COMMITMENT & INTEGRITY
DRIVE RESULTS

1111 Nantasket Ave.
Hull, Massachusetts 02045

T 781.925.0906

WOODARD
&CURRAN

January 12, 2018

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 – December 2017 – Discharge 001-A

Dear Ms. McDonald:

Enclosed please find the completed DMR for the month of December 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

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.
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&CURRAN

HULL, MA WATER POLLUTION CONTROL FACILITY
NPDES NO. MA0101231

Hull Water Pollution Control Facility – Staffing – December 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

Kate Roosa – Part-time O&M Support	Ma Grade 4M
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
Robert Scott – Asst. Area Manager	MA Grade 6C

Hull Water Pollution Control Facility – Schedule – December 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	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)

OMB No. 2040-0004

PERMIT NUMBER	DISCHARGE NUMBER
MA0101231	001 A

MAJOR
(SUBR E)
F- FINAL
TREATED SANITARY WASTEWATE

*** NO DISCHARGE [ ] ***

NOTE: Read instructions before completing this form

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	17	12	01	TO	17	12	31

PARAMETER		QUANTITY OR LOADING VALUE	QUANTITY OR LOADING VALUE	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION VALUE	QUALITY OR CONCENTRATION VALUE	QUALITY OR CONCENTRATION VALUE	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
BOD, 5-DAY (20 DEG. C)	SAMPLE MEASUREMENT	60	103	LBS/DY	6	10	10	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	3,102	******	LBS/DY	318	******	******	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	******	******	****	6.50	******	7.30	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	166	246	LBS/DY	17	24	24	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	3,277	******	LBS/DY	329	******	******	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	1.57	1.49	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	******	******	****	1.14	******	******	MGD	0	99/99	RC
50050 0 0 See Comments	PERMIT REQUIREMENT	******	******	****	REQ MO AVG	******	******	MGD		CONTIN	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Aram Varjabedian - Project Manager
John Struzziery, Director of WW Ops

TYPED OR PRINTED

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

TELEPHONE AREA CODE	TELEPHONE NUMBER	DATE YEAR	DATE MO	DATE DAY
781	925-1207	18	01	12

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	12	01	TO	17	12	31

*** 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	******	******	******	0.18	******	0.79	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	******	******	******	98	******	******	%	0	1/30	CA
81010 K 0 0 PERCENTREMOVAL	PERMIT REQUIREMENT	******	******	******	85 MO AVG	******	******	PER-CEN T		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-CEN T		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	781	925-1207	18	01	12
TYPED OR PRINTED		SIGNATURE OF PRICIPAL 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 MO

WET DATA ON DMR 001B

Date

Effluent

Effluent TSS		
Week Start	**Week End**	**Avg**
11/26/17	12/02/17	14
12/03/17	12/09/17	24
12/10/17	12/16/17	16
12/17/17	12/23/17	14
12/24/17	12/30/17	14
	MAX	**24**

Effluent BOD		
Week Start	**Week End**	**Avg**
11/26/17	12/02/17	3
12/03/17	12/09/17	10
12/10/17	12/16/17	3
12/17/17	12/23/17	8
12/24/17	12/30/17	5
	MAX	**10**

Data for dates in current month

Date	TSS mg/l	TSS Lbs	BOD mg/l	BOD LBS
12/01/17				
12/02/17				
12/03/17				
12/04/17				
12/05/17	24	246	10	103
12/06/17				
12/07/17				
12/08/17				
12/09/17				
12/10/17				
12/11/17				
12/12/17	16	157	3	30
12/13/17				
12/14/17				
12/15/17				
12/16/17				
12/17/17				
12/18/17				
12/19/17	14	114	8	62
12/20/17				
12/21/17				
12/22/17				
12/23/17				
12/24/17				
12/25/17				
12/26/17	14	147	5	47
12/27/17				
12/28/17				
12/29/17				
12/30/17				
12/31/17				
MAX	**24**	**246**	**10**	**103**
AVG	**17**	**166**	**7**	**61**

