WOONSOCKET REGIONAL WASTEWATER COMMISSION

11 Cumberland Hill Road (Rear)
Woonsocket, Rhode Island 02895-4819

Tel. (401) 766-0555 **Fax (401) 766-6912**
wrwc@woonsocketri.org

February 12, 2013

Mr. David Turin
USEPA New England
5 Post Office Square
Boston, MA 02109-3912

Dear Mr. Turin,

Enclosed please find a copy of the "CMOM Program Implementation Annual Report for 2012" as required by the Administrative Order issued by the USEPA to the City of Woonsocket.

Also please find attached SSO report, budget items and personnel job specifications as referred to in the report.

Please feel free to contact me at 401-766-0555 ext 5122.

Sincerely yours

Adel Banoub

Adel Banoub
Acting Wastewater Superintendent

cc: Sheila McMauvran, Director of Public Works
Angelo Liberti, RIDEM
Reney Ann Mondoux City of Woonsocket
Paul Rodman, VWNA

City of Woonsocket
Sewer Collection System

Annual Report

2012

As per EPA order No. 07-035, the City of Woonsocket is pleased to submit their Wastewater Collection System third annual report. During the calendar year 2012 the City of Woonsocket made progress in many areas at the collection system such as flushing and cleaning, CCTV, controlling fat & oil and grease, and spot repairs of more than 7 segments to reduce I/I impact by estimated 15,840 gpd during wet season. This report will follow the format as required by the EPA Order of 07-035:

A) Summary listing of all SSO:

During the calendar year 2012 the System has received a total of 74 complaints, 19 complaints were reportable SSO a reduction of 27% from previous year.

The table blow summarizes the details of all complaints and other activities by the Sewer Division.

MONTH	TOTAL COMPLAINTS	TOTAL SSO	TOTAL # OF CITY SEWER BLOCKAGES	TOTAL # OF HOMEOWNER BLOCKAGES	TOTAL # OF HOMEOWNER SSO	OTHER COMPLAINT ISSUES	TOTAL PIPE REPAIRS	TOTAL I/I REMOVED (GPD)	DEBRIS REMOVED (TONS)	JETTED STORM DRAINS IN (FT)	REPLACED MANHOLE COVERS
January-12	8	3	0	4	3	4	0	0	0	0	1
February-12	6	0	0	3	0	3	0	0	0	0	1
March-12	9	3	0	5	3	4	0	0	0	0	0
April-12	6	4	2	2	2	2	4	15,840	0	500	0
May-12	4	1	0	0	0	2	1	0	6	872	0
June-12	6	0	0	2	0	4	0	0	8	0	0
July-12	3	0	0	1	0	2	0	0	0	0	0
August-12	10	5	0	5	5	5	1	0	16	0	0
September-12	3	1	0	1	1	1	0	0	4	0	0
October-12	8	0	0	4	0	4	1	0	3	0	0
November-12	9	0	1	5	0	3	0	0	0	0	0
December-12	2	2	2	0	0	0	0	0	1	0	0
Totals	74	19	5	32	14	34	7	15,840	38	1,372	2

DATE	TIME CALLED	TIME RESPONDED	LOCATION	OWNER NAME	PHONE NUMBER	AREA OF DISCHARGE	CAUSE
1/13/2012	10:14 a.m.	8:45 a.m.	107 Prospect Street	Carol Montherny	339-927-4844	Basement	Blocked lateral
1/20/2012	8:20 a.m.	8:45 a.m.	893 Diamond Hill Road	Alfred Lafontaine	401-762-0120	Basement bathroom	Blocked lateral
1/29/2012	8:00 p.m.	8:45 p.m.	Bourdon Boulevard, Unit 7	Woonsocket Housing Authority	401-767-8000	Basement	Blocked lateral
3/11/2012	11:45 a.m.	12:30 p.m.	267 Congress Street	Valerie Stock	508-918-9491	Bathroom	Blocked lateral
3/23/2012	2:35 p.m.	2:46 p.m.	1077 Park Avenue	John Fields	401-640-3318	Basement	Blocked lateral
3/30/2012	5:00 p.m.	5:15 p.m.	456 North Main Street	Martin Abreau	401-236-1141	Basement	Blocked lateral
4/10/2012	10:49 a.m.	11:09 a.m.	50 Ella Avenue	Payao Schmidt	401-597-0497	Basement	Blocked lateral
4/15/2012	10:15 a.m.	11:00 a.m.	168 Park Place	John Lucchesi	401-473-7506	Basement	Blocked lateral
4/23/2012	8:00 a.m.	8:15 a.m.	159 Singleton Street	John Charpentier	401-767-3360	Basement	Blocked sewer main
4/23/2012	8:00 a.m.	8:15 a.m.	128 Singleton Street	Ken Mathewson	401-762-1122	Basement	Blocked sewer main
5/30/2012	8:15 a.m.	8:30 a.m.	305 Gauthier Drive	Dean Ayotte		Street	Broken force main
8/7/2012	4:00 p.m.	4:30 p.m.	78 Craigie Avenue	Carol Gabury	401-766-4371	Kitchen sink and washing machine	Blocked lateral
8/9/2012	1:10 p.m.	1:15 p.m.	574 Second Avenue	Blouin General Welding	401-762-4542	Bathroom	Jet rod back pressure
8/18/2012	8:45 a.m.	9:32 a.m.	242 Clinton	Woonsocket Police	766-1212	Basement	E-1 pump problem

8/20/2012	12:18 p.m.	12:35 p.m.	186 Flora Avenue	Michael Flood	401-762-4055	Basement	Blocked lateral
8/28/2012	1:28 p.m.	1:45 p.m.	116 East Orchard	Vivia Archarmbeault	401-765-6433	Shower	Blocked lateral
9/10/2012	11:50 a.m.	11:55 a.m.	271 Ward Street	Sara Gentes	401-766-3478	Bathroom	Jet rod back pressure
12/21/2012	1:45 p.m.	2:00 p.m.	481 Clinton Street			Street	Pipe blocked &Grease
12/27/2012	8:00 a.m.	8:00 a.m.	Clinton Street			Street	Pipe blocked &Grease

Details of Clinton Street SSO included in Attachment A

City of Woonsocket

Sewer Collection System

Month	Camera Inspection in feet	Cleaning in feet	Number of Manhole inspected
January 2012	**3,310**	**31,567**	**21**
February	**2,380**	**8,847**	**24**
March	**4,905**	**5,697**	**29**
April	**9,099**	**255**	**108**
May	**24,834**	**25,762**	**181**
June	**44,278**	**54,138**	**3**
July	**329**	**5,142**	**5**
August	**2,400**	**9,235**	**2**
September	**4,017**	**11,349**	**78**
October	**19,611**	**30,456**	**177**
November	**9,302**	**14,989**	**88**
December	**1,476**	**418**	**0**
Yearly Total	125,941	197,855	716
Previous Years Total	299,059	299,059	1,867
Grand total	425,000	496,914	2,583
System total	586,080	586,080	3,500
Percent completed	73%	84%	74%

B) Other activities

1. Flushing and Cleaning:

   During the calendar year 2012 the city through its contractor Veolia Water NA (VWNA) flushed and cleaned a total of 197,855 feet. In the past four years the city flushed and cleaned 299,059 feet. To date the city flushed and cleaned a total of 496,914 feet. This reflect that 84% of the entire sewer system was cleaned It must be noted that during this reporting year, VWNA removed over 38 tons of debris from the sewer system

2. CCTV:

   During the year 2012 VWNA has CCTV a total of 125, 941 feet. To date a total of 425,000 feet of sewer line were CCTV. This reflects that 73% of the system was CCTV. All CCTV ware conducted according to PACP protocol.

3. Manhole inspection:

   During the year 2012 VWNA inspected a total of 716 manholes. To date the total manhole were inspected is 2,583 manholes. This reflects that 74% were inspected. All manholes inspection were conducted in accordance to NASSCO's standard

The action of the City of Woonsocket to reduce SSO during 2012 as follow:

1. Infiltration:

   In 2009 the City of Woonsocket entered a 10 years contract with Veolia Water NA (VWNA) to maintain and operate its wastewater collection system. Under the term of the contract, VWNA will clean and flush 120,000 feet of sewer pipes every year. The contract also requires VWNA to CCTV 58,000 feet per year as well as an addition 66,000 feet per year for the next three years in order to CCTV all the 23 areas identified as high priority areas in 2006 flow study (Attachment B)**. During the 2012 year Veolia Water has completed CCTV all high priority areas. The remaining low priority areas shall be completed in the next two years.**

   a) In 2012, The City authorized Veolia Water to spot repairs 15 locations, some locations were identified and classified as gushers and some location identified as structural defects. Copy of repairs report in (Attachment C). Veolia Water already

completed all the spot repairs. It is estimated that these repairs reduced the amount of infiltrations by 15,840 gallons per day.

b) Structure repairs, The City authorized Veolia Water to repairs 10 structure repairs at a cost of $45,000

2. Inflow:

The City will be working with Veolia Water to reduce the effect on the inflow in the sewer system

GIS Mapping

The City of Woonsocket converted their entire sewer mapping to GIS in 2007. The City continues to upgrade the GIS on a regular basis.

Under the contract Veolia Water, The City down load every three months the latest CCTV conducted to its GIS database.

C) Budget and Staffing:

The Sewer collection system is financed by sewer use charge fund. Copy of the current year budget can be found in (Attachment D). The City of Woonsocket has established Capital Improvement fund many years ago. The current budget the City budgeted $400,000 for this fund. However in accordance of the contract between the City and Veolia Water the City is committed to spend up to $578,000 between July 2012 and June 2013 if required.

The VWNA organization chart: See Attachment E

The State of Rhode Island RIDEM was notified of the agreement between the City and VWNA. Copies of job descriptions can be found in (Attachment F). The collection system Manger and one of O&M Tech are certified MACP & PACP.

City's effort to reduce extraneous flow and FOG:

1: FOG:

In 2008, the City IPP started to permit all restaurants in the service area. Currently the IPP issued 150 permits. Only hand full of restaurants to be permitted. 149 restaurants have grease traps or grease interceptor. The IPP has issued compliance schedule to the remaining restaurants. In FY 2012, the IPP inspected 35 restaurants and additional 50 restaurants will be inspected in FY 2013

D) Buried Manholes:

During the current CCTV, Inland Water discovers some buried manholes. Arrangements are made to raise the manholes above grade. As the CCTV of the system progress any manholes discover to be buried will be raised.

E) Other Sewer Improvement in 2012

a. Extended sewer system to Fall Street

b. Completed upgrade North Main Street Pump Station according to consent agreement with RIDEM. The cost of the upgrade was financed through SRF loan to the City.

G) Project during calendar year 2013:

During the calendar year 2013, the City with their contractor will work to achieve the following:

a. The City authorized Veolia water to repairs 48 spots with structural damage at a cost of $99,700 and 11 spots with I/I at a cost of $18,700. Details of those repairs can be find in Attachment G

b. As discussed above that the City of Woonsocket completed cleaning and CCTV the 23 areas with high severity of infiltration to reduce flow to the plant and increase system capacity. This task was completed by June 30, 2012. During 2013 the City will clean and CCTV the low severity infiltration areas.

c. The agreement between the City and VWNA call for the inspection of 700 manholes per contract year (from July 1 to the following June 30). The City expects that VWNA has inspect more than 350during calendar year 2013.

d. Raise any discovered buried manholes.

e. The IPP already started to inspect permitted restaurants and will continue with this task during 2012.

