

# Annual Report

# ACTON WATER DISTRICT

For the year ending December 31, 2017



Warrant Articles for the Annual Meeting

March 21, 2018

### **In Memorial**

The 104 year history of the Acton Water District is distinctively marked by the services of exceptional leaders and citizens. In 2017, Alvin R. Piper, and William Walsh, passed away to their eternal rewards.

Alvin Piper, who served as a District Commissioner from 1968 to 1983, was a committed, dedicated District leader. Born and raised here, Alvin served in the US Navy in WWII. Mr. Piper retired and relocated to Maine in 1986. There he continued his civic interests and dedication to serve veterans, his church, family and fellow neighbors.

William P. Walsh, PhD, served as District Commissioner from 1980 to 1988. Dr. Walsh built his professional career in Geophysics. In recognition of the leadership and professional support he provided to the District regarding the W.R. Grace Contamination issue, the Water Storage Tank in North Acton was dedicated in his name in 1990.

On behalf of all members of the Acton Water District, past and present, we extend condolences and warmest thanks to the families of these two gentlemen for their distinguished service.

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**The Acton Water District welcomes you to visit our Website at:**

**[www.actonwater.com](http://www.actonwater.com)**

**Our publications are always available on our website.**

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**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:

Precinct 1, 2 & 6 - Conant School, 80 Taylor Rd.  
Precinct 3, 4 & 5 - Blanchard Auditorium, Junior High School, 16 Charter Rd.  
Acton, Massachusetts

On Tuesday, March 27, 2018  
Between 7:00 A.M. and 8:00 P.M.

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

**Commissioner for three years**

**Moderator for three years**

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

Acton Memorial Library  
486 Main Street  
Acton, Massachusetts

**On Wednesday, March 21, 2018  
7:00 P.M.**

Then and there to Act on the following Articles:

**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, 2018 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 Surplus Revenue the sum of \$125,000.00 for the maintenance and repair of the various treatment facilities including, but not limited to, media replacement in the filtration tanks, aeration tower repair, and replacement of packing material, 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 \$90,000.00 to clean and rehabilitate existing wells throughout 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 \$30,000.00 for the purpose of replacing old water mains, renewing old water services, replacing old fire hydrants or to take any other action relative thereto.

**Article 8.** To see if the District will vote to transfer from the Receipt Reserve for Appropriation Account (W.R. Grace settlement) the sum of \$300,000.00 for the piloting of treatment technologies for the Conant I and Conant II wells 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 \$500,000.00 to pay down short-term debt related to the Indian Village and Littlefield Road water main improvement project or to take any other action relative thereto.

**Article 10.** To see if the District will vote to transfer from Surplus Revenue \$100,000.00 for the removal of filtration residuals at the North Acton Water Treatment Plant or to take any other action relative thereto.

**Article 11.** To see if the District will vote to transfer from Surplus Revenue the sum of \$85,000.00 for the replacement of filter cartridges at the North Acton Water Treatment Plant or to take any other action relative thereto.

**Article 12.** To see if the District will vote to transfer from Surplus Revenue the sum of \$60,000.00 for the replacement of the granular activated carbon media at the Clapp and Whitcomb well sites on Massachusetts Avenue in Acton or to take any other action relative thereto.

**Article 13.** To see if the District will vote to transfer from Surplus Revenue the sum of \$62,000.00 for purchase of two general service vehicles and for approval to sell or trade the District's 2003 Ford Econoline Van and 2008 Ford Ranger pick-up or to take any other action relative thereto.

**Article 14.** To see if the District will vote to amend the District Bylaws, pursuant to the provisions of Massachusetts General Laws Chapter 44, Section 53E½, Revolving Funds, as most recently amended by Section 86 of Chapter 218 of the Acts of 2016, the Municipal Modernization Act, by inserting the following section entitled "District Revolving Fund for Mitigation" or take any other action relative thereto.

## District Revolving Fund for Mitigation

1. **Purpose.** This bylaw establishes and authorizes a revolving fund for use by the District in connection with mitigation fees, charges or other receipts to support all or some of the District's mitigation expenses under the Water Management Act. The fund will be credited with all fees charged for mitigation. Expenditures will be authorized by the District Manager and will not exceed \$100,000. This revolving fund is established under and governed by Massachusetts General Laws Chapter 44, Section 53E½.

2. **Expenditure Limitations.** The revolving fund is established and authorized by this bylaw without appropriation for projects to mitigate water usage or to pay fees assessed to the District under the Water Management Act subject to the following limitations:

- No liability shall be incurred in excess of the available balance of the fund.
- The total amount spent during a fiscal year shall not exceed the amount authorized by District Meeting on or before July 1 of that fiscal year, or any increased amount of that authorization that is later approved during that fiscal year by the Water Commissioners.

3. **Interest.** Interest earned on monies credited to a revolving fund established by this bylaw shall be credited to the General Fund.

4. **Procedures and Reports.** Except as provided in Massachusetts General Laws Chapter 44, Section 53E½ and this bylaw, the laws, charter provisions, bylaws, rules, regulations, policies or procedures that govern the receipt and custody of District monies and the expenditure and payment of District funds shall apply to the use of a revolving fund established and authorized by this bylaw. The District Treasurer shall include a statement on the collections credited to each fund, the encumbrances and expenditures charged to the fund and the balance available for expenditure in the regular report the District Treasurer provides.

**Article 15.** To see if the District will vote, pursuant to Massachusetts General Laws c.44, §53E½ as most recently amended by §86 of Chapter 218 of the Acts of 2016, to establish a \$100,000 limitation on expenditures from the revolving fund, captioned, "District Revolving Fund for Mitigation," or to take any other action relative thereto.

**Article 16.** To see if the District will vote to appropriate the sum of \$9,590.00 from free cash to fund the District Revolving Fund for Mitigation 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 of said meeting.

Given under our hand this 29th day of January in the year two thousand and eighteen.

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

A true copy. ATTEST:

William T. Stanford  
District Clerk

<b>FY 2019 Budget and Estimated Revenue</b>				
	<b>Actual FY 2017</b>	<b>Budget FY 2018</b>	<b>6 month actual</b>	<b>Budget FY 2019</b>
<b>EXPENSES</b>				
Accounting	0	500	-	2,000
Audit	15,000	15,000	15,000	16,000
Auto Maint & Fuel	43,245	50,000	13,532	50,000
Backflow/Cross Conn	599	1,000	-	1,000
Short Term Debt	0	100,000	-	100,000
Long Term Debt	1,571,135	1,529,310	438,893	1,514,128
Chemicals	73,185	75,000	24,275	75,000
Computer Maintenance	15,000	15,000	4,755	16,000
DEP Withdrawal	5,335	6,500	598	6,500
Employee Education	6,894	17,500	8,934	17,500
Engineering	12,967	55,000	3,379	55,000
Health/Life Insurance	309,845	350,000	162,198	385,000
Hydrants	10,000	10,000	10,000	10,000
Information Reports	6,702	45,000	40,060	45,000
Insurance	75,268	80,000	76,066	82,000
Laboratory Analysis	40,000	50,000	17,798	50,000
Legal	54,360	40,000	14,156	40,000
Lights/Power/Fuel	363,880	350,000	146,070	375,000
Maintenance & Operations	284,180	325,500	118,929	325,500
Middlesex Retirement	177,725	207,041	203,213	222,170
Meters	75,000	40,000	40,000	60,000
Office Supplies	13,105	20,000	6,443	20,000
OPEB Expense	100,000	100,000	-	100,000
Paving	28,904	60,000	17,790	50,000
Petty Cash	700	1,000	300	1,000
Postage	18,893	20,000	6,253	20,000
Reserve Fund	0	100,000	-	100,000
Salaries & Wages	1,206,288	1,350,000	637,274	1,404,000
Telephone	16,000	16,000	8,242	20,000
<b>Total</b>	<b>4,524,210</b>	<b>5,029,351</b>	<b>2,014,158</b>	<b>5,162,798</b>
<b>REVENUE</b>				
Water Revenue	3,052,550	2,570,471	1,654,921	2,707,074
Service Fee	516,120	515,220	257,610	516,540
Debt Service Fee	1,582,768	1,545,660	772,830	1,515,184
Total Water Revenue	5,151,438	4,631,351	2,685,361	4,738,798
Fire Protection Sprinklers	39,889	38,000	39,046	40,000
Rent/Lease	134,076	88,000	52,112	102,000
Repairs/Installation	62,388	50,000	72,184	60,000
Cross Connection	23,456	22,000	12,598	22,000
Demand Fees	108,150	200,000	232,950	200,000
Total Other Revenue	367,959	398,000	408,890	424,000
<b>Total</b>	<b>5,519,397</b>	<b>5,029,351</b>	<b>3,094,251</b>	<b>5,162,798</b>



**Report of the Treasurer**  
**Audited Account Balances**  
**June 30, 2017**

Sovereign Bank	179,700.77
Enterprise Bank	1,110,159.16
MMDT	1,756,644.70
Citizens Bank	6,693.40
Radius Bank	28,527.28
UniBank	<u>385,613.52</u>
Total	<u>3,467,338.83</u>

**Report of the Collector**  
**Audited Account Balances**  
**June 30, 2017**

Accounts Receivable June 30, 2016	128,643.46
Charges	5,570,610.04
Interest Charges	30,352.13
Refunds	<u>1,918.19</u>
	5,731,523.82
Payments	5,519,397.48
Abatements	50,667.83
Adjustments	-
Outstanding June 30, 2016	<u>161,458.51</u>
	5,731,523.82

**Outstanding Debt**  
**June 30, 2017**

Description	Original Amount	Interest rate	Date of Issue	Date of Maturity	Balance
Treatment Plant	6,000,000	3.57%	2/15/2009	2/15/2029	3,600,000
Water Mains	2,135,000	2.03%	8/15/2013	8/15/2023	1,490,000
SA Treatment Plant	13,470,767	2.00%	1/17/2015	1/7/2035	12,369,112

Respectfully submitted,  
Mary J. Bates  
Treasurer/Collector

## Report of the Commissioners for 2017

The Acton Water District was faced with numerous challenges and opportunities during calendar year 2017. This list describes some of the highlights. For more details, see the District Manager's Report and other reports within this publication and the minutes of meetings posted on the District website.