Sunday Thru Saturday (avg placed on Saturday date)

Date	TSS mg/l	TSS LBS	BOD mg/l	BOD LBS
12/01/17				
12/02/17	14	102	3	22
12/03/17				
12/04/17				
12/05/17				
12/06/17				
12/07/17				
12/08/17				
12/09/17	24	246	10	103
12/10/17				
12/11/17				
12/12/17				
12/13/17				
12/14/17				
12/15/17				
12/16/17	16	157	3	30
12/17/17				
12/18/17				
12/19/17				
12/20/17				
12/21/17				
12/22/17				
12/23/17	14	114	8	62
12/24/17				
12/25/17				
12/26/17				
12/27/17				
12/28/17				
12/29/17				
12/30/17	14	147	5	47
12/31/17				
MAX	**24**	**246**	**10**	**103**
Avg	**16**	**153**	**6**	**53**

Influent TSS		
Week Start	**Week End**	**Avg**
11/26/17	12/02/17	239
12/03/17	12/09/17	510
12/10/17	12/16/17	285
12/17/17	12/23/17	164
12/24/17	12/30/17	355
	Max	**510**

Influent BOD		
Week Start	**Week End**	**Avg**
11/26/17	12/02/17	370
12/03/17	12/09/17	360
12/10/17	12/16/17	220
12/17/17	12/23/17	300
12/24/17	12/30/17	390
	Max	390

TSS and BOD Loadings Check Sheet

Influent

Data for dates in current month

Date	TSS mg/l	TSS Lbs	BOD mg/l	BOD LBS
12/01/17				
12/02/17				
12/03/17				
12/04/17				
12/05/17	510	5,232	360	3,693
12/06/17				
12/07/17				
12/08/17				
12/09/17				
12/10/17				
12/11/17				
12/12/17	285	2,805	220	2,165
12/13/17				
12/14/17				
12/15/17				
12/16/17				
12/17/17				
12/18/17				
12/19/17	164	1,340	300	2,452
12/20/17				
12/21/17				
12/22/17				
12/23/17				
12/24/17				
12/25/17				
12/26/17	355	3,730	390	4,098
12/27/17				
12/28/17				
12/29/17				
12/30/17				
12/31/17				
MAX	**510**	**5,232**	**390**	**4,098**
AVG	**329**	**3,277**	**318**	**3,102**

Sunday Thru Saturday (avg placed on Saturday date)

Date	TSS mg/l	TSS Lbs	BOD mg/l	BOD LBS
12/01/17				
12/02/17	239.00		370.00	
12/03/17				
12/04/17				
12/05/17				
12/06/17				
12/07/17				
12/08/17				
12/09/17	510.00		360.00	
12/10/17				
12/11/17				
12/12/17				
12/13/17				
12/14/17				
12/15/17				
12/16/17	285.00		220.00	
12/17/17				
12/18/17				
12/19/17				
12/20/17				
12/21/17				
12/22/17				
12/23/17	164.00		300.00	
12/24/17				
12/25/17				
12/26/17				
12/27/17				
12/28/17				
12/29/17				
12/30/17	355.00		390.00	
12/31/17				
MAX	**510**		**390**	
AVG	**311**		**328**	

