COMMITMENT & INTEGRITY
DRIVE RESULTS

1111 Nantasket Ave.
Hull, Massachusetts 02045

T 781.925.0906

WOODARD
&CURRAN

October 13, 2017

Ms. Marie J. McDonald
U.S. Environmental Protection Agency
Water Enforcement, OES4-SMR
5 Post Office Square
Boston, MA 02109-3912

Subject: Hull, MA Water Pollution Control Facility (WPCF) – NPDES Permit No. MA0101231
Discharge Monitoring Reports – September 2017 – Discharge 001-A

Dear Ms. McDonald:

Enclosed please find the completed DMR for the month of September 2017. Please note that the facility effluent was in compliance with NPDES requirements.

Should you have questions concerning this submittal, please contact the undersigned at 781-925-0906. Thank you for your assistance.

Sincerely,

Aram Varjabedian – Woodard & Curran
Project Manager

Enc. DMR forms, support documentation

Cc: David Burns, MA DEP (SERO) Lakeville, MA
John J. Struzziery - Director of Wastewater Operations/Assistant Director of Public Works
Ryan Joyce – Division of Marine Fisheries

COMMITMENT & INTEGRITY
DRIVE RESULTS

1111 Nantasket Ave.
Hull, Massachusetts 02045

T 781.925.0906

WOODARD
&CURRAN

HULL, MA WATER POLLUTION CONTROL FACILITY
NPDES NO. MA0101231

Hull Water Pollution Control Facility – Staffing – September 2017

Project Manager/Chief Operator – Aram Varjabedian	MA Grade 7C
Asst. Project Manager/Asst. Chief Operator – William Boornazian	MA Grade 6C
Lead Operator – Joseph Basler	MA Grade 5C
Operations/Maintenance Tech 2 – Eric Sutton	MA Grade 3M
Operations/Maintenance Tech 2 – David Wilson	
Operations/Maintenance Tech 1 – Vacant – Posted for hire	

Supplemental O&M Personnel supporting/assisting the Hull facility

Pat Owens – Part-time Operator	MA Grade 6C
Roger Boltrushek – Part-time Operator	MA Grade 7C
James Gagliard – Sr. Operations Specialist	MA Grade 6C
Jody St. George - Sr. Operations Specialist	MA Grade 7C
Frank Cavaleri – Area Manager	MA Grade 7C

Hull Water Pollution Control Facility – Schedule – September 2017

Schedule for 8 Hour/Day coverage:

	License	Sun	Mon	Tue	Wed	Thur	Fri	Sat
Project Manager	7C			X	X	X	X	X
Asst. Project Manager	6C	X	X	X	X	X		
Lead Operator	5C			X	X	X	X	X
O&M Tech 1		X	X	X	X	X		
O&M Tech 2	3M		X	X	X	X	X	
O&M Tech 2			X	X	X	X	X	
Part-Time Operator	6C	*						*
Part-Time Operator	7C	*					*	*

- Part-time operator schedule is usually one day per week and the day can vary week-to-week. An asterisk denotes those days that the part-time operator could be scheduled.
- Filling O&M Tech 1 position with Sr. O&M Specialist coverage and additional staff overtime.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

Name HULL W P C F
Address 1111 NANTASKET AVE
HULL MA 02045

Facility HULL W P C F
Location HULL MA 02045
Attn: John Struzziery, Director of WW Ops

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

MA0101231	001 A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	17	09	01	TO	17	09	30