**Monitoring the Superfund site at Nuclear Metals in Concord.** The District has confirmed as a result of a series of pump tests, including a cluster of test wells near Assabet 1A, that a plume of pollution containing 1,4-dioxane and volatile organic compounds has continued traveling with groundwater flow, toward the Assabet Wellfield below the Assabet River from the former Nuclear Metals, Inc. (NMI) property at 2229 Main Street in Concord. This property is now designated a Superfund site by the U.S. Environmental Protection Agency, Region 1 (EPA). The Assabet River was previously thought to be a natural barrier to such travel, but has been determined to be superposed and does not hinder groundwater movement through underlying glacial deposits over 90 feet thick that are continuous with the aquifer materials in the wellfield. The EPA issued a Record of Decision (ROD) in Sept. 2015, which launched a Remedial Investigation/Feasibility Study (RI/FS) of the Nuclear Metals property itself, but despite remedial activities on the property, the plume of contaminants has continued migrating from the property at depth through these glacial deposits northwestward toward the Assabet wells. The EPA and the Massachusetts Department of Environmental Protection (MassDEP) have continued sampling the plume's speed, direction, volume and configuration, and contaminant types and concentrations, which reached 0.5 parts per billion in Assabet 1A raw water in 2017. The EPA has engaged the professional services of *de maximis, inc.* of Windsor, Connecticut to continue monitoring the pump test results made available by the EPA and MassDEP. These agencies have recommended pumping a well sited at a critical location east of Assabet 1A into the Assabet River as a means of intercepting the plume. Meanwhile, as a prudent measure, the District is investigating treatment technologies to mitigate the contamination, should it continue to threaten to compromise the quality of the water drawn from the Assabet wells. The South Acton Treatment Plant site would be the location of this potential new treatment technology.

**Innovative technology used to rehabilitate water mains.** Approximately 10,000 linear feet of distribution piping throughout Indian Village was rehabilitated during 2017 with an innovative lining process called Aqua-Pipe®, developed by Sanexen, based in Quebec, Canada and constructed by their facility based in Emmaus, Pennsylvania. The technology lines the inside of the existing water pipe with a proprietary, multi-layered composite material. The installation procedure involved excavating approximately 30 access pits to reach the piping at intervals of several hundred feet, pulling the lining material through the main from one pit to the next, and inflating the liner with water until it cured, avoiding the need for extensive trenching. Individual customer services were then reconnected to the newly lined mains. This rehabilitation effort proceeded faster and at lower cost than by excavation, removal and replacement of all the old piping. In addition a new tie-in was installed to connect the rehabilitated Indian Village distribution system to the distribution main on Littlefield Road. This main was replaced with a 8-inch ductile-iron main installed by conventional trenching operations. All customer service lines were connected to the rehabilitated main in Indian Village and to the new main on Littlefield Road. The old Littlefield Road main was retired and new hydrants were installed. The roadway will be restored with final paving scheduled for the spring of 2018. Temporary berms have been removed from all driveways in Indian Village and all water main access pits and trenches have been temporarily paved. Permanent restoration of disturbed areas, including property restoration, will occur in the spring of 2018.

**South Acton Water Treatment Plant.** Since its completion in June, 2015, the South Acton Water Treatment Plant, with a capacity of 1.7 million gallons per day (1.7MG), has been operating at a high level of efficiency. The primary purpose of the plant is the removal of naturally occurring iron & manganese from five of the District's wells. The plant filters about 40% of the District's supply. The facility was designed to include space for future filtration requirements, which are likely to issue from the imminent threat from pollution plumes emanating from the former Nuclear Metals property in Concord.

**New 5-year Master Plan.** The District is working with our engineers (Wright-Pierce) to develop a master plan to address future needs based on the lessons learned from past operations and best assessments of upcoming requirements for supply, treatment and distribution during this period.

**Solar photovoltaic project.** The District is investigating the installation of a solar photovoltaic array on our properties at 62 Lawsbrook Road (~5.5 megawatts capacity) and 16 Knox Trail (~900 kilowatt capacity), including the possibility of battery storage and microgrid capability, which would enable the array to be "islanded" from the public power grid and provide power in the event of an outage.

**Nagog Pond treatment plant.** The District was asked to comment on a special permit application by the Town of Concord to enlarge their treatment plant on Nagog Pond. Our comments were provided to the Acton Board of Selectmen.

The acronym *SWOT* stands for strengths, weaknesses, opportunities, and threats, and for the calendar year 2017, the Acton Water District experienced all of these.

1. **Strengths.** Our core strength is substantial and issues from the expertise and dedication of District personnel, led by District Manager Chris Allen, the support of volunteers on the Finance Committee, Water Land Management Advisory Committee, our able Moderator and the decades of experience represented by the Board of Commissioners.

2. **Weaknesses.** The District has minimal or no authority over issues involving Federal or State jurisdiction, such as the mitigation of threats issuing from the Nuclear Metals Superfund site. We closely monitor test results that are made available to us. However, in the end the District must prepare for a worst-case scenario in which we will have to effect a treatment procedure of our own design, an effort with which we are very familiar.

3. **Opportunities.** The potential benefits of photovoltaics include the provision of sustainable backup power for District Operations in South Acton and a new revenue stream, without the requirement for capital costs.

4. **Threats.** As a groundwater-sourced public water supply, the District is constantly facing the threat of pollution, such as from the Nuclear Metals site, and the variability of natural recharge, which led to a drought condition in the spring and early summer. In addition, the District is limited by state mandate to supply no more than 1.94 million gallons of water per day, as averaged over the calendar year, requiring the wise and prudent use of water by our customers.

We encourage all to attend the Acton Water District's Annual Meeting on Wednesday March 21th at 7:00 PM at the Acton Memorial Library, and our semi-monthly Commissioners' meetings, held at District Headquarters, 693 Massachusetts Avenue.

Respectfully submitted,

Leonard A. Phillips, Chairman

Ronald R. Parenti

Stephen C. Stuntz

## Report of the Finance Committee for 2017

Recent reports from the Finance Committee have been remarkably similar. This is another one with a one sentence summary. The Acton Water District is financially healthy now, but there are several risks, as discussed below.

First, the good news:

Certified free cash was \$1,608,274 on 06/30/2017. This will be used for many of the proposed capital improvement projects, thus avoiding the expense of a bond issue and the resulting interest charges. The Grace fund had a balance of \$2,370,093 on 6/30/17 and \$2,413,880 on 12/31/17.

Pollution from the Nuclear Metals site was flowing toward our new, still being paid for, with a bonded debt balance of over \$12,000,000, treatment plant, with a possibility of shutting it down. This threat has been addressed and the risk greatly reduced, perhaps even eliminated.

Many government bodies are now willing to admit they have a problem with grossly underfunded OPEB, Other Post-Employment Benefits, which means paying health insurance premiums for retired employees. The District has been reducing the unfunded gap for several years and is close to having the fund actuarially fully funded.

Various contractors have developed ways to extend the useful life of water mains and to replace them at lower cost.

But there are potential problems:

We survived the Grace pollution and seem to be winning against the Nuclear Metals pollution, but the next pollution incident might be very expensive. Science continues to advance. Some substances that were recently undetectable in water at parts per million can now be measured in parts per billion. No one knows what scary-sounding material that might have been in our water for decades will be discovered, publicized, and then regulated, meaning another treatment facility must be built. We will soon be required to build treatment plants for the wells in West Acton and Acton Center. Preliminary plans indicate they each will be much less expensive than the South Acton Treatment Plant.

The District is required by law to be a part of the Middlesex County Retirement System and to pay premiums into the system in whatever amount that the system administrators decide. The system is substantially underfunded, probably by about half, so eventually there will a very large increase in what we will have to pay. The committee is investigating ways to reduce that shock when it happens.

The District invests the Grace fund in a conservative mixture of about one half stocks and one half bonds. The Commonwealth of Massachusetts restricts our choices to about a dozen stocks and a small choice of bonds. This lack of diversification means we bear greater risk of loss and less chance of gain than the typical investor in unimaginative index funds. We have been urging our local legislators, for many years, to sponsor legislation that allows us to use the same prudent-man rules as many state funds use. So far, we have had no success.

In summary, the AWD is healthy now, and most of the potential future problems are still only problems sometime in the future, if at all. One more thing is also a long-term situation. The Commissioners and the District employees are a pleasure to work with; they make our job easier.

Respectfully submitted,

Charles Bradley, Chair

David A. Butler, Member

William Guthlein, Member

William Mullin, Associate Member

## Report of the District Manager 2017

With each passing year, priorities seem to come and go, some enacted, and some postponed to an undetermined future date. Our idea of what should be done is not always in our complete control, as there are many outside influences; federal, state, local, and natural to which we must react. Often times, we must be as “liquid” as the product that we provide. We have a blueprint as dictated by our Master Plan which is updated every five years and is currently being updated by our engineering consultant, Wright-Pierce.

This past year, the planned infrastructure improvement on Agawam, Mohegan, Sioux, Quaboag, and Seminole was substantially completed. For the first time in District history, we implemented a structural lining technology called Aquapipe, Cure in Place Pipe (CIPP), or re-lining of the existing pipe in place. CIPP, when cured, replaces the host pipe removing it from service and extending the line’s usable by more than 50 years. This technology was chosen due to having less neighborhood impacts and faster project completion. Mobilization to the neighborhood began in late July, and the work was substantially complete in mid-November, significantly less time than traditional open trench pipe replacement. Since it only requires excavating access pits, the impact to neighborhood traffic is minimized. The 6” pipe on Littlefield Road, part of the original re-lining project, was replaced with a larger 8” Ductile-Iron pipe versus being re-lined. Additional restoration will be done in the spring of 2018 before the project is deemed fully complete. We thank all impacted residents for their patience and understanding.

Late in 2015, the Town of Concord applied for a Site Plan Special Permit to construct a new filtration plant to replace its existing Ozone facility at Nagog Pond. Over the course of time, with multiple public hearings and open meetings with various government entities, including the Board of Water Commissioners, the District has participated in a technical support role. A special permit was issued in the spring of 2017 and it was appealed by Concord. The court proceeding resulted in a remanding of the permit back to Acton and Concord to negotiate a settlement. District personnel participated in a few sessions to provide insight into water supply issues and plans for Acton. We firmly understand the importance of the pond as a regional water source and the potential community impacts of the project. Although a settlement was thought to have been reached, the Acton Selectmen did not have a supermajority vote to approve the amendment of Concord’s permit, and it is now back in the hands of the Land Court. The District will continue to assist as requested to insure that Acton’s best interests are prioritized, and sustainability of water supply is maintained at its highest possible level.