Hull Wastewater Treatment Plant Operations Data

December, 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	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Sat	02	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Sun	03	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Mon	04	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Tue	05	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Wed	06	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Thu	07	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Fri	08	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Sat	09	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Sun	10	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Mon	11	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Tue	12	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Wed	13	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Thu	14	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Fri	15	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Sat	16	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Sun	17	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Mon	18	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Tue	19	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Wed	20	No	On	Off	Off	Off	Off	On	Off	On	Off	Off	On	On	On	On
Thu	21	No	On	Off	Off	Off	On	On	Off	On	Off	Off	On	On	On	On
Fri	22	No	On	Off	Off	Off	On	On	Off	On	Off	Off	On	On	On	On
Sat	23	No	On	Off	Off	Off	On	On	Off	On	Off	Off	On	On	On	On
Sun	24	No	On	Off	Off	Off	On	On	Off	On	Off	Off	On	On	On	On
Mon	25	No	On	Off	Off	Off	On	On	Off	On	Off	Off	On	On	On	On
Tue	26	No	On	Off	Off	Off	On	On	Off	On	Off	Off	On	On	On	On
Wed	27	No	On	Off	Off	Off	On	On	Off	On	Off	Off	On	On	On	On
Thu	28	No	On	Off	Off	Off	On	On	Off	On	Off	Off	On	On	On	On
Fri	29	No	On	Off	Off	Off	On	On	Off	On	Off	Off	On	On	On	On
Sat	30	No	On	Off	Off	Off	On	On	Off	On	Off	Off	On	On	On	On
Sun	31	No	On	Off	Off	Off	On	On	Off	On	Off	Off	On	On	On	On
MIN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MAX		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AVG		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUM		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hull Wastewater Treatment Plant Operations Data

December, 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	0.05	40	49	0	0.7			1.55	0.80	2.67	
Sat	02	Off	Off	On	On	0.00	33	45	0	0.7			1.59	0.54	2.71	
Sun	03	Off	Off	On	On	0.00	32	45	0	0.7			1.69	0.32	3.29	
Mon	04	Off	Off	On	On	0.00	35	44	0	0.7			1.56	0.17	3.81	
Tue	05	Off	Off	On	On	0.09	34	58	0	0.7	510	360	1.35	0.00	2.63	
Wed	06	Off	Off	On	On	0.30	37	58	0	0.7			1.61	1.08	2.61	
Thu	07	Off	Off	On	On	0.00	35	46	0	0.7			1.32	0.00	2.12	
Fri	08	Off	Off	On	On	0.00	34	41	0	0.7			1.13	0.00	2.33	
Sat	09	Off	Off	On	On	0.08	32	37	0	0.7			1.02	0.00	1.71	
Sun	10	Off	Off	On	On	0.00	30	36	0	0.7			1.15	0.00	1.74	
Mon	11	Off	Off	On	On	0.00	33	39	0	0.7			0.89	0.00	1.56	
Tue	12	Off	Off	On	Off	0.08	34	46	0	0.7	285	220	0.81	0.00	1.62	
Wed	13	Off	Off	On	Off	0.00	22	35	0	0.7			0.90	0.00	2.18	
Thu	14	Off	Off	On	Off	0.00	19	29	0	0.7			0.84	0.52	1.68	
Fri	15	Off	Off	On	Off	0.00	18	26	0	0.7			0.89	0.21	1.99	
Sat	16	Off	Off	On	Off	0.00	23	33	0	0.7			0.64	0.00	1.62	
Sun	17	Off	Off	On	Off	0.00	20	30	0	0.7			0.62	0.00	1.63	
Mon	18	Off	Off	On	Off	0.00	24	37	0	0.7			0.62	0.00	1.17	
Tue	19	Off	Off	On	Off	0.01	36	49	0	0.7	164	300	0.76	0.00	1.11	
Wed	20	Off	Off	On	Off	0.00	31	46	0	0.7			0.76	0.00	1.12	
Thu	21	Off	Off	On	Off	0.00	26	35	0	0.7			0.76	0.00	1.36	
Fri	22	Off	Off	Off	Off	0.12	25	39	0	0.7			0.91	0.66	1.32	
Sat	23	Off	Off	Off	Off	0.40	25	38	0	0.7			1.32	0.00	1.39	
Sun	24	Off	Off	Off	Off	0.00	33	38	0	0.7			1.38	0.00	2.06	
Mon	25	Off	Off	Off	Off	0.40	22	39	0	0.7			1.59	0.00	2.59	
Tue	26	Off	Off	Off	Off	0.00	18	27	0	0.7	355	390	0.93	0.00	2.38	
Wed	27	Off	Off	Off	Off	0.00	13	22	0	0.7			1.03	0.00	1.41	
Thu	28	Off	Off	Off	Off	0.00	6	13	0	0.7			0.97	0.00	2.54	
Fri	29	Off	Off	Off	Off	0.00	3	16	0	0.7			0.97	0.00	1.39	
Sat	30	Off	Off	Off	Off	0.00	8	19	0	0.7			0.94	0.00	1.43	
Sun	31	Off	Off	Off	Off	0.00	4	13	0	0.70			0.79	0.00	2.60	
MIN		-	-	-	-	0.00	3	13	0	1	164	220	0.62	0.00		
MAX		-	-	-	-	0.40	40	58	0	1	510	390	1.69		3.81	
AVG		-	-	-	-	0.05	25	36	0	1	329	318	1.07			
SUM		-	-	-	-	1.53	-	-	0	22			-	-	-	-