OMB No. 2040-0004

MAJOR
(SUBR E)
F- FINAL
TREATED SANITARY WASTEWATE

*** NO DISCHARGE [ ] ***

NOTE: Read instructions before completing this form

PARAMETER		QUANTITY OR LOADING VALUE	QUANTITY OR LOADING VALUE	UNITS	QUALITY OR CONCENTRATION VALUE	QUALITY OR CONCENTRATION VALUE	QUALITY OR CONCENTRATION VALUE	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
BOD, 5-DAY (20 DEG. C)	SAMPLE MEASUREMENT	89	115	LBS/DY	10	13	13	mg/L	0	1/7	24
00310 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	768 MO AVG	WKLY AVG	LBS/DY	30 MO AVG	45 WKLY AVG	50 DAILY MX	mg/L		WEEKLY	COMP 24
BOD, 5-DAY (20 DEG. C)	SAMPLE MEASUREMENT	1,569	******	LBS/DY	163	******	******	mg/L	0	1/7	24
00310 G 0 0 RAW SEW/INFLUENT	PERMIT REQUIREMENT	REPORT MO AVG	******	LBS/DY	REPORT MO AVG	******	******	mg/L		WEEKLY	COMP 24
PH	SAMPLE MEASUREMENT	******	******	****	7.00	******	7.40	SU	0	01/01	GR
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	****	6.5 MINIMUM	******	8.5 MAXIMUM	SU		WEEKLY	GRAB
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	217	271	LBS/DY	23	26	26	mg/L	0	1/7	24
00530 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	768 MO AVG	1152 WKLY AVG	LBS/DY	30 MO AVG	45 WKLY AVG	50 DAILY MX	mg/L		WEEKLY	COMP 24
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	4,598	******	LBS/DY	488	******	******	mg/L	0	1/7	24
00530 G 0 0 RAW SEW/INFLUENT	PERMIT REQUIREMENT	REPORT MO AVG	******	LBS/DY	REPORT MO AVG	******	******	mg/L		WEEKLY	COMP 24
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	SAMPLE MEASUREMENT	1.60	1.74	MGD	******	******	******	****	0	99/99	RC
50050 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	3.04 12 MO AVG	DAILY MX	MGD	******	******	******	****		CONTINUOUS	RCORDR
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	SAMPLE MEASUREMENT	******	******	****	1.20	******	******	MGD	0	99/99	RC
50050 0 0 See Comments	PERMIT REQUIREMENT	******	******	****	REQ MO AVG	******	******	MGD		CONTIN	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Aram Varjabedian - Project Manager John Struzziery, Director of WW Ops	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	Aram Varjabedian	781	925-1207	17	10	13
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPANATION OF ANY VIOLATIONS (Reference all attachments here)
REPORT MAXIMUM AND MINIMUM DAILY FLOW RATES AND TOTAL FLOW FOR EACH OPERATING DAY WITH DMR EACH MONTH
WET DATA ON DMR 001B

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

Name HULL W P C F
Address 1111 NANTASKET AVE
HULL MA 02045

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

OMB No. 2040-0004

MAJOR
(SUBR E)
F- FINAL
TREATED SANITARY WASTEWATER

MA0101231	001 A
PERMIT NUMBER	DISCHARGE NUMBER

Facility HULL W P C F
Location HULL MA 02045
Attn: John Struzziery, Director of WW Ops

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	17	09	01	TO	17	09	30

*** NO DISCHARGE [ ] ***

NOTE: Read instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Chlorine, Total Residual	SAMPLE MEASUREMENT	******	******	******	0.03	******	0.20	mg/L	0	03/01	GR
50060 1 0 EFFLUENT GROSS	PERMIT REQUIREMENT	******	******	******	0.7 MO AVG	******	1 DAILY MAX	mg/L		THREE PER DAY	GRAB
ENTEROCOCCI	SAMPLE MEASUREMENT	******	******	******	<10	******	<10	CFU/100 ml	0	1/7	GR
61211 1 0 EFFLUENT GROSS	PERMIT REQUIREMENT	******	******	******	35 MO AVG	******	276 DAILY MAX	CFU/100 ml		WEEKLY	GRAB
COLIFORM, FECAL GENERAL	SAMPLE MEASUREMENT	******	******	******	<10	******	<10	#/100 ml	0	1/7	GR
74055 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	******	88 MO GEO	******	260 DAILY MX	#/100 ml		WEEKLY	GRAB
BOD, 5-DAY PERCENT REMOVAL	SAMPLE MEASUREMENT	******	******	******	94	******	******	%	0	1/30	CA
81010 K 0 0 PERCENTREMOVAL	PERMIT REQUIREMENT	******	******	******	85 MO AVG	******	******	PER-CENT		ONCE/ MONTH	CALCTD
SOLIDS, SUSPENDED PERCENT REMOVA	SAMPLE MEASUREMENT	******	******	******	95	******	******	%	0	1/30	CA
81011 K 0 0 PERCENTREMOVAL	PERMIT REQUIREMENT	******	******	******	85 MO AVG	******	******	PER-CENT		ONCE/ MONTH	CALCTD
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Aram Varjabedian - Project Manager John Struzziery, Director of WW Ops	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	Aram Varjabedian SIGNATURE OF PRICIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	781	925-1207	17	10	13
TYPED OR PRINTED			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPANATION OF ANY VIOLATIONS (Reference all attachments here)

REPORT MAXIMUM AND MINIMUM DAILY FLOW RATES AND TOTAL FLOW FOR EACH OPERATING DAY WITH DMR EACH MO

WET DATA ON DMR 001B

TSS and BOD Loadings Check Sheet

Influent

Data for dates in current month

Date	TSS mg/l	TSS Lbs	BOD mg/l	BOD LBS
09/01/17				
09/02/17				
09/03/17				
09/04/17				
09/05/17	511	4,475	190	1,664
09/06/17				
09/07/17				
09/08/17				
09/09/17				
09/10/17				
09/11/17				
09/12/17	651	5,864	60	540
09/13/17				
09/14/17				
09/15/17				
09/16/17				
09/17/17				
09/18/17				
09/19/17	614	6,401	310	3,232
09/20/17				
09/21/17				
09/22/17				
09/23/17				
09/24/17				
09/25/17				
09/26/17	177	1,653	90	841
09/27/17				
09/28/17				
09/29/17				
09/30/17				
MAX	**651**	**6,401**	**310**	**3,232**
AVG	**488**	**4,598**	**163**	**1,569**