We also brought to a conclusion the multi-year effort of engaging renewable energy professionals to install ground-mount Solar Photovoltaic arrays on District land on Knox Trail and Lawsbrook Road. This will help greatly by generating land-lease revenue to assist District rate payers, and stabilize some of our electrical demand costs at a lower rate for at least 20-years, while lowering our carbon footprint.

I would like to thank the Board of Water Commissioners, Finance Committee, all elected and appointed officials and volunteers for their wisdom, guidance, dedication and commitment to the District and citizens of Acton. Their effort may go unnoticed by most, but not by me. I would like to wholeheartedly thank the staff of the Water District for their dedication and daily high level of effort that makes my job so much easier.

Respectfully submitted,

Chris Allen

# Report of the Environmental Manager for 2017

## Environmental Compliance

We completed the drinking water monitoring and notification requirements under the Safe Drinking Water Act (SDWA). We continued our second round of monitoring under the Long Term 2 Surface Water Treatment Rule. Additional sampling was completed at our sources, throughout our treatment plants, and in the distribution system to better improve the quality of your drinking water. This included arsenic, 1,4-dioxane, and disinfection byproducts. A summer intern joined us to help inventory our service line materials. This is to support our lead and copper compliance program.

## Water Conservation

In 2017, we approved conservation rebates resulting in 26 washing machines and 48 toilets being replaced with more water efficient models. Customers also received 64 subsidized rainbarrels through our partnership with the Great American Rainbarrel Company. The District continued to partner with the EPA WaterSense program and the Alliance for Water Efficiency (AWE) to provide tools for our customers to make better water use decisions. I continued my work as the Chair of the New England Water Works Association (NEWWA) Conservation Committee. We also received a grant from the Massachusetts Department of Environmental Protection (MassDEP) to perform a third party audit of our water use. This helps us to determine if real or paper losses are occurring between when the water is treated and when it reaches our customers. The District was recognized for its water efficiency programs in 2017 by two organizations. The Acton Garden Club awarded us with the Best Waterwise Landscape and MassDEP awarded us for Outstanding Performance and Achievement in Water Conservation for 2016.

## Source Water Protection

This was another busy year for source protection activities. I participated on the Town of Acton Open Space Committee and Water Resources Advisory Committee. We continued our participation in technical meetings and review of documents related to the ongoing Acton-W.R. Grace and Nuclear Metals, Inc. (NMI). Superfund Site cleanup. A public meeting hosted by site managers regarding the NMI site was held on May 25, 2017. We worked with MassDEP and our consultants to further understand treatment needs and the potential risk associated with 1,4-dioxane. Efforts to monitor potential impacts to water quality continued in areas surrounding all of our sources. In conjunction with the Town of Acton, we provided technical assistance relative to Nagog Pond and the possible impacts of Concord's proposed treatment facility on Acton's water supply. Work was completed to issue a Request for Proposals to lease water supply land for solar energy production.

## Education and Outreach Programs

We taught approximately 300 Acton students involved in water-related curriculum. This ranged from 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> grade classroom visits to field trips for the high school Environmental Science class. Additionally I worked with two high school students on their Senior Project, Get on Tap AB! to educate the student body about tap water and bottled water. We also worked with Cub Scout packs, the Acton Recreation Department, Green Acton, local churches, and participated in the Discover STEM event sponsored by the Acton-Boxborough Parent Involvement Project. In an unexpected way, we worked with close to 100 students through the First Lego League Robotics competition. The theme which teams were given this year was hydrodynamics and as part of the process, the teams needed to learn about local water resources. During the course of the Nagog Pond special permit deliberations, we were able to educate many more residents about our water supply system and planning efforts. We completed our pilot year of the WaterSmart Software program. This has resulted in customers being more satisfied with the services being offered and reducing water consumption by approximately three percent (after factoring in the 2016 drought response). Due to the positive outcome of the pilot program, we have opened up WaterSmart to all customers of the District. Finally a local lifestyle magazine, *North Bridge Magazine*, featured Acton's water system to explain how our water gets from the clouds to your taps.

Respectfully submitted,

Matthew Mostoller

# Report of the M.I.S. Coordinator for 2017

This document summarizes the main achievements of the Management Information Systems Coordinator. I continue to support, program and implement all mission critical applications.

## Software/Hardware/Technology

The operations staff received new mobile laptops and smartphones as we transition from a paper system to paperless work orders, Operations has been using online forms to record activities that otherwise would have needed data entry/crunching. Every year a new level of security is added and this year, to harden our security, we installed DVR cameras along with a new alarm system. Some of this installation was done in house, saving the District added expense. We also had a 3<sup>rd</sup> party conduct a security audit on our firewall along with cybersecurity training, I am happy to report that we received an A+.

Did you know that we utilize the Connect CTY system to contact our customers in an emergency or general outreach? If you have not registered your phone number with this system, we strongly encourage you to visit our customer service page on our website and follow the links to register. The more information you provide us, the more informed we can keep you. Please take the time to review the phone number and email listed on your quarterly bill and update with any needed changes. We also reach out to our customers via Twitter, please follow us @ActonWater.

## Cross Connection Control Program

A cross connection is any actual or potential connection between a distribution pipe of potable water supplied by the public water system and any waste pipe, soil pipe, sewer, drain or other unapproved source. If not properly protected or eliminated, a cross connection can cause health problems and spread disease. There are two methods by which contamination can enter the drinking water, backpressure and backsiphonage. Backpressure occurs when the pressure in the property exceeds the drinking water pressure. Backsiphonage occurs when the drinking water pressure drops off and a vacuum pulls the water from a building. The property owner is responsible for the elimination or protection of all cross-connections on his premises. The water district routinely surveys and tests all non-residential properties. Residential owners are required to have backflow protection on their irrigation systems as well as any other possible cross connections. All services are installed with a dual check backflow preventer at the meter.

## Meters and Billing

We have continued our partnership with WaterSmart to provide improved customer service, timely leak alerts and paperless billing. The seamless functionality between our system and a 3<sup>rd</sup> party was not without its challenges but it was fun to return to that level of programming.

To date we have outfitted all but 30 meters with the newest Orion reading technology transponders and I would like to thank the staff for their diligence and efforts during the final push. In the last year we installed 600 transponders, many with new casings that required double bookings, with twice the manpower. Thank you to all for a job well done. In 2017 we read the Orion Meters monthly while still billing quarterly. The Orion system detected more than 3,400 potential leaks saving customers money and water.

Respectfully submitted,

Robert Murch

WATER SUPPLY DISTRICT OF ACTON

REPORT ON EXAMINATION OF  
BASIC FINANCIAL STATEMENTS

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JUNE 30, 2017



WATER SUPPLY DISTRICT OF ACTON

REPORT ON EXAMINATION OF  
BASIC FINANCIAL STATEMENTS

JUNE 30, 2017

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**Independent Auditor's Report**

Page 1

**Report on the Financial Statements**

We have audited the accompanying financial statements of the governmental activities, and the aggregate remaining fund information of the Water Supply District of Acton, as of and for the year ended June 30, 2017 and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

**Management's Responsibility for the Financial Statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the financial statements that are free from material misstatement, whether due to fraud or error.

**Auditor's Responsibility**

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. 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 involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

**Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities and the aggregate remaining fund information of the Water Supply District of Acton, as of June 30, 2017, and the respective changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

**Other Matters - Required Supplementary Information**

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and required supplementary information, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

## Management's Discussion and Analysis

As Management of The Water Supply District of Acton, we offer readers of the Water Supply District of Acton's financial statements this narrative overview and analysis of financial activities for the year ended June 30, 2017. The District complies with Governmental Accounting Standards Board (GASB) reporting requirements.

### Financial Highlights

The assets and deferred outflows of the Water Supply District of Acton exceeded its liabilities and deferred inflows at the close of the fiscal year by \$22,486,680 (net position). Unrestricted net position at year end is currently a deficit of (\$684,061), primarily due to the District having recognized the Net Pension Liability in full as of June 30, 2015.

The total assets of the District are \$43,815,386. Of this amount, \$4,846,954 represents current assets and \$38,968,433 represents capital assets.

The total liabilities of the District are \$21,773,947. Of this amount, \$1,278,849 represents current liabilities and \$20,495,098 represents long term liabilities.

Total net position of the District is \$22,486,680. This includes \$21,442,183 invested in capital assets, net of related debt, \$1,728,558 which is restricted for capital projects and (\$684,061) which is unrestricted.

During the fiscal year ended June 30, 2015, the District reported the total Net Pension Liability of \$2,562,079, as required by GASB Statement #68. The Net Pension Liability is \$3,319,310 as of June 30, 2017. The District incurred a current period expense for the unfunded actuarial liability of \$394,725, as well as deferred outflows and inflows of resources in the amounts of \$532,506 and \$87,266, respectively.

During the fiscal year ended June 30, 2017, the District updated the actuarial valuation for Other Post Employment Benefits (OPEB), as required by GASB Statement #45. The District incurred a current period negative expense for the unfunded actuarial liability of (\$39,570) in addition to funding \$100,000. The current OPEB Liability is \$538,388.

### Overview of Financial Statements

The Water Supply District of Acton's financial statements are comprised of the following: Government Wide Financial Statement, Fiduciary Fund Financial Statement, Governmental Funds Financial Statement, Reconciliations of the Financial Statements and a Comparison of Actual to Budget. These statements provide different views of the District. One includes assets and liabilities of the District and the other focuses on the governmental funds.

The District adopts an annual appropriated budget for its government wide activities. A budgetary comparison has been included. Actual revenues for the year were greater than budgeted revenues by \$583,574. Actual expenditures were less than budgeted expenditures by \$426,414.

The Fiduciary Fund Financial Statements contain revenues and expenses relating to the W.R. Grace Fund, restricted funds which can only be used for expenditures relating to improving water quality, and the OPEB Trust Fund, restricted funds which can only be used to fund the District's OPEB obligations.

