

Weekly Field Report  
Week: 12-29-13 through 01-04-14  
New Bedford Harbor Lower Harbor CAD Cell (LHCC)

This Weekly Field Report was prepared to serve as a summary of field activities conducted throughout the week for Phase I dredging of the New Bedford Harbor Lower Harbor CAD Cell (LHCC) in New Bedford, Massachusetts.

**1. Introduction:**

The weekly field report describes the activities carried out by the Contractor (Cashman/Tripp Marine), the Owner's Representative (Apex Companies, LLC), and any subcontractors completing work within the scope of the project requirements.

This Weekly Field Report represents the ninth Report associated with Phase I dredging of the LHCC in New Bedford Harbor, and the associated handling and disposal of dredged materials at CAD cells within the Harbor, and at designated open-water disposal sites approved for this Project.

This Ninth Report for the LHCC dredging activities includes:

- Daily Inspection Reports from the dredging oversight performed during the week of December 29<sup>th</sup> 2013 through January 04<sup>th</sup> 2014. Daily contractor activities are included in the form of Daily Inspection Reports noting equipment observed on site and a summary of contractor activities. (See Attachment 1);
- Water Quality Monitoring Forms completed for the week of December 29<sup>th</sup> through January 4<sup>th</sup> are attached (Attachment 2). Included with the attached forms is Figure 1 *Lower Harbor CAD Cell Phase I Water Quality Monitoring Plan*, which shows the locations of the water quality monitoring events conducted during this reporting period. Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period Apex has;
  - Conducted water quality monitoring events a minimum of two days per week.
  - Conducted water quality monitoring for disposal events into either the existing CAD Cell #2 or CAD Cell #3 of Top of LHCC sediments removed by this Project.
  - Performed visual inspections of dredged materials in the disposal scow prior to disposal to ascertain the effectiveness of dewatering. If deemed necessary by the visual inspection, Apex will monitor the water quality of the effluent discharge from the carbon filtration system.

**2. Summary:**

The Contractor, through its subcontractor, Tripp Marine, conducted dredging at the LHCC December 30<sup>th</sup> and 31<sup>st</sup>, and January 1<sup>st</sup> and 4<sup>th</sup>. No dredging was performed on January 2<sup>nd</sup> and 3<sup>rd</sup> due to the passing of a strong Nor'easter. Dredging operations focused on the removal of Phase I Top of CAD cell sediments and the disposal of these sediments into CAD Cell #3. During this reporting period, dredging operations were conducted using a conventional digging bucket in certain areas of the dredge footprint where dense sandy materials were known to exist, per verbal approval discussed at the November 13<sup>th</sup> project meeting and the subsequent formal letters provided on November 21<sup>st</sup> and December 23<sup>rd</sup>. Tripp Marine was observed conducting these activities during the authorized operational window of 7AM until sunset, utilizing a single dredge plant; the tug *Sand Pebble*; a 900 cubic yard dump scow – *TMC 140*; a 3000 cubic yard pocket scow *SEL-2000*, and a small utility boat. Tripp Marine was utilizing the Cashman dewatering barge as a

staging area for dewatering operations and as an aid in accurately positioning the dump scow for disposal operations into CAD Cell #3. Dredging operations were conducted without the use of silt curtains because these activities lie outside the time of year restrictions noted in the Project Specifications.

### 3. Operational Notes:

#### Dredging:

Dredging at the LHCC continued through the week of December 29<sup>th</sup> utilizing an open conventional digging bucket, per the terms outlined in the letters issued on November 21<sup>st</sup> and December 23<sup>rd</sup>. Apex conducted three days of water quality monitoring while the open conventional bucket was being used to ensure that the use of the conventional bucket did not result in an exceedance of any project-specific water quality standards. Water quality monitoring was completed December 30<sup>th</sup>, January 1<sup>st</sup>, and January 4<sup>th</sup>. Monitoring of dredging activities will continue on a schedule of a minimum of two events per week as required by the project performance standards.

#### Disposal:

Disposal of “Top of LHCC” sediments was conducted on the four consecutive days between December 30<sup>th</sup> and January 2<sup>nd</sup>. Based on scow logs, approximately 500 and 800 cubic yards of material (assuming 120 pounds/ft<sup>3</sup> for dredged materials) was placed into CAD Cell #3 during each disposal event for scow TMC-140 and SEI-2000, respectively. Sediments contained in the scow were inspected prior to each disposal to assess the effectiveness of dewatering. Water quality monitoring was completed on each day of disposal activity, with the exception of December 31<sup>st</sup>.

Table 1 – Cumulative Dredging Progress

Period of Activity	Volume (cy)
Approximate Vol. Dredged this Reporting Period	2,000
Approximate Volume Dredged to Date	20,400

### 4. Monitoring Summary

There were no water quality exceedances observed during this reporting period related to either dredging or disposal operations. No water quality samples were collected.

