and Cross-Connections

June 11, 1990

- A. Survey Fees  
\$55.00 - first hour or part thereof (minimum)  
\$26.00 - each additional hour - chargeable in  
one-quarter hour installments

- B. Testing Fees (During normal work hours.)

The fee schedule is as follows:

1 or 2 Devices	\$50. 00 per device	} provided the multiple devices are located at the same address.
3 to 5 Devices	\$45-00 per device	
6 or more Devices	\$40.00 per device	

- C. If testing cannot be conducted during regular work  
hours (Monday - Friday), a fee of one and one-half  
the above will be charged.

Adopted by the Commissioners of the Water Supply  
District of Acton, May 11, 1998, at a regular meeting  
of said Commissioners.

Ronald R. Parenti  
Stephen C. Stuntz  
Leonard A. Phillips