Public Education and outreach:

Recently, the City's Wastewater and Sewer launched a webpage. The purpose of the webpage is educating the public on the Pretreatment regulations and the sewer system. The public will be able to down load permit application and review current rate.

The site is designed to educate the public on FOG and items not to be disposed in the sewer in order to reduce SSO in general. The webpage inform the public that the City accept waste vegetable oil to be recycled to biodiesel. The webpage also publish the important telephone numbers which the public my need in case if there is a sewer, odor or billing problems.

ATTACHMENT A

Environmental Incident Immediate Notification Report

Notice of Environmental Incident

Business Unit:	VWNA
Area Manager:	Mongie, Jonathan
Business Center:	East
Project:	Woonsocket Collections, Woonsocket, RI (2138b)
Project Manager:	Paul Rodman
Authorized Incident Manager:	Paul Rodman
Incident Manager Approved By:	Jim Galipeau
Other Participants/Team Members	Chris Zicuis John Belsky

Environmental Incident

Incident Date Time:	21-DEC-12
Date Incident Reported:	21-DEC-12
Injuries	No
Evacuation Required:	No
Incident Severity:	Non-Crisis
Odor or Vapor:	No
Emissions to Air:	No
Emissions to Soil:	No
Emissions to Water:	No
Emissions to Sewer:	No
Sewage Backup: (third party property damage)	Yes

Environmental Incident Details

What Occurred: At 1:45 p.m. the City Pre-Treatment Department called the Woonsocket Collections Department to report a sanitary sewer overflow on Clinton Street. Upon arrival at 2:00 p.m. the street had a layer of grease coming from the sewer manhole extending to both sides of the street where it had formed puddles. At 2:20 p.m. Jim Galipeau was notified of the incident. The sewer was not overflowing at the time of arrival, but the sewer was surcharged. As the crew worked their way downstream opening manholes to find one that was not surcharged they noticed the flow was going down. The crew opened the last manhole before the siphon and saw the flow return to normal below the bench. With the flows back to normal the crew returned to the vactor truck and began cleaning the grease and standing water from the street. There was a half gallon of hypo used with water to clean the street and then sucked up by the vactor truck. The clean up was completed at 5:30 p.m. Upstream pipe cleaning is being completed to make sure any remaining debris in the main is removed to prevent further backups.

There was never a typical blockage identified as the flows where returning to normal as the crew was checking the sewer. Between 12:30 p.m. and 2:00 p.m. when the rain was the heaviest the wastewater treatment plant flow went from roughly 14.00 to 22.00 and then returned to 14.00 around 2:30 p.m. I believe that this SSO was a direct result of a source of inflow around the Kennedy Siphon Area on Clinton Street and not a typical grease or rag blockage.

Permit Excursion

Grand Total Excursions (Year to Date): 1

Sampling Parameters and Results:

Parameter	Samples Analyzed	Excursion Type	Result	Permit Limit

Chemical/Material Release

Release/Overflow/Bypass/Spill: Yes

Chemical Released:

Other Product/Material: raw sewage/grease

Quantity: 200 gallons

Corrective Action

Responsible Person	Target Completion Date	Actual Completion Date	Required Corrections
Paul Rodman	21-DEC-12	21-DEC-12	Clean the upstream pipe segments and remove any debris.
Paul Rodman	21-DEC-12	21-DEC-12	Give the Woonsocket Pre-Treatment Department a list of every resturant upstream of the overflow.

Agency Notification

Date	Agency Notified	Persons Contacted	Case Number	Comment
21-DEC-12	City of Woonsocket	Adel Banoub		
21-DEC-12	RIDEM	Alex Pinto		
21-DEC-12	RIDEM	After hours hot line - Mike Harris		

Attachments

None.

NOTE: As this report is for notification purposes only - all facts, findings, corrective actions, etc., may not be available at time of report. A complete investigation will be filed in accordance with internal reporting protocol.


Locator
Grease and water puddled hear
2 catch basins covered with leaves. Sewer never entered basins
Sewer bipassed from manhole 4301
MINGS WY
4320
94.658-ft
4319
97.040-ft
4301
4665
275.628-ft
Blackstone River
10 m
50 ft

Environmental Incident Immediate Notification Report

Notice of Environmental Incident

Business Unit:	VWNA
Area Manager:	Mongie, Jonathan
Business Center:	East
Project:	Woonsocket Collections, Woonsocket, RI (2138b)
Project Manager:	Paul Rodman
Authorized Incident Manager:	Paul Rodman
Incident Manager Approved By:	Jonathan Mongie
Other Participants/Team Members	Chris Zicuis John Belsky Nick Turner

Environmental Incident

Incident Date Time:	27-DEC-12
Date Incident Reported:	27-DEC-12
Injuries	No
Evacuation Required:	No
Incident Severity:	Non-Crisis
Odor or Vapor:	No
Emissions to Air:	No
Emissions to Soil:	No
Emissions to Water:	Yes
Emissions to Sewer:	No
Sewage Backup: (third party property damage)	Yes

Environmental Incident Details

What Occurred: At 8:00 a.m. the collections staff was driving down Clinton Street to begin cleaning the sewer main when they noticed a sewer manhole overflowing in the street. The crew set up the vactor truck and began sucking the water coming out of the manhole. At 8:07 a.m. Jonathan Mongie was notified of the current SSO. There were two catch basins observed that the sewage was flowing into. The crew used the spill containment kit from the truck to dam the catch basins and have the sewage pool around the basins. Sewage was stopped from flowing into the catch basin at 8:30 a.m., at which time the second vactor arrived on site and began sucking the pooled water from the break down lanes. The two vactors cycled bypass pumping while other staff members looked for manholes up to the siphon that were not surcharged. Upon investigating the siphon tower it was observed that the tower was surcharged and there was a large amount of grease built up. The crew found that the siphon outlet manhole was flowing but slowly. One of the vactors was brought through the easement and began jet rodding the siphon piping. After two water tank cycles the crew broke through the grease blockage in the siphon tower. At 2:00 p.m. the sewage stopped overflowing and cleanup of the street began. Two staff members used a half gallon of hypo to clean the area that the sewage pooled on the street and washed the area with water then sucked it up with the vactor. While the street cleaning was happening two other staff members continued jet rodding the siphon as more grease would come out each time the jet rod would go through. At roughly 3:00 p.m. the siphon tower was entered and it was observed that flows had returned to normal, but there was still a large amount of grease on the walls. The crew utilized the vactors hydro excavation gun to power wash majority of the grease off of the walls while the second vactor continued to jet rod the siphon. At 4:30 p.m. the crew finished jet rodding and power washing the siphon and siphon tower. Two crew members cleaned downstream pipe segments to make sure there was no debris left in the 60” interceptor that could cause a backup while the other staff members checked the main siphon that goes to the wastewater treatment plant for debris buildup. The siphon appeared clear. At roughly 5:00 p.m. the crew finished and returned to the garage.

The crew removed roughly 5400 gallons with the two vactors for the duration of the SSO. In the 30 minute time frame between arrival on site and damming the catch basins there was an estimated total of 200 gallons that entered the storm system and discharged to the Blackstone River. There was an estimated 5,600 gallons that overflowed from the sewer.

Permit Excursion

Grand Total Excursions (Year to Date): 1

Sampling Parameters and Results:

Parameter	Samples Analyzed	Excursion Type	Result	Permit Limit

Chemical/Material Release

Release/Overflow/Bypass/Spill: Yes
Chemical Released:
Other Product/Material: raw sewage
Quantity: 5600 gallons

Corrective Action

Responsible Person	Target Completion Date	Actual Completion Date	Required Corrections
Paul Rodman	04-JAN-13		Reomove all grease from siphon tower

Agency Notification

Date	Agency Notified	Persons Contacted	Case Number	Comment
27-DEC-12	City of Woonsocket	Adel Banoub		
27-DEC-12	City of Woonsocket	Shelia McGauvran		
27-DEC-12	RIDEM	Alex Pinto		
27-DEC-12	RIDEM - HOTLINE	Jim		

Attachments

None.

NOTE: As this report is for notification purposes only - all facts, findings, corrective actions, etc., may not be available at time of report. A complete investigation will be filed in accordance with internal reporting protocol.


2 catch basins that sewage water entered and went to Blackstone River
Sewer bipassed from manhole 4301
Blackstone River
MINGS WY
177.149-ft
97.040-ft
275.628-ft
4319
4301
4320
4665
Locator

ATTACHMENT B

*Meter	Recorded		Area		Industrial Flow (mgd)	Gross WW Flow (mgd)	Gross Base Infiltration Production (mgd)	Upstream Base Infiltration (mgd)	Net Base Infiltration (mgd)	Inch - Miles (in-mi)	Infiltration Severity (gpd/in-mi)
	Average Daily Flow (mgd)	Minimum Flow (mgd)	Average Daily Flow (mgd)	Minimum Flow (mgd)							
LL-1	7.670	5.878	2.007	1.777		1.991	5.679	3.927	1.751	20.21	86,662
LL-21	1.291	1.051	1.291	1.051		0.267	1.024	0.000	1.024	65.01	15,757
LL-14	0.196	0.171	0.196	0.171		0.028	0.168	0.000	0.168	15.52	10,839
LL-19	0.370	0.292	0.254	0.220		0.087	0.283	0.067	0.216	20.36	10,620
HL-3	1.371	1.216	0.576	0.562		0.172	1.199	0.638	0.560	53.85	10,408
LL-16	0.443	0.347	0.443	0.347		0.107	0.336	0.000	0.336	32.41	10,377
HL-1	2.635	2.356	0.429	0.429		0.310	2.325	1.896	0.429	42.32	10,137
HL-5	0.378	0.343	0.378	0.343		0.039	0.339	0.000	0.339	37.69	8,997
LL-2	0.456	0.305	0.244	0.154		0.168	0.288	0.144	0.144	16.63	8,659
LL-9	0.288	0.240	0.288	0.240		0.053	0.235	0.000	0.235	30.27	7,752
IP-1	0.397	0.304	0.147	0.127		0.103	0.294	0.156	0.138	19.27	7,150
LL-22A	0.442	0.333	0.442	0.333		0.121	0.321	0.000	0.321	48.08	6,674
IP-2	0.164	0.126	0.164	0.126	0.013	0.042	0.122	0.000	0.109	17.27	6,299
HL-4	0.141	0.101	0.141	0.101		0.044	0.097	0.000	0.097	15.75	6,131
HL-2	0.694	0.610	0.559	0.492		0.093	0.601	0.116	0.485	80.06	6,052
LL-8	0.130	0.101	0.130	0.101		0.032	0.098	0.000	0.098	16.39	5,966
LL-6	0.559	0.372	0.559	0.372		0.208	0.351	0.000	0.351	63.06	5,570
HL-6	0.417	0.311	0.417	0.311		0.118	0.299	0.000	0.299	54.74	5,466
DH-1	0.135	0.118	0.135	0.118		0.019	0.116	0.000	0.116	24.49	4,741
LL-11	3.510	2.616	0.428	0.303		0.993	2.517	2.228	0.289	61.14	4,729
LL-10	0.078	0.060	0.078	0.060		0.020	0.058	0.000	0.058	12.33	4,704
LL-18	0.648	0.478	0.278	0.186		0.189	0.459	0.283	0.176	38.52	4,563
MR-1A	0.068	0.041	0.068	0.041		0.030	0.038	0.000	0.038	9.37	4,055
LL-15	0.356	0.202	0.278	0.142		0.171	0.185	0.058	0.127	34.84	3,642
LL-12	0.043	0.022	0.043	0.022		0.023	0.020	0.000	0.020	5.41	3,635
LL-17	0.028	0.017	0.028	0.017		0.012	0.016	0.000	0.016	4.96	3,181
LL-3	0.131	0.072	0.131	0.072		0.066	0.065	0.000	0.065	20.63	3,172
LL-20	0.116	0.072	0.116	0.072		0.049	0.067	0.000	0.067	24.07	2,788
LL-7	0.629	0.446	0.211	0.105	0.016	0.203	0.426	0.332	0.077	28.30	2,729
LL-22B	0.045	0.026	0.045	0.026		0.021	0.024	0.000	0.024	8.91	2,681
LL-5	1.314	0.889	0.126	0.071		0.472	0.842	0.777	0.065	27.35	2,373
IP-3	0.062	0.043	0.062	0.043		0.021	0.041	0.000	0.041	18.65	2,192
LL-13	1.072	0.745	0.077	0.025		0.363	0.709	0.689	0.019	13.42	1,432
MR-1	0.144	0.110	0.144	0.110	0.088	0.038	0.106	0.000	0.018	38.45	474
IP-4	0.024	0.008	0.024	0.008		0.018	0.006	0.000	0.006	13.15	473
LL-4	5.076	3.724	-0.235	-0.140		1.502	3.574	3.703	-0.129	60.44	-2,142
System Total			**10.70**		**0.12**				**8.19**	**1093.32**	**7494.18**

