

Data Requests of Providence Water

Directed to the

Kent County Water Authority

Set 1 (Issued August 30, 2013)

PW 1 – 2 With regard to Christopher Woodcock’s pre-filed testimony, pages 37-39, please provide a copy of the testimony filed by Mr. Alberico Mancini recommending deferral of the new facilities in Docket 3311.

Response: Direct Testimony and Surrebuttal Testimony of Mr. Alberico Mancini attached.

Kent County Water Authority
Docket No. 3311
Direct Testimony of Alberico Mancini

1 Q. PLEASE STATE YOUR NAME AND ADDRESS.

2

3 A. My name is Alberico Mancini and my business address is the Division of Public
4 Utilities and Carriers (“Division”), 89 Jefferson Blvd. Warwick, RI 02888.

5

6 Q. WHAT IS YOUR POSITION AT THE DIVISION?

7

8 A. I am a Public Utilities Engineering Specialist II for the Division. I have been
9 employed in this position since February of 1999.

10

11 Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

12

13 A. I graduated from the University of Rhode Island in 1994 with a Bachelor of
14 Science degree in Civil Engineering.

15

16 Q. PLEASE INDICATE YOUR CERTIFICATIONS AND PROFESSIONAL
17 MEMBERSHIPS.

18

19 A. I currently hold an Engineer-In-Training Certificate. I am a member of the
20 American Water Works Association (AWWA), New England Water Works
21 Association (NEWWA), and the Rhode Island Water Works Association
22 (RIWWA).

23

24 Q. PLEASE DESCRIBE YOUR EMPLOYMENT BACKGROUND.

25

26 A. Prior to accepting my current position with the Division, I was employed with
27 Pare Engineering Corporation from 1997 to 1999 as an environmental engineer
28 assisting in the evaluation and design of water distribution systems and storage
29 facilities throughout Rhode Island. I also inspected several capital improvement

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1 projects that involved the installation of 12” and 16” water transmission mains,
2 and its interconnections.

3
4 Prior to my employment at Pare Engineering Corporation, I was employed with R.
5 Zoppo Corporation from 1995 to 1997 as a field engineer inspecting and
6 supervising water, sewer, and drainage projects throughout Rhode Island and
7 Massachusetts. I also estimated utility contracts involving water and sewer main
8 installation.

9
10 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE RHODE ISLAND
11 PUBLIC UTILITIES COMMISSION (PUC)?

12
13 A. Yes. I have provided direct testimony in Docket No. 2904 concerning the request
14 of the Woonsocket Water Department (“WWD”) request for IFR funding, Docket
15 No. 2961 concerning Providence Water Supply Board’s request for IFR funding,
16 Docket No. 2969 related to Prudence Island Utilities Corporation’s moratorium on
17 new service connections, Docket No. 2985 concerning Newport Water Division’s
18 request for IFR/CIP funding and in Docket No. 3164 relating to Pawtucket Water
19 Supply Board’s request for IFR funding.

20
21 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

22
23 A. The purpose of my testimony is to present the findings of my review of Kent
24 County Water Authority’s (KCWA) proposed Capital Improvement Plan (CIP)
25 and also to provide my conclusions and recommendations concerning their
26 request in this docket to fund the CIP program through an additional debt
27 issuance.

28
29 Q. ARE YOU FAMILIAR WITH KCWA’S WATER SYSTEM?

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1

2 A. Yes. I have traveled throughout KCWA's system and have visited all of their
3 main components including pumping stations, storage facilities, well fields and
4 main office. I am familiar with their transmission and distribution system and
5 have also reviewed various KCWA reports filed with the Commission in
6 compliance with previous rate decisions.

7

8 Q. ARE YOU AWARE OF ANY PROBLEMS WITH KCWA'S SYSTEM?

9

10 A. Yes. The KCWA has experienced pressure problems within its system. These
11 problems stem from KCWA's large service area with many areas in high
12 elevations. Areas in high elevations are subjected to low water pressure due to
13 system hydraulics. As the system expanded to these higher elevations, water
14 pressure decreased.

15

16 Q. WHAT IMPROVEMENTS HAS THE KCWA UNDERTAKEN TO
17 ALLEVIATE THESE PRESSURE PROBLEMS?

18

19 A. KCWA has embarked upon an aggressive CIP program designed to increase
20 pressure to low pressure areas. A total of \$26.5 million in bonds has been issued
21 by KCWA since 1994 to fund a number of projects. Many areas throughout the
22 KCWA system have seen dramatic improvements due to the CIP program.
23 Additional projects have been included in KCWA's updated CIP program to
24 continue improving areas experiencing low pressure.