Prepared by:  
Apex Companies, LLC



John B. McAllister, P.E.  
Senior Project Engineer



Don Boyé  
Senior Project Manager

Attachment 1  
Daily Inspection Reports



**City of New Bedford Harbor Development Commission**  
**New Bedford Harbor USEPA Lower Harbor CAD Cell**  
**CFDA No.: 66.802**

**Inspection Report**

**Inspector:** K. Ryan

**Date:** 30 December 2013

**Contractor:** Tripp Marine Foreman/Supt: Pyne Tripp

<b>Weather</b>	AM:	<u>Ptly. Cloudy</u>	<b>Temperature</b>	AM:	<u>21</u>
	PM:	<u>Ptly. Cloudy Winds 10-15k W</u>		PM:	<u>42</u>
<b>Tides</b>	High	<u>0532</u>	AM	<u>1757</u>	PM
	Low	<u>1136</u>	AM	<u>2323</u>	PM

**Manpower Onsite**

**Equipment Onsite**

Foreman	<u>1</u>	@	<u>8</u>	Hrs	Description:	<u>Dredge Tripp 47</u>	Hrs.	<u>8</u>
Operators	<u>1</u>	@	<u>8</u>	Hrs		<u>Scow TMC 140</u>	Hrs.	<u>8</u>
Laborers	<u>1</u>	@	<u>8</u>	Hrs		<u>Push boat Sand Pebble</u>	Hrs.	<u>8</u>
Drivers		@		Hrs		<u>Support boat</u>	Hrs.	<u>8</u>
Other:		@		Hrs		<u>Scow SEI 2000</u>	Hrs.	<u>8</u>

**Contractor Activities: (Attach Additional Sheets as Necessary)**

Apex on-site at 0730 to conduct oversight of dredging activities and to inspect dredged materials in scow for disposal authorization. Dredged materials held in scow TMC-140 were disposed into CAD Cell #3 at 0800, after which scow was maneuvered alongside dredge plant. Dredging begins at 0850 in Dredge Area T-5 using the open conventional digging bucket, with dredged materials being placed into scow TMC-140. Dredging continued until 1406, at which point scow TMC-140 was maneuvered over to dewatering barge.

End-of-day draft marks on the scow were 9' FWD and AFT.

No water quality issues were observed during the day.

**Problems/Issues or Action Items:**

None / N/A

**Visitors:**

Signature: D. Boye

Date: 30 December 2013

Title: \_\_\_\_\_

Page: 1 of 1

Copy to: file

File: DIR\_LHCC\_123013



**City of New Bedford Harbor Development Commission**  
**New Bedford Harbor USEPA Lower Harbor CAD Cell**  
**CFDA No.: 66.802**  
**Inspection Report**

**Inspector:** C. Stillman, M. Martinho

**Date:** 31 December 2013

**Contractor:** Tripp Marine Foreman/Supt: Pyne Tripp

<b>Weather</b>	AM:	<u>Overcast.</u>	<b>Temperature</b>	AM:	<u>18</u>
	PM:	<u>Overcast. Winds 5-10k WNW</u>		PM:	<u>27</u>
<b>Tides</b>	High	<u>0626</u>	AM	<u>1850</u>	PM
	Low	<u>-</u>	AM	<u>1228</u>	PM

**Manpower Onsite**

**Equipment Onsite**

Foreman	<u>1</u>	@	<u>8</u>	Hrs	Description:	<u>Dredge Tripp 47</u>	Hrs.	<u>8</u>
Operators	<u>1</u>	@	<u>8</u>	Hrs		<u>Scow TMC 140</u>	Hrs.	<u>8</u>
Laborers	<u>1</u>	@	<u>8</u>	Hrs		<u>Push boat Sand Pebble</u>	Hrs.	<u>8</u>
Drivers		@		Hrs		<u>Support boat</u>	Hrs.	<u>8</u>
Other:		@		Hrs		<u>Scow SEI 2000</u>	Hrs.	<u>8</u>

**Contractor Activities: (Attach Additional Sheets as Necessary)**

Apex on-site at 0745 to conduct oversight of dredging activities and to inspect dredged materials in scow for disposal authorization. Dredged materials held in scow TMC-140 were disposed into CAD Cell #3 at 0855, after which scow was maneuvered alongside dredge plant. Dredging begins at 0925 using the open conventional digging bucket, with dredged materials being placed into scow TMC-140. Dredging continued until 1315, at which point scow TMC-140 was maneuvered over to dewatering barge.

End-of-day draft marks on the scow were 8.5' FWD and AFT.

No water quality issues were observed during the day.