Notes:

Shading denotes areas recommended for further evaluation

* B-1 values are not included in the total calculations

TABLE 3-6
CITY OF WOONSOCKET
I/I REMEDIATION PROGRAM - PHASE 1
INFILTRATION RANKING BY METER

RANKING OF DRAINAGE-AREAS FOR INFLOW (by gallons/inch-mile)										
*Meter	Base Inflow Rank	Net Inflow Volume Event (mg)	Direct Net Inflow Volume Storm (mg)	Delayed Net Inflow Volume R1+R2 (mg)	Inch - Miles (in-mi)	Severity Event (g/in-mi)	Cumulative Inflow Volume Event (mg)	Cumulative Inflow Volume Event (%)	Cumulative Inflow Volume R1 + R2 (mg)	Cumulative Inflow Volume R1 + R2 (%)
LL-1	1	2.85	0.71	2.14	20.21	141,030	2.85	23.04%	2.14	23.70%
LL-16	2	0.65	0.14	0.51	32.41	19,968	3.50	28.27%	2.64	29.30%
HL-6	3	0.98	0.14	0.84	54.74	17,875	4.48	36.18%	3.48	38.62%
LL-21	4	1.13	0.24	0.89	65.01	17,435	5.61	45.35%	4.37	48.48%
LL-2	5	0.28	0.12	0.17	16.63	17,044	5.89	47.64%	4.54	50.35%
HL-4	6	0.25	0.04	0.21	15.75	15,856	6.14	49.66%	4.75	52.68%
LL-14	7	0.22	0.07	0.15	15.52	13,867	6.36	51.40%	4.90	54.34%
LL-4	8	0.76	0.23	0.53	60.44	12,525	7.12	57.52%	5.43	60.18%
IP-1	9	0.23	0.05	0.18	19.27	11,858	7.34	59.37%	5.61	62.19%
LL-9	10	0.35	0.08	0.28	30.27	11,687	7.70	62.23%	5.88	65.24%
LL-5	11	0.29	0.12	0.17	27.35	10,448	7.98	64.54%	6.05	67.12%
LL-15	12	0.35	0.09	0.26	34.84	9,968	8.33	67.34%	6.31	69.95%
DH-1	13	0.21	0.06	0.16	24.49	8,748	8.54	69.08%	6.47	71.70%
LL-7	14	0.24	0.13	0.11	28.30	8,587	8.79	71.04%	6.58	72.94%
HL-1	15	0.35	0.12	0.23	42.32	8,211	9.14	73.85%	6.81	75.49%
LL-22A	16	0.38	0.13	0.26	48.08	7,996	9.52	76.96%	7.06	78.33%
LL-12	17	0.04	0.01	0.03	5.41	7,439	9.56	77.28%	7.09	78.67%
LL-3	18	0.15	0.06	0.10	20.63	7,406	9.71	78.52%	7.19	79.73%
HL-2	19	0.58	0.12	0.46	80.06	7,263	10.29	83.22%	7.65	84.83%
LL-11	20	0.43	0.13	0.29	64.14	6,626	10.72	86.65%	7.94	88.07%
MR-1A	21	0.06	0.01	0.05	9.37	6,507	10.78	87.15%	7.99	88.64%
LL-8	22	0.09	0.03	0.07	16.39	5,628	10.87	87.89%	8.06	89.37%
LL-17	23	0.03	0.01	0.02	4.96	5,541	10.90	88.12%	8.07	89.53%
LL-18	24	0.21	0.06	0.16	38.52	5,497	11.11	89.83%	8.23	91.25%
HL-5	25	0.20	0.06	0.14	37.69	5,294	11.31	91.44%	8.37	92.78%
HL-3	26	0.27	0.09	0.18	53.85	4,963	11.58	93.60%	8.55	94.79%
LL-6	27	0.28	0.15	0.13	63.06	4,432	11.86	95.86%	8.68	96.21%
IP-2	28	0.08	0.02	0.06	17.27	4,401	11.93	96.47%	8.74	96.88%
LL-10	29	0.05	0.02	0.03	12.33	4,378	11.99	96.91%	8.77	97.23%
LL-13	30	0.06	0.04	0.02	13.42	4,228	12.04	97.37%	8.79	97.47%
LL-20	31	0.08	0.02	0.06	24.07	3,420	12.13	98.04%	8.85	98.14%
IP-3	32	0.05	0.02	0.04	18.65	2,855	12.18	98.47%	8.89	98.54%
MR-1	33	0.11	0.02	0.08	38.45	2,757	12.29	99.32%	8.97	99.47%
LL-19	34	0.06	0.02	0.03	20.36	2,725	12.34	99.77%	9.00	99.84%
LL-22B	35	0.02	0.01	0.01	8.91	1,740	12.36	99.90%	9.01	99.92%
IP-4	36	0.01	0.01	0.01	13.15	970	12.37	100.00%	9.02	100.00%
System Total		**12.37**		**9.02**		**427,172**				

Notes:

Shading denotes areas recommended for further evaluation

* B-1 values are not included in the total calculations

TABLE 3-4
CITY OF WOONSOCKET
I/I REMEDIATION PROGRAM - PHASE 1
INFLOW RANKING FOR AVERAGE STORMS BY METER

ATTACHMENT C

Pipe Repair Report

Network: Woonsocket_RI_Collections

Veolia Water North America
Collection Systems
www.veoliawaterna.com

Summary of Pipe Repairs:

Number of repairs: 4
Total length of repairs (ft): 12.00
Total actual cost ($): 7000.00
Infiltration Removed (GPD): 15,840.00

Pipe ID	Repair ID	Repair Length (ft)	Status	Defect Type	Repair Type
-	1333536464_rodman	4.000	COMP (Completed)	MAIN (Break In Main)	CIP_LINER (Cured In-Place Liner)
-	1333536235_rodman	2.000	COMP (Completed)	INFILT (Infiltration)	CIP_LINER (Cured In-Place Liner)
-	1333970937_rodman	4.000	COMP (Completed)	INFILT (Infiltration)	CIP_LINER (Cured In-Place Liner)
-	1333971117_rodman	2.000	COMP (Completed)	MAIN (Break In Main)	CIP_LINER (Cured In-Place Liner)

Repair Record

Repair ID: 1333536464_rodman		**Job Number:** 2020900.3501	
Status: COMP (Completed)	**Defect Type:** MAIN (Break In Main)	**Repair Type:** CIP_LINER (Cured In-Place Liner)	**Cause of Failure:** GROUND (Ground Movement)
Start Length (ft): 119.000	**Repair Length (ft):** 4.000	**CCTV Required:** Y	**Shape:** CIRC (Circular)
Material: VCP (Vitrified Clay Pipe)	**Lining Material:** EP (Epoxy)	**Lining Type:** CIP (Cured in Place)	**I/I Removed:** 0 GPD
Width (in): -	**Height (in):** 8.0	**Location:** Rustic Dr. 4475-4476 (119')	

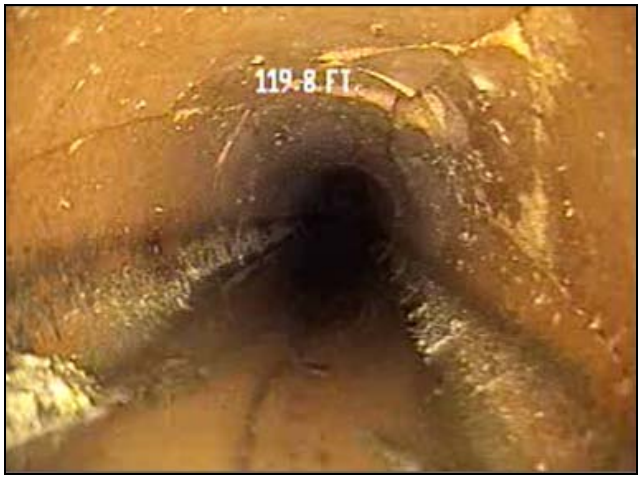
Actual Duration:	-	**Actual Cost ($):**	1800.00
Estimated Duration:	-	**Estimated Cost ($):**	1800.00

Schedule Number:	-	**Completed:**	Y
Date/Time Planned:	10:47 03 Apr 2012	**Task Status:**	COMP (Completed)
Estimated Completion Date:	-	**Date/Time Started:**	10:48 03 Apr 2012
Repeat Period:	-	**Date Completed:**	10:49 04 Apr 2012
Team Leader:	ZICUIS (Zicuis Chris)	**Repeat Schedule Number:**	-
Contractor:	VEOLIA (Veolia Water North America)		

Pipe Information:

Pipe ID:		**Pipe Type: Gravity**
Location: Rustic Drive		**Site Condition:**
US Material: VCP	**US Lining Type: N/A**	
US Shape: CIR	**US Height (in): 8"**	
DS Material: VCP	**DS Lining Type: N/A**	
DS Shape: CIR	**DS Height (in): 8"**	

Pre Repair



Post Repair

Repair Record

Repair ID: 1333536235_rodman		**Job Number:** 2020900.3501	
Status: COMP (Completed)	**Defect Type:** INFILT (Infiltration)	**Repair Type:** CIP_LINER (Cured In-Place Liner)	**Cause of Failure:** GROUND (Ground Movement)
Start Length (ft): 62.000	**Repair Length (ft):** 2.000	**CCTV Required:** Y	**Shape:** CIRC (Circular)
Material: VCP (Vitrified Clay Pipe)	**Lining Material:** EP (Epoxy)	**Lining Type:** CIP (Cured in Place)	**I/I Removed:** 5760 GPD
Width (in): -	**Height (in):** 8.0	**Location:** Langevin St. 3297-3296 (62')	

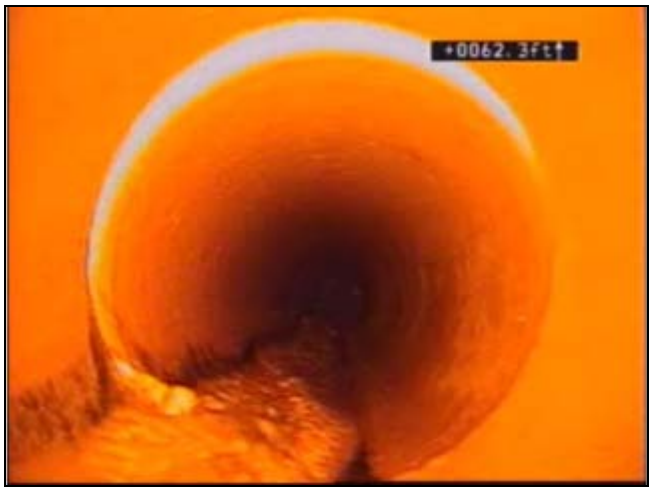
Actual Duration:	-	**Actual Cost ($):**	1700.00
Estimated Duration:	-	**Estimated Cost ($):**	1700.00