Hull Wastewater Treatment Plant Operations Data

December, 2017

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										0.74		1.5		32,390	
Sat	02										0.74		2.5		33,530	
Sun	03										0.74		2.5		34,180	
Mon	04								2,473		0.74		2.0		34,360	
Tue	05					560	280	230			0.80		1.5		32,190	24.0
Wed	06				128	520	260	210	2,022		0.86		2.0		29,670	
Thu	07					530	240	200			0.86		2.0		29,540	
Fri	08				126	510	250	210	1,975		0.86		2.5		32,780	
Sat	09										0.86		2.5		30,910	
Sun	10										0.86		2.0		30,060	
Mon	11				117	500	220	200	1,871		0.86		2.5		27,250	
Tue	12										0.84		1.5		13,840	16.0
Wed	13				132	600	300	250	2,271		0.82		2.5		18,460	
Thu	14										0.73		2.0		23,140	
Fri	15										0.69		1.0		27,350	
Sat	16										0.67		2.0		27,140	
Sun	17										0.69		2.0		27,770	
Mon	18				116	500	350	275	2,999		0.60		1.5		33,100	
Tue	19										0.63		2.0		31,990	14.0
Wed	20				129	480	275	200	2,122		0.72		2.0		29,470	
Thu	21										0.66		1.0		30,540	
Fri	22			2.5							0.80		1.0		28,790	
Sat	23			1.0							0.80		3.5		28,430	
Sun	24			1.0							0.80		3.0		28,580	
Mon	25			2.0							0.80		4.0		29,800	
Tue	26			2.0		500	260	230			0.80		3.5		31,390	14.0
Wed	27			2.5	113	450	250	200	2,212		0.80		2.5		31,560	
Thu	28			2.0							0.80		2.0		31,430	
Fri	29			0.0							0.80		2.0		28,500	
Sat	30			1.0							0.80		1.0		32,010	
Sun	31			1.0							0.80		2.0		32,270	
MIN				0.0	113	450	220	200	1,871		0.60		1.0		13,840	14.0
MAX				2.5	132	600	350	275	2,999		0.86		4.0		34,360	24.0
AVG				1.5	123	515	269	221	2,243		0.77		2.1		29,433	17.0
SUM		-	-	-	-	-	-	-	-	-	-	-	-	-	912,420	-