**Comparison of current year to prior year (Governmental Funds)**

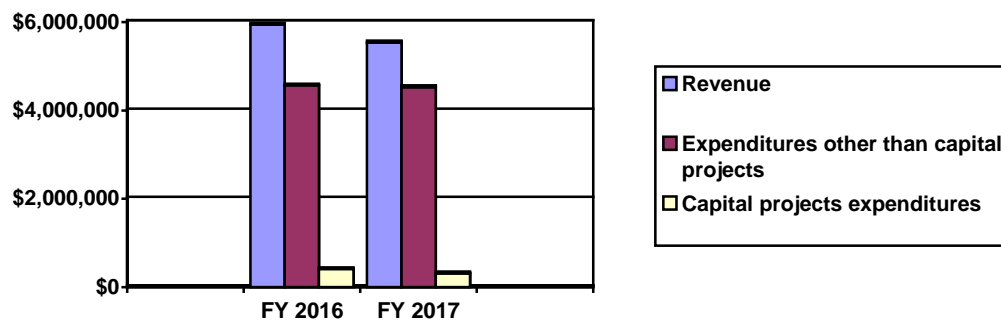
The total revenue for the District was \$5,537,199. Income for the Water Supply District of Acton is generated from water rates, installation of new services and investment income. Income from water rates and services was \$415,807 less than last year. Investment income was \$10,745 greater than last year.

Total expenditures for the year amounted to \$4,834,538. This includes the expenditure of \$310,327 for capital projects. Expenditures for the current fiscal year decreased from the previous fiscal year by \$139,397.

At the close of the fiscal year the Unreserved Fund Balance for the General Fund (Free Cash) was \$1,608,276. This represents an increase of \$4,483.

At the close of the fiscal year there was a balance of \$1,728,558 restricted for capital projects. This represents an increase of \$567,673 from the previous fiscal year.

Below is a graph comparing revenues and expenditures for fiscal years 2016 versus 2017.



**Capital Assets**

The Water Supply District of Acton's investment in capital assets as of June 30, 2017 amounts to \$38,968,433 (net of accumulated depreciation). This investment includes land, buildings and improvements, pumping stations and tanks, infrastructure and improvements, machinery and equipment.

Property and equipment is depreciated utilizing the straight line depreciation method and estimated useful lives as recommended by the Commonwealth of Massachusetts Department of Revenue Bureau of Accounts. The depreciation expense for this fiscal year was \$1,249,813.

Capital Assets are replaced following a replacement schedule prepared by the District. This schedule is updated every 5 years.

**Fiscal Year 2018**

The District has appropriated a balanced annual budget for FY 2018 of \$5,029,351.

<b>WATER SUPPLY DISTRICT OF ACTON</b>				Page 4
Statement of Net Position				
June 30, 2017		<i>Capital</i>	<i>Invested in</i>	
	<i>Unrestricted</i>	<i>Projects</i>	<i>Capital</i>	
	<i>Fund</i>	<i>Fund</i>	<i>Assets</i>	<i>Total</i>
<b>ASSETS</b>				
<i>Current Assets</i>				
Cash and Cash Equivalents	\$3,467,339			\$3,467,339
Due to Capital Projects Fund	(1,728,558)	\$1,728,558		0
Accounts Receivable	161,207			161,207
Unbilled Accounts Receivable	1,218,408			1,218,408
Total Current Assets	3,118,396	1,728,558	0	4,846,954
<i>Non Current Assets</i>				
Capital Assets				
Land			\$1,578,725	1,578,725
Depreciable Capital Assets, net			37,389,708	37,389,708
Total Non Current Assets	0	0	38,968,433	38,968,433
Total Assets	3,118,396	1,728,558	38,968,433	43,815,386
<i>Deferred Outflow of Resources</i>				
Pension	532,506			532,506
<b>LIABILITIES</b>				
<i>Current Liabilities</i>				
Current Portion Long Term Debt			1,083,849	1,083,849
Accrued Interest Payable	195,000			195,000
Total Current Liabilities	195,000	0	1,083,849	1,278,849
<i>Non-Current Liabilities</i>				
Long Term Debt, net of current portion			16,442,401	16,442,401
Accrued Compensated Absences	195,000			195,000
Other Post Employment Benefits	538,388			538,388
Net Pension Liability	3,319,310			3,319,310
Total Non-Current Liabilities	4,052,697			20,495,098
Total Liabilities	4,247,697	0	17,526,250	21,773,947
<i>Deferred Inflow of Resources</i>				
Pension	87,266			87,266
<b>NET POSITION</b>				
Unappropriated Net Assets	(814,565)			(814,565)
Appropriated for Maintenance & Operations	130,504			130,504
Restricted for Capital Assets		1,728,558		1,728,558
Net Investment in Capital Assets			21,442,183	21,442,183
Total Net Position	(\$684,061)	\$1,728,558	\$21,442,183	\$22,486,680

SEE ACCOMPANYING NOTES AND INDEPENDENT AUDITOR'S REPORT

<b>WATER SUPPLY DISTRICT OF ACTON</b>				Page 5
Statement of Activities		<i>Capital</i>	<i>Invested in</i>	
For the Year Ended June 30, 2017	<i>Unrestricted</i>	<i>Projects</i>	<i>Capital</i>	
	<i>Fund</i>	<i>Fund</i>	<i>Assets</i>	<i>Total</i>
<b>REVENUES</b>				
Water Rates and Services	\$5,425,367			\$5,425,367
Interest Income	16,053			16,053
Grant Funds Received	0	\$3,000		3,000
Total Revenues	5,441,420	3,000	0	5,444,420
<b>EXPENDITURES</b>				
Salaries and Wages	1,221,288			1,221,288
Other Post Employment Benefits Expense	(39,570)			(39,570)
Interest and Fees	459,153		(\$11,189)	447,964
Depreciation Expense			1,249,813	1,249,813
Lights, Power and Fuel	347,530			347,530
Health and Life Insurance	309,845			309,845
Maintenance & Operations	206,843			206,843
Middlesex Retirement	394,725			394,725
Insurance	75,268			75,268
Auto Maintenance and Fuel	43,245			43,245
Chemicals	73,185			73,185
Legal	54,360			54,360
Laboratory Analysis	40,000			40,000
Education	6,894			6,894
Audit	15,000			15,000
Computer Maintenance	15,000			15,000
Information Reports	6,702			6,702
Office Supplies	13,105			13,105
Paving	28,904			28,904
Engineering	12,967			12,967
Postage	18,893			18,893
Telephone	16,000			16,000
D.E.P. Withdrawal and Fees	5,335			5,335
Petty Cash	700			700
Hydrants	10,000			10,000
Backflow/Cross Connection	599			599
Total Expenditures	3,335,972	0	1,238,624	4,574,596
<b>REVENUES OVER (UNDER) EXPENDITURES</b>				
	2,105,448	3,000	(1,238,624)	869,824
Capital Project Payments Made		(310,327)	310,327	0
Transfers from Unrestricted to Capital Projects	(875,000)	875,000		0
Bonds Repaid	(1,100,982)		1,100,982	0
Expenditures Capitalized	(168,688)		168,688	0
Net Change in Fund Balances	(39,222)	567,673	341,373	869,824
Net Position - Beginning of Year	(644,839)	1,160,885	21,100,810	21,616,856
Net Position - End of Year	(\$684,061)	\$1,728,558	\$21,442,183	\$22,486,680

SEE ACCOMPANYING NOTES AND INDEPENDENT AUDITOR'S REPORT

<b>WATER SUPPLY DISTRICT OF ACTON</b>			Page 6
Governmental Funds - Balance Sheet			
June 30, 2017			
		<i>Capital</i>	<i>Total</i>
	<i>General</i>	<i>Projects</i>	<i>Governmental</i>
	<i>Fund</i>	<i>Fund</i>	<i>Funds</i>
<i>ASSETS</i>			
Cash and Cash Equivalents	\$3,467,339		\$3,467,339
Accounts Receivable	161,207		161,207
Less Reserve for Uncollectible	(161,207)		(161,207)
Due to Capital Projects Fund	(1,728,558)	\$1,728,558	0
Total Assets	\$1,738,781	\$1,728,558	\$3,467,339
<i>LIABILITIES AND FUND BALANCES</i>			
<i>LIABILITIES</i>			
<i>FUND BALANCES</i>			
Unappropriated Fund Balance	\$1,608,276	\$1,728,558	\$3,336,834
Appropriated for Maintenance & Operations	130,504		130,504
Total Fund Balances	1,738,781	1,728,558	3,467,339
Total Liabilities and Fund Balances	\$1,738,781	\$1,728,558	\$3,467,339

SEE ACCOMPANYING NOTES AND INDEPENDENT AUDITOR'S REPORT

<b>WATER SUPPLY DISTRICT OF ACTON</b>			Page 7
Governmental Funds - Statement of Revenues, Expenditures and			
Changes in Fund Balances		<i>Capital</i>	<i>Total</i>
For the Year Ended June 30, 2017	<i>General</i>	<i>Projects</i>	<i>Governmental</i>
	<i>Fund</i>	<i>Fund</i>	<i>Funds</i>
<b>REVENUES</b>			
Water Rates and Services	\$5,518,146		\$5,518,146
Interest Income	16,053		16,053
Grant Funds Received		\$3,000	3,000
Total Revenues	5,534,199	3,000	5,537,199
<b>EXPENDITURES</b>			
Salaries and Wages	1,206,288		1,206,288
Other Post Employment Benefits Expense	100,000		100,000
Capital Project Payments Made		310,327	310,327
Bonds Interest and Fees	1,571,135		1,571,135
Lights, Power and Fuel	363,880		363,880
Health and Life Insurance	309,845		309,845
Maintenance & Operations	284,180		284,180
Middlesex Retirement	177,725		177,725
Meters	75,000		75,000
Insurance	75,268		75,268
Chemicals	73,185		73,185
Auto Maintenance and Fuel	43,245		43,245
Legal	54,360		54,360
Laboratory Analysis	40,000		40,000
Information Reports	6,702		6,702
Office Supplies	13,105		13,105
Audit	15,000		15,000
Education	6,894		6,894
Paving	28,904		28,904
Engineering	12,967		12,967
Postage	18,893		18,893
Telephone	16,000		16,000
D.E.P. Withdrawal and Fees	5,335		5,335
Computer Maintenance	15,000		15,000
Hydrants	10,000		10,000
Petty Cash	700		700
Backflow/Cross Connection	599		599
Total Expenditures	4,524,211	310,327	4,834,538
<b>REVENUES OVER (UNDER) EXPENDITURES</b>	1,009,988	(307,327)	702,661
<b>OTHER FINANCING SOURCES (USES)</b>			
Transfers from General Fund to Capital Projects	(875,000)	875,000	0
Net Change in Fund Balances	134,988	567,673	702,661
Fund Balances - Beginning of Year	1,603,793	1,160,885	2,764,678
Fund Balances - End of Year	\$1,738,781	\$1,728,558	\$3,467,339

