

**PREFILED DIRECT TESTIMONY**

**OF**

**JAMES L. DeCELLES, P.E.  
CHIEF ENGINEER  
PAWTUCKET WATER SUPPLY BOARD**

**FOR**

**PAWTUCKET WATER SUPPLY BOARD**

**RHODE PUBLIC UTILITIES COMMISSION**

**DOCKET NO.**

**APRIL 2010**

1 **I. INTRODUCTION**

2 **Q. Please provide your full name, title and business address for the record.**

3 A. James L. DeCelles, P.E., Chief Engineer, Pawtucket Water Board, 85 Branch Street,  
4 Pawtucket, RI 02860

5  
6 **Q. How long have you been employed the Pawtucket Water Supply Board?**

7 A. I was hired as Assistant Chief Engineer on March 14, 2005. I assumed the duties of  
8 Acting Chief Engineer in February 2006, and I became Chief Engineer as of June 20,  
9 2007.

10  
11 **Q. What are your responsibilities at the PWSB?**

12 A. I serve as the general manager of the Pawtucket Water Supply Board (“PWSB”),  
13 which includes water supply, treatment, and distribution systems. The Pawtucket Water  
14 Supply Board serves a population of approximately 99,167 in the City of Pawtucket, the  
15 City of Central Falls, and the Valley Falls section of the Town of Cumberland.

16  
17 **Q. Can you provide a brief description of your previous work experience?**

18 A. From May 1988 to February 1990, I worked for the RIDEM Division of Water  
19 Resources as a Junior Sanitary Engineer responsible for design review and construction  
20 management. From 1990 to 2000, I held the position of Water and Sewer Superintendant  
21 for the Town of North Smithfield. As the Superintendant, I was responsible for the  
22 complete operation and maintenance of the water and wastewater systems for the Town  
23 of North Smithfield. From 2000 to 2005 I was the Utilities Manager for the Town of  
24 North Attleboro, MA and was responsible for the management of the water and  
25 wastewater systems for the Town.

26  
27 **Q. What is your educational background?**

28 A. I hold a Masters Degree in Civil Engineering from Worcester Polytechnic Institute  
29 and a BS in Environmental Engineering Technology from Norwich University.

1 **Q. Do you have any professional affiliations?**

2 A. I am a registered professional engineer in the State of Rhode Island and a member of  
3 the Rhode Island Water Works Association, American Water Works Association, the  
4 New England Water Works Association, and American Public Works Association. For  
5 the New England Water Works Association, I am a member of the Financial  
6 Management Committee and a member of the Program and Legislative Committees, as  
7 well as the Executive Board for the Rhode Island Water Works Association. I am also a  
8 member of the American Society of Civil Engineers.

9  
10 **Q. What is the purpose of your testimony?**

11 A. To support the PWSB's request for a rate increase to provide the revenue necessary in  
12 the rate year.

13  
14 **Q. What does that request consist of?**

15 A. Basically, the increase consists of four major components:

- 16 1. An increase to address the continued decline in consumption;
- 17 2. An increase to address a significant decrease in miscellaneous revenues;
- 18 3. An increase in debt service; and,
- 19 4. An increase in the contract cost for the operation of the water treatment facility.

20  
21 As explained in Christopher Woodcock's testimony, the two most significant factors  
22 contributing to the requested increase are the sharp decline in water consumption and the  
23 significant decrease in miscellaneous revenues.

24  
25 **Q. How is the proposed rate increase to be applied?**

26 A. A full cost of service and rate design study has been prepared by Mr. Woodcock. As  
27 such, please see the testimony and schedules prepared by Mr. Woodcock for the proposed  
28 application of the requested increase.

29  
30  
31

1 **II. NEW TREATMENT PLANT/DISTRIBUTION SYSTEM STATUS**

2 **Q. What is the status of the new treatment plant?**

3 A. The new treatment plant was placed into service in March 2008. The plant is  
4 currently operated by AECOM, who purchased Earth Tech last year, under a twenty year  
5 operating contract that was signed by the PWSB in 2004.