**Problems/Issues or Action Items:**

None / N/A

**Visitors:**

**Signature:** D. Boye

**Date:** 31 December 2013

**Title:** \_\_\_\_\_

**Page:** 1 of 1

**Copy to:** file

**File:** DIR\_LHCC\_123113



**City of New Bedford Harbor Development Commission**  
**New Bedford Harbor USEPA Lower Harbor CAD Cell**  
**CFDA No.: 66.802**  
**Inspection Report**

**Inspector:** C. Stillman

**Date:** 01 January 2014

**Contractor:** Tripp Marine Foreman/Supt: Pyne Tripp

<b>Weather</b>	AM:	<u>Ptly. Cloudy.</u>	<b>Temperature</b>	AM:	<u>17</u>
	PM:	<u>Ptly. Cloudy. Winds 5-10k W</u>		PM:	<u>28</u>
<b>Tides</b>	High	<u>0719</u>	AM	<u>1944</u>	PM
	Low	<u>0017</u>	AM	<u>1320</u>	PM

**Manpower Onsite**

**Equipment Onsite**

Foreman	<u>1</u>	@	<u>8</u>	Hrs	Description:	<u>Dredge Tripp 47</u>	Hrs.	<u>8</u>
Operators	<u>1</u>	@	<u>8</u>	Hrs		<u>Scow TMC 140</u>	Hrs.	<u>8</u>
Laborers	<u>1</u>	@	<u>8</u>	Hrs		<u>Push boat Sand Pebble</u>	Hrs.	<u>8</u>
Drivers		@		Hrs		<u>Support boat</u>	Hrs.	<u>8</u>
Other:		@		Hrs		<u>Scow SEI 2000</u>	Hrs.	<u>8</u>

**Contractor Activities: (Attach Additional Sheets as Necessary)**

Apex on-site at 0630 to conduct oversight of dredging activities and to inspect dredged materials in scow for disposal authorization. Dredged materials held in scow TMC-140 were disposed into CAD Cell #3 at 0933, after which scow was maneuvered alongside dredge plant and Apex boards Pyne dredge plant to confirm GPS position of dredge bucket. Dredging begins at 1032 using the open conventional digging bucket, with dredged materials being placed into scow TMC-140. Dredging continued until 1437, at which point scow TMC-140 was maneuvered over to dewatering barge.

No water quality issues were observed during the day.

**Problems/Issues or Action Items:**

None / N/A

**Visitors:**

**Signature:** D. Boye

**Date:** 01 January 2014

**Title:** \_\_\_\_\_

**Page:** 1 of 1

**Copy to:** file

**File:** DIR\_LHCC\_010114



**City of New Bedford Harbor Development Commission**  
**New Bedford Harbor USEPA Lower Harbor CAD Cell**  
**CFDA No.: 66.802**  
**Inspection Report**

**Inspector:** C. Stillman

**Date:** 02 January 2014

**Contractor:** Tripp Marine Foreman/Supt: Pyne Tripp

<b>Weather</b>	AM:	<u>Fog, Snow.</u>	<b>Temperature</b>	AM:	<u>21</u>
	PM:	<u>Blizzard Warning. Winds 5-10k AM 20-30k PM NNE</u>		PM:	<u>30</u>
<b>Tides</b>	High	<u>0810</u>	AM	<u>2036</u>	PM
	Low	<u>0112</u>	AM	<u>1410</u>	PM

**Manpower Onsite**

**Equipment Onsite**

Foreman	<u>1</u>	@	<u>8</u>	Hrs	Description:	<u>Dredge Tripp 47</u>	Hrs.	<u>8</u>
Operators	<u>1</u>	@	<u>8</u>	Hrs		<u>Scow TMC 140</u>	Hrs.	<u>8</u>
Laborers	<u>1</u>	@	<u>8</u>	Hrs		<u>Push boat Sand Pebble</u>	Hrs.	<u>8</u>
Drivers		@		Hrs		<u>Support boat</u>	Hrs.	<u>8</u>
Other:		@		Hrs		<u>Scow SEI 2000</u>	Hrs.	<u>8</u>

**Contractor Activities: (Attach Additional Sheets as Necessary)**

Apex on-site at 0805 to conduct oversight of dredging activities and to inspect dredged materials in scow for disposal authorization. Additional dewatering was required and scow was re-inspected at 0905 and cleared for disposal. Dredged materials held in scow TMC-140 were disposed into CAD Cell #3 at 0925, after which scow was maneuvered alongside dredge plant.

Given the severity of the weather forecast, Pyne elects to stand down and reposition all equipment dockside at Packer Marine- all equipment secured at 1030 and all personnel depart site for an anticipated two-day weather delay.

No water quality issues were observed during the day.