25

26 Q. WHAT HAS BEEN THE MOST RECENT PROBLEM FOR THE KCWA?

27

28 A. Part of the KCWA system operates on a 500-foot gradient. This is referred to as
29 the Technology Park high service area. Many CIP projects included the expansion

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1 of this high service area or low service changeover to high service. This
2 additional demand in conjunction with heavy development in the high service area
3 created a significant strain on this portion of the system. The high service area is
4 currently supplied by the Johnson Boulevard pump station which draws water
5 from the low service area. During peak demand periods, the system has difficulty
6 in maintaining a minimum water level in its elevated high service storage tank.
7 As demand increases, the water level in the storage tank decreases resulting in
8 dangerously low levels.

9
10 Q. WHAT IS KCWA'S PLAN TO SOLVE THIS PROBLEM?

11
12 A. KCWA's proposed CIP program includes projects that are intended to address this
13 problem. Several projects are currently in design or under construction. KCWA
14 is currently constructing a three (3) million-gallon storage reservoir in the high
15 service area. The additional storage reservoir will supplement the existing
16 elevated high service storage tank. The storage reservoir is currently under
17 construction and is scheduled to be on line in October of this year. Additional
18 supply was the next problem to be addressed. To supplement supply, KCWA is in
19 the process of installing three (3) new wells in the existing well field and plans to
20 install four (4) new wells (CIP Project 1a) in the new Mishnock well field. To
21 meet the requirements of the Safe Drinking Water Act and proposed EPA radon
22 regulation, KCWA is required to treat all of its new ground water sources. Due to
23 these regulations, the construction of the Mishnock Treatment Facility (CIP
24 Project 1c) is proposed as part of KCWA's CIP program. Raw water transmission
25 mains will also be needed to transport raw water from the wells to the Mishnock
26 Treatment Facility (CIP Project 1b). The expansion of the Mishnock well field
27 will create additional supply that can be pumped into the high service area. This
28 will allow additional customers to connect to the system which in turn may result

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1 in increased sales. In addition the new well field should allow KCWA to reduce
2 its dependence on purchased water from Providence.

3
4 Q. ARE THERE OTHER CAPITAL IMPROVEMENTS, IF COMPLETED,
5 WOULD PROVIDE IMPROVED WATER SERVICE WITHIN KCWA'S
6 SYSTEM?

7
8 A. There are several other proposed capital improvements which would improve
9 system pressure and stability. These projects are listed in KCWA's proposed CIP
10 program, which is provided in Schedule #2 of Mr. Brown's testimony.

11
12 Q. HAVE YOU REVIEWED KCWA'S UPDATED CIP PROGRAM?

13
14 A. Yes. I have reviewed KCWA's updated CIP program as well as testimony
15 submitted by Timothy Brown of KCWA and John Keaney of Camp Dresser &
16 McKee.

17
18 Q. YOU HAVE PREVIOUSLY EXPLAINED CIP PROPOSED PROJECTS 1A,
19 1B, AND 1C CONCERNING THE MISHNOCK WELL FIELD EXPANSION.
20 COULD YOU BRIEFLY EXPLAIN THE REMAINING PROJECTS IN WHICH
21 KCWA IS REQUESTING FUNDING?

22
23 Due to poor water quality and proposed EPA radon regulation, KCWA is
24 proposing to upgrade their existing East Greenwich well (CIP Project 2). The
25 surrounding area experiences water quality problems caused by iron and
26 manganese in the groundwater. Proposed improvements will provide treatment
27 for iron and manganese as well as radon to comply with the proposed EPA
28 regulation.

29

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1 As the high service demand increases and the Johnson Boulevard pumping station
2 continues to draw from the low service area, additional supply is needed to feed
3 the low service area. The proposed Black Rock Road area transmission main
4 (CIP Project 4) would supply additional water to the low service area.

5
6 The Knotty Oak Road area transmission mains (CIP Project 5) will replace the
7 existing asbestos-cement pipe which has a history of failures. The proposed
8 ductile iron pipe will withstand greater pressure which will be imposed as a
9 portion of the main is transferred to high service.