6  
7 The overall operation of the plant has been good, but several issues have arisen that  
8 caused the delay of the final payment to Earth Tech. The major issue was that the plant  
9 had difficulty meeting the wide flow ranges that were being seen at the plant. The four  
10 new high service pumps are 13 MGD each. Anytime the required flow was below 13  
11 MGD or greater than 13 MGD, the flow had to be regulated by valve. This operation  
12 caused severe disturbances and pressure fluctuations in the distribution system. These  
13 issues have been addressed through a settlement agreement with AECOM. In the  
14 agreement, AECOM has agreed to install two variable frequency drives on the high  
15 service pumps. These drives will allow the pumps to handle a greater flow range and will  
16 eliminate the use of the throttling valve. The cost of the project is being shared by  
17 AECOM and National Grid and is scheduled to be completed by June 2010.

18  
19 **Q. What is the status of the water distribution system renovation project?**

20 A. The PWSB continues work on the cleaning, lining and replacement of our distribution  
21 system pipes. The PWSB is currently completing our final cleaning and lining project.  
22 Our next main replacement project has been awarded and is scheduled to begin in the  
23 spring of 2010. This project is being financed by the Rhode Island Clean Water Finance  
24 Agency (“RICWFA”) and is eligible for funding through the American Recovery and  
25 Reinvestment Act (“ARRA”). We will be receiving approximately 24% principal  
26 forgiveness on this project as a result of the ARRA funds. Currently, we are on schedule  
27 to complete the transmission and distributions system rehabilitation by 2016. After that,  
28 we will have an ongoing replacement program that will target the oldest lined pipe that  
29 needs to be replaced.

30

1 **Q. What is the status of your relocation of the Transmission and Distribution**  
2 **Department, which was part of the treatment plant project?**

3 A. As part of the treatment plant construction project, our Transmission and Distribution  
4 (“T&D”) personnel were displaced from their existing facilities. They have been located  
5 at an office trailer located on City land on School Street in Pawtucket. The land also  
6 contains a large garage that has been utilized for storage and vehicle repair during the  
7 construction project. The original plan called for Earth Tech to complete some  
8 renovations at the old Mill Street treatment plant that would house the T&D functions.  
9 After further evaluation, it has been determined that the Mill Street location would  
10 require significant investment to be able to serve the functions of our T&D Department  
11 and that even after significant investment, would not be adequate. There are some severe  
12 limitations such as ceiling height, support column and beam location, and overall  
13 building dimensions that will not allow for the necessary renovations.

14  
15 We have begun to investigate alternative locations and have identified a potential  
16 building that is available to purchase for the T&D Department. We have been working  
17 with the current owners and we hope to have some resolution shortly. However, even if  
18 this particular parcel is not purchased, it appears that a land purchase for a parcel that will  
19 serve our needs will be significantly less than the cost to renovate the old Mill Street  
20 Treatment Plant and would better serve the PWSB now and into the future.

21  
22 **III. REVENUE REQUEST**

23  
24 **Consumption Decline**

25 **Q. You indicated above that one of the primary reasons for the PWSB’s requested**  
26 **increase is a decline in consumption. Can you comment further on this?**

27 A. Yes. As stated previously, the PWSB has continued to see a steady decline in  
28 customer consumption. Since FY03, the PWSB’s consumption has declined by almost  
29 18%. This decreased consumption created revenue shortfalls that resulted in the  
30 underfunding of certain aspects of our operations.

31

1 The PWSB is also experiencing a sharp increase in the amount of uncollected revenue  
2 due to the economic climate in our service area. The PWSB has stepped up collection  
3 efforts to minimize the impact of aging accounts, but it is still a factor that effects our  
4 revenue projections.