SEE ACCOMPANYING NOTES AND INDEPENDENT AUDITOR'S REPORT



<b>WATER SUPPLY DISTRICT OF ACTON</b>	Page 8
Reconciliation of the Governmental Funds Balance Sheet Total Fund Balances to the Statement of Net Position- June 30, 2017	
Total Governmental Fund Balances	\$3,467,339
Capital assets used in governmental activities are not financial resources, and therefore are not reported in the funds.	38,968,433
The Statement of Activities accrues accounts receivable on billed and unbilled water pumped, whereas in the governmental funds, revenue is not reported until collected.	
Deferred Pension Outflow	532,506
Deferred Pension Inflow	(87,266)
Accounts Receivable	161,207
Unbilled Accounts Receivable	1,218,408
The Statement of Activities includes accounts payable and debts, whereas in governmental funds these are not reported until paid.	
Accrued Compensated Absences	(195,000)
Accrued Interest Payable	(195,000)
Current Portion Long Term Debt	(1,083,849)
Long Term Debt	(16,442,401)
Other Post Employment Benefits Liability	(538,388)
Net Pension Liability	(3,319,310)
Net Position of Governmental Activities	\$22,486,680
<b>WATER SUPPLY DISTRICT OF ACTON</b>	
Reconciliation of the Statement of Revenues, Expenditures and Changes in Fund Balances of Governmental Funds to the Statement of Activities For the Year Ended June 30, 2017	
Net Change in Fund Balances - Total Governmental Funds	\$702,661
Governmental funds report capital outlays as expenditures. However, in the Statement of Activities, the cost is allocated over the estimated useful lives and is depreciated.	
Capital Project Payments Made	310,327
Expenditures Capitalized	168,688
Bond Principal Repayment	1,100,982
Depreciation Expense	(1,249,813)
Some revenue/expenses reported in the Statement of Activities do not provide (use) current financial resources and therefore are not reported as revenue or expense in the governmental funds.	
Water Revenue Accrual Reduction	(92,780)
Other Post Employment Benefits (OPEB) Expense	139,570
Bond Premium Amortization	11,189
Interest Accrual Reduction	11,000
Compensated Absences Reported as Salaries and Wages	(15,000)
Retirement Accrual	(217,000)
Change in Net Position of Governmental Activities	\$869,824

<b>WATER SUPPLY DISTRICT OF ACTON</b>			Page 9
General Fund - Statement of Revenues, Expenditures and Changes in Fund Balance - Budget and Actual For the Year Ended June 30, 2017			
			<i>Variance</i>
			<i>Positive</i>
	<i>Budget</i>	<i>Actual</i>	<i>(Negative)</i>
<i>REVENUES</i>			
Water Rates and Services	\$4,950,625	\$5,518,146	\$567,521
Interest Income	0	16,053	16,053
Total Revenues	4,950,625	5,534,199	583,574
<i>EXPENDITURES</i>			
Salaries and Wages	1,298,000	1,206,288	91,712
Bonds, Interest and Fees	1,643,000	1,571,135	71,865
Lights, Power and Fuel	425,000	363,880	61,120
Health and Life Insurance	325,000	309,845	15,155
Maintenance & Operations	275,000	284,180	(9,180)
Middlesex Retirement	181,125	177,725	3,400
Insurance	80,000	75,268	4,732
Chemicals	75,000	73,185	1,815
Reserve Fund	80,000	0	80,000
Laboratory Analysis	40,000	40,000	0
Auto Maintenance and Fuel	50,000	43,245	6,755
Information Reports	10,000	6,702	3,298
Telephone	16,000	16,000	0
Legal	60,000	54,360	5,640
Computer Maintenance	15,000	15,000	0
Office Supplies	18,000	13,105	4,895
Education	15,000	6,894	8,106
Audit	15,000	15,000	0
Paving	60,000	28,904	31,096
Engineering	55,000	12,967	42,033
Hydrants	10,000	10,000	0
Postage	20,000	18,893	1,107
D.E.P. Withdrawal and Fees	6,500	5,335	1,165
Bank Fees	500	0	500
Cross Connection	1,000	599	401
Accounting	500	0	500
Meters	75,000	75,000	0
Petty Cash	1,000	700	300
OPEB Expense	100,000	100,000	0
Total Expenditures	4,950,625	4,524,211	426,414
<i>REVENUES OVER (UNDER) EXPENDITURES</i>	0	1,009,988	1,009,988
<i>OTHER FINANCING SOURCES (USES)</i>			
Transfers from General to Capital Projects Fund		(875,000)	(875,000)
Net Change in Fund Balance	0	134,988	134,988
Budgetary Fund Balance - Beginning of Year	1,603,793	1,603,793	0
Budgetary Fund Balance - End of Year	\$1,603,793	\$1,738,781	\$134,988

SEE ACCOMPANYING NOTES AND INDEPENDENT AUDITOR'S REPORT

<b>WATER SUPPLY DISTRICT OF ACTON</b>		Page 10
Statement of Fiduciary Net Position		
June 30, 2017		
	<i>WR GRACE</i>	<i>OPEB</i>
	<i>FUND</i>	<i>FUND</i>
<b>ASSETS</b>		
<i>Current Assets</i>		
Cash and Cash Equivalents	\$38,475	
Investments	2,370,093	\$819,891
Total Assets	\$2,408,568	\$819,891
<b>LIABILITIES</b>		
<b>NET POSITION</b>		
Restricted for W.R Grace activity	\$2,408,568	
Held in trust for OPEB benefits		\$819,891
Total Net Position	\$2,408,568	\$819,891
<b>WATER SUPPLY DISTRICT OF ACTON</b>		
Statement of Changes in Fiduciary Net Position		
For the Year Ended June 30, 2017		
<b>ADDITIONS</b>		
Employer Contributions		\$100,000
Dividend and Interest Income	\$67,205	13,419
Net Increase in Fair Value of Investments	48,258	46,100
Total Additions	115,463	159,519
<b>DEDUCTIONS</b>		
W.R. Grace Maintenance & Operations	179,808	
Investment Management Fees	12,019	3,845
Total Deductions	191,827	3,845
Change in Net Position	(76,364)	155,673
Net Position - Beginning of Year	2,484,932	664,218
Net Position - End of Year	\$2,408,568	\$819,891

SEE ACCOMPANYING NOTES AND INDEPENDENT AUDITOR'S REPORT

**WATER SUPPLY DISTRICT OF ACTON**  
**Notes to the Basic Financial Statements - June 30, 2017**

**NOTE 1 – GENERAL STATEMENT AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Reporting Entity** - 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. There are no component units included within the reporting entity. The basic operations of the District are financed by water rate and services charges. 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.

**Summary of Significant Accounting Policies** - The following significant accounting policies were applied in the preparation of the accompanying financial statements:

**Basis of Accounting and Presentation** - The District reports its financial statements in accordance with both the Governmental Accounting Standards Board requirements (accrual basis) and with the Commonwealth of Massachusetts uniform reporting system (cash basis). The financial statements include reconciliations that identify the differences between the accrual basis and cash basis financial statements.

The two reporting standards are briefly described here.

**GOVERNMENT WIDE FINANCIAL STATEMENTS** - This financial model includes the presentation of Management's Discussion and Analysis as well as Government Wide financial statements that are prepared on the accrual method of accounting. Revenues are reported when earned and expenses are reported when incurred, regardless of when payments are either received or made. The accrual basis financial statements report capital assets and the related depreciation expense and accumulated depreciation. All liabilities are reported, including compensated absences, short and long term debt, net pension liability and other post employment benefits liability. The net positions of the District are reported in three components: invested in capital assets net of related debt, restricted for capital projects, and unrestricted.

**GOVERNMENTAL FUNDS** – This financial model presents the District's governmental funds. 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.

Capital assets and infrastructure are not recorded in the governmental funds. Funds used to acquire capital assets 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. The governmental funds report the unreserved fund balance, commonly referred to as Free Cash.

**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 or additional appropriations must be approved at a specially called District Meeting.

**Capital Assets** - Capital assets, which include land, infrastructure, buildings, vehicles, machinery and equipment, are reported in the Government Wide financial statements at historical cost or estimated historical cost. Depreciation is provided using the straight-line method over the estimated useful lives recommended by the Massachusetts Department of Revenue, Division of Local Services, Bureau of Accounts.

**Compensated Absences** - The District has a policy of buying back 50% of a retiring employee's unused sick time, up to a maximum of 85 days sick time.

**WATER SUPPLY DISTRICT OF ACTON**  
**Notes to the Basic Financial Statements - June 30, 2017**

**NOTE 1 – GENERAL STATEMENT AND SIGNIFICANT ACCOUNTING POLICIES - continued**

**District Funds** - The District categorizes its funds into governmental and fiduciary funds.

The following *governmental funds* are reported:

**Unrestricted Fund** - This primary operating fund is used for financial resources other than those that are required to be accounted for in another fund.

**Restricted Capital Projects Fund** - This fund reports the activity for the appropriations and spending for construction projects or for acquiring assets.

**Invested in Capital Assets Fund:** - This fund reports the historical cost of fixed assets less accumulated depreciation.

The following *fiduciary funds* are reported:

**W.R. Grace Fund** - This fund is to maintain the purity of the District's water sources upon approval of District meeting. This fund was established with proceeds from the W.R. Grace lawsuit settlement.

**Other Post Employment Benefits (OPEB) Fund** – This fund is an irrevocable trust fund established by the District in 2011 pursuant to Massachusetts General Laws. The fund can only be used to fund the District's OPEB obligations.

**NOTE 2 - CASH AND CASH EQUIVALENTS**

The District considers all highly liquid investments with a maturity date of less than one year to be cash equivalents. The District maintains a significant portion of its cash in the Massachusetts Municipal Depository Trust's Cash Portfolio, an investment account that offers participation in a diversified portfolio of high-quality money-market instruments that seek the highest possible level of current income consistent with preservation of capital and liquidity. The account is neither insured nor guaranteed by the Commonwealth of Massachusetts or the U.S. government, the Federal Deposit Insurance Corporation (FDIC) or any other government agency. The District has not experienced any loss in the account, and believes it is not exposed to any significant credit risk on cash and cash equivalents.