Sunday Thru Saturday (avg placed on Saturday date)

Date	TSS mg/l	TSS Lbs	BOD mg/l	BOD LBS
09/01/17				
09/02/17	571.00		360.00	
09/03/17				
09/04/17				
09/05/17				
09/06/17				
09/07/17				
09/08/17				
09/09/17	511.00		190.00	
09/10/17				
09/11/17				
09/12/17				
09/13/17				
09/14/17				
09/15/17				
09/16/17	651.00		60.00	
09/17/17				
09/18/17				
09/19/17				
09/20/17				
09/21/17				
09/22/17				
09/23/17	614.00		310.00	
09/24/17				
09/25/17				
09/26/17				
09/27/17				
09/28/17				
09/29/17				
09/30/17	177.00		90.00	
MAX	**651**		**360**	
AVG	**505**		**202**	

Date

Effluent

Effluent TSS		
Week Start	Week End	Avg
08/27/17	09/02/17	14
09/03/17	09/09/17	20
09/10/17	09/16/17	23
09/17/17	09/23/17	26
09/24/17	09/30/17	23
	MAX	**26**

Effluent BOD		
Week Start	Week End	Avg
08/27/17	09/02/17	4
09/03/17	09/09/17	13
09/10/17	09/16/17	7
09/17/17	09/23/17	11
09/24/17	09/30/17	7
	MAX	**13**

Data for dates in current month

Date	TSS mg/l	TSS Lbs	BOD mg/l	BOD LBS
09/01/17				
09/02/17				
09/03/17				
09/04/17				
09/05/17	20	175	13	114
09/06/17				
09/07/17				
09/08/17				
09/09/17				
09/10/17				
09/11/17				
09/12/17	23	207	7	62
09/13/17				
09/14/17				
09/15/17				
09/16/17				
09/17/17				
09/18/17				
09/19/17	26	271	11	115
09/20/17				
09/21/17				
09/22/17				
09/23/17				
09/24/17				
09/25/17				
09/26/17	23	215	7	67
09/27/17				
09/28/17				
09/29/17				
09/30/17				
MAX	**26**	**271**	**13**	**115**
AVG	**23**	**217**	**10**	**90**

Sunday Thru Saturday (avg placed on Saturday date)

Date	TSS mg/l	TSS LBS	BOD mg/l	BOD LBS
09/01/17				
09/02/17	14	106	4	32
09/03/17				
09/04/17				
09/05/17				
09/06/17				
09/07/17				
09/08/17				
09/09/17	20	175	13	114
09/10/17				
09/11/17				
09/12/17				
09/13/17				
09/14/17				
09/15/17				
09/16/17	23	207	7	62
09/17/17				
09/18/17				
09/19/17				
09/20/17				
09/21/17				
09/22/17				
09/23/17	26	271	11	115
09/24/17				
09/25/17				
09/26/17				
09/27/17				
09/28/17				
09/29/17				
09/30/17	23	215	7	67
MAX	**26**	**271**	**13**	**115**
Avg	**21**	**195**	**8**	**78**

Influent TSS		
eek Start	Week End	Avg
)8/27/17	09/02/17	571
)9/03/17	09/09/17	511
)9/10/17	09/16/17	651
)9/17/17	09/23/17	614
)9/24/17	09/30/17	177
	Max	**651**

Influent BOD		
eek Start	Week End	Avg
)8/27/17	09/02/17	360
)9/03/17	09/09/17	190
)9/10/17	09/16/17	60
)9/17/17	09/23/17	310
)9/24/17	09/30/17	90
	Max	360

Hull Wastewater Treatment Plant Operations Data

September, 2017

Date		Manual Screen Used	Mechanical Screen	GRIT CHAMBER	GRIT CLASSIFIER	PRI CLAR #1	PRI CLAR #2	AT #1	AT #2	AT #3	AT #4	SEC CLAR #1	SEC CLAR #2	CL2 BASIN #1	CL2 BASIN #2	GRAVITY THICK #1
		Yes/No	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF
Fri	01	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sat	02	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sun	03	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Mon	04	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Tue	05	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Wed	06	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Thu	07	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Fri	08	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sat	09	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sun	10	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Mon	11	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Tue	12	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Wed	13	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Thu	14	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Fri	15	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sat	16	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sun	17	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Mon	18	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Tue	19	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Wed	20	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Thu	21	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Fri	22	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sat	23	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sun	24	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Mon	25	No	On	On	Off	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Tue	26	No	On	On	Off	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Wed	27	No	On	On	Off	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Thu	28	No	On	On	Off	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Fri	29	No	On	On	Off	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sat	30	No	On	On	Off	Off	Off	On	Off	On	Off	Off	On	On	On	Off
MIN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MAX		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AVG		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUM		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hull Wastewater Treatment Plant Operations Data