**Problems/Issues or Action Items:**

None / N/A

**Visitors:**

**Signature:** D. Boye

**Date:** 02 January 2014

**Title:** \_\_\_\_\_

**Page:** 1 of 1

**Copy to:** file

**File:** DIR\_LHCC\_010214



**City of New Bedford Harbor Development Commission**  
**New Bedford Harbor USEPA Lower Harbor CAD Cell**  
**CFDA No.: 66.802**  
**Inspection Report**

**Inspector:** K. Ryan

**Date:** 04 January 2014

**Contractor:** Tripp Marine Foreman/Supt: Pyne Tripp

<b>Weather</b>	AM:	<u>Fog. Snow.</u>	<b>Temperature</b>	AM:	<u>1</u>
	PM:	<u>Overcast. Tapering Snow W15-20k+ NNW</u>		PM:	<u>24</u>
<b>Tides</b>	High	<u>0954</u>	AM	<u>2223</u>	PM
	Low	<u>0300</u>	AM	<u>1541</u>	PM

**Manpower Onsite**

**Equipment Onsite**

Foreman	<u>1</u>	@	<u>8</u>	Hrs	Description:	<u>Dredge Tripp 47</u>	Hrs.	<u>8</u>
Operators	<u>1</u>	@	<u>8</u>	Hrs		<u>Scow TMC 140</u>	Hrs.	<u>8</u>
Laborers	<u>1</u>	@	<u>8</u>	Hrs		<u>Push boat Sand Pebble</u>	Hrs.	<u>8</u>
Drivers		@		Hrs		<u>Support boat</u>	Hrs.	<u>8</u>
Other:		@		Hrs		<u>Scow SEI 2000</u>	Hrs.	<u>8</u>

**Contractor Activities: (Attach Additional Sheets as Necessary)**

Apex on-site at 0945 to conduct oversight of dredging activities. Dredging begins at 1015 using the open conventional digging bucket, with dredged materials being placed into scow TMC-140. Pyne is focusing on removing residual high points above the required Project elevation. Dredging continued until 1545, at which point scow TMC-140 was maneuvered over to dewatering barge. Apex departs site at 1615.

End of day draft marks on scow TMC-140 were 9.5' FWD and AFT.

No water quality issues were observed during the day.

**Problems/Issues or Action Items:**

None / N/A

**Visitors:**

**Signature:** D. Boye

**Date:** 04 January 2014

**Title:** \_\_\_\_\_

**Page:** 1 of 1

**Copy to:** file

**File:** DIR\_LHCC\_010414

Attachment 2  
Water Quality Monitoring Forms

PROJECT:	New Bedford Harbor Lower Harbor CAD Cell		
JOB NUMBER:	6724		
SURVEY DATE:	30 December 2013		
MONITORS:	K. Ryan		
WEATHER CONDITIONS:	Ptly.Cloudy	Low: 21	High: 42
WIND CONDITIONS:	Speed: 10-15k	Direction: W	
PRIOR STORM EVENTS:	N/A		
DREDGE / SCOW Position:	Northing/Easting: 2696617 / 814829		
TYPE OF WATER QUALITY MONITORING EVENT:	TOP CAD Dredging / BTM CAD Dredging / Disposal		
TIDE INFORMATION:	High: 0532/1757	Low: 1136/2323	
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	N IF YES, ATTACH COC FORMS		
GENERAL NOTES:	Dredging begins at 0850 and ends for the day at 1406		



**UP-CURRENT**

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
123013-00-1-1	2690720 / 815136	0910	5.7	1	5.9		Ebbing	200' N of Dredge	0
123013-00-1-2		0912		2	5.7				
123013-00-1-4		0914		4	6.4				
AVERAGE TURBIDITY:					6.00				
123013-02-1-1	2696936 / 815119	1107	6.6	1	4.7		Ebbing	200' N of Dredge	2
123013-02-1-3		1109		3	5.7				
123013-02-1-6		1111		6	4.8				
AVERAGE TURBIDITY:					5.07				
123013-04-1-1	2695159 / 814802	1322	32.4	1	6.8		Flooding tide	200' S of Dredge	4
123013-04-1-16		1324		16	7.2				
123013-04-1-32		1326		32	6				
AVERAGE TURBIDITY:					6.67				
123013-06-1-1	2695648 / 814755	1509	33.9	1	6.9		Flooding tide	200' S of Dredge	6
123013-06-1-16		1511		16	5.4				
123013-06-1-32		1513		32	6				
AVERAGE TURBIDITY:					6.10				
AVERAGE TURBIDITY:									

