

Appendix-6: Water Quality Reports (Bisnandi)

Monthly Water Quality Monitoring Report Feb-Mar 2014

WEEKLY DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING

(1) Sample location: Chaitankanda, Bishnondi, Meghna river

(GIS Location: 23° 45' 14.69 N & 90° 43' 18.07 E)

(2) Field Observations:

Upon arrival at a sampling site, record visual observations on the appearance of the water and other information related to water quality and water use as below:

Sampling Week	Parameter	Observation
1 st	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
2 nd	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
3 rd	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
4 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
1 st	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
2 nd	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
3 rd	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
4 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
1 st	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
2 nd	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
3 rd	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
4 th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
1 st	Day	Cloudy/ Sunny ✓ / Hot/ Cool
2 nd	Day	Cloudy/ Sunny ✓ / Hot/ Cool
3 rd	Day	Cloudy/ Sunny ✓ / Hot/ Cool
4 th	Day	Cloudy/ Sunny ✓ / Hot/ Cool
1 st	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
2 nd	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
3 rd	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
4 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
1 st	Biological Activity	Excessive growth of algal/ Phytoplankton/ others...../ None ✓
2 nd	Biological Activity	Excessive growth of algal/ Phytoplankton/ others...../ None ✓
3 rd	Biological Activity	Excessive growth of algal/ Phytoplankton/ others...../ None ✓
4 th	Biological Activity	Excessive growth of algal/ Phytoplankton/ others...../ None ✓

(3.A) Water Quality Test Parameters (Field Tests)

Sampling Week	Date & Time	Depth (m)	Alkalinity	Temp.	pH	Salinity	Condu.	Turbi.	DO	TDS	NH ₃	Hard.
1 st	15-2-14 12.05 pm	8.2	75	21.1	8.4	2	71	1.26	9.75	48	0.5	72
2 nd	22-2-14 11.00am	8.3	60	24.5	7.6	1	95	1.88	8.95	51	0	60
3 rd	01-03-14 11.05 am	8.15	60	25.2	8	1	97	0.09	8.42	55	0	52.5
4 th	08-03-14 1-30 pm	9	75	25.6	7.9	1.5	63	2.4	8.06	62	0	52.5

(3.B) Water Quality Parameters (Laboratory Tests)

Sampling Week	Date & Time	Depth (m)	Color	TSS
1 st	15-2-14 & 12.05 pm	8.2	5.8	1
2 nd	22-2-14 & 11.00am	8.3	4.2	4.6
3 rd	01-03-14 & 11.05 am	8.15	3.2	2
4 th	08-03-14 & 1-30 pm	9	4.6	3.9

(3.E) Water level measurement in addition to depth at every sampling point at intake, Chaitankanda, Meghna river

Sampling Week	Date & Time	Measurement time	Parameter	Water level + Depth (M)
1 st	-	During Weekly Sampling	Water Level	(1)-Meters above national datum (2)-Meters depth from surface to river bottom
2 nd	-	During Weekly Sampling	Water Level	(1)-Meters above national datum (2)-Meters depth from surface to river bottom
3 rd	-	During Weekly Sampling	Water Level	(1)-Meters above national datum (2)-Meters depth from surface to river bottom
4 th	-	During Weekly Sampling	Water Level	(1)-Meters above national datum (2)-Meters depth from surface to river bottom

MONTHLY DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING**(3.B) Water Quality Parameters (Laboratory Tests)**

Sampling Month	Sampling Week	Date & Time	Depth (m)	As	Al	Fe	Mn	TDS	Algae
1 st	4 th	08-03-14 & 1-30 pm	9	0.002	0.315	<0.09	<0.05	65	208

(3.C) River water salinity test at Meghna Bridge spot during high tide

Sampling Month	Sample Location	Date & Time	Tide	Parameter	Concentration (g/kg)
1 st	Meghna Bridge	08-03-14 & 3-35 pm	During high tide	Salinity	1.5

(3.D) River water Salinity test at four different points between Meghna Bridge and proposed new intake location

Sampling Month	Sampling Week	Sample Location	Date & Time	Measurement time	Concentration (g/kg)
1 st	4 th	Bishnondi Point	08-03-14 & 1-15 pm	During monthly sampling	1.5
1 st	4 th	Chaitankanda point	08-03-14 & 1-30 pm	During monthly sampling	1.5
1 st	4 th	Nunertech, Near Anandabazar point	08-03-14 & 2-40 pm	During monthly sampling	1.5
1 st	4 th	Near Meghna bridge	08-03-14 & 3-35 pm	During monthly sampling	1.5

Monthly Water Quality Monitoring Report Feb-Mar 2014
WEEKLY DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING

(1) Sample location: Chaitankanda, Bishnondi, Meghna river

(GIS Location: 23° 45' 14.69 N & 90° 43' 18.07 E)

(2) Field Observations:

Upon arrival at a sampling site, record visual observations on the appearance of the water and other information related to water quality and water use as below:

Sampling Week	Parameter	Observation
5th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
6th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
7th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
8th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
6th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
7th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
8th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
6th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
7th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
8th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5th	Day	Cloudy/ Sunny ✓ / Hot/ Cool
6th	Day	Cloudy/ Sunny ✓ / Hot/ Cool
7th	Day	Cloudy/ Sunny ✓ / Hot/ Cool
8th	Day	Cloudy/ Sunny ✓ / Hot/ Cool
5th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
6th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
7th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
8th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
6th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
7th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
8th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None

(3.A) Water Quality Test Parameters (Field Tests)