September, 2017

Date		GRAVITY THICK #2	SLUDGE TANK #1	SLUDGE TANK #2	RST	Rainfall	MIN AIR TEMP	MAX AIR TEMP	GRIT REMOVED	SCREENINGS	INF TSS (Report)	INF BOD (Report)	INF FLOW	INFLUENT Q MINIMUM	INFLUENT Q MAXIMUM	PRI TSS
		ON/OFF	ON/OFF	ON/OFF	ON/OFF	Inches	Deg F	Deg F	LBS	CU FT	MG/L	MG/L	MGD	MGD	MGD	MG/L
Fri	01	Off	Off	On	On	0.00	54	65	35	0.7			1.18	0.00	2.69	
Sat	02	Off	Off	On	On	0.00	53	72	35	0.7			1.18	0.10	1.99	
Sun	03	Off	Off	On	On	0.30	57	69	35	0.7			1.15	0.21	2.05	
Mon	04	Off	Off	On	On	0.00	57	83	35	0.7			1.28	0.01	2.02	
Tue	05	Off	Off	On	On	0.00	68	76	35	0.7	511	190	1.21	0.30	1.87	
Wed	06	Off	Off	On	On	0.22	60	75	35	0.7			1.15	0.20	1.88	
Thu	07	Off	Off	On	On	0.00	60	76	35	0.7			1.37	0.21	1.94	
Fri	08	Off	Off	On	On	0.00	59	74	35	0.7			1.21	0.22	2.76	
Sat	09	Off	Off	On	On	0.10	55	73	35	0.7			1.27	0.13	2.62	
Sun	10	Off	Off	On	On	0.10	55	77	35	0.7			1.31	0.11	2.62	
Mon	11	Off	Off	On	On	0.00	55	80	35	0.7			1.25	0.23	1.78	
Tue	12	Off	Off	On	On	0.00	61	86	35	0.7	651	60	1.27	0.32	1.72	
Wed	13	Off	Off	On	On	0.00	61	75	35	0.7			1.30	0.37	2.23	
Thu	14	Off	Off	On	On	0.00	67	79	35	0.7			1.30	0.23	2.02	
Fri	15	Off	Off	On	On	0.21	66	77	35	0.7			1.32	0.16	2.63	
Sat	16	Off	Off	On	Off	0.00	64	83	35	0.7			1.32	0.23	1.97	
Sun	17	Off	Off	On	On	0.00	62	68	35	0.7			1.34	0.10	2.09	
Mon	18	Off	Off	On	On	0.00	63	66	35	0.7			1.30	0.36	2.12	
Tue	19	Off	Off	On	On	0.09	62	63	35	0.7	614	310	1.31	0.20	2.19	
Wed	20	Off	Off	On	Off	0.19	62	67	35	0.7			1.44	0.29	2.19	
Thu	21	Off	Off	On	On	0.00	63	70	30	0.7			1.73	0.18	2.68	
Fri	22	Off	Off	On	Off	0.03	57	63	35	0.7			1.86	1.42	2.67	
Sat	23	Off	Off	On	On	0.10	60	69	35	0.7			1.66	0.12	2.21	
Sun	24	Off	Off	On	Off	0.00	61	79	35	0.7			1.31	0.05	2.24	
Mon	25	Off	Off	On	Off	0.00	63	80	0	0.7			1.22	0.13	1.83	
Tue	26	Off	Off	On	On	0.00	63	81	0	0.7	177	90	1.17	0.00	2.09	
Wed	27	Off	Off	On	Off	0.00	64	89	0	0.7			1.39	0.83	1.92	
Thu	28	Off	Off	On	On	0.00	58	70	0	0.7			1.31	0.06	1.75	
Fri	29	Off	Off	On	Off	0.00	53	66	0	0.7			1.21	0.40	1.77	
Sat	30	Off	Off	On	On	0.40	50	58	0	0.7			0.93	0.00	1.93	
MIN		-	-	-	-	0.00	50	58	0	1	177	60	0.93	0.00		
MAX		-	-	-	-	0.40	68	89	35	1	651	310	1.86		2.76	
AVG		-	-	-	-	0.06	60	74	28	1	488	163	1.31			
SUM		-	-	-	-	1.74	-	-	835	21			-	-	-	-