Hull Wastewater Treatment Plant Operations Data

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			1.90	0.00	0.96	7.00	0.46	0.06	0.03	0.18	5.7	8.0				
Sat	02			1.90	0.00	1.04	7.20	0.70	0.47	0.06	0.41		7.5				
Sun	03			2.22	0.00	1.19	7.00	0.00	0.01	0.03	0.01		8.0				
Mon	04			4.99	0.00	1.19	7.10	0.04	0.03	0.02	0.03	4.9	8.0				
Tue	05	10.0		2.11	0.00	1.23	7.20	0.78	0.06	0.07	0.30		7.5				
Wed	06		10	2.19	0.98	1.49	6.80	0.10	0.02	0.22	0.11	6.6	7.5				
Thu	07			1.78	0.91	1.25	6.90	0.03	0.02	0.12	0.06		7.0				
Fri	08			1.62	0.80	1.12	7.00	0.22	0.02	0.02	0.09		7.0				
Sat	09			2.94	0.00	1.23	6.90	0.01	0.04	0.02	0.02	5.8	7.0				
Sun	10			5.85	0.00	1.47	6.80	0.15	0.02	0.01	0.06		5.0				
Mon	11			1.92	0.00	1.14	6.80	0.02	0.00	0.03	0.02		7.5				
Tue	12	3.0		1.93	0.00	1.18	6.60	0.05	0.01	0.02	0.03	3.8	6.5				
Wed	13		10	2.23	0.00	1.25	6.90	0.23	0.03	0.03	0.10		6.5				
Thu	14			1.79	0.00	1.07	6.50	0.00	0.08	0.05	0.04		7.0				
Fri	15			2.02	0.00	0.97	6.90	0.03	0.05	0.04	0.04	3.2	7.0				
Sat	16			1.81	0.00	1.01	6.90	0.04	0.03	0.09	0.05		7.0				
Sun	17			1.92	0.00	1.01	6.60	0.01	0.03	0.01	0.02		10.0				
Mon	18			1.91	0.00	0.96	6.50	2.02	0.05	0.00	0.69		12.5				
Tue	19	7.6		1.88	0.00	0.98	6.50	0.03	0.03	0.01	0.02	2.7	10.0				
Wed	20		10	1.80	0.00	0.98	7.00	0.04	0.01	0.03	0.03		10.0				
Thu	21			1.90	0.00	0.78	7.20	0.01	0.03	0.01	0.02	2.5	10.0				
Fri	22			1.95	0.00	0.90	7.10	0.03	0.25	0.03	0.10		10.0				
Sat	23			2.16	0.00	1.19	6.90	0.06	0.02	0.14	0.07	2.8	10.0				
Sun	24			1.87	0.00	1.19	7.00	0.02	0.07	0.04	0.04		13.0				
Mon	25			2.15	0.00	1.46	7.00	0.69	0.00	0.05	0.25		10.0				
Tue	26	4.5		2.03	0.00	1.26	7.00	0.76	0.04	0.07	0.29	3.4	10.0				
Wed	27		10	1.86	0.00	1.14	7.20	0.15	0.09	0.04	0.09	3.6	10.0				
Thu	28			2.03	0.00	1.11	7.20	0.83	0.68	0.52	0.68	3.5	10.0				
Fri	29			2.02	0.00	1.11	7.20	0.53	0.46	0.37	0.45	3.6	9.0				
Sat	30			2.23	0.00	1.19	7.10	0.36	0.71	0.77	0.61		10.0				
Sun	31			2.12	0.00	1.25	7.30	1.50	0.61	0.25	0.79		12.0				
MIN		3.0	10		0.00	0.78	6.50	0.00	0.00	0.00	0.01	2.48	5.00	-	-	-	-
MAX		10.0	10	5.85		1.49	7.30	2.02	0.71	0.77	0.79	6.61	13.00	-	-	-	-
AVG		6.3	10			1.14	6.95	0.32	0.13	0.10	0.18	4.01	8.73	-	-	-	-
SUM		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hull Wastewater Treatment Plant Operations Data