Sampling Week	Date & Time	Depth (m)	Alkalinity (mg/l)	Temp. (0c)	pH	Salinity (g/kg)	Condu. (µS/cm)	Turbi. (mg/l)	DO (mg/l)	TDS (mg/l)	NH ₃ (mg/l)	Hard. (mg/l)	As (µg/l)
5th	15-3-14 & 11.40 am	7.25	60	26.6	7.92	1.5	145.8	0.75	8.06	68	0	30	
6th	22-3-14 & 11.40am	9.25	60	29.1	7.74	1.5	170.4	1.95	7.89	64	0	60	
7th	29-03-14 & 1.35 pm	9	54	32.7	7.91	1.5	174	2.16	7.64	79	0	45	
8th	05-04-14 & 9-00 am	9	66	28	7.69	0.07	160.8	0.63	7.94	75	0	225	0

(3.B) Water Quality Parameters (Laboratory Tests)

Sampling Week	Date & Time	Depth (m)	Color (Hazen)	TSS (mg/l)
5th	15-3-14 & 11.40 am	7.25	4.14	4.5
6th	22-3-14 & 11.40am	9.25	3.75	5.3
7th	29-03-14 & 1.35 pm	9	5.4	4.9
8th	05-04-14 & 9-00 am	9	4.2	5.2

(3.E) Water level measurement in addition to depth at every sampling point at intake, Chaitankanda, Meghna river

Sampling Week	Date & Time	Measurement time	Parameter	Water level + Depth (M)
5th	-	During Weekly Sampling	Water Level	(1)-Meters above national datum (2)-Meters depth from surface to river bottom
6th	22-3-14 & 11.40am	During Weekly Sampling	Water Level	(1)-Meters above national datum (2)11.25 Gauge was in water
7th	29-03-14 & 1.35 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2)-4 Gauge was bank of the river
8th	05-04-14 & 9-00 am	During Weekly Sampling	Water Level	(1)-Meters above national datum (2)-4 Gauge was bank of the river

MONTHLY DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING**(3.B) Water Quality Parameters (Laboratory Tests)**

Sampling Month	Sampling Week	Date & Time	Depth (m)	As (µg/l)	Al (mg/l)	Fe (mg/l)	Mn (mg/l)	TDS (mg/l)	Algae (µg/l)
2nd	8th	05-04-14 & 9-00 am	9	0.003	0.291	<0.09	<0.05	74	590

(3.C) River water salinity test at Meghna Bridge spot during high tide

Sampling Month	Sample Location	Date & Time	Tide	Parameter	Concentration
2nd	Meghna Bridge	05-04-14 & 9-00 am	During high tide	Salinity	0.08

(3.D) River water Salinity test at four different points between Meghna Bridge and proposed new intake location

Sampling Month	Sampling Week	Sample Location	Date & Time	Measurement time	Concentration
2nd	8th	Bishnondi Point	05-04-14 & 9-00 am	During monthly sampling	0.07
2nd	8th	Chaitankanda point	05-04-14 & 9-00 am	During monthly sampling	0.07
2nd	8th	Nunercech, Near Anandabazar point	05-04-14 & 9-00 am	During monthly sampling	0.07
2nd	8th	Near Meghna bridge	05-04-14 & 9-00 am	During monthly sampling	0.08

Hourly Water Quality Monitoring
DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING

(1) Sample location: Chaitankanda, Bishnondi, Meghna river

(GIS Location: 23° 45' 14.69 N & 90° 43' 18.07 E)

(2) Field Observations:

Upon arrival at a sampling site, record visual observations on the appearance of the water and other information related to water quality and water use as below:

Sampling Date & Time	Parameter	Observation
5-4-2014 & 7.00am	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 8.02am	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 9.00am	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 10.00am	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 11.00am	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 12.00pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 1.00pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 2.03pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 3.00pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 4.00pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 5.00pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 6.00pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 7.00pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
5-4-2014 & 7.00am	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5-4-2014 & 8.02am	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5-4-2014 & 9.00am	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5-4-2014 & 10.00am	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5-4-2014 & 11.00am	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5-4-2014 & 12.00pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5-4-2014 & 1.00pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5-4-2014 & 2.03pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5-4-2014 & 3.00pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5-4-2014 & 4.00pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5-4-2014 & 5.00pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5-4-2014 & 6.00pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
5-4-2014 & 7.00pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic

5-4-2014 & 7.00am	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 8.02am	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 9.00am	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 10.00am	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 11.00am	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 12.00pm	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 1.00pm	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 2.03pm	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 3.00pm	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 4.00pm	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 5.00pm	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 6.00pm	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 7.00pm	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
5-4-2014 & 7.00am	Day	Cloudy/ Sunny ✓ / Hot/ Cool
5-4-2014 & 8.02am	Day	Cloudy/ Sunny ✓ / Hot/ Cool
5-4-2014 & 9.00am	Day	Cloudy/ Sunny ✓ / Hot/ Cool
5-4-2014 & 10.00am	Day	Cloudy/ Sunny ✓ / Hot✓/ Cool
5-4-2014 & 11.00am	Day	Cloudy/ Sunny ✓ / Hot✓/ Cool
5-4-2014 & 12.00pm	Day	Cloudy/ Sunny ✓ / Hot✓/ Cool
5-4-2014 & 1.00pm	Day	Cloudy/ Sunny ✓ / Hot✓/ Cool
5-4-2014 & 2.03pm	Day	Cloudy/ Sunny ✓ / Hot✓/ Cool
5-4-2014 & 3.00pm	Day	Cloudy/ Sunny ✓ / Hot✓✓/ Cool
5-4-2014 & 4.00pm	Day	Cloudy/ Sunny ✓ / Hot/ Cool
5-4-2014 & 5.00pm	Day	Cloudy/ Sunny ✓ / Hot/ Cool
5-4-2014 & 6.00pm	Day	Cloudy/ Sunny ✓ / Hot/ Cool
5-4-2014 & 7.00pm	Day	Cloudy/ Sunny ✓ / Hot/ Cool
5-4-2014 & 7.00am	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5-4-2014 & 8.02am	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5-4-2014 & 9.00am	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5-4-2014 & 10.00am	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5-4-2014 & 11.00am	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5-4-2014 & 12.00pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5-4-2014 & 1.00pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5-4-2014 & 2.03pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5-4-2014 & 3.00pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5-4-2014 & 4.00pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5-4-2014 & 5.00pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓

5-4-2014 & 6.00pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5-4-2014 & 7.00pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
5-4-2014 & 7.00am	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None
5-4-2014 & 8.02am	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None
5-4-2014 & 9.00am	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None
5-4-2014 & 10.00am	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None
5-4-2014 & 11.00am	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None
5-4-2014 & 12.00pm	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None
5-4-2014 & 1.00pm	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None
5-4-2014 & 2.03pm	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None
5-4-2014 & 3.00pm	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None
5-4-2014 & 4.00pm	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None
5-4-2014 & 5.00pm	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None
5-4-2014 & 6.00pm	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None
5-4-2014 & 7.00pm	Biological Activity	Excessive growth of algal/ Phytoplankton// Water Hyacinthv/ None

(3.A) Water Quality Test Parameters (Field Tests)

Date & Time	Depth (Meter)	Temp. (oc)	pH	Salinity (g/l)	Condu. (μS/cm)	Turbi. (mg/l)	DO (mg/l)	TDS (mg/l)	NH ₃ (mg/l)
5-4-2014 & 7.00am	9.2	26.8	7.7	0.07	158.3	0.63	7.69	60	0
5-4-2014 & 8.02am	9.1	27.6	7.62	0.07	159.6	0.62	7.84	62.5	0
5-4-2014 & 9.00am	9	28	7.69	0.07	160.8	0.63	7.94	75	0
5-4-2014 & 10.00am	9.1	28.6	7.64	0.08	167.6	0.87	8.1	79.5	0
5-4-2014 & 11.00am	9.2	28.8	8.06	0.07	154.8	0.77	8.22	73.4	0
5-4-2014 & 12.00pm	9.2	29.5	8.15	0.08	163.8	0.81	8.35	77.5	0
5-4-2014 & 1.00pm	9.25	30.3	8.04	0.07	153.6	0.75	8.28	73.8	0
5-4-2014 & 2.03pm	9.25	29.2	8.14	0.07	161.7	0.75	8.39	76.2	0
5-4-2014 & 3.00pm	9.3	29.3	7.94	0.07	154.5	0.65	8.33	73.3	0
5-4-2014 & 4.00pm	9.2	29	7.97	0.08	164.6	0.95	8.32	78.1	0
5-4-2014 & 5.00pm	9	28.8	7.68	0.08	160.9	1.3	7.97	75.2	0
5-4-2014 & 6.00pm	9	27.6	7.63	0.07	159.7	2	7.81	65.1	0
5-4-2014 & 7.00pm	9.1	26.5	7.72	0.08	158.4	2.05	7.68	63.2	0

Quarterly Water Quality Monitoring
DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING
(1) Sample location: Chaitankanda, Bishnondi, Meghna river
(GIS Location: 230 45' 14.69 N & 900 43' 18.07 E)

Sampling Date & Time	Parameters	Unit	Concentration present
5-4-2014 & 9.00 am	Barium	mg/l	0.045
5-4-2014 & 9.00 am	Cadmium	mg/l	0.0008
5-4-2014 & 9.00 am	Chloride	mg/l	16
5-4-2014 & 9.00 am	Chromium	mg/l	0.009
5-4-2014 & 9.00 am	Faecal Coliform	cfu	850
5-4-2014 & 9.00 am	BOD	mg/l	10
5-4-2014 & 9.00 am	COD	mg/l	28
5-4-2014 & 9.00 am	Lead	mg/l	<0.002
5-4-2014 & 9.00 am	Mercury	mg/l	<0.002
5-4-2014 & 9.00 am	Nitrite	mg/l	0.04
5-4-2014 & 9.00 am	Nitrate	mg/l	2.1
5-4-2014 & 9.00 am	Phosphate	mg/l	0.38
5-4-2014 & 9.00 am	TOC	mg/l	2.1
5-4-2014 & 9.00 am	Oil & Grease	mg/l	0.31
5-4-2014 & 9.00 am	Fluride	mg/l	<0.10
5-4-2014 & 9.00 am	Selenium	mg/l	<0.002
5-4-2014 & 9.00 am	Zinc	mg/l	<0.08
5-4-2014 & 9.00 am	Sulphate	mg/l	5
5-4-2014 & 9.00 am	Copper	mg/l	<0.26
5-4-2014 & 9.00 am	Ammonia	mg/l	<0.10
5-4-2014 & 9.00 am	Boron	mg/l	<0.20
5-4-2014 & 9.00 am	Nickel	mg/l	0.013
5-4-2014 & 9.00 am	Sodium	mg/l	21
5-4-2014 & 9.00 am	α-BHC	mg/l	Not Detected
5-4-2014 & 9.00 am	γ-BHC	mg/l	Not Detected
5-4-2014 & 9.00 am	β-BHC	mg/l	Not Detected
5-4-2014 & 9.00 am	Heptachlor	mg/l	Not Detected
5-4-2014 & 9.00 am	Aldrin	mg/l	Not Detected
5-4-2014 & 9.00 am	Hepatachloro Epoxide I	mg/l	Not Detected
5-4-2014 & 9.00 am	Dieldrin	mg/l	Not Detected
5-4-2014 & 9.00 am	4,4 -DDE	mg/l	Not Detected
5-4-2014 & 9.00 am	Endrin	mg/l	Not Detected
5-4-2014 & 9.00 am	2,4 -DDT	mg/l	Not Detected
5-4-2014 & 9.00 am	4,4 DDT	mg/l	Not Detected
5-4-2014 & 9.00 am	4,4 DDD	mg/l	Not Detected
5-4-2014 & 9.00 am	2,4 DDT		Not Detected