Hull Wastewater Treatment Plant Operations Data

Date		PRI BOD MG/L	PRI #1 BLANKET FT	PRI #2 BLANKET FT	MLS SVI MG/L	MLSS 5 MIN SET MIN	MLSS 30 MIN SET	MLSS 60 MIN SET	MLSS	RAS TSS	RAS FLOW	SEC #1 BLANKET	SEC #2 BLANKET	WAS TSS THCK	WAS FLOW GALLONS THCK	EFF TSS (Report)
		MG/L	FT	FT	MG/L	MG/L	ML	ML	MG/L	MG/L	MGD	FT	FT	MG/L	GAL	MG/L
Fri	01										0.69		1.0		53,670	
Sat	02										0.69		1.5		37,170	
Sun	03										0.69		1.5		46,190	
Mon	04										0.69		1.5		38,920	
Tue	05										0.69		1.0		38,840	20.0
Wed	06				59	230	100	90	1,682		0.69		1.0		39,580	
Thu	07										0.69		1.0		38,950	
Fri	08				76	300	120	100	1,559		0.69		2.0		45,130	
Sat	09										0.69		3.5		38,480	
Sun	10										0.69		1.0		36,470	
Mon	11										0.69		2.0		37,440	
Tue	12					200	125	125			0.69		3.0		35,070	23.0
Wed	13				74	225	125	125	1,679		0.69		3.0		38,230	
Thu	14					160	120	120			0.69		2.0		37,640	
Fri	15				79	190	110	110	1,392		0.69		1.5		31,300	
Sat	16										0.69		1.0		24,970	
Sun	17										0.69		1.0		22,050	
Mon	18										0.69		1.0		22,880	
Tue	19				80	200	135	135	1,672		0.69		1.0		21,700	26.0
Wed	20				82	200	120	120	1,454		0.71		1.0		18,880	
Thu	21					190	110	110			0.71		1.0		17,040	
Fri	22				68	200	110	110	1,612		0.71		1.0		14,440	
Sat	23					240	160	110			0.71		1.5		13,860	
Sun	24										0.71		1.0		13,810	
Mon	25				61	150	100	100	1,617		0.71		1.0		15,150	
Tue	26					260	150	150			0.65		3.0		15,050	23.0
Wed	27				89	200	150	150	1,678		0.69		1.0		16,400	
Thu	28					275	165	160			0.69		1.0		16,590	
Fri	29				98	300	170	160	1,720		0.69		2.0		17,630	
Sat	30										0.69		2.0		40,570	
MIN					59	150	100	90	1,392		0.65		1.0		13,810	20.0
MAX					98	300	170	160	1,720		0.71		3.5		53,670	26.0
AVG					77	220	129	123	1,607		0.69		1.5		29,470	23.0
SUM		-	-	-	-	-	-	-	-	-	-	-	-	-	884,100	-

Hull Wastewater Treatment Plant Operations Data

September, 2017

Date		EFF BOD (Report)	EFF FECAL #/100	EFF MAX DAILY FLOW MGD	EFF MIN DAILY FLOW MGD	EFF FLOW MGD	EFF #1pH	CL2 RES #1	CL2 RES #2	CL2 RES #3	CL2 RES Daily Avg	THICKENED SLUDGE TS	THICKENER #1 BLANKET	THICKENER #2 BLANKET	LEACHATE TSS	LEACHATE BOD	LEACHATE COD
		MG/L	ML	MGD	MGD	MGD	SU	MG/L	MG/L	MG/L	MG/L	%	FT	FT	MG/L	MG/L	MG/L
Fri	01			1.99	0.00	1.03	7.20	0.03	0.02	0.02	0.02						
Sat	02			2.97	0.00	1.03	7.40	0.04	0.01	0.01	0.02	7.1					
Sun	03			1.95	0.00	1.05	7.20	0.00	0.00	0.00	0.00						
Mon	04			1.81	0.00	1.15	7.30	0.00	0.00	0.00	0.00						
Tue	05	13.0		1.89	0.00	1.05	7.20	0.03	0.02	0.00	0.02						
Wed	06		10	1.87	0.00	1.07	7.20	0.00	0.01	0.03	0.01	0.0					
Thu	07			1.77	1.01	1.25	7.10	0.02	0.02	0.00	0.01						
Fri	08			1.87	0.00	1.16	7.20	0.03	0.02	0.06	0.04						
Sat	09			1.99	0.00	1.16	7.20	0.02	0.02	0.02	0.02	6.9					
Sun	10			1.90	0.00	1.19	7.20	0.00	0.00	0.00	0.00						
Mon	11			1.90	0.00	1.05	7.20	0.00	0.01	0.00	0.00						
Tue	12	6.9		1.91	0.00	1.08	7.10	0.01	0.02	0.02	0.02	4.8					
Wed	13		10	1.89	0.00	1.12	7.20	0.05	0.04	0.50	0.20						
Thu	14			1.92	0.00	1.10	7.40	0.03	0.02	0.02	0.02						
Fri	15			1.88	0.00	1.10	7.40	0.12	0.02	0.02	0.05						
Sat	16			2.07	0.00	1.14	7.10	0.00	0.01	0.03	0.01						
Sun	17			1.90	0.00	1.20	7.20	0.00	0.04	0.01	0.02						
Mon	18			1.88	0.00	1.18	7.20	0.00	0.00	0.01	0.00	7.1					
Tue	19	11.0		1.88	0.00	1.25	7.00	0.04	0.04	0.04	0.04						
Wed	20		10	2.07	1.00	1.42	7.00	0.04	0.08	0.04	0.05						
Thu	21			2.43	1.08	1.63	7.20	0.03	0.03	0.03	0.03						
Fri	22			2.47	1.19	1.74	7.30	0.03	0.01	0.04	0.03						
Sat	23			2.13	1.10	1.56	7.20	0.02	0.01	0.03	0.02						
Sun	24			1.96	0.00	1.34	7.30	0.01	0.00	0.02	0.01						
Mon	25			1.95	0.00	1.18	7.20	0.02	0.02	0.01	0.02	6.3					
Tue	26	7.2		1.94	0.00	1.12	7.20	0.04	0.04	0.04	0.04						
Wed	27		10	2.12	0.06	1.18	7.00	0.04	0.00	0.03	0.02						
Thu	28			2.10	0.06	1.15	7.20	0.08	0.04	0.09	0.07						
Fri	29			2.05	0.07	1.15	7.30	0.09	0.04	0.04	0.06						
Sat	30			3.46	0.08	1.20	7.10	0.04	0.19	0.02	0.08						
MIN		6.9	10		0.00	1.03	7.00	0.00	0.00	0.00	0.00	0.00		-	-	-	-
MAX		13.0	10	3.46		1.74	7.40	0.12	0.19	0.50	0.20	7.09		-	-	-	-
AVG		9.5	10			1.20	7.20	0.03	0.03	0.04	0.03	5.37		-	-	-	-
SUM		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hull Wastewater Treatment Plant Operations Data