**Down-Current**

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
123013-00-9-1	2696317 / 814857	0923	12.4	1	6.1		Ebbing	200' S of Dredge	0
123013-00-9-6		0925		6	7.8				
123013-00-9-12		0927		12	8.3				
AVERAGE TURBIDITY:					7.40				
TURBIDITY INCREASE:					1.40				
123013-02-9-1	2696137 / 815090	1132	9.6	1	6.9		Ebbing / Slack	200' S of Dredge	2
123013-02-9-4.5		1134		4.5	6.4				
123013-02-9-9		1136		9	9.6				
AVERAGE TURBIDITY:					7.63				
TURBIDITY INCREASE:					2.57				
123013-04-9-1	2696912 / 815020	1335	6.1	1	7.8		Flooding tide	200' N of Dredge	4
123013-04-9-3		1337		3	10.4				
123013-04-9-6		1339		6	11.5				
AVERAGE TURBIDITY:					9.90				
TURBIDITY INCREASE:					3.23				
123013-06-9-1	2696974 / 814939	1526	11	1	18.4		Flooding tide	200' N of Dredge	6
123013-06-9-5		1528		5	18.6				
123013-06-9-10		1530		10	16.5				
AVERAGE TURBIDITY:					17.83				
TURBIDITY INCREASE:					11.73				
AVERAGE TURBIDITY:									
TURBIDITY INCREASE:									

\* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: New Bedford Harbor Lower Harbor CAD Cell  
 JOB NUMBER: 6724  
 SURVEY DATE: 30 December 2013  
 MONITORS: K. Ryan  
 WEATHER CONDITIONS: Ptty. Cloudy Low: 10 High: 15  
 WIND CONDITIONS: Speed: 10-15k Direction: W  
 PRIOR STORM EVENTS: N/A  
 DREDGE / SCOW Position: Northing/Easting: CAD Cell #3  
 TYPE OF WATER QUALITY MONITORING EVENT: TOP CAD Dredging / BTM CAD Dredging / Disposal  
 TIDE INFORMATION: High: 0532/1757 Low: 1136/2323  
 WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N IF YES, ATTACH COC FORMS  
 GENERAL NOTES: Disposal into CAD Cell #3 occurred at 0800



**UP-CURRENT**

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
123013-01-1-1	2696873 / 815389	0802	14.3	1	5.2		Ebbing	200' N of Disposal	post
123013-01-1-7		0804		7	6.1				
123013-01-1-14		0806		14	6.1				
					AVERAGE TURBIDITY:	5.80			
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				

**Down-Current**

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
123013-01-9-1	2696372 / 815747	0807	14.8	1	5.6		Ebbing	200' S of Disposal	post
123013-01-9-7		0809		7	5.9				
123013-01-9-14		0811		14	7.1				
					AVERAGE TURBIDITY:	6.20			
					TURBIDITY INCREASE:	0.40			
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				

\* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

**PROJECT:** New Bedford Harbor Lower Harbor CAD Cell  
**JOB NUMBER:** 6724  
**SURVEY DATE:** 01 January 2014  
**MONITORS:** C. Stillman  
**WEATHER CONDITIONS:** Ptty.Cloudy Low: 17 High: 28  
**WIND CONDITIONS:** Speed: 5-10k Direction: WNW  
**PRIOR STORM EVENTS:** N/A  
**DREDGE / SCOW Position:** Northing/Easting: 2696914 / 815314  
**TYPE OF WATER QUALITY MONITORING EVENT:** TOP CAD Dredging / BTM CAD Dredging / Disposal  
**TIDE INFORMATION:** High: 0719/1944 Low: 0017/1320  
**WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):** N IF YES, ATTACH COC FORMS  
**GENERAL NOTES:** Dredging begins at 1032 and ends for the day at 1437



**UP-CURRENT**

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
010114-00-1-1	2697270 / 815283	1034	5	1	7.1		Ebbing	200' N of Dredge	0
010114-00-1-2.5		1036		2.5	7.8				
010114-00-1-4		1038		4	7.6				
AVERAGE TURBIDITY:					7.50				
010114-02-1-1	2697254 / 814944	1233	5.7	1	5.2		Ebbing	200' N of Dredge	2
010114-02-1-2		1235		2	5.3				
010114-02-1-5		1237		5	5.4				
AVERAGE TURBIDITY:					5.30				
010114-04-1-1	2696369 / 814813	1435	10.5	1	6.8		Flooding tide	200' S of Dredge	4
010114-04-1-5		1437		5	5.1				
010114-04-1-9		1439		9	5.3				
AVERAGE TURBIDITY:					5.73				
AVERAGE TURBIDITY:									
AVERAGE TURBIDITY:									