Schedule Number:	-	**Completed:**	Y
Date/Time Planned:	10:44 03 Apr 2012	**Task Status:**	COMP (Completed)
Estimated Completion Date:	-	**Date/Time Started:**	10:45 03 Apr 2012
Repeat Period:	-	**Date Completed:**	10:47 04 Apr 2012
Team Leader:	ZICUIS (Zicuis Chris)	**Repeat Schedule Number:**	-
Contractor:	VEOLIA (Veolia Water North America)		

Pipe Information:

Pipe ID:		**Pipe Type: Gravity**
Location: Langevin Street		**Site Condition:**
US Material: VCP	**US Lining Type: N/A**	
US Shape: CIR	**US Height (in): 8"**	
DS Material: VCP	**DS Lining Type: N/A**	
DS Shape: CIR	**DS Height (in): 8"**	

Pre Repair



Post Repair

Repair Record

Repair ID: 1333970937_rodman		**Job Number:** 2020900.3501	
Status: COMP (Completed)	**Defect Type:** INFILT (Infiltration)	**Repair Type:** CIP_LINER (Cured In-Place Liner)	**Cause of Failure:** GROUND (Ground Movement)
Start Length (ft): 6.000	**Repair Length (ft):** 4.000	**CCTV Required:** Y	**Shape:** CIRC (Circular)
Material: VCP (Vitrified Clay Pipe)	**Lining Material:** EP (Epoxy)	**Lining Type:** CIP (Cured in Place)	**I/I Removed:** 7200 GPD
Width (in): -	**Height (in):** 8.0	**Location: Congress St. 3644-3643 (188.5')**	

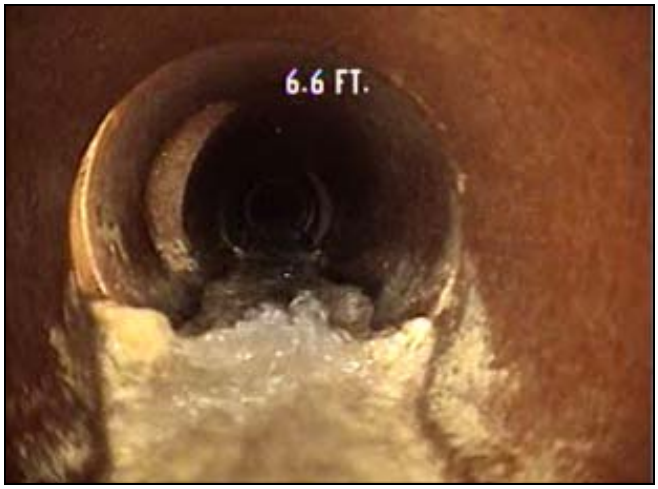
Actual Duration:	-	**Actual Cost ($):**	1800.00
Estimated Duration:	-	**Estimated Cost ($):**	1800.00

Schedule Number:	-	**Completed:**	Y
Date/Time Planned:	11:29 05 Apr 2012	**Task Status:**	COMP (Completed)
Estimated Completion Date:	-	**Date/Time Started:**	11:30 05 Apr 2012
Repeat Period:	-	**Date Completed:**	11:31 05 Apr 2012
Team Leader:	ZICUIS (Zicuis Chris)	**Repeat Schedule Number:**	-
Contractor:	VEOLIA (Veolia Water North America)		

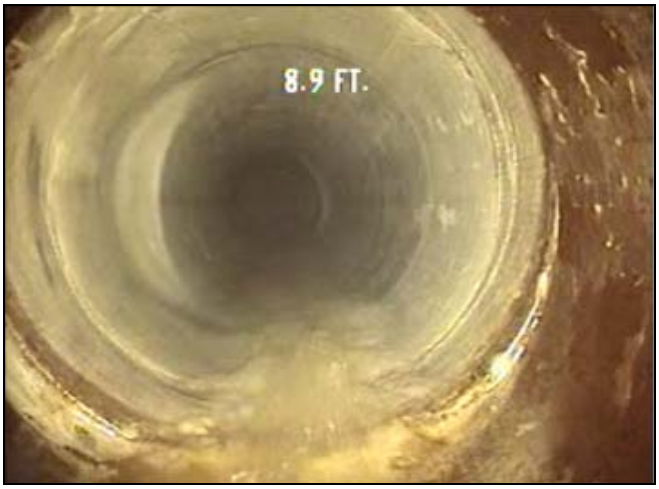
Pipe Information:

Pipe ID:		**Pipe Type: Gravity**
Location: Congress Street		**Site Condition:**
US Material: VCP	**US Lining Type: N/A**	
US Shape: CIR	**US Height (in): 8"**	
DS Material: VCP	**DS Lining Type: N/A**	
DS Shape: CIR	**DS Height (in): 8"**	

Pre Repair



Post Repair



Repair Record

Repair ID: 1333971117_rodman		**Job Number:** 2020900.3501	
Status: COMP (Completed)	**Defect Type:** MAIN (Break In Main)	**Repair Type:** CIP_LINER (Cured In-Place Liner)	**Cause of Failure:** IMPACT (Impact Damage)
Start Length (ft): 160.000	**Repair Length (ft):** 2.000	**CCTV Required:** Y	**Shape:** CIRC (Circular)
Material: VCP (Vitrified Clay Pipe)	**Lining Material:** EP (Epoxy)	**Lining Type:** CIP (Cured in Place)	**I/I Removed: 2880 GPD**
Width (in): -	**Height (in):** 8.0	**Location: Prospect St. 3843-3844 (160')**	

Actual Duration:	-	**Actual Cost ($):**	1700.00
Estimated Duration:	-	**Estimated Cost ($):**	1700.00

Schedule Number:	-	**Completed:**	Y
Date/Time Planned:	11:32 05 Apr 2012	**Task Status:**	COMP (Completed)
Estimated Completion Date:	-	**Date/Time Started:**	11:33 05 Apr 2012
Repeat Period:	-	**Date Completed:**	11:34 05 Apr 2012
Team Leader:	ZICUIS (Zicuis Chris)	**Repeat Schedule Number:**	-
Contractor:	VEOLIA (Veolia Water North America)		

Pipe Information:

Pipe ID:		**Pipe Type: Gravity**
Location: Prospect Street		**Site Condition:**
US Material: VCP	**US Lining Type: N/A**	
US Shape: CIR	**US Height (in): 8"**	
DS Material: VCP	**DS Lining Type**: N/A	
DS Shape: CIR	**DS Height (in): 8"**	

Pre Repair

Post Repair

Pipe Repair Report

Network: Woonsocket_RI_Collections

Veolia Water North America
Collection Systems
www.veoliawaterna.com

Summary of Pipe Repairs:

Number of repairs: ***1***
Total length of repairs (ft): 2.00
Total actual cost ($): $ 4389.69

Pipe ID	Repair ID	Repair Length (ft)	Status	Defect Type	Repair Type
5968.5967.1	1339751645_rodman	2.000	Completed	MAIN (Break In Main)	REPLACE (Replacement)

Repair Record

Repair ID: 1339751645_rodman		**Job Number:** 2020900.3501	
Status: -	**Defect Type:** MAIN (Break In Main)	**Repair Type:** REPLACE (Replacement)	**Cause of Failure:** WORKS (Other Works)
Start Length (ft): 1.000	**Repair Length (ft):** 2.000	**CCTV Required:** N	**Shape:** CIRC (Circular)
Material: PVC (Polyvinyl Chloride)	**Lining Material:** -	**Lining Type:** -	
Width (in): -	**Height (in):** 1.2	**Notes:** At 8:15 a.m. the Woonsocket Collections Forman received a call that there was sewage coming out of a manhole in front of 304 Gauthier Drive in Woonsocket, RI. Upon arrival at 8:30 a.m. the Collections crew noticed a puddle of standing water in front of the driveway (estimated to be roughly 2 gallons) with a water runoff mark coming from the manhole also located in front of the property. At this time there was no active overflow coming from the manhole, however the manhole was surcharged. The crew utilized the vactor truck to suck the manhole of all water and noticed that it was a dead end manhole with a 1.25 inch PVC flushing connection for a 1.25 PVC force sewer main. This force sewer main served five houses on the street where each house had a private Environmental One Grinder Pump installed to discharge the sewage to the force main. When the manhole was sucked clear of all standing water the crew noticed water coming back into the manhole where the 1.25 inch force sewer main exited the manhole. The crew used green liquid dye to troubleshoot issue. A Collections staff member entered the property at 304 Gauthier Drive and poured green liquid dye into the toilet and flusher several times so that the pump would turn on and discharge to the force main. Shortly after green dye was identified coming back into the manhole and it was determined that there was a break in the force sewer main. At 8:50 a.m. the Woonsocket Public Works Director was notified of the situation and gave approval to bring in the City of Woonsocket?s excavation contractor to repair the broken pipe. At 9:10 a.m. the Veolia Director, of Asset Management was notified of the current situation. At 9:30 a.m. the City?s excavation contractor was notified that there was an emergency dig and repair that would need to be done. The Collections crew remained at the site using the	

		vactor truck to bypass the minimal sewage flow into the manhole for the duration of the job. While waiting for the excavation contractor to arrive the Collections crew sucked up the 2 gallons of standing sewage water in front of the driveway and applied a small hypo-water solution to the area. At 1:00 p.m. the excavation contractor arrived on site and began cutting the road to excavate. The Dig Safe mark out for the other underground utilities was completed at 2:30 p.m. and the excavation crew began digging. At 4:00 p.m. the excavation crew located the broken section of 1.25 inch PVC force sewer main. The new 1.25 inch PVC section of pipe was assembled, but required a 1 hour drying time for PVC cement to set up properly. At 5:15 p.m. the section of pipe was installed and tested. The repair held all water within the sewer main and back filling of the trench began. At 6:15 p.m. the trench was backfilled to grade and had been compacted in three foot intervals. The residents were then informed that they could use the water again. The trench was left to grade with road cones and barrels around it per request of the City of Woonsocket's Engineering Department. The road will have a temporary patch put on it and will receive a permanent asphalt patch within 90 days managed by the City's Engineering Department.