10
11 The Watercress Court transmission main (CIP Project 6) is needed to increase
12 capacity between the Knotty Oak transmission main and the proposed Reading
13 School House Road (RSHR) storage reservoir.

14
15 KCWA receives its main water supply from a connection to Providence Water's
16 78-inch aqueduct which feeds the Clinton Avenue Pump Station. This Clinton
17 Avenue pump station (CIP Project 7a) is in need of rehabilitation. KCWA
18 performed an evaluation in 1995 which recommended improvements to the pump
19 station. The proposed improvements consist of new high service pumps which
20 will be used to service the RSHR high service area and will eliminate the Knotty
21 Oak Pump Station which currently supplies water to the RSHR high service area.

22
23 Pressure problems in the RSHR area have also been addressed in KCWA's CIP
24 program. A new RSHR storage tank (CIP Project 7b) would increase pressure to
25 the area. The proposed tank would be constructed at a higher operating elevation
26 (500-ft gradient). Additional transmission mains (CIP Projects 7c and 7d) would
27 also increase capacity from the Clinton Avenue pumping station to the RSHR
28 area. This operating elevation would then be compatible to the Technology Park
29 high service area.

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Q. DO YOU BELIEVE THAT THE PROPOSED CIP PROJECTS WOULD IMPROVE THE WATER SERVICE QUALITY IN THE KCWA SYSTEM, SUCH AS IMPROVED PRESSURE, FIRE PROTECTION, SUPPLY FOR NEW CUSTOMERS, AND COMPLIANCE WITH NEW ENVIRONMENTAL REGULATIONS?

A. Yes. The proposed projects would upgrade the existing system and result in improved water service quality, and allows for new customers to receive water service from the KCWA.

Q. HOW WOULD THE KCWA SYSTEM AND SURROUNDING COMMUNITIES BE AFFECTED IF THESE PROJECTS ARE NOT COMPLETED?

A. The KCWA system will continue to have difficulty in maintaining an adequate water system. The following problems would likely result and worsen with time:

- KCWA will continue to issue mandatory water restrictions during the summer months as they have in the past.
- New development in East Greenwich, West Greenwich, and Coventry could be curtailed due to existing supply and demand problems.
- Fire supply will be negatively affected during peak demand periods when the system has difficulty in meeting peak demand.
- New EPA regulations for ground water supplies will not be met.
- Areas experiencing low water pressure will not improve.

Q. KCWA IS PROPOSING A NEW FACILITY (CIP PROJECT 3). DO YOU BELIEVE THAT THIS PROJECT SHOULD BE FUNDED AT THIS TIME?

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A. The Division recognizes that KCWA’s existing facility is far from ideal but considering the magnitude of the balance of the other projects in the CIP which have a direct bearing on water service quality and the amount of funding necessary to comply with the Division’s recommendation, spending additional funds on a new building should be deferred.

Q. SHOULD ALL REMAINING LISTED CIP PROJECTS BE FUNDED PRIMARILY THROUGH DEBT SERVICE?

A. Although the Division believes that a majority of the projects should be funded through debt service, we believe that certain projects could be funded through the current level of infrastructure replacement (IFR) funding. Currently, KCWA receives \$3.5 million annually in rates for IFR. The Division believes that the following projects are of an IFR nature and could be funded through the IFR account:

<u>Project</u>	<u>Description</u>	<u>Requested Funding</u>
• 2	Upgrade East Greenwich Well	\$1,532,300
• 5	Replace Knotty Oak Road Main	\$2,261,100
• 7a	Clinton Ave. P.S. Modifications	<u>\$1,537,200</u>
Total Funding Through IFR		= \$5,330,600

As the IFR revenues total to \$10.5 million over the next three (3) years, the \$5.3 million requested for these projects could be funded through IFR revenues currently in rates. This may require, though not necessarily so, a deferral of some of the less critical IFR projects. We think our proposal for project funding is a reasonable balance to strike in weighing the improvements the proposed projects

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1 will bring to service quality against the rate impacts of the project funding.

2
3 Q. WHAT PROJECTS SHOULD BE FUNDED THROUGH DEBT SERVICE?