**Down-Current**

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
010114-00-9-1	2696589 / 815272	1050	6.8	1	10.5		Ebbing	200' S of Dredge	0
010114-00-9-3		1052		3	8				
010114-00-9-6		1054		6	8.2				
AVERAGE TURBIDITY:					8.90				
TURBIDITY INCREASE:					1.40				
010114-02-9-1	2696552 / 815026	1250	6	1	6.2		Ebbing	200' S of Dredge	2
010114-02-9-3		1252		3	6.9				
010114-02-9-5		1254		5	6.1				
AVERAGE TURBIDITY:					6.40				
TURBIDITY INCREASE:					1.10				
010114-04-9-1	2696986 / 814730	1450	20	1	7.2		Flooding tide	200' N of Dredge	4
010114-04-9-10		1452		10	7.5				
010114-04-9-19		1454		19	6.1				
AVERAGE TURBIDITY:					6.93				
TURBIDITY INCREASE:					1.20				
AVERAGE TURBIDITY:									
TURBIDITY INCREASE:									
AVERAGE TURBIDITY:									
TURBIDITY INCREASE:									

\* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: New Bedford Harbor Lower Harbor CAD Cell  
 JOB NUMBER: 6724  
 SURVEY DATE: 01 January 2014  
 MONITORS: C. Stillman  
 WEATHER CONDITIONS: Ptty. Cloudy Low: 17 High: 28  
 WIND CONDITIONS: Speed: 5-10k Direction: WNW  
 PRIOR STORM EVENTS: N/A  
 DREDGE / SCOW Position: Northing/Easting: CAD Cell #3  
 TYPE OF WATER QUALITY MONITORING EVENT: TOP CAD Dredging / BTM CAD Dredging / Disposal  
 TIDE INFORMATION: High: 0719/1944 Low: 0017/1320  
 WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N IF YES, ATTACH COC FORMS  
 GENERAL NOTES: Disposal into CAD Cell #3 occurred at 0933



**UP-CURRENT**

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
010114-01-1-1	2697165 / 815578	0917	6.8	1	2.4		Ebbing	200' N of Disposal	post
010114-01-1-3		0919		3	4.5				
010114-01-1-6		0921		6	4.8				
					AVERAGE TURBIDITY:	3.90			
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				

**Down-Current**

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
010114-01-9-1	2696328 / 815914	0939	9.1	1	8.2		Ebbing	200' S of Disposal	post
010114-01-9-4		0941		4	6.2				
010114-01-9-8		0943		8	6.5				
					AVERAGE TURBIDITY:	6.97			
					TURBIDITY INCREASE:	3.07			
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				

\* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: New Bedford Harbor Lower Harbor CAD Cell  
 JOB NUMBER: 6724  
 SURVEY DATE: 02 January 2014  
 MONITORS: C. Stillman  
 WEATHER CONDITIONS: Fog, Snow, PM Blizzard Warning Low: 21 High: 30  
 WIND CONDITIONS: Speed: 5-10k AM 20-30k PM Direction: NNE  
 PRIOR STORM EVENTS: N/A  
 DREDGE / SCOW Position: Northing/Easting:  
 TYPE OF WATER QUALITY MONITORING EVENT: TOP CAD Dredging / BTM CAD Dredging / Disposal  
 TIDE INFORMATION: High: 0810/2036 Low: 0112/1410  
 WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N IF YES, ATTACH COC FORMS  
 GENERAL NOTES: Dredging canceled and gear returned dockside at 1015 and secured for weather.



UP-CURRENT

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
AVERAGE TURBIDITY:									
AVERAGE TURBIDITY:									
AVERAGE TURBIDITY:									
AVERAGE TURBIDITY:									

Down-Current

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
AVERAGE TURBIDITY:									
TURBIDITY INCREASE:									
AVERAGE TURBIDITY:									
TURBIDITY INCREASE:									
AVERAGE TURBIDITY:									
TURBIDITY INCREASE:									
AVERAGE TURBIDITY:									
TURBIDITY INCREASE:									

\* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: New Bedford Harbor Lower Harbor CAD Cell  
 JOB NUMBER: 6724  
 SURVEY DATE: 02 January 2014  
 MONITORS: C. Stillman  
 WEATHER CONDITIONS: Fog, Snow, PM Blizzard Warning Low: 21 High: 30  
 WIND CONDITIONS: Speed: 5-10k AM 20-30k PM Direction: NNE  
 PRIOR STORM EVENTS: N/A  
 DREDGE / SCOW Position: Northing/Easting: CAD Cell #3  
 TYPE OF WATER QUALITY MONITORING EVENT: TOP CAD Dredging / BTM CAD Dredging / Disposal  
 TIDE INFORMATION: High: 0810/2036 Low: 0112/1410  
 WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N IF YES, ATTACH COC FORMS  
 GENERAL NOTES: Disposal into CAD Cell #3 occurred at 0925