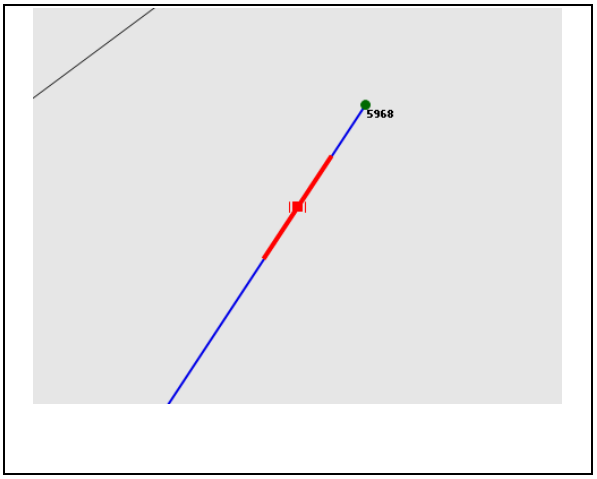
Actual Duration: -	**Actual Cost ($):** 4389.69
Estimated Duration: -	**Estimated Cost ($):** -

Schedule Number: -	**Completed:** Y
Date/Time Planned: 13:00 23 May 2012	**Task Status:** COMP (Completed)
Estimated Completion Date: -	**Date/Time Started:** 13:00 23 May 2012
Repeat Period: -	**Date Completed:** 06:00 23 May 2012
Team Leader: RODMAN (Rodman Paul)	**Repeat Schedule Number:** -
Contractor: VEOLIA (Veolia Water North America)	

Pipe Information:

Pipe ID: 5968.5967.1		**Pipe Type:** FM (Force Main)
Location: Gauthier Drive		**Site Condition:** -
US Material: PVC (Polyvinyl Chloride)	**US Lining Material:** -	**US Lining Type:** -
US Shape: CIRC (Circular)	**US Width (in):** 1.8	**US Height (in):** 1.8
DS Material: PVC (Polyvinyl Chloride)	**DS Lining Material:** -	**DS Lining Type:** -
DS Shape: CIRC (Circular)	**DS Width (in):** 1.8	**DS Height (in):** 1.8

US Depth From Cover (ft): 0.000	**DS Depth From Cover (ft):** 0.000
Notes: 2005	



October 17, 2012

Sheila McGauvran
Director of Public Works
City of Woonsocket
160 Main Street
Woonsocket, RI 02895

RE: Rhodes Avenue completed pipe repair report

Dear Mrs. McGauvran,

The following report is

Regards,

Paul Rodman
Collection System Manager
Veolia Water North America

Cc: Adel Banoub – City of Woonsocket
Jonathan Mongie – Director, Asset Management, Veolia Water

VEOLIA
WATER

October 8, 2012

Shelia McGauvran
Director of Public Works
City of Woonsocket
160 Main Street
Woonsocket, RI 02895

RE: Rhodes Avenue emergency sewer main repair

Dear Mrs. McGauvran,

On October 2, 2012 during a routine CCTV assessment it was identified that a fifty (50) foot section of sewer main was near failure due to significant structural damage. Also the downstream manhole on this section of pipe is severely damaged and needs replacement. Attached please find the CCTV pipe section report that identifies each individual defect as well as pictures of the pipe and manhole defects.

Due to the amount of damage throughout the entire section of sewer main and manhole I have classified this as an emergency repair and recommend that the entire fifty (50) section of sewer main and downstream manhole be excavated and replaced. With your authorization I would like to conduct an emergency repair to fix the sewer main on Tuesday, October 16, 2012 and Wednesday, October 17, 2012.

Should you have any questions or require further information, please feel free to contact me at your convenience.

Sheila McGauvran
Accepted: Sheila McGauvran, Director of Public Works

10/9/12
Date

Regards,

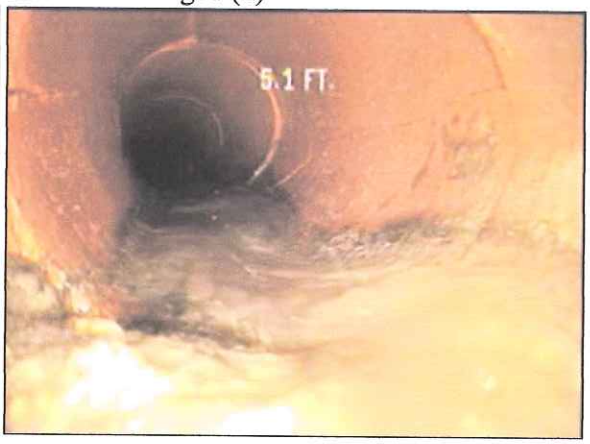
Paul Rodman
Veolia Water North America

Cc: Adel Banoub, City of Woonsocket
Jonathan Mongie, Dir., Asset Management, Veolia Water North America

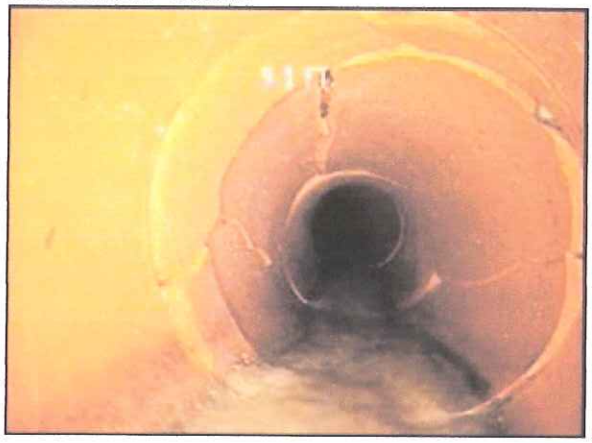
Defect photos of pipe

Broken Void Visible

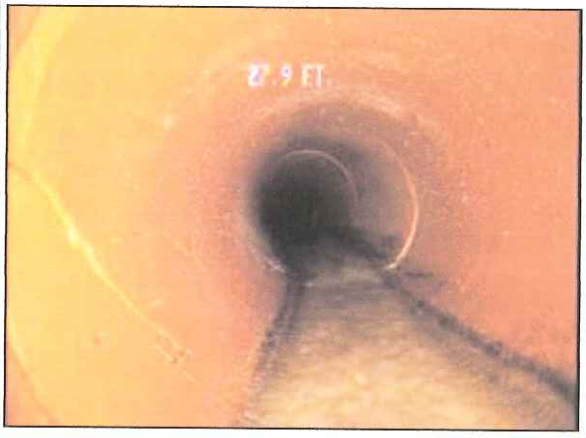
Fractures Hinged (4)



Broken Soil Visible



Multiple Fractures



Multiple Fractures

Pipe Broken

Defect photos of manhole

PACP Inspection Report

Upstream MH	Downstream MH	Size	Material	Total Length	City
1149	1150	8	Vitrified Clay Pipe		Woonsocket

Surveyor's Name	Certificate Number	Street Address	Location Details
chris zicuis	U-408-6826	Rhodes Ave	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Routine Assessment	Dry	10/02/2012	09:42	42.3

Additional Information

1149

Ftg.	Code	Description	Position	Comment
0.0	AMH	Access Point - Manhole		Starting Manhole: 1149
0.0	MWL	Water Level		
0.0	CM	Crack Multiple	12 to 12	
4.5	BSV	Pipe Broken: Soil Visible	12 to 12	
9.4	FH4	Fracture Longitudinal Hinge, 4	12	

Ftg.	Code	Description	Position	Comment
28.5	CM	Crack Multiple	6 to 12	
34.1	CH3	Crack Longitudinal Hinge, 3	6	
42.3	OBZ	Obstacle - Other Objects	3 to 9	PIECES OF VCP PIPE
42.3	MSA	Survey Abandoned		PIECES OF BROKEN PIPE

1150

Generated on Tuesday, 10/2/2012 at 09:58 AM by the PipeTech® TV inspection system.

Pipe repair report

On October 16, 2012 the Veolia Woonsocket Collections staff met Boyle & Fogarty Construction to complete the dig and replacement of forty-eight (48) linear feet of eight (8) inch sewer main located on Rhodes Avenue.

At 7:00 a.m. the police detours where set in place and the road cutting began. By 8:00 a.m. the excavator had begun removing asphalt and digging down to the sewer main. The excavation process was prolonged due to the amount of ledge that the crew encountered. See the photos below.

The sewer main by-pass was set up and running by 11:00 a.m. All flow from the sewer up stream was sucked into a 4000 gallon tank truck and at the end of the project all contents where decanted at the waste water treatment facility.

When the sections of the trench were excavated enough to begin pipe installation prep, sections of hydraulic shoring were installed for safety measures. See photos below.

After the new 8 inch sewer main was placed and approved by the City Engineering staff the construction crew began to back fill first using a bed of crushed stone and the then processed gravel. See photos below.

The repair trench was backfilled, compacted, and temporary patch was put on the trench by 4:00 p.m. when the construction crew left the job site and the road was opened again.

Boyle & Fogarty Construction

2 Industrial Drive South, Unit 1
Smithfield, RI 02917
(401) 231-0007 / fax (401) 231-4410

Invoice

Date	Invoice #
10/17/2012	1600

Bill To

City of Woonsocket
Engineering Division
P. O. Box "B"
Woonsocket, RI 02895-4379
ATTN: Mike Debroisse

P.O. No.	Terms	Project	Date(s) Worked
	Due on rec...	Emergency Repair	10/16/12

Description	Qty/Ho...	Rate	Amount
RE: Rhodes Avenue, Woonsocket Replace 8" Sewer Main			
**********			
Excavator & Trench Box		380.00	380.00
Sewer Main - 25lf	25	150.00	3,750.00
Sewer Main - 25lf	25	125.00	3,125.00
Saw Cut		300.00	300.00
Connect to SMH	2	800.00	1,600.00
Unsuitable Material - 73.58cy	73.58	19.00	1,398.02
Suitable Material - 73.58cy	73.58	27.00	1,986.66
**********			
1/2 Hour OT			
(1) Foreman ($74/Hr)	0.5	111.00	55.50
(2) Operators ($72/Hr)	1	108.00	108.00
(2) Laborers ($70/Hr)	1	105.00	105.00
(1) Driver ($50/Hr)	0.5	75.00	37.50
200 Komatsu Excavator	0.5	105.00	52.50
Backhoe	0.5	60.00	30.00
Tri-Axle Dump Truck	0.5	30.00	15.00

I hereby certify that this bill is true and correct,

Total

John P. Fogarty, V.P.

Overdue accounts subject to a service charge of 1 1/2% per month.

An Equal Opportunity / Affirmative Action Employer

10/17/12 OK to pay

Boyle & Fogarty Construction
2 Industrial Drive South, Unit 1
Smithfield, RI 02917
(401) 231-0007 / fax (401) 231-4410

Invoice

Date	Invoice #
10/17/2012	1600

Bill To

City of Woonsocket
Engineering Division
P. O. Box "B"
Woonsocket, RI 02895-4379
ATTN: Mike Debroisse

P.O. No.	Terms	Project	Date(s) Worked
	Due on rec...	Emergency Repair	10/16/12

Description	Qty/Ho...	Rate	Amount
Tool Truck	0.5	30.00	15.00
10% Mark Up ($418.50)		41.85	41.85
**********			
Repair 10' of 12" Drain Pipe	10	80.00	800.00

I hereby certify that this bill is true and correct,

Total $13,800.03

John P. Fogarty, V.P.

Overdue accounts subject to a service charge of 1 1/2% per month.

An Equal Opportunity / Affirmative Action Employer

401-232-3010
MATERIAL SAND & STONE, CORP.
618 GREENVILLE ROAD
N. SMITHFIELD, RI 02896

CUST # 13100
TKT # 147496
DATE 10/16/12

QTY TOTAL 23.65

SOLD TO:BOYLE & FOGARTY CONSTRUCTION
2 INDUSTRIAL DRIVE SOUTH
UNIT 1
SMITHFIELD RI 02917

DEL:

JOB/LOC: WOON SEWER nhoog 4M

TRUCK: OWN
DRIVER:

PRODUCT	U/M	QUANTITY		S-TX
PROCESSED GRAVEL	TN	23.65	18.92	

LEAVE PLANT: 12:12
RETURN PLANT: ____:____

ON ACCOUNT

THANK YOU! WE APPRECIATE YOUR BUSINESS

GROSS WEIGHT: 74700
TARE WEIGHT: 27400
NET WEIGHT: 47300

RECEIVED BY : Thomas P. Dunn

THE CUSTOMER ACCEPTS ALL RESPONSIBILITY FOR ANY DAMAGES CAUSED BY VEHICLE ON THE CUSTOMER'S PROPERTY. THE COMPANY SHALL NOT BE LIABLE FOR DRIVEWAYS WITH PREVIOUS DAMAGE OR AGE.