Date		LEACHATE	Groundwater Underdrain	Potable H2O Calc.	Thickened Feed Sludge Gallons to truck	THICKENED SLDG	Sludge Holding Tank Level	Thickened Sludge Holding Tank Level	EFF TEMP	Enterococci	Toxicity	GALS HEATING OIL	NaOCl	NaOH	Hingham Flow
		GAL	GAL	GAL	GAL	LBS/DAY	FT	FT	DEG C	No/100ml	%	Inches	Gallons	Gallons	MGD
Fri	01			58	0		5.8	7.0	19.7			37	91	4.0	0.020
Sat	02			55	9,000	5,303	5.3	4.6	20.7			76	139	1.0	0.018
Sun	03			19	0		5.8	6.7	19.9			76	72	3.0	0.019
Mon	04			36	0		5.8	7.7	20.5			76	101	2.0	0.022
Tue	05			39	0		5.9	7.3	21.3			76	95	2.0	0.022
Wed	06			169	9,000	5,479	5.9	7.0	21.3	<10		76	167	2.0	0.019
Thu	07			15	0		5.9	9.8	20.5			76	125	2.0	0.020
Fri	08			80	0		5.9	7.5	19.6			76	120	4.0	0.021
Sat	09			38	9,000	5,231	5.9	9.1	20.6			76	130	1.0	0.020
Sun	10			19	0		5.9	9.3	20.0			76	134	3.0	0.022
Mon	11			56	0		5.9	5.5	20.1			76	129	1.6	0.022
Tue	12			72	9,000	3,606	5.9	5.1	20.5			76	127	2.4	0.020
Wed	13			75	0		6.0	2.2	20.9	<10		76	149	2.0	0.019
Thu	14			75	0		6.0	7.0	20.1			76	98	2.0	0.019
Fri	15			110	0		6.0	7.0	20.9			76	133	2.0	0.019
Sat	16			82	0		6.0	6.4	20.8			75	130	2.0	0.024
Sun	17			50	0		6.0	8.0	20.6			75	164	4.0	0.031
Mon	18			45	9,000	5,325	6.0	9.0	20.6			75	160	1.6	0.031
Tue	19			60	0		6.0	5.4	20.0			75	189	2.4	0.020
Wed	20			96	0		6.0	6.0	20.2	<10		75	193	2.0	0.021
Thu	21			114	0		6.0	2.5	20.3			75	243	2.0	0.021
Fri	22			80	0		6.0	4.6	19.3			75	163	2.0	0.020
Sat	23			227	0		6.0	6.3	19.8			75	182	2.0	0.022
Sun	24			34	0		6.0	4.4	20.0			75	149	2.4	0.022
Mon	25			74	9,000	4,702	6.0	6.8	20.7			75	170	3.6	0.021
Tue	26			30	0		6.0	8.8	21.0			75	167	2.0	0.020
Wed	27			1,423	0		6.0	6.9	20.9	<10		75	155	2.0	0.020
Thu	28			94	0		6.0	6.4	21.1			75	172	2.0	0.020
Fri	29			85	0		6.0	5.4	19.2			75	161	2.0	0.019
Sat	30			46	0		6.0	7.4	19.4			75	135	3.0	0.019
MIN		-	-	15	0	3,606	5	2	19	<10	-	37	72	1.0	0.018
MAX		-	-	1,423	9,000	5,479	6	10	21	<10	-	76	243	4.0	0.031
AVG		-	-	115	1,800	4,941	6	7	20	<10	-	74	145	2.3	0.021
SUM		-	-	3,456	54,000	29,646	-	-	-		-	-	-	-	0.631