**UP-CURRENT**

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
010214-00-1-2	2697310 / 815017	0915	10.8	2	4.2		Ebbing	200' N of Disposal	0
010214-00-1-5		0917		5	4				
010214-00-1-8		0919		8	4.4				
					AVERAGE TURBIDITY:	4.20			
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				

**Down-Current**

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
010214-01-9-2	2696298 / 815697	0929	16	2	4.9		Ebbing	200' S of Disposal	post
010214-01-9-8		0931		8	5				
010214-01-9-14		0933		14	10.3				
					AVERAGE TURBIDITY:	6.73			
					TURBIDITY INCREASE:	2.53			
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				

\* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT:	New Bedford Harbor Lower Harbor CAD Cell		
JOB NUMBER:	6724		
SURVEY DATE:	04 January 2014		
MONITORS:	K. Ryan		
WEATHER CONDITIONS:	Fog / Snow.	Low: 1	High: 24
WIND CONDITIONS:	Speed: 15-20k gusting 25+k		Direction: NNW
PRIOR STORM EVENTS:	Nor'easter 02-03January		
DREDGE / SCOW Position:	Northing/Easting: 2696631 / 815038		
TYPE OF WATER QUALITY MONITORING EVENT: <b>TOP CAD Dredging</b> / BTM CAD Dredging / Disposal			
TIDE INFORMATION:	High: 0954/2223		Low: 0300/1541
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	N IF YES, ATTACH COC FORMS		
GENERAL NOTES:	Dredging begins at 1015 and ends for the day at 1546		



**UP-CURRENT**

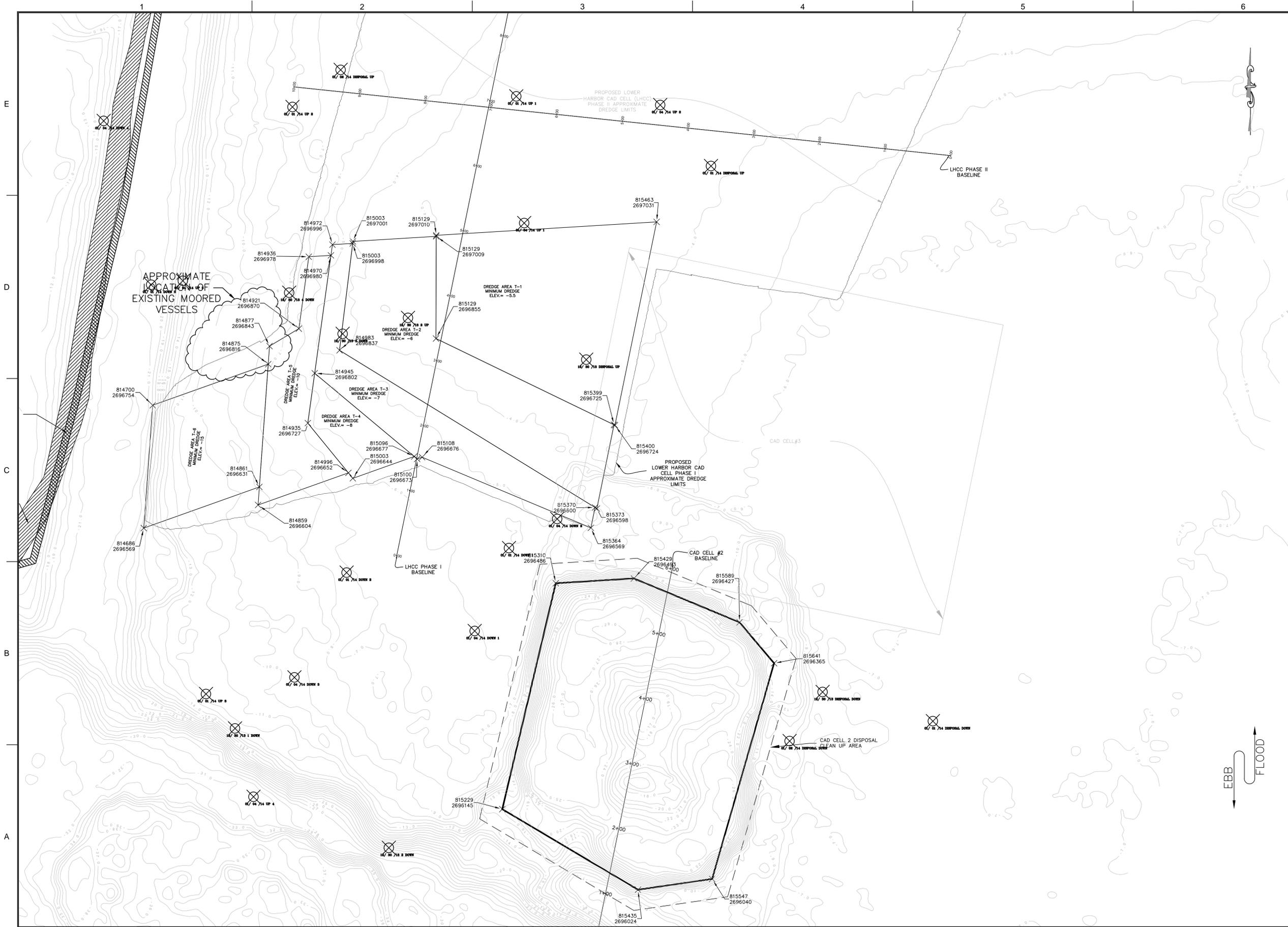
Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
010414-00-1-1	2697079 / 815295	1026	8.8	1	4.6		Ebbing	200' N of Dredge	0
010414-00-1-4		1028		4	5.3				
010414-00-1-8		1030		8	5.3				
					AVERAGE TURBIDITY:	5.07			
010414-02-1-1	2697257 / 815501	1220	6.4	1	5.3		Ebbing	200' N of Dredge	2
010414-02-1-3		1222		3	6				
010414-02-1-6		1224		6	6.1				
					AVERAGE TURBIDITY:	5.80			
010414-04-1-1	2696992 / 814778	1427	19.1	1	6.9		Ebbing	200' N of Dredge	4
010414-04-1-9.5		1429		9.5	7.6				
010414-04-1-19		1431		19	8.5				
					AVERAGE TURBIDITY:	7.67			
010414-06-1-1	2696214 / 814885	1603	15.9	1	10.4		Slack / Flooding	200' S of Dredge	6
010414-06-1-7		1605		7	10.6				
010414-06-1-14		1607		14	10.4				
					AVERAGE TURBIDITY:	10.47			
					AVERAGE TURBIDITY:				