401-232-3010
MATERIAL SAND & STONE, CORP.
618 GREENVILLE ROAD
N. SMITHFIELD, RI 02896

CUST # 13100
TKT # 147503
DATE 10/16/12

QTY TOTAL 22.63

SOLD TO:BOYLE & FOGARTY CONSTRUCTION
2 INDUSTRIAL DRIVE SOUTH
UNIT 1
SMITHFIELD RI 02917

DEL:

JOB/LOC: WOON SEWER nhoog Adel

TRUCK:
DRIVER:

PRODUCT	U/M	QUANTITY		S-TX
RECYCLED PROCESSED GRAVEL	TN	22.63	18.10	

LEAVE PLANT: 14:46
RETURN PLANT: ____:____

ON ACCOUNT

THANK YOU! WE APPRECIATE YOUR BUSINESS

GROSS WEIGHT: 72660
TARE WEIGHT: 27400
NET WEIGHT: 45260

RECEIVED BY : Thomas P. Dunn

THE CUSTOMER ACCEPTS ALL RESPONSIBILITY FOR ANY DAMAGES CAUSED BY VEHICLE ON THE CUSTOMER'S PROPERTY. THE COMPANY SHALL NOT BE

401-232-3010
MATERIAL SAND & STONE, CORP.
618 GREENVILLE ROAD
N. SMITHFIELD, RI 02896

CUST # 13100
TKT # 147486
DATE 10/16/12

QTY TOTAL 20.00

SOLD TO: BOYLE & FOGARTY CONSTRUCTION
2 INDUSTRIAL DRIVE SOUTH
UNIT 1
SMITHFIELD RI 02917

DEL:

JOB/LOC: MOON SEWER

TRUCK: OWN
DRIVER:

PRODUCT	U/M	QUANTITY	
3" GRANULAR FILL (STRUCTURAL)	CY	20.00	S-TX

20.00 cy

LEAVE PLANT: 10:39
ON JOB SITE: ____:____
BEG DISCHARGE: ____:____
END DISCHARGE: ____:____
RETURN PLANT: ____:____

ON ACCOUNT

WAIT CHARGE _____

THANK YOU! WE APPRECIATE YOUR BUSINESS

ADDITIONAL WATER ORDERED BY:
GAL: _____ SIGNED: _____

RECEIVED BY : _____

THE CUSTOMER ACCEPTS ALL RESPONSIBILITY FOR ANY DAMAGES CAUSED BY VEHICLE ON THE CUSTOMER'S PROPERTY. THE COMPANY SHALL NOT BE LIABLE FOR DRIVEWAYS WITH PREVIOUS DAMAGE OR AGE.

401-232-3010
MATERIAL SAND & STONE, CORP.
618 GREENVILLE ROAD
N. SMITHFIELD, RI 02896

CUST # 13100
TKT # 147501
DATE 10/16/12

QTY TOTAL 44.35

SOLD TO: BOYLE & FOGARTY CONSTRUCTION
2 INDUSTRIAL DRIVE SOUTH
UNIT 1
SMITHFIELD RI 02917

DEL:

JOB/LOC: MOON SEWER

TRUCK: OWN
DRIVER:

PRODUCT	U/M	QUANTITY	
PROCESSED GRAVEL	TN	20.70	S-TX

16.56 cy

LEAVE PLANT: 13:37
RETURN PLANT: ____:____

ON ACCOUNT

THANK YOU! WE APPRECIATE YOUR BUSINESS

GROSS WEIGHT: 68800
TARE WEIGHT: 27400
NET WEIGHT: 41400

RECEIVED BY : _____

THE CUSTOMER ACCEPTS ALL RESPONSIBILITY FOR ANY DAMAGES CAUSED BY VEHICLE ON THE CUSTOMER'S PROPERTY. THE COMPANY SHALL NOT BE

After Hours Drain Service
PO Box 760
Wrentham, MA 02093

Invoice

Date	Invoice #
10/12/2012	13373

Bill To	Job Address
Veolia Water North America Attn: Accounts Payable 115 W. Washington Street - Suite 14505 Indianapolis, IN 46204-3427	270 Rhoades Avenue Woonsocket, RI

Terms
Net 30

Description	Price	Serviced	Amount
By-pass pumping while contractor replaced 8" main line in street. Dump on site. 8.5 hours @ $150/hr.	1,275.00	10/16/2012	1,275.00
		Total	$1,275.00

Thank you for your business!

After 30 days 18% interest is assessed starting from the invoice date.

Phone #	E-mail	Web Site
1-508-384-0181	afterhoursdrain@comcast.net	afterhoursdrain.com

August 30, 2012

Mrs. Sheila McGauvran
Director of Public Works
City of Woonsocket
169 Main Street
Woonsocket, RI 02895

RE: Emergency Repair Report for 121 Providence Street

Dear Mrs. McGauvran,

With you authorization, on August 29, 2012 the Veolia Woonsocket Collections Department conducted a emergency sewer main and lateral repair located 121 Providence Street in an attempt to remedy a sink hole problem in the street.

At 7:00 a.m. Boyle and Fogarty Construction arrived on site and began saw cutting the street and setting the detour route.

7:30 a.m. the storm drain grates were covered to prevent excavation debris from entering and causing a potential blockage.

8:00 a.m. excavation begins.

9:00 a.m. Excavation comes to a stop due to uncovering an unmarked 6” cast iron pipe. The Woonsocket Water Department is contacted to remark the area because the unmarked pipe s believed to be a live water main. The Water Department confirmed that the pipe was a live 6” water main.

9:45 a.m. Excavation begins again.

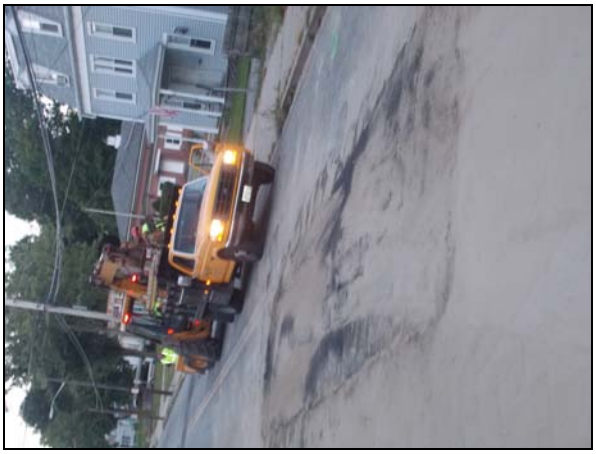
11: 30 a.m. the sewer main and lateral are located. Through hydro excavation all of the piping is uncovered and damage assessed.

While cleaning around the service lateral it was discovered that the storm drain manhole structure is placed directly on top of the service lateral. The lateral is found to be separated 6 feet up from the connection to the main which places the break in the center of the storm drain structure. At this time the only repair was to sleeve 3 foot sections of 4 inch PVC pipe into the existing lateral and if the house ever gets repaired then connect to the 4 inch.

At roughly 4:00 p.m. the repair of the sewer main and lateral are complete and back filling begins.


The trench is compacted in 3 foot increments.


A temporary hot asphalt patch is placed over the trench until Picolli Paving can put down the permanent patch.

If you should have any questions or require further information please feel free to contact me at 401-265-0525.

Sincerely,

Paul Rodman
Project Manager, Veolia Water North America

Cc: Adel Banoub, City of Woonsocket
Jonathan Mongie, Director, Asset Management, Veolia Water North America

ATTACHMENT D

Section IX

USER CHARGE COLLECTION FUND
Detailed Expenditures

2012-2013

USER CHARGE COLLECTION FUND
Public Works Department
Sewer Division
Detail 2012-2013

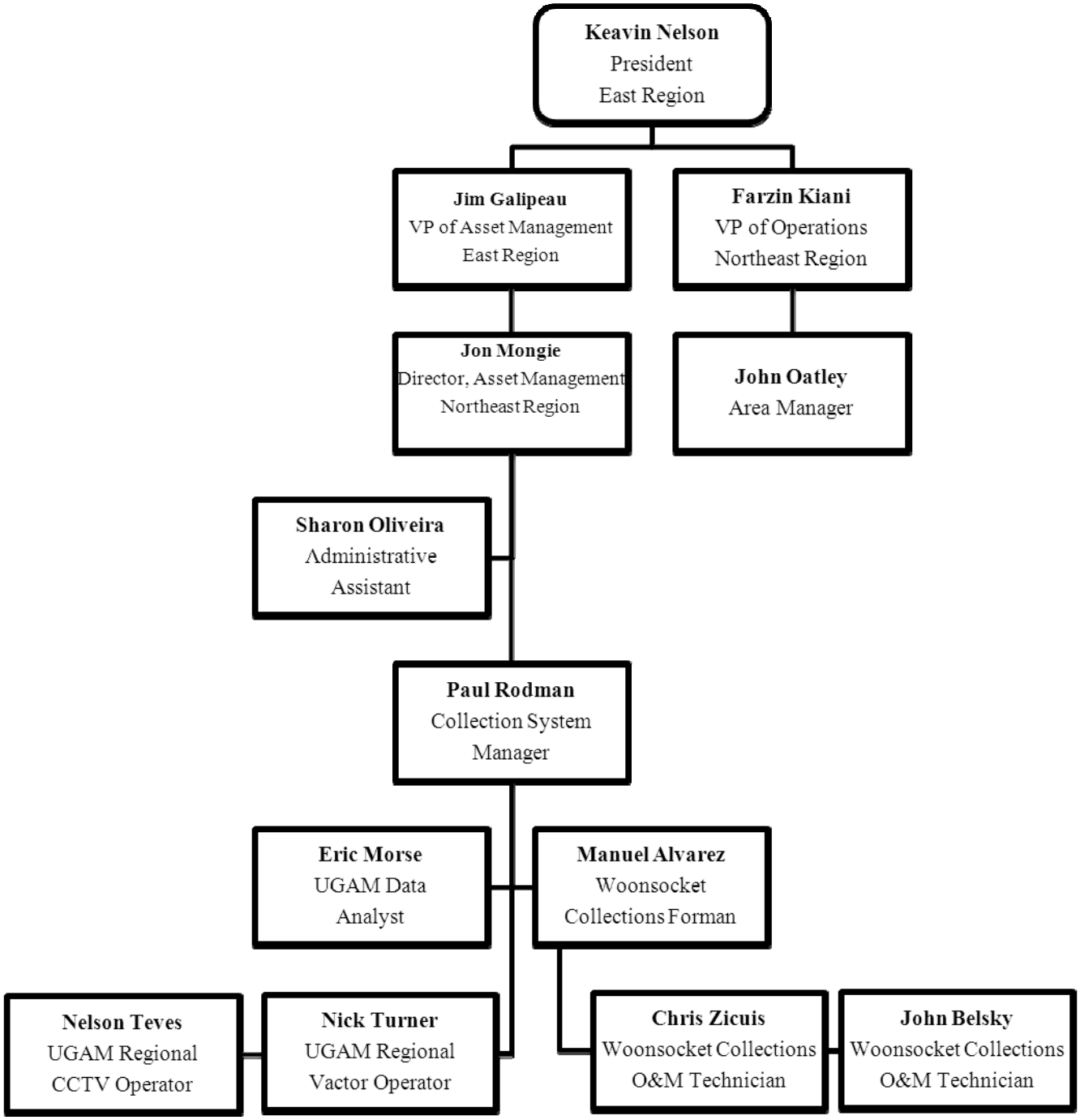
		Adopted Budget FY 12	Adjusted Budget FY 12	Total Est. Expended FY 12	Proposed Budget FY 13
U6951	**Personal Services**				
-51110	Permanent Services	$ -	$ -	$ -	$ -
-51122	Temporary Labor	$ 19,850	$ 19,850	$ 19,850	$ 19,850
	Permanent Services	19,850	19,850	19,850	19,850
	Extra Compensation				
-51141	Overtime	-	-	-	-
-51144	Out of Class Pay	-	-	-	-
-51145	Longevity	-	-	-	-
-51147	Sick Leave Reimb	-	-	-	-
51148	Comp Time Reimb	-	-	-	-
-51149	Shift Differential	-	-	-	-
-51153	Non Sick/Injury Bonus	-	-	-	-
-51155	Bonus for Course	-	-	-	-
	Total Extra Compensation	-	-	-	-
	Total Personal Services	19,850	19,850	19,850	19,850
U6952	**Maintenance & Servicing**				
-52211	Postage	-	-	-	-
-52212	Telephone	600	600	600	600
-52213	Dues and Subscriptions	-	-	-	-
-52214	Advertising	-	-	-	-
-52219	Education Training	-	-	-	-
-52221	Printing & Reproducing	-	-	-	-
-52223	Operations & Management	698,140	698,140	684,451	698,140
-52227	Accelerated Cleaning	155,000	155,000	153,000	155,000
-52231	Gen. Maint. & Upkeep	-	-	-	-
-52234	Veh & Outside Equip Upkeep	-	-	-	-
-52238	Maintenance - Roads & Walk:	-	-	-	-
-52244	Land Rental Charges	2,475	2,475	2,475	2,475
-52251	Heating	-	-	-	-
-52252	Light & Power	50,000	50,000	50,000	50,000
-52290	Engineering Services	50,000	50,000	50,000	50,000
	Total Maint. & Servicing	956,215	956,215	940,526	956,215