December, 2017

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			41	9,000	4,295	1.9	2.7	14.8			72	116	2.0	0.020
Sat	02			26	0		2.0	2.6	13.6			72	74	2.0	0.020
Sun	03			18	0		2.0	7.8	13.6			72	79	2.0	0.022
Mon	04			27	9,000	3,686	2.0	7.8	14.1			72	90	2.0	0.022
Tue	05			151	0		2.0	6.3	13.5			72	112	2.0	0.021
Wed	06			97	8,600	4,742	2.1	8.1	14.2	<10		72	90	2.0	0.023
Thu	07			105	0		2.1	8.8	13.1			72	114	2.0	0.023
Fri	08			98	0		2.0	9.8	12.7			72	91	2.0	0.022
Sat	09			128	9,000	4,368	2.0	9.7	12.6			72	100	2.0	0.026
Sun	10			90	0		2.1	6.7	12.2			72	107	2.0	0.029
Mon	11			41	0		2.2	5.8	11.8			72	107	0.0	0.028
Tue	12			104	8,000	2,555	2.2	6.3	12.5			72	103	2.0	0.026
Wed	13			43	0		2.1	6.2	10.9	<10		72	85	2.0	0.028
Thu	14			171	0		2.1	6.3	10.4			72	78	0.0	0.028
Fri	15			240	9,000	2,427	2.1	6.3	11.4			72	62	0.0	0.026
Sat	16			93	0		2.1	6.2	11.6			72	57	0.0	0.025
Sun	17			61	0		2.1	6.2	11.1			72	66	2.0	0.025
Mon	18			139	0		2.1	6.2	11.1			72	75	2.0	0.023
Tue	19			81	9,000	1,996	2.2	6.2	11.6			72	41	2.0	0.022
Wed	20			76	0		2.1	6.2	11.9	<10		72	35	2.0	0.022
Thu	21			688	9,000	1,861	2.1	6.2	9.8			72	75	0.0	0.022
Fri	22			1,235	0		2.0	6.2	11.3			72	77	4.0	0.022
Sat	23			66	9,000	2,117	2.1	6.2	11.2			72	88	2.0	0.025
Sun	24			25	0		2.0	6.2	11.1			72	95	2.0	0.029
Mon	25			66	0		2.1	6.2	10.3			72	85	2.0	0.033
Tue	26			61	9,000	2,522	2.1	6.3	11.3			72	88	2.0	0.033
Wed	27			57	9,000	2,717	2.0	6.2	8.9	<10		72	58	2.0	0.031
Thu	28			61	9,000	2,657	2.0	6.3	6.1			71	51	2.0	0.029
Fri	29			146	9,000	2,687	2.0	6.2	8.1			71	55	2.0	0.028
Sat	30			29	0		2.1	6.3	7.4			71	31	1.0	0.027
Sun	31			57	0		2.0	6.3	6.7			71	64	1.0	0.026
MIN		-	-	18	0	1,861	2	3	6	<10	-	71	35	0.0	0.020
MAX		-	-	1,235	9,000	4,742	2	10	15	<10	-	72	116	4.0	0.033
AVG		-	-	139	3,729	2,972	2	6	11	<10	-	72	79	1.7	0.025
SUM		-	-	4,321	115,600	38,630	-	-	-		-	-	-	-	0.785

Hull WWTF
Monthly Rain, Temperature and Flow
December, 2017

Date	Rainfall	Minimum Air Temp	Maximum Air Temp	Effluent Flow
	Inches	F	F	MGD
12/01/17	0.05	40	49	0.960
12/02/17	0.00	33	45	1.040
12/03/17	0.00	32	45	1.190
12/04/17	0.00	35	44	1.190
12/05/17	0.09	34	58	1.230
12/06/17	0.30	37	58	1.490
12/07/17	0.00	35	46	1.250
12/08/17	0.00	34	41	1.120
12/09/17	0.08	32	37	1.230
12/10/17	0.00	30	36	1.470
12/11/17	0.00	33	39	1.140
12/12/17	0.08	34	46	1.180
12/13/17	0.00	22	35	1.250
12/14/17	0.00	19	29	1.070
12/15/17	0.00	18	26	0.970
12/16/17	0.00	23	33	1.010
12/17/17	0.00	20	30	1.010
12/18/17	0.00	24	37	0.960
12/19/17	0.01	36	49	0.980
12/20/17	0.00	31	46	0.980
12/21/17	0.00	26	35	0.780
12/22/17	0.12	25	39	0.900
12/23/17	0.40	25	38	1.190
12/24/17	0.00	33	38	1.190
12/25/17	0.40	22	39	1.460
12/26/17	0.00	18	27	1.260
12/27/17	0.00	13	22	1.140
12/28/17	0.00	6	13	1.110
12/29/17	0.00	3	16	1.110
12/30/17	0.00	8	19	1.190
12/31/17	0.00	4	13	1.250
Min	0.00	3	13	0.78
Max	0.40	40	58	1.49
Avg	0.05	25	36	1.14
Sum	1.53			35.30