5

6 As set forth in Mr. Woodcock's direct testimony, we originally considered requesting  
7 increased rates to fund a Revenue Stabilization Account (formerly known as the  
8 Operating Revenue Allowance) as permitted by R.I.G.L. § 39-15.1-3. Our intent was to  
9 fund this account at a level equal to five percent (5%) of total revenues. However, the  
10 members of the Pawtucket Water Supply Board were acutely aware of the difficult  
11 economic climate facing our customers and decided to keep the funding of this account at  
12 the level set in Docket 3945, which is one and a half percent (1.5%) of total revenues.

13

14 It is our hope that the economic climate in this state will improve, and that we will be  
15 able to increase the funding of the Revenue Stabilization Account in future rate filings. It  
16 is my belief that an increased Revenue Stabilization Account is necessary as a balance to  
17 decreases in consumption.

18

19 **Q. Since you are not requesting increased funding for a Revenue Stabilization**  
20 **Account, have you made any other requests in this filing to address the sharp**  
21 **decline in consumption?**

22 A. Yes. We are requesting that consumption be set based on the methodology set forth in  
23 Mr. Woodcock's testimony. We believe that setting realistic consumption numbers is  
24 vital in this Docket.

25

26 **Q. Will there be any negative effect if the PWSB continues to under collect because**  
27 **of decreased consumption?**

28 A. Yes. The PWSB has several concerns about being able to properly fund its various  
29 accounts. First, the PWSB's bond indentures have certain requirements as to the funding  
30 of accounts. The indentures require that the O&M budget, Debt Service Fund and O&M

1 Reserve Fund be fully funded first. Then, only after these accounts have been fully  
2 funded, can the remaining restricted accounts, such as the IFR account, be funded.

3  
4 Due to our decreased consumption, we have already begun to experience underfunding of  
5 our IFR account. As a result, we had to delay IFR projects such as the Robin Hollow  
6 Dam rehabilitation project.

7

## 8 **Debt Service**

9 **Q. The PWSB is requesting an increase in debt service. Can you explain why?**

10 A. The PWSB is proposing new debt for the completion of several projects as listed  
11 below:

- 12 1. Main Replacement (Project MR-6, approximately \$4.4 million) – This project will  
13 consist of water main replacements at various locations in the system.
- 14 2. Energy Recovery Project (approximately \$400,000) – The PWSB has identified  
15 several locations for energy recovery projects. This will include the installation  
16 of generating turbines on existing water lines that run between the new treatment  
17 plant and the new 5 MG water tank. The water in the 5 MG tank needs to be  
18 moved on a daily basis for quality reasons. The PWSB is proposing to utilize this  
19 process to generate electricity that will either be used on site or sold back to the  
20 grid.
- 21 3. Hydraulic/Asset Management Model (approximately \$400,000) – This project  
22 will consist of developing both a hydraulic and asset management model. The  
23 projects are being completed simultaneously because much of the same data is  
24 required for both models. Also, the hydraulic model will help with the  
25 implementation of the asset management program since we will be able to predict  
26 areas of flow or water quality concerns.
- 27 4. Main Replacement (Project MR-7, approximately \$5 million) – This project will  
28 consist of water main replacement at various locations in the system.
- 29 5. Pump Station 3 Demolition (approximately \$700,000) – This pump station is no  
30 longer utilized by the PWSB and the building is deteriorating. As such, we will  
31 have the building demolished.

1 **Treatment Plant Contract**

2 **Q. The PWSB is requesting revenue to cover the operating costs for the treatment**  
3 **plant contract. Can you explain why?**

4 A. As explained more fully in Mr. Benson’s testimony, our costs under the contract with  
5 Earth Tech are increasing due to the CPI increase included in the contract, and because  
6 new treatment plant is now in operation. The operating contract cost for operation of the  
7 new plant is higher than they were at the old plant.