account detail continued on next page

USER CHARGE COLLECTION FUND
Public Works Department
Sewer Division
Detail 2012-2013

		Adopted Budget FY 12	Adjusted Budget FY 12	Total Est. Expended FY 12	Proposed Budget FY 13
U6953	**Operating Supplies**				
-53311	Office Supp. & expenses	-	-	-	-
-53321	Gas & Diesel Fuel	-	-	-	-
-53322	Tires & Batteries	-	-	-	-
-53335	Water Purchased	3,000	3,000	3,000	3,000
-53344	Tools & Implements	-	-	-	-
-53346	Cleaning & Hskp Supplies	-	-	-	-
-53349	Other Supplies	-	-	-	-
-53363	Clothing & Footwear	-	-	-	-
-53366	Medical Supplies	-	-	-	-
-53369	Clothing Allowance	-	-	-	-
	Total Operating Supplies	3,000	3,000	3,000	3,000
U6954	**General Charges**				
-54433	City Employees Pension	-	-	-	-
-54434	FICA Employer Cost	1,519	1,519	1,519	1,530
-54449	RWT Service Charges	-	-	-	-
-54451	Vehicle Insurance	-	-	-	-
-54452	Insurance Workers Comp	-	-	-	-
-54453	Insurance Liability	-	-	-	-
-54456	Insurance-Group Life	-	-	-	-
-54471	Health Insurance	8,800	8,800	8,800	9,680
-54472	Dental Insurance	3,000	3,000	3,000	3,060
-54473	Renewal & Replace Fund	400,000	400,000	400,000	400,000
	Total General Charges	413,319	413,319	413,319	414,270
TOTAL SEWER DIVISION		$ 1,392,384	$ 1,392,384	$ 1,376,695	$ 1,393,335

ATTACHMENT E


Keavin Nelson
President
East Region
Jim Galipeau
VP of Asset Management
East Region
Farzin Kiani
VP of Operations
Northeast Region
Jon Mongie
Director, Asset Management
Northeast Region
John Oatley
Area Manager
Sharon Oliveira
Administrative
Assistant
Paul Rodman
Collection System
Manager
Eric Morse
UGAM Data
Analyst
Manuel Alvarez
Woonsocket
Collections Forman
Nelson Teves
UGAM Regional
CCTV Operator
Nick Turner
UGAM Regional
Vactor Operator
Chris Zicuis
Woonsocket Collections
O&M Technician
John Belsky
Woonsocket Collections
O&M Technician

ATTACHMENT F

June 30, 2009

COLLECTION SYSTEM MANAGER, WOONSOCKET, RI

Responsibilities/Duties for this position: Supervises approximately three full time employees on a regular basis. The work involves the maintenance of sanitary collection systems and pump stations as needed. Employees typically perform cleaning, inspection and maintenance of the gravity sanitary sewer pipes and manholes. The unique feature of this system is the pipes are large diameter of 10 to 30 inches.

Experience, Education and/or Licensing needed for this position: Degree in related field or equivalent related experience. Must hold or be working toward the highest level of Collection System Certification as required by site. Must demonstrate knowledge and experience of health and safety requirements, federal, state and local laws and codes. Must be First Aid and CPR certified within 90 days of hire. Five to seven years in progressive experience in the operation and maintenance of a sanitary sewer collection system with specialized experience in cleaning and inspecting large deep sanitary sewer pipes and manholes.
Lead experience or supervisory training required with understanding of human relations, training, performance evaluation and health and safety.
Candidate must have:

- Experience in Cleaning and inspecting large diameter gravity sewer pipes and manholes.
- Effective skills in troubleshooting, problem solving and team building.
- The availability to help execute the wet weather operations plan.
- The ingenuity and initiative to coordinate problem resolution and to execute the contract requirements within a team environment.
- General knowledge of budget preparation and understanding of cost control.
- Demonstrated good verbal communications and interpersonal skills in order to interface with and motivate all levels of personnel.
- Demonstrated ability to prepare accurate, timely, effective, complete and easily understood written communications and reports.
- Proficiency in the care and use of all site specific, facility required PPE (Personal Protection Equipment).
- Computer skills and a knowledge of word processing, spreadsheet and presentation software for preparing work related reports, charts, graphs and data submittal requirements.
- The ability to use computer systems for preparing work orders and purchasing requisitions.
- The ability to work on an on-call, rotational 24 hour emergency basis with the other Collection System Supervisor.
- Must have or develop skills for the O&M of pump stations and instrumentation and control equipment.
- A demonstrated commitment to compliance with applicable laws and regulations, the Company's Code of Business Conduct and other Company policies and procedures.

Veolia Water North America
Collection Systems
11 Cumberland hill Road
Woonsocket, RI 02895
(ph) 401-762-5050
www.veoliawaterna.com

Collections O&M Technician

JOB DESCRIPTION

Business Unit / Location: VWNA / Woonsocket, RI	Position Code: 270010 Benchmark
Department: UGAM	Prepared by: J. Mongie Last Update: April 9, 2010
Managed by (Title): Collections System Supv / Mgr	FLSA Status: Non-Exempt
Department Approval	HR Approval

SUMMARY

Performs field maintenance, inspection, installation or repairs in one or more areas such as system protection (line locates and inspections of the collection system), cleaning and CCTV pipe, SSES projects, and system flows, and inspecting and maintaining manholes, pipes, and wet wells.
Note: This position requires a mandatory rotating on-call schedule with a half hour response time. Also ability to travel to other job locations

KNOWLEDGE, EXPERIENCE AND SKILLS REQUIRED TO CARRY OUT THE JOB

Technical Knowledge, Years of Related Experience, Certifications Required, Equipment and/or Systems Experience

High school or GED with the ability to read, write and comprehend English (maps, operational, maintenance, safety and quality instructions) and be able to carry out verbal and written instructions.
Ability to perform basic mathematical calculations. Some vocational training and mechanical aptitude preferred, with the ability to read, interpret and record data from meters, gauges, panels, computer consoles and other equipment.
Six months to two years experience in a related position with ability to comprehend specifications, drawings and manuals.
Minimum water / wastewater license as required by regulatory agency at site.
Experience using power, pneumatic, hydraulic, and hand tools.
Experience using pressure gauges and precision measuring instruments.
Must have ability to use a computer or computer device for record keeping.
Must consistently demonstrate the ability to learn and independently perform assigned duties and meet or exceed production and quality goals.
Must demonstrate ability to work in a team environment and willingness to assume additional or new responsibilities readily.
Must demonstrate the ability to work well and communicate with clients, management and the general public.
Must possess a valid driver's license and a safe driving record.

TRAINING REQUIRED

What training will an employee require to successfully perform the duties of the position?

Employee Orientation, Field Service Operating Procedures, Safety, Confined Space training, OSHA and Quality Training. Equipment inspection and repair training.
HAZWOPER (Hazardous Waste Operations and Emergency Response) Level I and II First Responder Certification if required by site. Minimum water / wastewater operator state certification.
Cross-connection certification if required by site.
Customer Service Training. Computer or systems training as required.
Must become proficient in the care and use of all site specific, facility required PPE (Personal Protection Equipment), including respirators, gas detectors, confined space equipment, etc.)
Forklift Certification if required by site.
Works toward increasing skills in additional functional areas or in obtaining advanced skills / certifications.

CDL Class B with Tanker endorsement
Knowledge of operations and maintenance of Vactor Trucks
May perform more advanced functions as part of training and development.

Learning Curve: How much time is required to effectively perform the job? ☐ 0-3 months
☐ 3-6 months ☒ 6-9 months ☐ 9 months to 1 year ☐ 1 – 1 ½ years ☐ 1 ½ to 2 years ☐ 2 to 3 years

E or N	MAIN ACTIVITIES CARRIED OUT **Identify the major tasks accomplished by this job. Identify % of time spent on each and whether activity is an E- essential function or N – non-essential function of the job.**	% OF TIME
E	Performs inspections for sewer pipe repairs, replacements and fresh water sources. Performs system locates. Performs cleaning and maintenance of pipes and manholes.	30%
E	Learns to use the InfoNet Mobile application to record and complete existing work orders and create work orders ad hoc in the field.	15%
E	Learns to perform SSES projects, such as smoke testing, dye testing, dye flooding, building inspection, sewer tie in & sewer extension inspections and manhole inspections.	25%
E	Performs routine and preventative maintenance on equipment. Promptly reports any operational problems to Lead or Supervisor.	10%
E	Cleans equipment and work area as required and properly disposes of waste according to safety and environmental policies. Operates vehicles for field service purposes.	10%
E	**SPECIFIC ACTIVITIES (INTERMITTENT, ON AN OCCASIONAL BASIS, ETC.)** May travel to other projects for assistance.	10%

SCOPE AND IMPACT OF THE JOB

Revenue or budget managed: $ 0 **Investments decided upon / managed:** none at this level

Number of Direct Reports: 0 **Number of Indirect Reports: 0**
Titles of Reports: n/a

Nature of Supervisory Responsibility: ☒ **None**

Degree of supervision received or the degree of autonomy given: The degree to which supervisor outlines the methods to be followed or results to be obtained and checks work or progress.
Works under direct supervision**:** Works either with higher level or more experienced team member or specific instructions are given on assignments or follows written or verbal instructions and established procedures (specifications, drawing and manuals) and standard practice to perform assigned tasks.

Complexity of Duties and Decisions: The extent to which duties are guided by standard policy, practice or precedents or the amount of resourcefulness and planning and creative effort in devising new methods, policies, policies, procedures, products or original application.
Performs a variety of manual functions. Follows established procedures to perform standardized or routine tasks. Must follow established operational, maintenance, safety and emergency response procedures. Must adhere to specifications and schedule. May suggest process improvements.