4
5 A. The Division believes that the following projects should be funded through debt
6 service:

<u>Project</u>	<u>Description</u>	<u>Requested Funding</u>
• 1a	Mishnock Wellfield Improvements	---
• 1b	Mishnock Transmission Mains	---
• 1c	Mishnock Water Treatment Plant	\$11,817,000
• 4	Black Rock Road Transmission Main	\$3,286,800
• 6	Watercress Court Transmission Main	\$1,094,700
• 7b	New Read School House Road Tank	\$1,759,500
• 7c	20" Main in RSHR to Flat River Rd.	\$753,200
• 7d	20" Main Flat River Rd. to Colinton Rd.	\$215,000
Total Funding Through Debt Service		= \$18,926,200

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24 Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS?

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26 A. I recommend that the funding be made available through debt service to complete
27 the CIP projects totaling \$18,926,200, as listed in my testimony. Projects 2, 5,
28 and 7a should be accomplished over the next three years through IFR funding.
29 The proposed new administrative building should be deferred until plans for it are

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1 more definitive and funding for it could be re-evaluated. The Division also
2 recommends that the Commission require KCWA to update its CIP progress
3 report to reflect the updated CIP program and submit them quarterly.

4

5 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

6

7 A. Yes, it does.

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1 Q. PLEASE STATE YOUR NAME AND ADDRESS.

2

3 A. My name is Alberico Mancini and my business address is the Division of Public
4 Utilities and Carriers (“Division”), 89 Jefferson Blvd. Warwick, RI 02888..

5

6 Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS PROCEEDING?

7

8 A. Yes, on August 24, 2001, I filed Direct Testimony on behalf of The Division of
9 Public Utilities and Carriers. My Direct Testimony presented the Division’s
10 recommendation regarding KCWA’s Capital Improvement Program (CIP).

11

12 Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

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14 A. The purpose of my Surrebuttal Testimony is to respond to the Rebuttal Testimony
15 filed on September 28, 2001 by Timothy J. Brown. In his Rebuttal Testimony,
16 Mr. Brown explains that they have agreed to defer the new administration facility
17 project until the next rate filing, however, KCWA claims that there are no funds
18 available to include any additional projects in their infrastructure program as I
19 recommended in my direct testimony. In this Surrebuttal Testimony, I will
20 discuss why the Division believes that funds are available in its IFR account to
21 fund additional projects.

22

23 Q. WHY DOES THE DIVISION BELIEVE THAT FUNDS ARE AVAILABLE
24 THROUGH KCWA'S IFR ACCOUNT?

25

26 A. Andrea Crane’s testimony provides an analysis of KCWA’s IFR account through
27 December 31, 2002. This analysis shows that there is a projected balance in the
28 account at December 31, 2002 of \$2.7 million.

29

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1 Q. MR. BROWN STATED IN HIS REBUTTAL TESTIMONY, PAGE 3, LINE 27,
2 THAT KCWA WOULD HAVE TO REVISE THEIR IFR PLAN AND
3 RESUBMIT THE PLAN FOR REVIEW BY STATE AGENCIES. DO YOU
4 AGREE WITH MR. BROWN?

5
6 A. I disagree with Mr. Brown's statement. Water utilities are required to submit an
7 IFR plan to the Department of Health Office of Drinking Water Quality (DOH).
8 After speaking with June Swallow, Chief of the Division of Drinking Water
9 Quality, water utilities may alter their IFR plans to fit the changing needs of the
10 water utility. Ms. Swallow continued to explain that the IFR plan "is only a plan"
11 and project can be added or eliminated at the discretion of the water utility
12 without having to resubmit the entire plan. The DOH does require water utilities
13 to revise and resubmit their IFR plan every five years.
14 Therefore, KCWA can alter their IFR plan to include additional projects currently
15 in their CIP plan.

16
17 Q. DOES THE DIVISION BELIEVE THAT THE IFR PROGRAM WILL SUFFER
18 AS A RESULT OF FUNDING ADDITIONAL PROJECTS IN ORDER TO
19 REDUCE KCWA'S DEBT SERVICE?

20
21 A. No. The Division does not believe that the current IFR program will be effected
22 at all through 2002. Thereafter, KCWA would have to decide what projects are of
23 greater importance. The Division realizes that there are many areas in need of
24 replacement and most recently areas identified as lacking adequate fire flows.
25 They have accomplished a great deal of improvements to their system during the
26 past 5 years and should continue to do so but rate impacts also need to be
27 considered. The Division believes that KCWA can continue with their proposed
28 IFR program and also include additional projects from their CIP program.

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1 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

2

3 A. Yes, it does.