Woodard and Curran
December, 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	ENE-3	36	Sunny	0.004	0.660			0.002	0.017	0.040	0.004	0.002	50.0
Sat	02	NNW-8	36	Mostly cloudy	0.004	0.560			0.140	0.037	0.010	0.008	0.004	50.0
Sun	03	NNW-8	33	Partly cloudy	0.002	0.340			0.002	0.005	0.007	0.006	0.004	33.3
Mon	04	NNW-10	33	Partly cloudy	0.003	0.450			0.003	0.003	0.007	0.007	0.004	42.9
Tue	05	SSE-10	37	Cloudy	0.001	0.001			2.500	0.022	0.001	0.003	0.000	100.0
Wed	06	W-6	50	Cloudy	0.000	0.039			0.000	0.000	0.000	0.006	0.002	66.7
Thu	07	WSW-11	35	Clear	0.003	0.031			0.001	0.002	0.002	0.006	0.003	50.0
Fri	08	WSW-8	34	Clear	0.004	0.520			0.002	0.002	0.003	0.013	0.003	76.9
Sat	09	WNW-3	37	Light Snow	0.003	0.180			0.002	0.004	0.002	0.007	0.003	57.1
Sun	10	WNW-3	29	Partly cloudy	0.003	0.035			0.002	0.000	0.001	0.005	0.002	60.0
Mon	11	SSW-9	34	Cloudy	0.000	0.054			0.001	0.002	0.003	0.003	0.002	33.3
Tue	12	ESE-12	39	Cloudy	0.001	0.200			0.029	0.000	0.000	0.000	0.000	
Wed	13	W-24	24	Windy p/c	0.003	0.092			0.032	0.000		0.104	0.004	96.2
Thu	14	WNW -9	24	Cloudy	0.004	0.680			0.002	0.003		0.330	0.004	98.8
Fri	15	WSW- 8	19	Partly cloudy	0.003	0.005			0.072	0.002		0.042	0.004	90.5
Sat	16	WSW -14	23	Clear	0.002	0.005			0.038	0.002		0.003	0.002	33.3
Sun	17	ESE-13	20	Clear	0.003	0.300			0.002	0.002		0.009	0.004	55.6
Mon	18	0	23	Cloudy	0.004	0.610			0.002	0.000		0.003	0.002	33.3
Tue	19	SW-7	37	Cloudy	0.005	0.330			13.000	0.002		0.002	0.002	0.0
Wed	20	W-13	39	Fair	0.001	1.100			0.002	0.001		0.006	0.002	66.7
Thu	21	WNW-11	29	Cloudy	0.004	0.380			0.002	0.000		0.012	0.002	83.3
Fri	22	NNW - 6	26	Cloudy	0.001	4.100			11.000	0.013		0.019	0.003	84.2
Sat	23	NW-6	25	Light rain	0.004	0.127			1.200	0.000		0.003	0.000	100.0
Sun	24	NNW-11	34	Partly cloudy	0.000	2.000			0.002	0.033		0.010	0.004	60.0
Mon	25	NE-13	38	Rain	0.000	6.400			14.000	0.000		0.029	0.001	96.6
Tue	26	WSW-12	23	Partly cloudy	0.004	0.490			0.001	0.002		0.016	0.002	87.5
Wed	27	W-12	14	Clear	0.003	0.063			0.001	0.002		0.004	0.003	25.0
Thu	28	W- 16	10	Clear	0.001	1.130			1.600	0.081		0.004	0.003	25.0
Fri	29	W-12	10	Cloudy	0.006	0.540			1.200	0.003		0.004	0.003	25.0
Sat	30	W-8	7	Fair - P/C	0.034	4.000			0.002	0.005		0.004	0.002	50.0
Sun	31	WNW-12	5	Partly cloudy	0.006	1.500			0.001	0.001		0.003	0.002	33.3
Min.			5		0.000	0.001			0.000	0.000	0.000	0.000	0.000	0.0
Max.			50		0.034	6.400			14.000	0.081	0.040	0.330	0.004	100.0
Ave.			28		0.004	0.868			1.447	0.008	0.006	0.022	0.003	58.8
Target					<.01	<10.0	<10.0	<10.0	<10.0	.050	.050	<10.0	<1.0	95%