**NOTE 3 - INVESTMENTS**

The District's investments are managed pursuant to Massachusetts General Laws by Boston Financial Management with the guideline that there is low risk to principal while providing a continuing revenue stream. The investments are carried at fair value. As of June 30, 2017, the District had the following investments:

Description	W.R. Grace Fiduciary Fund	OPEB Trust Fiduciary Fund
Cash and equivalents	\$31,270	\$20,753
Bonds (corporate & government)	1,298,529	216,866
Equities	1,040,294	161,327
Exchange Traded Funds and Other	0	420,945
Total	\$2,370,093	\$819,891

**WATER SUPPLY DISTRICT OF ACTON**  
**Notes to the Basic Financial Statements - June 30, 2017**

**NOTE 4 - INTERFUND RECEIVABLES/PAYABLES**

As of June 30, 2017, the General Fund owed \$1,728,558 to the Capital Projects Fund.

**NOTE 5 - RETIREMENT PLANS**

Substantially all employees of the District are members of the Middlesex Retirement System. The retirement system is funded by both employer and employee contributions. The District's annual contributions to the retirement system are calculated to pay current normal cost as well as unfunded actuarially calculated liabilities from prior years. In addition, employees contribute 5 to 11% of their base pay depending on when they entered the system. The District's contributions for the year ended June 30, 2017 were \$177,725.

The District has a voluntary Section 457 retirement plan. Employees may make pre-tax contributions up to the amount allowed by the Internal Revenue Code, and the District matches contributions up to 3% of the participating employee's base salary. District match contributions for the year ended June 30, 2017 were \$28,952 which is included in Salaries and Wages.

**NOTE 6 - CAPITAL ASSETS**

Capital asset activity for the District for the year ended June 30, 2017 consisted of the following:

Description	Balance 6/30/16	Additions	Disposals	Balance 6/30/17
Land	\$1,566,515	\$12,210		\$1,578,725
Infrastructure	53,620,978	276,042		53,897,020
Buildings	1,154,213	23,750		1,177,963
Vehicles	634,098	68,270	(\$50,000)	652,368
Machinery & Equipment	2,835,290	98,742		2,934,032
Total at Historical Cost	59,811,094	479,014	(50,000)	60,240,108
Less Accumulated Depreciation	20,071,863	1,249,813	(50,000)	21,271,676
Capital Assets, Net	\$39,739,231			\$38,968,432

**NOTE 7 - NOTES PAYABLE**

The District has utilized short term debt to finance engineering costs at the South Acton Water Treatment Plant. The following is a summary of the changes in Notes Payable for the year ended June 30, 2017:

Description	Interest Rate	Due Date	Balance 6/30/16	(Retired)	Balance 6/30/17
South Acton WTP Engineering	.11%	12/31/16	\$29,233	\$29,233	\$0

**WATER SUPPLY DISTRICT OF ACTON**  
**Notes to the Basic Financial Statements - June 30, 2017**

**NOTE 8 – BONDS PAYABLE**

The District has general obligation bonds to finance the construction of the North Acton Water Treatment Plant, the South Acton Water Treatment Plant and water mains and land purchased. The following is a summary of the changes in Bonds Payable for the year ended June 30, 2017:

Description	Interest Rate	Issue Date	Due Date	Balance 6/30/16	(Paid Down) (or Amortized)	Balance 6/30/17
North Acton Water Treatment Plant	2.0% to 4.3%	2/15/09	2/15/29	\$3,900,000	(\$300,000)	\$3,600,000
South Acton WTP, Water Mains and Land	2.0% to 3.0%	8/15/13	8/15/23	1,705,000	(215,000)	1,490,000
South Acton Water Treatment Plant	2.0%	1/7/15	1/7/35	12,925,861	(556,749)	12,369,112
Subtotal				18,530,861		17,459,112
Bond Premium		8/15/13	8/15/23	78,327	(11,189)	67,138
Total Bonds Payable				\$18,609,188		\$17,526,250

The annual debt service requirements for Bonds Payable outstanding at June 30, 2017 are as follows:

Fiscal Years	Principal	Interest	Total
2018	\$1,083,849	\$443,461	\$1,527,310
2019	1,096,212	415,781	1,511,993
2020	1,108,844	387,835	1,496,679
2021	1,121,750	359,017	1,480,767
2022	1,129,937	329,097	1,459,034
2023-2027	5,227,742	1,209,940	6,437,682
2028-2032	4,283,156	525,512	4,808,668
2033-2035	2,407,622	104,270	2,511,892
Total	\$17,459,112	\$3,774,913	\$21,234,025

Principal of \$1,100,982 plus interest and fees of \$470,153 for a total of \$1,571,135 is reported as Bonds, Interest and Fees on the Governmental Funds - Statement of Revenues, Expenditures and Changes in Fund Balances for the year ended June 30, 2017.

Interest and Fees of \$459,153 less amortization of bond premium of \$11,189 for a total of \$447,964 is reported on the Statement of Activities to reflect the accrual basis calculation of interest incurred during the year ended June 30, 2017, regardless of when the actual interest payments were made by the District.

As of June 30, 2017 the District has one series of debt for \$1,000,000 authorized and unissued. The debt was authorized on 3/16/2016 for the purpose of constructing water mains.

**NOTE 9 – COMMITMENTS & CONTINGENCIES**

The District has ongoing commitments for the construction of capital projects, most of which are for water main construction or repair. The District continues to be engaged in legal and environmental negotiations with the Massachusetts Department of Environmental Protection and the Federal Environmental Protection Agency regarding the Superfund cleanup projects. These efforts are intended to protect the Assabet well field.

**WATER SUPPLY DISTRICT OF ACTON**  
**Notes to the Basic Financial Statements - June 30, 2017**

**NOTE 10 – PENSION PLAN**

*Plan Description* – The District contributes to the Middlesex County Retirement System (“the System”), a cost-sharing multiple-employer defined benefit pension plan administered by the Middlesex Retirement Board (“the Board”). Substantially all employees are members of the System. The System provides retirement, disability and death benefits to plan members and beneficiaries. Chapter 32 of the Commonwealth of Massachusetts General Laws assigns authority to establish and amend benefit provisions of the plan. Cost-of-living adjustments granted between 1981 and 1997 and any increase in other benefits imposed by the Commonwealth’s state law adjustments granted after 1997 must be approved by the Board and are borne by the System. The System issued an audited financial statement for the year ended December 31, 2015. That report may be obtained by contacting the System at 25 Linnell Circle, Billerica, MA 01821.

*Funding Policy* – Plan members are required to contribute to the System at rates ranging from 5% to 11% of gross regular compensation. The District is required to pay into the System its share of the system-wide actuarially determined contribution that is apportioned among the employers based on active current payroll. The contributions of plan members and the District are governed by Chapter 32 of the Commonwealth of Massachusetts General Laws. The District’s contribution to the System for the year ended June 30, 2017 was \$177,725, which equaled its required contribution.

At June 30, 2017, the District reported a liability of \$3,319,310 for its proportionate share of the net pension liability. The net pension liability was measured as of December 31, 2016, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of January 1, 2016. The District’s proportionate share of the net pension liability was based on a projection of the District’s long-term share of contributions to the pension plan relative to the projected contributions of all participating members. At December 31, 2016, the District’s proportionate share was 0.234270%, which increased from its 0.215861% proportion measured at December 31, 2015.

For the year ended June 30, 2017, the District recognized a pension expense of \$394,725. At June 30, 2017, the District reported the following deferred outflows and inflows of resources related to pensions:

Deferred Outflows of Resources – difference between expected and actual experience	\$14,949
Deferred Outflows of Resources – net difference between projected and actual investment earnings on pension plan investments	137,811
Deferred Outflows of Resources – changes of assumptions	180,858
Deferred Outflows of Resources – changes in proportion and differences between employer contributions and proportionate share of contributions	198,888
Deferred Inflows of Resources – changes in proportion and differences between employer contributions and proportionate share of contributions	(87,266)
Net Deferred Outflows and Inflows of Resources	\$445,240

The deferred outflows and inflows of resources related to pensions will be recognized in pension expense as follows:

Year ending June 30,	
2018	\$120,784
2019	120,784
2020	118,406
2021	85,266
Total	\$445,240



**WATER SUPPLY DISTRICT OF ACTON**  
**Notes to the Basic Financial Statements - June 30, 2017**

**NOTE 10 – PENSION PLAN– continued**

*Actuarial Assumptions* – The total pension liability in the January 1, 2016 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement updated to December 31, 2016:

Valuation date	January 1, 2016
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Prior year's total contribution increased by 6.5% for fiscal 2018 through fiscal 2024, and thereafter the remaining unfunded liability will be amortized on a 4.0% annual increasing basis; Early Retirement Incentive (ERI) liability amortized in level payments.
Remaining amortization period	As of July 1, 2016, four years remained for 2003 ERI liability, and 19 years remained for remaining unfunded liability.
Asset valuation method	The difference between the expected return and the actual investment return on a market value basis is recognized over a five-year period. Asset value is adjusted as necessary to be within 20% of the market value.
Inflation rate	3.5%
Projected salary increases	Varies by length of service with ultimate rate of 4.25% for Group 1.
Cost of living adjustments	3.00% of first \$14,000 of retirement income.
Rates of retirement	Varies based upon age for general employees.
Rates of disability	It is assumed that 45% of all disabilities are ordinary, and 55% of all disabilities are service connected.
Mortality rate pre-retirement	RP-2000 Employee Mortality Table projected generationally from 2009 with Scale BB2D.
Mortality rate post-retirement	RP-2000 Employee Mortality Table projected generationally from 2009 with Scale BB2D.
Mortality rate disabled retiree	RP-2000 Healthy Annuitant Mortality Table projected generationally from 2015 with Scale BB2D.
Investment rate of return/ Discount rate	7.75%, net of pension plan investment expense, including inflation. This was previously 7.875%.

*Investment policy* – The pension plan's policy in regard to the allocation of invested assets is established by Pension Reserve Investment Trust. Plan assets are managed on a total return basis with long-term objective of achieving a fully funded status for the benefits provided through the pension plan. The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of January 1, 2016 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return	Long Term Expected Asset Allocation
Domestic equity	7.50%	19.50%
International equity	7.83%	16.80%
Emerging markets equity	9.61%	6.90%
Core fixed income	3.75%	12.30%
Value-added fixed income	7.26%	8.30%
Private equity	9.50%	11.10%
Real estate	6.50%	10.00%
Timber/natural resources	6.00%	3.60%
Hedge funds and other investments	6.48%	11.5%
		100.00%

**WATER SUPPLY DISTRICT OF ACTON**  
**Notes to the Basic Financial Statements - June 30, 2017**

**NOTE 10 – PENSION PLAN– continued**

*Discount rate* – The discount rate used to measure the total pension liability was 7.75%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that contributions will be made at rates equal to the actuarially determined contributions rate. Based on those assumptions, the pension plan’s fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

*Sensitivity of the net pension liability to changes in the discount rate* – The following presents the net pension liability as of June 30, 2017, calculated using the discount rate of 7.75%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1% lower (6.75%) or 1% higher (8.75%) than the current rate:

	1% Decrease to 6.75%	Current Discount 7.75%	1% Increase to 8.75%
The District’s share of the net pension liability	\$4,008,376	\$3,319,310	\$2,736,967

*Pension plan fiduciary net position* – Detailed information about the pension plan’s fiduciary net position is available in the separately issued Middlesex County Retirement System financial report.