Initiative: Describe the ingenuity, creative imagination or original thought that is expected of the job.
Uses initiative in carrying out recurring assignments. Waits for direction for next steps and assignments outside of routine. Keeps supervisor informed of problems.

How errors detected and what is possible impact of those errors?
Work is reviewed for completeness and accuracy, or inherent checks are built into the nature of the work. Most errors are caught during self-inspection before leaving work unit. Impact is minimal.

INTERPERSONAL / COMMUNICATIONS

Indicate internal and external contacts and purpose of contacts.

Internal contact with immediate associates and immediate supervisor for instructions, training and guidance. Frequent contact with customers to resolve service issues and problems.

WORK ENVIRONMENT AND DEMANDS

List the work environment and physical demands encountered while performing the essential functions of the job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Work Environment:

Spends majority of time in field environment and occasionally works in an office, maintenance or repair shop environment. Typically spends 85% of time exposed to outdoor and sometimes inclement weather. Company service vehicles are used as required. May serve rotational 24 hour emergency on-call.

Possible Work Hazards:

May be exposed to possible operations hazards including fumes, dust, toxic and caustic chemicals, noise, rotating machinery, high pressure and hot and cold temperatures, slippery surfaces, water and electrical hazards and confined spaces.

Physical Demands:

Amount of time spent – Standing 25%, Walking 75% for as many as five miles per shift.
Requires close visual and hearing observation to detect non-conformance and machine malfunction.
Constantly uses hands to finger, handle or feel and frequently reaches with hands and arms.
Works in various positions; works on ladders, catwalks, and supports at heights of 50 feet above the ground; and works with hands extended above and below head and body up to 40 minutes using hand tools weighing up to 15 pounds. Must be able to lift and carry 50 pounds (occasionally 60 pounds) distances of 10 feet. Occasional stooping, bending or kneeling and entering confined spaces.

This job description is a general description of essential job functions. It is not intended as an employment contract, nor is it intended to describe all duties someone in this position may perform. All employees are expected to perform tasks as assigned by supervisory personnel, regardless of job title or routine job duties.

ATTACHMENT G

October 31, 2012

Mrs. Sheila McGauvran
Director of Public Works
City of Woonsocket
169 Main Street
Woonsocket, RI 02895

Dear Mrs. McGauvran,

Veolia has prepared this approval request to authorize Veolia Water to proceed with the following defect repairs which were previously approved by Mr. Adel Banoub and to be funded by the Repair and Maintenance Fund per the Collection System O&M Contract. Veolia proposes to repair sixty (60) point repair locations that have either infiltration or structural damage identified through the ongoing CCTV condition assessment program. The specific repair locations, estimated infiltration removed, and repair costs are outlined in the attached table.

Veolia proposes a total project value not to exceed $ 118,400.00

Should you have any questions or require additional information please feel free to contact me at 401-265-0525.

_____ _____

Approved Mrs. Shelia McGauvran Date

Sincerely,

Paul Rodman Jr.
Collections System Manager
Veolia Water North America – Northeast LLC

Cc Adel Banoub – City of Woonsocket
Jonathan Mongie – Director Asset Management, VWNA

Structural Repairs												
US MH	**DS MH**	**Street Location**	**Distance in Feet from US MH**	**Diameter (in)**	**PACP Defect Code**	**Criticality of Structural Defect**	**Date Surveyed**	**Recommended Repair**	**Repair Cost**	**Comments**	**Approved (Y or N)**	
3660	3659	Country Road	83	8	JSM	10	9/19/2011	8"x4' CIPL	$1,800.00		Y	
3564	3563	Bayberry Road	37	8	RPP/FC	10	9/23/2011	8" x 4' CIPL	$1,800.00		Y	
1879	3264	New Street	79	8	HVV	10	1/20/2012	8"x4' CIPL	$1,800.00		Y	
1756	3050	Cottage Court	16	8	BVV	10	4/20/2012	8" x 4' CIPL	$1,800.00		Y	
721	1880	Carrington Street	112-115	8	B,H, FM	10	1/2/2009	8"x6' CIPL	$2,000.00	Paving List	Y	
539	1749	Davison Street	45	12	HVV	10	5/25/2011	12" x 4' CIPL	$2,000.00		Y	
4657	84	East School Street	108 - 116	15	FM & B	10	2/16/2011	15" x 10' CIPL	$2,900.00	The severity of the fractures with the break increases the criticality of the defect	Y	
4514	2212	Bernard Avenue	91	8	B	10	6/13/2011	8" x 4' CIPL	$1,800.00		Y	
2093	4655	Wood Avenue	170.1	8	BSV	9	4/18/2011	8" x 4' CIPL	$1,800.00		Y	
5499	4513	Stoneham Drive	88	8	BSV	9	9/19/2011	8" x 4' CIPL	$1,800.00		Y	
4472	5485	Richelieu Street	28	8	HSV	9	3/3/2011	8" x 2' CIPL	$1,700.00		Y	
4454	3663	Grandview Ave	22	8	BSV	9	9/16/2011	8" x 4' CIPL	$1,800.00		Y	
4170	4473	Rustic Drive	174	8	B	9	9/27/2011	8" x 4' CIPL	$1,800.00		Y	
3793	4455	Knollwood Drive	61	8	B	9	9/28/2011	8" x 4' CIPL	$1,800.00		Y	
721	4171	Annette Avenue	105	8	B	9	8/5/2009	8" x 4' CIPL	$1,800.00		Y	
709	3416	Temple Street	202.3	8	BSV	9	3/7/2011	8" x 2' CIPL	$1,700.00		Y	
512	720	Memorial Drive	65.3	8	HSV	9	7/21/2009	8" x 2' CIPL	$1,700.00		Y	
186	708	Bourdon Boulevard	34 - 37	10	FL/ID	9	11/23/2009	10" x 4' CIPL	$1,900.00		Y	
4137	1988	Fourth Avenue	74.7	8	B	9	2/18/2010	8" x 4' CIPL	$1,800.00		Y	
418	184	Diamond Hill Road	160 - 170	18	B	9	6/8/2009	18" x 10' CIPL	$3,100.00		Y	
5083	4138	Thomas Street	16	8	H x2	9	5/2/2012	8" x 4' CIPL	$1,800.00		Y	
4336	1759	Davison Street	22	12	RPP	9	5/25/2011	12" x 4' CIPL	$2,000.00		Y	

3405	5084	Star Avenue	46	8	BSV	9	4/7/2008	8" x 4' CIPL	$1,800.00		Y	
83	4352	Kendrick Street	169-179	8	FM	8	4/12/2011	(2) 8"x6' CIPL	$4,000.00	Paving List	Y	
3257	3411	Winter Street	27 - 35	12	FM	8	3/7/2011	12" x 8' CIPL	$2,400.00		Y	
4623	84	East School Street	82 - 92	15	FM	8	2/16/2011	(2) 15" x 6' CIPL	$6,600.00		Y	
2433	4622	Progesso Avenue	206 - 216	8	FL	8	7/1/2009	(2) 8" x 6' CIPL	$4,000.00		Y	
2418	4488	Walnut Hill Road	176	8	B	8	9/20/2011	8" x 4' CIPL	$1,800.00		Y	
3659	2407	Coolidge Avenue	10.5	8	H	8	1/31/2011	8" x 2' CIPL	$1,700.00		Y	
3379	544	Laurier Street	131.8	8	FM	8	4/26/2011	8" x 4' CIPL	$1,800.00		Y	
2541	3658	Country Road	162	8	FC	8	9/19/2011	8" x 4' CIPL	$1,800.00		Y	
2523	3375	Grand Street	303	8	H	8	5/4/2012	8" x 4' CIPL	$1,800.00		Y	
539	2542	Bernon Street	196	8	BSV	8	7/11/2011	8" x 4' CIPL	$1,800.00		Y	
4140	2522	CVS Drive	8	8	B	8	5/18/2011	8" x 6' CIPL	$2,400.00		Y	
4136	1975	Poplar Street	267	8	BSV	8	4/26/2011	8" x 4' CIPL	$1,800.00		Y	
3370	4141	Hollis Street	59	8	B/FL	8	5/2/2012	8" x 6' CIPL	$2,000.00		Y	
3405	4137	Thomas Street	60	8	B	8	5/2/2012	8" x 6' CIPL	$2,000.00		Y	
3265	3371	Vose Street	23	8	B	8	5/7/2012	8" x 2' CIPL	$1,700.00		Y	
5992	3264	New Street	102 -108	8	FH03	7	1/20/2012	8" x 6' CIPL	$2,000.00		Y	
728	719	Asylum Street	40-42	8	FM w/I	6	10/7/2008	8"x4' CIPL	$1,800.00	Paving List	Y	
4336	4352	Kendrick Street	205-210	8	FM	5	4/12/2011	8"x6' CIPL	$2,000.00	Paving List	Y	
1871	1872	Maple Street	27	8	FM	4	12/18/2008	8"x2' CIPL	$1,800.00	Paving List	Y	
727	728	Asylum Street	79-80	8	CL	4	10/7/2008	8"x2' CIPL	$1,700.00	Paving List	Y	
730	1951	Asylum Street	61	8	CL	3	10/8/2008	8"x2' CIPL	$1,700.00	Paving List	Y	
726	725	Asylum Street	83-85	8	CL	3	10/7/2008	8"x4' CIPL	$1,800.00	Paving List	Y	
683	1779	Hamlet Street	9'-10'	8	FM	3	6/19/2009	8"x2' CIPL	$1,700.00	Paving List	Y	
730	1951	Asylum Street	70	8	FM	2	10/8/2008	8"x2' CIPL	$1,700.00	Paving List	Y	
727	728	Asylum Street	70-71	8	CM	1	10/7/2008	8"x2' CIPL	$1,700.00	Paving List	Y	
Total									$99,700.00			
Infiltration Repairs												

Upstream MH	Downstream MH	Street Location	Distance in Feet from Starting MH	Pipe Diameter (in)	PACP Defect Code	Estimated Infiltration (GPM)	Criticality of Structural Defect	Date Surveyed	Recommended Repair	Repair Cost	Comments	Approved (Y or N)
4361	4360	Elder Ballou Road	37	12	IG	6	7	1/5/2012	8" x2' CIPL	$1,700		Y
4361	4360	Elder Ballou Road	72	12	IG	5	6	1/5/2012	8" x2' CIPL	$1,700		Y
4	3	Cumberland Street	11	8	IG	3	5	6/30/2012	8" x2' CIPL	$1,700	Paving List	Y
4	3	Cumberland Street	17	8	IG	3	5	6/30/2012	8" x2' CIPL	$1,700	Paving List	Y
1861	1875	Maple Street	60	8	IR	3	5	12/18/2008	8" x2' CIPL	$1,700	Paving List	Y
1943	1944	Asylum Street	26	8	IR	2	4	10/8/2008	8" x2' CIPL	$1,700	Paving List	Y
1875	674	Maple Street	129	8	IR	2	4	12/18/2008	8" x2' CIPL	$1,700	Paving List	Y
1861	1875	Maple Street	104	8	IR	2	4	12/18/2008	8" x2' CIPL	$1,700	Paving List	Y
1861	1875	Maple Street	96	8	IR	2	4	12/18/2008	8" x2' CIPL	$1,700	Paving List	Y
1875	674	Maple Street	123	8	IR	1	2	12/18/2008	8" x2' CIPL	$1,700	Paving List	Y
1874	1871	Maple Street	2	8	IR	0.5	1	12/18/2008	8" x2' CIPL	$1,700	Paving List	Y
										$18,700	**Total infiltration repair cost**	