Woodard and Curran

December, 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	ENE-3	36	Sunny	0.001	0.001	0.001	0.001	0.001	0.000	0.001
Sat	02	NNW-8	36	Mostly cloudy	0.003	0.004	0.004	0.003	0.003	0.004	0.003
Sun	03	NNW-8	33	Partly cloudy	0.003	0.003	0.004	0.003	0.003	0.003	0.003
Mon	04	NNW-10	33	Partly cloudy	0.004	0.004	0.004	0.004	0.004	0.003	0.004
Tue	05	SSE-10	37	Cloudy	0.001	0.001	0.001	0.001	0.001	0.002	0.002
Wed	06	W-6	50	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Thu	07	WSW-11	35	Clear	0.003	0.004	0.003	0.003	0.003	0.002	0.003
Fri	08	WSW-8	34	Clear	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Sat	09	WNW-3	37	Light Snow	0.001	0.001	0.001	0.001	0.001	0.002	0.002
Sun	10	WNW-3	29	Partly cloudy	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Mon	11	SSW-9	34	Cloudy	0.001	0.001	0.001	0.002	0.002	0.002	0.002
Tue	12	ESE-12	39	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wed	13	W-24	24	Windy p/c	0.003	0.003	0.003	0.003	0.003	0.002	0.004
Thu	14	WNW -9	24	Cloudy	0.004	0.004	0.004	0.003	0.003	0.004	0.005
Fri	15	WSW- 8	19	Partly cloudy	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Sat	16	WSW -14	23	Clear	0.004	0.004	0.004	0.003	0.003	0.003	0.003
Sun	17	ESE-13	20	Clear	0.004	0.003	0.003	0.003	0.003	0.002	0.004
Mon	18	0	23	Cloudy	0.004	0.003	0.003	0.003	0.003	0.002	0.004
Tue	19	SW-7	37	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wed	20	W-13	39	Fair	0.001	0.001	0.001	0.002	0.002	0.001	0.001
Thu	21	WNW-11	29	Cloudy	0.004	0.002	0.003	0.003	0.003	0.002	0.007
Fri	22	NNW - 6	26	Cloudy	0.003	0.001	0.001	0.001	0.001	0.002	0.002
Sat	23	NW-6	25	Light rain	0.000	0.002	0.000	0.000	0.000	0.000	0.000
Sun	24	NNW-11	34	Partly cloudy	0.003	0.000	0.000	0.000	0.000	0.000	0.004
Mon	25	NE-13	38	Rain	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tue	26	WSW-12	23	Partly cloudy	0.002	0.002	0.002	0.002	0.002	0.002	0.003
Wed	27	W-12	14	Clear	0.003	0.002	0.002	0.002	0.002	0.002	0.004
Thu	28	W- 16	10	Clear	0.002	0.002	0.003	0.003	0.003	0.003	0.003
Fri	29	W-12	10	Cloudy	0.004	0.003	0.001	0.001	0.001	0.003	0.004
Sat	30	W-8	7	Fair - P/C	0.005	0.004	0.005	0.005	0.005	0.007	0.004
Sun	31	WNW-12	5	Partly cloudy	0.005	0.005	0.005	0.005	0.005	0.005	0.006
Min.			5		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Max.			50		0.005	0.005	0.005	0.005	0.005	0.007	0.007
Ave.			28		0.002	0.002	0.002	0.002	0.002	0.002	0.003
Target					<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005