Monthly Water Quality Monitoring Report April-May 2014

WEEKLY DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING

(1) Sample location: Chaitankanda, Bishnondi, Meghna river

(GIS Location: 23° 45' 14.69 N & 90° 43' 18.07 E)

(2) Field Observations:

Upon arrival at a sampling site, record visual observations on the appearance of the water and other information related

Sampling Week	Parameter	Observation
9 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
10 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
11 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
12 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
13 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
9 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
10 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
11 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
12 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
13 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
9 th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
10 th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
11 th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
12 th	Rainfall in last 24h	Heavy/Medium/ Low ✓/ None
13 th	Rainfall in last 24h	Heavy/Medium/ Low ✓/ None
9 th	Day	Cloudy/ Sunny ✓ / Hot/ Cool
10 th	Day	Cloudy/ Sunny ✓ / Hot ✓/ Cool
11 th	Day	Cloudy/ Sunny ✓ / Hot ✓/ Cool
12 th	Day	Cloudy/ Sunny ✓ / Hot ✓/ Cool
13 th	Day	Cloudy/ Sunny ✓ / Hot/ Cool
9 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
10 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
11 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
12 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
13 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
9 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
10 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
11 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
12 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
13 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None

(3.A) Water Quality Test Parameters (Field Tests)

Sampling Week	Date & Time	Depth (m)	Alkalinity	Temp. (oc)	pH	Salinity (g/l)	Condu. (μS/cm)	Turbi. (mg/l)	DO (mg/l)	TDS (mg/l)	NH ₃ (mg/l)	Hardness (mg/l)	Arsenic (mg/l)
9 th	12-4-14 12.20 pm	9.1	67.5	30	8.24	0.08	163.4	2.18	7.72	78.2	0	30	—
10 th	19-4-14 12.10pm	9.2	75	32.3	8.33	0.08	163	3.59	7.68	76.6	0	52.5	—
11 th	26-04-14 12.40 pm	8	63	33.4	8.56	0.08	158.3	3.88	7.52	76.2	0	60	—
12 th	03-05-14 11-00 am	8	60	31.8	8.2	0.08	160.4	3.74	7.62	75.8	0	60	—
13 th	10-05-14 12-10 pm	7.5	67.5	30.3	8.25	0.08	170.4	8.04	8.01	80.5	0	52.5	0

(3.B) Water Quality Parameters (Laboratory Tests)

Sampling Week	Date & Time	Depth (m)	5 meter above from the bottom TSS (mg/l)	2 meter above from the bottom TSS (mg/l)	Color Hazen	TSS (mg/l)
9 th	12-4-14 12.20 pm	9.1	—	—	5	4.7
10 th	19-4-14 12.10pm	9.2	—	—	2.4	5.3
11 th	26-04-14 12.40 pm	8	5.6	4.9	5.4	—
12 th	03-05-14 11-00 am	8	—	—	3.75	—
13 th	10-05-14 12-10 pm	7.5	5.5	5.1	4.1	—

(00) Extra TSS Monitoring (Laboratory Tests)

Sampling Week	Date & Time	Depth (ft)	TSS (mg/l)
10 th	19-4-14 & 12.10pm	2	5.2
10 th	19-4-14 & 12.12pm	4	6.5
10 th	19-4-14 & 12.14pm	6	7
10 th	19-4-14 & 12.16pm	8	6.9

Sampling Week	Date & Time	Measurement time	Parameter	Water level + Depth (M)
9 th	12-4-14 12.20 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) -3
10 th	19-4-14 12.10pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 0
11 th	26-04-14 12.40 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) -5
12 th	03-05-14 11-00 am	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) -5
13 th	10-05-14 12-10 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 1

3.R SURFACE WATER QUALITY MONITORING

(3.B) Water Quality Parameters (Laboratory Tests)

Sampling Month	Sampling Week	Date & Time	Depth (m)	As	Al	Fe	Mn	TDS	Algae
	9th	12-4-14 & 12.20 pm	9.1	—	—	—	—	—	1087
	10 th	19-4-14 & 12.10 pm	9.2	—	—	—	—	—	973
	11 th	26-4-14 & 12.40 pm	8	—	—	—	—	—	
3rd	13th	10-05-14 & 12-10 pm	7.5	0.002	0.28	<0.09	<0.05	81	—

(3.C) River water salinity test at Meghna Bridge spot during high tide

Sampling Month	Sample Location	Date & Time	Tide	Parameter	Concentration (g/kg)
3rd	Meghna Bridge	10-05-14 & 2-58 pm	During high tide	Salinity	0.08

(3.D) River water Salinity test at four different points between Meghna Bridge and proposed new intake location

Sampling Month	Sampling Week	Sample Location	Date & Time	Measurement time	Concentration (g/kg)
3rd	13th	Bishnondi Point	10-05-14 & 11-40	During monthly sampling	0.08
3rd	13th	Chaitankanda point	10-05-14 & 12-10 pm	During monthly sampling	0.09
3rd	13th	Numeretech, Near Anandabazar point	10-05-14 & 1-40 pm	During monthly sampling	0.08
3rd	13th	Near Meghna bridge	10-05-14 & 2-58 pm	During monthly sampling	0.08

Monthly Water Quality Monitoring Report May-June 2014

WEEKLY DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING

(1) Sample location: Chaitankanda, Bishnondi, Meghna river

(GIS Location: 23° 45' 14.69 N & 90° 43' 18.07 E)

(2) Field Observations:

Upon arrival at a sampling site, record visual observations on the appearance of the water and other information related to water quality and water use as below:

Sampling Week	Parameter	Observation
14 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
15 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
16 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
17 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
18 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
14 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
15 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
16 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
17 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
18 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
14 th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
15 th	Rainfall in last 24h	Heavy/Medium✓/ Low/ None
16 th	Rainfall in last 24h	Heavy/Medium✓/ Low/ None
17 th	Rainfall in last 24h	Heavy/Medium/ Low / None✓
18 th	Rainfall in last 24h	Heavy/Medium/ Low / None✓
14 th	Day	Cloudy/ Sunny ✓ / Hot✓/ Cool
15 th	Day	Cloudy✓/ Sunny / Hot ✓/ Cool
16 th	Day	Cloudy✓/ Sunny / Hot ✓/ Cool
17 th	Day	Cloudy/ Sunny ✓ / Hot ✓/ Cool
18 th	Day	Cloudy/ Sunny ✓ / Hot/ Cool
14 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
15 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
16 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
17 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
18 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
14 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
15 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
16 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
17 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
18 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None

(3.A) Water Quality Test Parameters (Field Tests)

Sampling Week	Date & Time	Depth (m)	Alkalinity	Temp. (oc)	pH	Salinity (g/l)	Condu. (μS/cm)	Turbi. (mg/l)	DO (mg/l)	TDS (mg/l)	NH3 (mg/l)	Hardness (mg/l)	Arsenic (mg/l)
14 th	17-05-14 12.10 pm	8.5	48	33.8	7.54	0.07	162.2	40.68	6.63	77	0	45	—
15 th	24-05-14 4.00pm	8.5	52.5	28.9	7.41	0.05	108.3	36.91	7.24	51.1	0	30	—
16 th	31-05-14 1.40 pm	8.5	36	27.2	7.36	0.04	88.9	15.62	7.27	42.1	0	30	—
17 th	07-06-14 3-45 pm	8	48	31.2	7.57	0.05	100.9	13.6	7.43	47.5	0	45	0
18 th	14-06-14 3-20 pm	8	45	34	8.22	0.04	89.3	14.98	7.68	42.5	0	52.5	—

(3.B) Water Quality Parameters (Laboratory Tests)

Sampling Week	Date & Time	Depth (m)	5 meter above from the bottom TSS (mg/l)	2 meter above from the bottom TSS (mg/l)	Color Hazen	
14 th	17-05-14 12.10 pm	8.5	—	—	5.8	
15 th	24-05-14 4.00pm	8.5	15	17	9.6	
16 th	31-05-14 1.40 pm	8.5	—	—	10.4	
17 th	07-06-14 3-45 pm	8	12	14	9.6	
18 th	14-06-14 3-20 pm	8	—	—	11.6	

Sampling Week	Date & Time	Measurement time	Parameter	Water level + Depth (M)
14 th	17-05-14 12.10 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 11
15 th	24-05-14 4.00pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 11
16 th	31-05-14 1.40 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 11
17 th	07-06-14 3-45 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 10
18 th	14-06-14 3-20 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 10

(3.A) Water Quality Test Parameters (Field Tests)

Sampling Week	Date & Time	Depth (m)	Alkalinity	Temp. (oc)	pH	Salinity (g/l)	Condu. (μS/cm)	Turbi. (mg/l)	DO (mg/l)	TDS (mg/l)	NH3 (mg/l)	Hardness (mg/l)	Arsenic (mg/l)
15 th	18-05-14 12.10 pm	9.5	49	34.8	8.54	1.07	163.2	41.68	7.63	78	1	46	—
16 th	25-05-14 4.00pm	9.5	53.5	29.9	8.41	1.05	109.3	37.91	8.24	52.1	1	31	—
17 th	32-05-14 1.40 pm	9.5	37	28.2	8.36	1.04	89.9	16.62	8.27	43.1	1	31	—
18 th	08-06-14 3-45 pm	9	49	32.2	8.57	1.05	101.9	14.6	8.43	48.5	1	46	1
19 th	15-06-14 3-20 pm	9	46	35	9.22	1.04	90.3	15.98	8.68	43.5	1	53.5	—

(3.B) Water Quality Parameters (Laboratory Tests)

Sampling Week	Date & Time	Depth (m)	6 meter above				3 meter above				Color Hazen	
15 th	18-05-14 12.10 pm	9.5	—				—				6.8	
16 th	25-05-14 4.00pm	9.5	16				18				10.6	
17 th	32-05-14 1.40 pm	9.5	—				—				11.4	
18 th	08-06-14 3-45 pm	9	13				15				10.6	
19 th	15-06-14 3-20 pm	9	—				—				12.6	

Monthly Water Quality Monitoring Report June-July 2014

WEEKLY DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING

(1) Sample location: Chaitankanda, Bishnondi, Meghna river

(GIS Location: 23° 45' 14.69 N & 90° 43' 18.07 E)

(2) Field Observations:

Upon arrival at a sampling site, record visual observations on the appearance of the water and other information related to water quality and water use as below:

Sampling Week	Parameter	Observation
19 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
20 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
21 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
22 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
20 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
21 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
22 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19 th	Rainfall in last 24h	Heavy/Medium✓/ Low/ None
20 th	Rainfall in last 24h	Heavy/Medium/ Low/ None✓
21 th	Rainfall in last 24h	Heavy/Medium✓/ Low/ None
22 th	Rainfall in last 24h	Heavy/Medium/ Low / None✓
19 th	Day	Cloudy/ Sunny ✓ / Hot✓/ Cool
20 th	Day	Cloudy✓/ Sunny / Hot / Cool
21 th	Day	Cloudy✓/ Sunny / Hot / Cool
22 th	Day	Cloudy/ Sunny ✓ / Hot ✓/ Cool
19 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
20 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
21 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
22 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
20 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
21 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
22 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None

(3.A) Water Quality Test Parameters (Field Tests)