**NOTE 11 – OTHER POST-EMPLOYMENT BENEFITS**

The District implemented Governmental Accounting Standards Board Statement 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions (GASB 45) starting in the fiscal year ended June 30, 2010. As allowed by GASB 45, the District has established the net Other Post Employment Benefits (OPEB) obligation at zero at the beginning of that transition year and has applied the measurement and recognition requirements of GASB 45 on a prospective basis.

During fiscal year 2011 the District established the “Other Post Employment Benefits Trust Fund” and began funding its liability through this irrevocable trust. The OPEB Trust Fund is reported as a Fiduciary Fund in the accompanying financial statements.

*Plan Description* - The District administers a defined benefit healthcare plan through the Massachusetts Interlocal Insurance Association (MIIA) that provides lifetime healthcare insurance for eligible retirees and their spouses. Massachusetts General Laws Chapter 32B assigns authority for the District to establish and amend benefit provisions of the plan. The Retiree Health Plan does not issue a publicly available financial report.

*Funding Policy* - Contribution requirements are set by the Board of Water Commissioners and approved with a Special Meeting vote by the water takers of the District. The required contribution is based on a pay-as-you-go financing requirement. The District contributes 80 percent of the cost of current-year premiums for eligible retired plan members and their spouses. Plan members receiving benefits contribute the remaining 20 percent of their premium costs.

*Annual OPEB Expense and Net OPEB Obligation* - The District’s annual OPEB expense is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover the normal cost each year and amortize any unfunded actuarial liabilities over a period not to exceed thirty years.

**WATER SUPPLY DISTRICT OF ACTON**  
**Notes to the Basic Financial Statements - June 30, 2017**

**NOTE 11 – OTHER POST-EMPLOYMENT BENEFITS - continued**

The components of the District's annual obligation are summarized in the following table:

Normal cost	\$21,914
Amortization of unfunded actuarially accrued liability	34,259
Annual OPEB expense	56,173
Contributions made	(195,743)
Decrease in net OPEB obligation	(139,570)
Net OPEB obligation - beginning of year	677,958
Net OPEB obligation - end of year	\$538,388

The District's annual OPEB cost, the percentage of annual OPEB cost contributed to the plan, and the net OPEB obligations for 2017 and the two most recent preceding years were as follows:

Fiscal Year Ended	Annual OPEB Cost	% of Annual OPEB Cost Contributed	Net OPEB Obligation
6/30/2017	\$51,828	378%	\$538,388
6/30/2016	\$51,828	378%	\$677,958
6/30/2015	\$212,479	126%	\$817,528

*Funded Status and Funding Process*- The funded status of the Plan as of the most recent actuarial valuation dates is:

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a % of Covered Payroll
7/1/2015	\$649,881	\$1,075,003	\$425,122	60%	\$1,100,000	39%
7/1/2012	\$200,501	\$2,403,921	\$2,203,420	8%	\$1,020,000	216%
7/1/2009	0	\$3,515,024	\$3,515,024	0%	\$1,057,000	333%

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarially accrued liabilities of benefits.

*Actuarial Methods and Assumptions* - Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and the plan members) and include the types of benefits provided at the time of each valuation and historical pattern of sharing of benefit costs between the employer and plan members to that point. Since the District has fewer than 100 employees, it has elected to use the alternative measurement method to calculate the actuarial valuations of its OPEB. The actuarial method and assumptions used include techniques that are designed to reduce the effects of short term volatility in actuarially accrued liabilities and value of assets, consistent with the long term perspective of the calculations.

In the July 1, 2015 actuarial valuation, actuarial liabilities were determined using the projected unit credit method. The actuarial assumptions included a 7.0% investment return assumption, which is based on the expected yield on the District assets.

**WATER SUPPLY DISTRICT OF ACTON**  
**Required Supplemental Information and Notes to Required Supplemental Information - June 30, 2017**

**PENSION PLAN SCHEDULES**

SCHEDULE OF THE DISTRICT'S PROPORTIONATE SHARE OF THE NET PENSION LIABILITY OF MIDDLESEX COUNTY RETIREMENT (MCRS)	December 31, 2016	December 31, 2015	December 31, 2014
District's proportion of the MCRS Net Pension Liability	\$3,319,310	\$2,784,648	\$2,562,079
District's percentage share of the MCRS Net Pension Liability	0.234277%	0.215861%	0.213273%
District's covered employee payroll	\$1,136,133	\$1,013,745	\$974,755
District's Net Pension Liability as a % of covered payroll	292.16%	274.69%	262.84%
MCRS fiduciary net position as a % of its total pension liability	45.49%	46.13%	47.65%

SCHEDULE OF THE DISTRICT'S CONTRIBUTIONS TO THE MIDDLESEX COUNTY RETIREMENT SYSTEM	Year Ended June 30, 2017	Year Ended June 30, 2016	Year Ended June 30, 2015
Date of actuarial valuation	1/1/2016	1/1/2014	1/1/2014
Actuarially determined contribution	\$177,725	\$165,791	\$133,367
Contributions made	\$177,725	\$165,791	\$133,367
Contribution deficiency (excess)	----	----	----
Covered employee payroll	\$1,136,133	\$1,013,745	\$974,755
Contributions as a % of covered employee payroll	15.64%	16.35%	13.68%

The two schedules above are intended to present information for ten years. Until a ten year period is available, information is presented for those years for which information is available. See notes to required supplementary information.

**NOTE A – PENSION PLAN – CHANGES IN ASSUMPTIONS AND PLAN PROVISIONS**

The following changes in Assumptions and Methods were effective January 1, 2014:

- The actuarial cost method was changed to better reflect the impact of the plan changes effective for employees hired on or after April 2, 2012.
- The pre-retirement mortality assumption was changed from the RP-2000 Employee Mortality Table projected 12 years with Scale AA to the RP-2000 Employee Mortality Table projected 22 years with Scale AA.
- The mortality assumption for non-disabled retirees was changed from the RP-2000 Healthy Annuitant Mortality Table projected 12 years with Scale AA to the RP-2000 Healthy Annuitant Mortality Table projected 17 years with Scale AA.
- The mortality assumption for disabled participants was changed from the RP-2000 Healthy Annuitant Mortality Table set forward two years to the RP-2000 Healthy Annuitant Mortality Table set forward three years projected 17 years with Scale AA.
- The investment return assumption was lowered from 8.00% to 7.875%.
- The salary increase assumption was changed from level rates of 4.75% per year for Group 1 and Group 2 members and 5.25% per year for Group 4 members, including an allowance for inflation of 4.5% per year, to rates based on years of service and ultimate rates of 4.25% per year for Group 1 members, 4.5% per year for Group 2 members, and 4.75% per year for Group 4 members, including an allowance for inflation of 4.0% per year.
- The assumed retirement age for inactive vested participants was changed from age 65 to age 60 for Group 1 and 2 members and remained the same at age 55 for Group 4 members hired prior to April 2, 2012. For participants hired April 2, 2012 or later, the assumption is 60 for Group 1 members, 55 for Group 2 members and 50 for Group 4 members.
- The administrative expense assumption was increased from \$3,100,000 for calendar year 2012 to \$3,400,000 for calendar year 2014.

The following changes in Assumptions and Methods were effective January 1, 2016:

- The pre-retirement mortality assumption was changed from the RP-2000 Employee Mortality Table projected 22 years with Scale AA to the RP-2000 Employee Mortality Table projected generationally from 2009 with Scale BB2D.
- The mortality assumption for non-disabled retirees was changed from the RP-2000 Healthy Annuitant Mortality Table projected 17 years with Scale AA to RP-2000 Employee Mortality Table projected generationally from 2009 with Scale BB2D.
- The mortality assumption for disabled participants was changed from the RP-2000 Healthy Annuitant Mortality Table set forward three years projected 17 years with Scale AA to the RP-2000 Healthy Annuitant Mortality Table projected generationally from 2015 with Scale BB2D.
- The investment return assumption was lowered from 7.875% to 7.75%.
- The inflation allowance in the salary increase assumption was lowered from 4.0% to 3.5%.
- The administrative expense assumption was increased from \$3,400,000 for calendar 2014 to \$3,500,000 for calendar 2016.

The following change in Plan Provisions was reflected in the January 1, 2014 actuarial valuation:

- Members hired on or after April 2, 2012 are covered by the provisions of Massachusetts General Law Chapter 32 as amended by Chapter 176 of the Acts of 2011 and Chapter 139 of the Acts of 2012.

The following change in Plan Provisions was reflected in the January 1, 2016 actuarial valuation:

- As permitted by Section 63 of Chapter 139 of the Acts of 2012, the Board has increased the Section 101 annual allowance from \$9,000 to \$12,000.