**Down-Current**

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
010414-00-9-1	2696464 / 815220	1045	10.7	1	5.3		Ebbing	200' S of Dredge	0
010414-00-9-5		1047		5	5.2				
010414-00-9-10		1049		10	5.1				
					AVERAGE TURBIDITY:	5.20			
					TURBIDITY INCREASE:	0.13			
010414-02-9-1	2696633 / 815345	1237	21.9	1	13		Ebbing	200' S of Dredge	2
010414-02-9-11		1239		11	12.4				
010414-02-9-21		1241		21	9.1				
					AVERAGE TURBIDITY:	11.50			
					TURBIDITY INCREASE:	5.70			
010414-04-9-1	2696394 / 814947	1447	9.6	1	8		Ebbing	200' S of Dredge	4
010414-04-9-4.5		1449		4.5	8.1				
010414-04-9-9		1451		9	8.4				
					AVERAGE TURBIDITY:	8.17			
					TURBIDITY INCREASE:	0.50			
010414-06-9-1	2697233 / 814658	1609	19.4	1	6.2		Flooding tide	200' N of Dredge	6
010414-06-9-9		1611		9	6.5				
010414-06-9-18		1613		18	6.8				
					AVERAGE TURBIDITY:	6.50			
					TURBIDITY INCREASE:	-3.97			
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				

\* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Figure 1  
Lower Harbor CAD Cell Phase I – Water Quality Monitoring



ROCKVILLE, MD  
SOUTH WINDSOR, CT - BOSTON, MA -  
NEW BEDFORD, MA - HOLYOKE, MA

125 BROAD STREET, 5TH FLOOR  
BOSTON, MA 02210

58H CONNECTICUT AVENUE  
SOUTH WINDSOR, CT

The drawings prepared by Apex for this project are the property of Apex and are to be used solely for the project and site. Apex shall be deemed to have accepted the design and data as shown. Apex shall not be responsible for any errors or omissions in the drawings or data. The drawings shall not be used for any other project, for addition to this project or for completion of the project, without the written consent of Apex.

PROJECT	NEW BEDFORD HARBOR DEVELOPMENT COMMISSION LOWER HARBOR CAD CELL	
	OWNER	NEW BEDFORD HARBOR DEVELOPMENT COMMISSION 52 FISHERMAN'S WHARF, NEW BEDFORD, MA 02740

1	9/25/2012	EPA COMMENTS	GCD
2	2/21/2013	DRAFT SUITABILITY	MCK

DATE	DESCRIPTION	BY

PROJECT NO.	6724
DESIGNED BY	###
DRAWN BY	###
CHECKED BY	###
DATE	NOV 2013
DRAWING SCALE	AS NOTED

GRAPHIC SCALE  
SCALE: 1"=50'  
0 25 50 100

SHEET TITLE  
**LOWER HARBOR CAD CELL PHASE I WATER QUALITY MONITORING**  
12/29/13-01/04/14

DRAWING NO.  
**WQM-1**

1 OF 1