Sampling Week	Date & Time	Depth (m)	Alkalinity	Temp. (oc)	pH	Salinity (g/l)	Condu. (μS/cm)	Turbi. (mg/l)	DO (mg/l)	TDS (mg/l)	NH3 (mg/l)	Hardness (mg/l)	Arsenic Mg/l
19 th	21-06-14 4.10 pm	7.5	36	29.1	7.56	0.04	84.6	15.78	7.41	39.6	0	30	—
20 th	28-06-14 11.20am	7.75	32	32	7.41	0.03	69.8	19.44	7.15	32.6	0	30	—
21 th	5-07-14 1.20 pm	7	24	28.9	7.56	0.03	62.1	10.59	7.52	29.3	0	24	0
22 th	14-07-14 10.00 pm	7	21	31.6	7.65	0.03	59.3	12.13	7.4	27.8	0	21	—

(3.B) Water Quality Parameters (Laboratory Tests)

Sampling Week	Date & Time	Depth (m)	5 meter above from the bottom TSS (mg/l)	2 meter above from the bottom TSS (mg/l)	Color Hazen	
19 th	21-06-14 4.10 pm	7.5	8	9	4.2	
20 th	28-06-14 11.20am	7.75	—	—	6.7	
21 th	5-07-14 1.20 pm	7	10	12	9.2	
22 th	14-07-14 10.00 pm	7	—	—	8.2	

Sampling Week	Date & Time	Measurement time	Parameter	Water level + Depth (M)
19 th	21-06-14 4.10 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 2 (Gauge was another point/place)
20 th	28-06-14 11.20am	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 6
21 th	5-07-14 1.20 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 8
22 th	14-07-14 10.00 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 10

MONTHLY DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING**(3.B) Water Quality Parameters (Laboratory Tests)**

Sampling Month	Sampling Week	Date & Time	Depth (m)	As	Al	Fe	Mn	TDS	Algae
5th	21th	5-07-14 & 1.20 pm	7	0.002	0.278	0.3	<0.05	26	

(3.C) River water salinity test at Meghna Bridge spot during high tide

Sampling Month	Sample Location	Date & Time	Tide	Parameter	Concentration (g/kg)
5th	Meghna Bridge	5-07-14 & 1.20 pm	During high tide	Salinity	0.03

(3.D) River water Salinity test at four different points between Meghna Bridge and proposed new intake location

Sampling Month	Sampling Week	Sample Location	Date & Time	Measurement time	Concentration (g/kg)
5th	21th	Bishnondi Point	5-07-14 & 1.00 pm	During monthly sampling	0.03
5th	21th	Chaitankanda point	5-07-14 & 1.20 pm	During monthly sampling	0.03
5th	21th	Nunertech, Near Anandabazar point	5-07-14 & 2.10 pm	During monthly sampling	0.03
5th	21th	Near Meghna bridge	5-07-14 & 3.30 pm	During monthly sampling	0.03

Monthly Water Quality Monitoring Report July -August 2014
WEEKLY DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING (23rd-26th week)

(1) Sample location: Chaitankanda, Bishnondi, Meghna river

(GIS Location: 23° 45' 14.69 N & 90° 43' 18.07 E)

(2) Field Observations:

Upon arrival at a sampling site, record visual observations on the appearance of the water and other information related

Sampling Week	Parameter	Observation
23rd	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
24th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
25th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
26th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
23rd	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
24th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
25th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
26th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
23rd	Rainfall in last 24h	Heavy/Medium/ Low/ None
24th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
25th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
26th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
23rd	Day	Cloudy/ Sunny ✓ / Hot/ Cool
24th	Day	Cloudy/ Sunny ✓ / Hot/ Cool
25th	Day	Cloudy/ Sunny ✓ / Hot/ Cool
26th	Day	Cloudy/ Sunny ✓ / Hot/ Cool
23rd	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
24th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
25th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
26th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
23rd	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
24th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
25th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
26th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None

(3.A) Water Quality Test Parameters (Field Tests)

Sampling Week	Date & Time	Depth (m)	Alkalinity (mg/l)	Temp. (0c)	pH	Salinity (g/kg)	Condu. (μS/cm)	Turbi. (mg/l)	DO (mg/l)	TDS (mg/l)	NH ₃ (mg/l)	Hard. (mg/l)	As (μg/l)
23rd	19-7-14 & 09.01 am	6.5	3	30	7.47	0.03	59.7	10.25	7.32	28	0	21	–
24th	26-7-14 & 09.40am	7	22.5	30.2	7.41	0.03	62.9	16.83	7.59	30.3	0	22.5	–
25th	02-8-14 & 09.30 am	7	30	31.2	7.56	0.03	74.2	12.95	7.47	35	0	30	–
26th	09-8-14 & 11-47 am	7	22.5	30.6	7.29	0.03	65.4	29.43	7.39	30.7	0	22.5	0

(3.B) Water Quality Parameters (Laboratory Tests)

Sampling Week	Date & Time	Depth (m)	Color (Hazen)	TSS (mg/l), 5 meter above from the bottom	TSS (mg/l), 2 meter above from the bottom
23rd	19-7-14 & 09.01 am	6.5	6.7	9	10
24th	26-7-14 & 09.40am	7	8	–	–
25th	02-8-14 & 09.30 am	7	7.5	10	12
26th	09-8-14 & 11-47 am	7	10.4	–	–

(3.E) Water level measurement in addition to depth at every sampling point at intake, Chaitankanda, Meghna river

Sampling Week	Date & Time	Measurement time	Parameter	Water level + Depth (M)
23rd	19-7-14 & 09.01 am	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 4 (Gauge was another place/point)
24th	26-7-14 & 09.40am	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 5
25th	02-8-14 & 09.30 am	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 3 (Gauge was another place/point)
26th	09-8-14 & 11-47 am	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 3

MONTHLY DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING(6th month, July-August-2014)

(3.B) Water Quality Parameters (Laboratory Tests)