Hull WWTF
Monthly Rain, Temperature and Flow
September, 2017

Date	Rainfall	Minimum Air Temp	Maximum Air Temp	Effluent Flow
	Inches	F	F	MGD
09/01/17	0.00	54	65	1.030
09/02/17	0.00	53	72	1.030
09/03/17	0.30	57	69	1.050
09/04/17	0.00	57	83	1.150
09/05/17	0.00	68	76	1.050
09/06/17	0.22	60	75	1.070
09/07/17	0.00	60	76	1.250
09/08/17	0.00	59	74	1.160
09/09/17	0.10	55	73	1.160
09/10/17	0.10	55	77	1.190
09/11/17	0.00	55	80	1.050
09/12/17	0.00	61	86	1.080
09/13/17	0.00	61	75	1.120
09/14/17	0.00	67	79	1.100
09/15/17	0.21	66	77	1.100
09/16/17	0.00	64	83	1.140
09/17/17	0.00	62	68	1.200
09/18/17	0.00	63	66	1.180
09/19/17	0.09	62	63	1.250
09/20/17	0.19	62	67	1.420
09/21/17	0.00	63	70	1.630
09/22/17	0.03	57	63	1.740
09/23/17	0.10	60	69	1.560
09/24/17	0.00	61	79	1.340
09/25/17	0.00	63	80	1.180
09/26/17	0.00	63	81	1.120
09/27/17	0.00	64	89	1.180
09/28/17	0.00	58	70	1.150
09/29/17	0.00	53	66	1.150
09/30/17	0.40	50	58	1.200
Min	0.00	50	58	1.03
Max	0.40	68	89	1.74
Avg	0.06	60	74	1.20
Sum	1.74			36.03

Woodard and Curran

September, 2017

Outside Plant Sulfide Readings

Date		Wind Direction	Outside Temp	Outside Condition	Cemetery Flag Pole	Garage At Cemetery	Duck Lane	Duck Lane And Nantasket Ave	Seawall Across From Plant	Fire Hydrant Across Inland Bay Side	Front Of Aeration Bayside
		Direction	Deg F	Condition	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Fri	01	NW-15	53	Sunny	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Sat	02	WNW-5	55	Sunny	0.004	0.004	0.004	0.004	0.004	0.004	0.005
Sun	03	WSW-2	56	Light Rain	0.001	0.001	0.001	0.001	0.001	0.002	0.001
Mon	04	SW-10	70	Sunny & clear	0.005	0.004	0.005	0.004	0.004	0.004	0.004
Tue	05	N-7	66	Clear	0.002	0.002	0.002	0.002	0.002	**0.002**	0.002
Wed	06	0	60	Rain							
Thu	07	WNW-7	60	Partly cloudy	0.000	0.000	0.000			0.000	0.000
Fri	08	WSW-8	60	Sunny	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Sat	09	NW-8	56	SUNNY	0.003	0.003	0.003	0.003	0.003	**0.014**	0.003
Sun	10	ESE-10	55	Sunny	0.001	0.002	0.002	0.002	**0.002**	**0.001**	0.002
Mon	11	NNW-14	54	Sunny	0.002	0.002	0.002	0.002	0.002	0.003	0.002
Tue	12	N-8	67	Clear	0.004	0.003	0.003	0.004	**0.004**	**0.004**	**0.004**
Wed	13	WNW-6	70	Partly Cloudy							
Thu	14	SSW-7	68	Sunny	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fri	15	SW-5	67	Cloudy	0.001	0.000	0.000	0.000	0.000	0.000	0.000
Sat	16	ENE-3	65	Fog/cloudy	0.000	0.000	0.000	0.000	0.000	0.001	0.000
Sun	17	N-5	61	Foggy & wet	0.004	0.004	0.005	**0.006**	**0.006**	0.003	0.004
Mon	18	NW-8	65	Cloudy	0.002	0.002	0.002	0.002	0.002	0.003	0.003
Tue	19	NE-20	63	Light rain	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wed	20	NNE-19	62	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Thu	21	NNE-25	66	Cloudy	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Fri	22	N-23	58	Cloudy/windy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sat	23	NW-0	62	Cloudy	0.001	0.001	0.002	0.002	0.002	0.001	0.002
Sun	24	WSW-0	70	Clear	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Mon	25	SSE-1	64	Clear	0.002	0.002	0.002	0.002	0.002	0.003	0.002
Tue	26	ESE-5	85	Clear	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Wed	27	S-3	65	partly cloudy	0.002	0.002	0.001	0.001	0.001	0.001	0.002
Thu	28	W -5	72	Cloudy	0.003	0.002	0.001	0.001	0.001	0.001	0.001
Fri	29	NW-8	53	Sunny	0.005	0.004	0.004	0.004	0.004	0.004	0.004
Sat	30	ESE-8	59	Rain	0.003	0.003	0.003	0.003	0.003	0.001	0.003
Min.			53		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Max.			85		0.005	0.004	0.005	**0.006**	**0.006**	**0.014**	0.005
Ave.			63		0.002	0.002	0.002	0.002	0.002	0.002	0.002
Target					<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Woodard and Curran
September, 2017
In Plant Sulfide Readings