8  
9 **IFR**

10 **Q. Mr. Woodcock testified that the PWSB’s capital plan has been revised and that**  
11 **funding has been reduced by \$600,000 in the rate year. Can you address this issue?**

12 A. As set forth above in my testimony, the two most significant factors contributing to  
13 the requested increase are the sharp decline in water consumption and the significant  
14 decrease in miscellaneous revenues. These factors are not in our control. Nevertheless, it  
15 was clear that we had to seek increased revenues, which in turn results in a rate increase  
16 for our customers. The members of the Pawtucket Water Supply Board realized that  
17 increased revenues were necessary, but they were also sensitive to the economic climate  
18 and economic conditions many of our customers face. Thus, the Board asked that I look  
19 reduce other expenses to offset the required increase. One of these areas was IFR and our  
20 Capital Improvement Program.

21  
22 In order to reduce IFR spending, we revised our IFR plan. The revised plan has pushed  
23 back the Robin Hollow and Happy Hollow dam rehabilitation projects by two years. We  
24 also split the cost of the new decant flow line from the lined residual settling basin over a  
25 two year period and pushed the old water treatment plant demolition off by two years.  
26 We also pushed back some smaller projects such as tank painting. These revisions  
27 allowed us to keep IFR costs under \$2.6 million in the rate year. A copy of the PWSB’s  
28 Capital Improvement Program is attached to my testimony.

1 **IV. CONCLUSION**

2 **Q. Does this conclude your testimony?**

3 A. Yes. Subject to review of further documentation and the testimony of the Division and  
4 any Interveners, this concludes my direct testimony.