Sampling Month	Sampling Week	Date & Time	Depth (m)	As (µg/l)	Al (mg/l)	Fe (mg/l)	Mn (mg/l)	TDS (mg/l)	Algae (µg/l)
6th	23rd	19-7-2014 & 9.01am	6.5	0.001	0.27	0.22	<0.05	25	—

(3.C) River water salinity test at Meghna Bridge spot during high tide

Sampling Month	Sample Location	Date & Time	Tide	Parameter	Concentration (g/kg)
6th	Meghna Bridge	09-8-14 & 01-35 pm	During high tide	Salinity	0.03

(3.D) River water Salinity test at four different points between Meghna Bridge and proposed new intake location

Sampling Month	Sampling Week	Sample Location	Date & Time	Measurement time	Concentration (g/kg)
6th	26th	Bishnondi Point	09-8-14 & 11-30 am	During monthly sampling	0.03
6th	26th	Chaitankanda point	09-8-14 & 11-47 am	During monthly sampling	0.03
6th	26th	Anandabazar point	09-8-14 & 12-50 pm	During monthly sampling	0.03
6th	26th	Near Meghna bridge	09-8-14 & 01-35 pm	During monthly sampling	0.03

Hourly Water Quality Monitoring (Rainy Season: Mid July 2014)

DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING

(1) Sample location: Chaitankanda, Bishnondi, Meghna river

(GIS Location: 23° 45' 14.69 N & 90° 43' 18.07 E)

(2) Field Observations:

Upon arrival at a sampling site, record visual observations on the appearance of the water and other information related

Sampling Date & Time	Parameter	Observation
19-7-2014 & 7.05am	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 8.00am	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 9.01am	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 10.00am	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 11.02am	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 12.00pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 1.01pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 2.00pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 3.03pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 4.00pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 5.02pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 6.00pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 6.55pm	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
19-7-2014 & 7.05am	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 8.00am	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 9.01am	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 10.00am	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 11.02am	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 12.00pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 1.01pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 2.00pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 3.03pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 4.00pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 5.02pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 6.00pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 6.55pm	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
19-7-2014 & 7.05am	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None
19-7-2014 & 8.00am	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None
19-7-2014 & 9.01am	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None
19-7-2014 & 10.00am	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None
19-7-2014 & 11.02am	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None
19-7-2014 & 12.00pm	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None
19-7-2014 & 1.01pm	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None

19-7-2014 & 2.00pm	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None
19-7-2014 & 3.03pm	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None
19-7-2014 & 4.00pm	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None
19-7-2014 & 5.02pm	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None
19-7-2014 & 6.00pm	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None
19-7-2014 & 6.55pm	Rainfall in last 24h	Heavy/Medium ✓/ Low/ None
19-7-2014 & 7.05am	Day	Cloudy/ Sunny ✓ / Hot/ Cool
19-7-2014 & 8.00am	Day	Cloudy/ Sunny ✓ / Hot/ Cool
19-7-2014 & 9.01am	Day	Cloudy/ Sunny ✓ / Hot/ Cool
19-7-2014 & 10.00am	Day	Cloudy/ Sunny ✓ / Hot/ Cool
19-7-2014 & 11.02am	Day	Cloudy ✓/ Sunny / Hot/ Cool
19-7-2014& 12.00pm	Day	Cloudy ✓/ Sunny / Hot/ Cool
19-7-2014 & 1.01pm	Day	Cloudy/ Sunny ✓ / Hot/ Cool
19-7-2014 & 2.00pm	Day	Cloudy ✓/ Sunny / Hot/ Cool
19-7-2014 & 3.03pm	Day	Cloudy/ Sunny ✓ / Hot/ Cool
19-7-2014 & 4.00pm	Day	Cloudy/ Sunny ✓ / Hot/ Cool
19-7-2014 & 5.02pm	Day	Cloudy/ Sunny ✓ / Hot/ Cool
19-7-2014 & 6.00pm	Day	Cloudy ✓/ Sunny / Hot/ Cool
19-7-2014 & 6.55pm	Day	Cloudy ✓/ Sunny / Hot/ Cool
19-7-2014 & 7.05am	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014 & 8.00am	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014 & 9.01am	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014 & 10.00am	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014 & 11.02am	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014& 12.00pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014 & 1.01pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014 & 2.00pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014 & 3.03pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014 & 4.00pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014 & 5.02pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014 & 6.00pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014 & 6.55pm	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
19-7-2014 & 7.05am	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
19-7-2014 & 8.00am	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
19-7-2014 & 9.01am	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
19-7-2014 & 10.00am	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
19-7-2014 & 11.02am	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
19-7-2014& 12.00pm	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
19-7-2014 & 1.01pm	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
19-7-2014 & 2.00pm	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
19-7-2014 & 3.03pm	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None

19-7-2014 & 4.00pm	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
19-7-2014 & 5.02pm	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
19-7-2014 & 6.00pm	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None
19-7-2014 & 6.55pm	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth✓/ None

(3.A) Water Quality Test Parameters (Field Tests)

Date & Time	Depth (Meter)	Temp. (oc)	pH	Salinity (g/l)	Condu. (μS/cm)	Turbi. (mg/l)	DO (mg/l)	TDS (mg/l)	NH ₃ (mg/l)
19-7-2014 & 7.05am	6.55	28.9	7.62	0.03	59.4	10.86	7.15	29.6	0
19-7-2014 & 8.00am	6.55	29.8	7.66	0.03	61.7	14.81	7.17	29.2	0
19-7-2014 & 9.01am	6.5	30	7.47	0.03	59.7	10.25	7.32	28	0
19-7-2014 & 10.00am	6.5	29.7	7.46	0.03	60.3	14.38	7.28	30.2	0
19-7-2014 & 11.02am	6.5	29.3	7.43	0.03	68.2	12.62	7.25	32.1	0
19-7-2014 & 12.00pm	6.5	30.2	7.48	0.03	61.9	15.84	7.44	29.1	0
19-7-2014 & 1.01pm	6.75	30.6	7.53	0.03	63.3	15.52	7.35	29.8	0
19-7-2014 & 2.00pm	6.75	30.4	7.51	0.03	67.9	9.48	7.41	31.9	0
19-7-2014 & 3.03pm	6.75	30.3	7.46	0.03	66.5	10.3	7.6	30.6	0
19-7-2014 & 4.00pm	7	30	7.62	0.03	59.7	14.6	7.34	28.9	0
19-7-2014 & 5.02pm	7	29.7	7.54	0.03	61.6	10.11	7.28	30.2	0
19-7-2014 & 6.00pm	6.75	29.8	7.48	0.03	60	12.32	7.19	29.5	0
19-7-2014 & 6.55pm	6.5	29.2	7.53	0.03	63.2	9.44	7.15	29.1	0