Date		Wind Direction	Outside Temp	Outside Condition	Front Door	Head Works	Primary Tank No. 1	Primary Tank No. 2	Gravity Thickener	Aeration Tanks	Rotory Sludge Thickener Room	Scrubber In	Roof Exhaust Scrubber Out	% Removal
		Direction	Deg F	Condition	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
Fri	01	NW-15	53	Sunny	0.001	0.500				0.002	0.003	0.170	0.013	92.4
Sat	02	WNW-5	55	Sunny	0.004	0.013				0.005	0.003	2.100	0.170	91.9
Sun	03	WSW-2	56	Light Rain	0.000	2.000				0.007	0.001	1.100	0.170	84.5
Mon	04	SW-10	70	Sunny & clear	0.002	3.100				0.002	0.002	1.400	0.510	63.6
Tue	05	N-7	66	Clear	0.002	1.100				0.003	0.003	0.550	0.140	74.5
Wed	06	0	60	Rain								0.910	0.049	94.6
Thu	07	WNW-7	60	Partly cloudy	0.000	0.095				0.000	0.003	0.240	0.010	95.8
Fri	08	WSW-8	60	Sunny	0.001	0.600				0.002	0.002	0.820	0.019	97.7
Sat	09	NW-8	56	SUNNY	0.002	3.700				0.001	0.002	2.000	0.330	83.5
Sun	10	ESE-10	55	Sunny	0.002	0.890				0.002	0.000	1.300	0.030	97.7
Mon	11	NNW-14	54	Sunny	0.002	0.690				0.004	0.003	0.720	0.050	93.1
Tue	12	N-8	67	Clear	0.004	0.003				0.004	0.002	1.200	0.120	90.0
Wed	13	WNW-6	70	Partly Cloudy								0.420	0.020	95.2
Thu	14	SSW-7	68	Sunny	0.000	0.002				0.001	0.001	0.400	0.118	70.5
Fri	15	SW-5	67	Cloudy	0.001	0.003				0.000	0.000	0.730	0.340	53.4
Sat	16	ENE-3	65	Fog/cloudy	0.000	0.630				0.000	0.001	0.660	0.030	95.5
Sun	17	N-5	61	Foggy & wet	0.000	3.000				0.001	0.000	0.720	0.180	75.0
Mon	18	NW-8	65	Cloudy	0.001	0.460				0.002	0.003	1.200	0.170	85.8
Tue	19	NE-20	63	Light rain	0.000	0.040				0.002	0.003	0.370	0.020	94.6
Wed	20	NNE-19	62	Cloudy	0.000	0.002				0.000	0.000	0.130	0.034	73.8
Thu	21	NNE-25	66	Cloudy	0.000	0.240				0.000	0.001	0.105	0.006	94.3
Fri	22	N-23	58	Cloudy/windy	0.000	0.002				0.000	0.000	0.640	0.048	92.5
Sat	23	NW-0	62	Cloudy	0.000	0.088				0.001	0.070	0.130	0.009	93.1
Sun	24	WSW-0	70	Clear	0.002	0.100				0.002	0.002	0.130	0.010	92.3
Mon	25	SSE-1	64	Clear	0.002	1.600				0.004	0.003	0.570	0.100	82.5
Tue	26	ESE-5	85	Clear	0.002	0.340				0.003	0.002	0.495	0.014	97.2
Wed	27	S-3	65	partly cloudy	0.001	0.002				0.001	0.000	0.270	0.020	92.6
Thu	28	W -5	72	Cloudy	0.001	0.002				0.001	0.000	0.290	0.009	96.9
Fri	29	NW-8	53	Sunny	0.004	0.080				0.002	0.002	0.200	0.010	95.0
Sat	30	ESE-8	59	Rain	0.013	27.000				0.004	0.002	21.000	3.300	84.3
Min.			53		0.000	0.002				0.000	0.000	0.105	0.006	53.4
Max.			85		0.013	27.000				0.007	0.070	21.000	3.300	97.7
Ave.			63		0.002	1.653				0.002	0.004	1.366	0.202	87.5
Target					<.01	<10.0	<10.0	<10.0	<10.0	.050	.050	<10.0	<1.0	95%