5

PAWTUCKET WATER SUPPLY BOARD		RWF = Raw Water Facilities WTF = Water Treatment Facilities T&D = Transmission & Distribution System ADM = Administrative Facilities		RES = Restricted Land Funds IRF = Infrastructure Reserve Fund SRF = New SRF borrowing CWF = Issued RICWFA Bonds WRB = Water Resource Board WTP = WTP Reserve Account EED = EPA & HS Grants				
CAPITAL IMPROVEMENTS PLAN				Year 1	Year 2	Year 3	Year 4	Year 5
Updated as of: <b>February 19, 2010</b>								
Project Name	Category	Funding Source	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	
Land Acquisition	RWF	RES/WRB	\$ 490,000	\$ 490,000	\$ 490,000	\$ 490,000		
Watershed Security Fencing	RWF	IRF	\$ 40,000	\$ 20,000	\$ 40,000	\$ 40,000	\$ 40,000	
Motion Detectors, Video Cameras, Alarms per Vulnerability Assessment Study	RWF	FED						
Well Rehabilitation - All Wells	RWF	IRF	\$ 60,000		\$ 60,000		\$ 30,000	
Well Buildings Refurb (eng) - Wells 6, 7, 8 & 9		IRF						
Well Buildings Refurb (const) - Wells 6, 7, 8 & 9	RWF	SRF	\$ 500,000	\$ 500,000				
EAP for all Dams & Spillways due to RI DEM by July 1, 2008	RWF	IRF						
Happy Hollow Dam & Spillway Rehab (eng./perm.)	RWF	IRF			\$ 50,000			
Happy Hollow Dam & Spillway Rehab (const)	RWF	IRF				\$ 450,000	\$ 450,000	
Robin Hollow Walls/ Outlet & Aeration System (eng./perm)	RWF	IRF						
Robin Hollow Walls/ Outlet & Aeration System (const)	RWF	IRF		\$ 1,000,000	\$ 1,500,000			
Arnold Mills Dam & Spillway Rehab (eng/perm)	RWF	IRF				\$ 100,000		
Arnold Mills Dam & Spillway Rehab (const)	RWF	IRF						\$ 350,000
Diamond Hill Dam & Spillway Rehab (eng/perm)	RWF	IRF						
Diamond Hill Dam & Spillway Rehab (const)	RWF	IRF						
	<b>RWF Total</b>		<b>\$ 1,090,000</b>	<b>\$ 2,010,000</b>	<b>\$ 2,140,000</b>	<b>\$ 1,080,000</b>	<b>\$ 870,000</b>	
New WTP 87 Branch Street	WTF	CWF						
Pump Station 3 (Ralco Way) Demolition	WTF	SRF	\$ 350,000	\$ 350,000				
Sludge Removal	WTF	IRF	\$ 171,242					
Decant Line	WTF	IRF	\$ 1,500,000	\$ 500,000				
Energy Recovery on 5MG Tank	WTF	SRF	\$ 200,000					
Decommission 120 Mill St Water Treatment processing structures	WTF	WTP	\$ 700,000					
Decommission 120 Mill St Water Treatment processing structures	WTF	SRF		\$ 1,000,000				
	<b>WTF Total</b>		<b>\$ 2,921,242</b>	<b>\$ 1,850,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
Distribution System Water Quality Monitors	T&D	IRF	\$ 50,000					
Distribution System Hydraulic Model	T&D	SRF	\$ 150,000					
3 MG Stump Hill Tank Painting (Eng.)	T&D	IRF	\$ 20,000					
3 MG Stump Hill Tank Painting (Const.)	T&D	IRF		\$ 200,000	\$ 100,000			
10 MG Stump Hill Tank Painting (Eng.)	T&D	IRF			\$ 20,000			
10 MG Stump Hill Tank Painting (Const.)	T&D	IRF				\$ 240,000	\$ 240,000	
Lincoln Interconnection	T&D	SRF				\$ 600,000	\$ 600,000	
CL-4 Improvements	T&D	CWF						
CL-5 Improvements	T&D	CWF						
Conduit Loan - CL5	T&D	CWF						
MR-4 Improvements	T&D	IRF						
MR-5 Improvements	T&D	CWF	\$ 4,000,000					
MR-6 Improvements	T&D	SRF	\$ 1,110,000	\$ 3,280,000				
MR-7 Improvements	T&D	SRF		\$ 1,460,000	\$ 1,020,000			
MR-8 Improvements	T&D	SRF			\$ 1,520,000	\$ 3,560,000		
MR-9 Improvements	T&D	SRF				\$ 1,580,000	\$ 3,700,000	
MR-10 Improvements	T&D	SRF					\$ 1,650,000	
MR-11 Improvements	T&D	IRF						
MR-12 Improvements	T&D	IRF						
MR-13 Improvements	T&D	IRF						
MR-14 Improvements	T&D	IRF						
MR-15 Improvements	T&D	IRF						
MR-16 Improvements	T&D	IRF						
Leak Detection	T&D	IRF	\$ 40,000	\$ 20,000				
T&D Facility	T&D	IRF						
Project Manager - salary	T&D	IRF	\$ 106,600	\$ 109,800	\$ 113,100	\$ 116,500	\$ 120,000	
Main, Hydrant & Service replacements (T&D)	T&D	IRF	\$ 82,400	\$ 84,900	\$ 87,500	\$ 90,200	\$ 93,000	
Road restoration for T & D work	T&D	IRF	\$ 206,000	\$ 212,200	\$ 218,600	\$ 225,200	\$ 232,000	
	<b>T&amp;D Total</b>		<b>\$ 5,765,000</b>	<b>\$ 5,366,900</b>	<b>\$ 3,079,200</b>	<b>\$ 6,411,900</b>	<b>\$ 6,635,000</b>	
Vehicles & Equipment	ADM	IRF		\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000
Asset Management	ADM	IRF	\$ 100,000					
Computer equipment & programs	ADM	IRF	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	
Misc facility repairs/installations	ADM	IRF	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	
Meter replacement (materials only)	ADM	IRF	\$ 92,700	\$ 95,500	\$ 98,400	\$ 101,400	\$ 104,500	
	<b>ADM Total</b>		<b>\$ 292,700</b>	<b>\$ 345,500</b>	<b>\$ 348,400</b>	<b>\$ 351,400</b>	<b>\$ 354,500</b>	
	<b>Grand Total</b>		<b>\$ 10,068,942</b>	<b>\$ 9,572,400</b>	<b>\$ 5,567,600</b>	<b>\$ 7,843,300</b>	<b>\$ 7,859,500</b>	