**WATER SUPPLY DISTRICT OF ACTON**  
**Required Supplemental Information and Notes to Required Supplemental Information - June 30, 2017**

**OTHER POST-EMPLOYMENT BENEFITS SCHEDULES**

SCHEDULE OF FUNDING PROGRESS			
Actuarial valuation date	7/1/2015	7/1/2012	7/1/2009
Actuarial value of assets	\$649,881	\$200,501	0
Actuarial accrued liability (AAL)	\$1,075,003	\$2,403,901	\$3,515,024
Unfunded AAL (UAAL)	\$425,122	\$2,203,420	\$3,515,024
Funded ratio	60%	8%	0%
Covered payroll	\$1,100,000	\$1,020,000	\$1,057,000
UAAL as a percentage of covered payroll	39%	216%	333%
ACTUARIAL METHODS AND ASSUMPTIONS			
Actuarial cost method	Projected Unit Credit	Projected Unit Credit	Projected Unit Credit
Amortization method	Level Dollar	Level Dollar	Level Dollar
Remaining amortization period	24 years	27 years	30 years
Investment rate of return	7%	7%	3%
Health care trend rate	6.8% down to 5% after 10 years	7.9% down to 5% after 10 years	9.5% or 10%, graded to 5% after 10 years
Dental care trend rate	3.5% for all years	4.1% for all years	5.5% for all years

Year Ended	EMPLOYER CONTRIBUTIONS			PLAN MEMBERSHIP		
	Annual Required Contributions (ARC)	Actual Contributions Made	Percentage Contributed	Current retirees, beneficiaries & dependents	Current active members	Total Members
6/30/17	\$56,173	\$195,743	348%	10	15	25
6/30/16	\$56,173	\$195,743	348%	10	14	24
6/30/15	212,479	268,054	126%	11	16	27
6/30/14	212,479	268,054	126%	12	15	27
6/30/13	212,479	118,054	53%	12	13	25
6/30/12	408,085	171,605	42%	10	13	23
6/30/11	408,085	171,605	42%	9	14	23
6/30/10	408,085	71,605	18%	8	15	23

**NOTE B - OTHER POST-EMPLOYMENT BENEFITS**

The District administers a defined benefit healthcare plan that provides lifetime healthcare insurance for eligible retirees and their spouses through the Massachusetts Interlocal Insurance Association (MIIA) health insurance plan, which covers both active and retired members. The District currently finances its other postemployment benefits (OPEB) on combined pre-funded and a pay-as-you-go basis whereby the funding schedule is designed to pay the normal cost currently and amortizes the unfunded liability over a period of 30 years. As a result, the funded ratio (actuarial value of assets expressed as a percentage of the actuarially accrued liability) as of the most recent valuation was 60%. In accordance with Governmental Accounting Standards, the District has recorded its OPEB cost equal to the actuarial determined annual required contribution (ARC) which includes the normal cost of providing benefits for the year and a component for the amortization of the total unfunded actuarial accrued liability of the plan.

The Schedule of Funding Progress presents multi-year trend information which compares, over time, the actuarially accrued liability for benefits with the actuarial value of accumulated plan assets. The Schedule of Actuarial Methods and Assumptions presents factors that significantly affect the identification of trends in the amounts reported. The Schedule of Employer Contributions presents multiyear trend information of contributions relating to the plan. Projections of benefits for financial reporting purposes are based on the substantive plan and include the types of benefits provided at the time of each valuation and the historical pattern of sharing benefits costs between the employer and the plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

<b>WATER SUPPLY DISTRICT OF ACTON</b>					Page 21
Supplemental Schedule of Governmental Fund Balance - Capital Projects Activity					
For the Year Ended June 30, 2017					
	<i>BEGINNING</i>	<i>TRANSFERS</i>	<i>GRANT</i>	<i>PAYMENTS</i>	<i>ENDING</i>
	<i>BALANCE</i>	<i>FROM</i>	<i>FUNDS</i>	<i>MADE</i>	<i>BALANCE</i>
	<i>06/30/16</i>	<i>GEN'L FUND</i>	<i>RECEIVED</i>		<i>06/30/17</i>
Assabet Sand & Gravel 14	\$12,210			\$12,210	\$0
Clean Rehab Wells 17	0	\$65,000		65,000	0
Eminent Domain Main Street	19,519				19,519
Flagg Hill Tank Repairs 12	3,504				3,504
Indian Village Engineering 16	15,149			15,149	0
Leak Detection 2017	0	15,000		12,350	2,650
Marshall Well Replacement 12	54				54
Master Plan Update 17	0	50,000		1,146	48,854
Media Replacement 16	8,597			8,597	0
Media Replacement 17	0	60,000		54,603	5,397
NAWTP Engineering 12	532				532
Replace Old Mains 16	32,086			32,086	0
Replace Old Mains 17	0	35,000		2,457	32,543
Residuals Management 16	25,000			11,940	13,060
Residuals Management 17	0	50,000			50,000
Service Vehicles 16	160				160
Service Vehicles 17	0	70,000		68,270	1,730
Solar META Grant 17	0		\$3,000	3,000	0
Storage Tank Repairs 16	150,000				150,000
Storage Tank Upgrades 13	55,000				55,000
Water Main Emergency 15	11,743			11,743	0
Water Main Emergency 16	40,000			11,776	28,224
Water Main Emergency 17	0	30,000			30,000
Water Main Improvements 15	287,331				287,331
Water Main Improvements 16	500,000				500,000
Water Main Improvements 17	0	500,000			500,000
	\$1,160,885	\$875,000	\$3,000	\$310,327	\$1,728,558

# Minutes of March 15, 2017 Annual Meeting

Held at Acton Memorial Library  
486 Main Street  
Acton, Massachusetts

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

*Unanimously Approved.*

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

*Unanimously Approved.*

**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, 2017, 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.

*Unanimously Approved.*

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

*Unanimously Approved.*

**Article 5.** To see if the District will vote to transfer from Surplus Revenue the sum of \$150,000 for the maintenance and repair of the various treatment facilities including, but not limited to, media replacement in the filtration tanks, aeration tower repair, and replacement of packing material, or to take any other action relative thereto.

*Unanimously Approved.*

**Article 6.** To see if the District will vote to transfer from Surplus Revenue the sum of \$65,000 to clean and rehabilitate existing wells throughout the District or to take any other action relative thereto.

*Unanimously Approved.*

**Article 7.** To see if the District will vote to transfer from Surplus Revenue the sum of \$35,000 for the purpose of replacing old water mains, renewing old water services, replacing old fire hydrants or to take any other action relative thereto.

*Unanimously Approved.*

**Article 8.** To see if the District will vote to transfer from Surplus Revenue the sum of \$15,000 to complete a system-wide leak detection survey or to take any other action relative thereto.

*Unanimously Approved.*

**Article 9.** To see if the District will vote to transfer from Surplus Revenue the sum of \$30,000 for the purpose of repairing emergency water main breaks or to take any other action relative thereto.

*Unanimously Approved.*

**Article 10.** To see if the District will vote to authorize the Commissioners to enter into a long-term written lease, with options to extend for a period not to exceed thirty (30) years, for the purpose of a pump and treat system for 1,4-dioxane remediation on a 100' X 150' segment of land owned by the District at 16 Knox Trail in Acton. The written lease shall include an annual rental charge of not less than the current fair market value rent for the use of the property and shall provide for annual increases based on the consumer price index. The lease shall include other terms, conditions and limitations as the Commissioners shall deem necessary and proper to protect the public water supply

and to satisfy the requirements and regulations of the Department of Environmental Protection and the Environmental Protection Agency or to take any other action relative thereto.

*Unanimously Approved.*

**Article 11.** To see if the District will vote to transfer from Surplus Revenue the sum of \$60,000 for the replacement of the granular activated carbon media at the Clapp and Whitcomb well sites on Massachusetts Avenue in Acton or to take any other action relative thereto.

*Unanimously Approved.*

**Article 12.** To see if the District will vote to transfer from Surplus Revenue the sum of \$70,000 for purchase of two general service vehicles, and approval to sell or trade the District's 2004 Chevrolet 2500 Silverado Service Truck and 2007 Ford Escape or to take any other action relative thereto.

*Unanimously Approved.*

**Article 13.** To see if the District will vote to transfer from Surplus Revenue the sum of \$500,000 for water main improvements throughout the District's water system or to take any other action relative thereto.

*Unanimously Approved.*

**Article 14.** To see if the District will vote to appropriate the sum of \$50,000 for an engineered update to the District's Master Plan or to take any other action relative thereto.

*Unanimously Approved.*

**Article 15.** To see if the District will vote to transfer from Surplus Revenue the sum of \$50,000 for the purchase of a residuals management tank for the Clapp and Whitcomb treatment facility or to take any other action relative thereto.

*Unanimously Approved.*

A motion was made by Terra Friedrichs of 627 Mass. Ave to add a non-binding resolution to the warrant for the District to financially support the Town of Acton Water Resource Study. Atty. Bassett informed the Commissioners that any business not published on the official warrant could not be discussed or acted on at Annual Meeting. Mr. Stuntz indicated that the Commissioners will be discussing this at the March 27 Commissioners Meeting and invited all to attend.

Mr. Parenti made a motion to adjourn the meeting at 8:22 pm. The motion was seconded and it was unanimously approved.



# Water District Organization

## ELECTED OFFICIALS

<b>Commissioners</b>	Leonard A. Phillips, Chair Ronald R. Parenti Stephen C. Stuntz	Term Expires 2018 Term Expires 2019 Term Expires 2020
<b>District Clerk</b>	William T. Stanford	Term Expires 2020
<b>District Moderator</b>	Richard P. O'Brien	Term Expires 2018

## APPOINTED OFFICIALS

<b>Finance Committee</b>	William Guthlein David A. Butler Charles Bradley	Term Expires 2018 Term Expires 2019 Term Expires 2020
<b>District Manager</b>	Christopher D. Allen	Contract Expires 2020
<b>Treasurer/Collector</b>	Mary J. Bates	Term Expires 2018
<b>District Counsel</b>	Mary Bassett	Term Expires 2018
<b>District Assistant Clerk</b>	Helen F. Argento	Term Expires 2018
<b>Commissioners Secretary</b>	Lynn Protasowicki	Term Expires 2018
<b>Auditor</b>	Maureen Waters Mara, CPA, MST	Term Expires 2018

## **Water Land Management Advisory Committee**

Paul Malchodi  
Charles Olmstead  
Barry Rosen  
John Cipar

## **Water District Staff**

Matthew L. Mostoller	Environmental Manager
Julia Hawkins	Secretary A/P Bookkeeper
Elizabeth Secinaro	A/R Bookkeeper/Secretary
Robert Murch	MIS Coordinator
Stephen G. Peterson, Jr.	Superintendent
Charles Rouleau	General Foreman
Andrew Peterson	Assistant Foreman
James Trippier	Operator/Distribution
Robert P. Dionne, Jr.	Operator/Distribution
Keith Kupfer	Operator/Distribution
Matthew Walsh	Operator/Distribution
Lucas Peterson	Operator/Distribution
Josh Richard	Operator/Distribution

**Acton Water**



Water Supply District of Acton

P.O. Box 953

Acton, MA 01720

**OUTDOOR WATER USE RESTRICTIONS  
EFFECTIVE MAY 1 – OCTOBER 1**

- Those of you with even numbered addresses may use water outdoors on Tuesdays, Thursdays and Saturdays.
- Those of you with odd numbered addresses may use 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 tank levels is critical to serving both our domestic needs, as well as providing fire protection, if needed.