Quarterly Water Quality Monitoring (2nd quarter)
DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING

(1) Sample location: Chaitankanda, Bishnondi, Meghna river

(GIS Location: 230 45' 14.69 N & 900 43' 18.07 E)

Sampling Date & Time	Parameters	Unit	Concentration present
19-7-2014 & 9.01am	Barium	mg/l	0.041
19-7-2014 & 9.01am	Cadmium	mg/l	0.0005
19-7-2014 & 9.01am	Chloride	mg/l	70
19-7-2014 & 9.01am	Chromium	mg/l	0.007
19-7-2014 & 9.01am	Faecal Coliform	cfu	460
19-7-2014 & 9.01am	BOD	mg/l	8
19-7-2014 & 9.01am	COD	mg/l	24
19-7-2014 & 9.01am	Lead	mg/l	<0.002
19-7-2014 & 9.01am	Mercury	mg/l	<0.00015
19-7-2014 & 9.01am	Nitrite	mg/l	0.06
19-7-2014 & 9.01am	Nitrate	mg/l	1.71
19-7-2014 & 9.01am	Phosphate	mg/l	<0.12
19-7-2014 & 9.01am	TOC	mg/l	1.93
19-7-2014 & 9.01am	Oil & Grease	mg/l	0.23
19-7-2014 & 9.01am	Fluride	mg/l	<0.10
19-7-2014 & 9.01am	Selenium	mg/l	<0.002
19-7-2014 & 9.01am	Zinc	mg/l	<0.08
19-7-2014 & 9.01am	Sulphate	mg/l	3
19-7-2014 & 9.01am	Copper	mg/l	<0.26
19-7-2014 & 9.01am	Ammonia	mg/l	0.21
19-7-2014 & 9.01am	Boron	mg/l	<0.20
19-7-2014 & 9.01am	Nickel	mg/l	0.015
19-7-2014 & 9.01am	Sodium	mg/l	18
19-7-2014 & 9.01am	α-BHC	mg/l	Not Detected
19-7-2014 & 9.01am	γ-BHC	mg/l	Not Detected
19-7-2014 & 9.01am	β-BHC	mg/l	Not Detected
19-7-2014 & 9.01am	Heptachlor	mg/l	Not Detected
19-7-2014 & 9.01am	Aldrin	mg/l	Not Detected
19-7-2014 & 9.01am	Hepatachloro Epoxide	mg/l	Not Detected
19-7-2014 & 9.01am	Dieldrin	mg/l	Not Detected
19-7-2014 & 9.01am	4,4 -DDE	mg/l	Not Detected
19-7-2014 & 9.01am	Endrin	mg/l	Not Detected
19-7-2014 & 9.01am	2,4 -DDT	mg/l	Not Detected
19-7-2014 & 9.01am	4,4 DDT	mg/l	Not Detected
19-7-2014 & 9.01am	4,4 DDD	mg/l	Not Detected
19-7-2014 & 9.01am	2,4 DDT		Not Detected

Monthly Water Quality Monitoring Report August - September 2014

WEEKLY DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING

(1) Sample location: Chaitankanda, Bishnondi, Meghna river

(GIS Location: 23° 45' 14.69 N & 90° 43' 18.07 E)

(2) Field Observations:

Upon arrival at a sampling site, record visual observations on the appearance of the water and other information related to water quality and water use as below:

Sampling Week	Parameter	Observation
27th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
28 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
29 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
30 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
31 th	Water color	Greenish/reddish/yellowish/muddy/colorless ✓
27th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
28 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
29 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
30 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
31 th	Water appearance	Unusual amount of floating matter ✓ /debris/foam/weeds/plastic
27th	Rainfall in last 24h	Heavy ✓/Medium/ Low/ None
28 th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
29 th	Rainfall in last 24h	Heavy/Medium/ Low/ None ✓
30 th	Rainfall in last 24h	Heavy/Medium/ Low / None✓
31 th	Rainfall in last 24h	Heavy/Medium/ Low / None✓
27th	Day	Cloudy ✓/ Sunny / Hot✓/ Cool
28 th	Day	Cloudy/ Sunny ✓ / Hot / Cool
29 th	Day	Cloudy/ Sunny ✓ / Hot / Cool
30 th	Day	Cloudy/ Sunny ✓ / Hot / Cool
31 th	Day	Cloudy/ Sunny ✓ / Hot ✓/ Cool
27th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
28 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
29 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
30 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
31 th	Unusual Odor	Hydrogen Sulfide odor/ Musty odor/ Sewage odor/ None ✓
27th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
28 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
29 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
30 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None
31 th	Biological Activity	Excessive growth of algal/ Phytoplankton✓/ Water Hyacinth ✓ / None

(3.A) Water Quality Test Parameters (Field Tests)

Sampling Week	Date & Time	Depth (m)	Alkalinity	Temp. (oc)	pH	Salinity (g/l)	Condu. (µS/cm)	Turbi. (mg/l)	DO (mg/l)	TDS (mg/l)	NH3 (mg/l)	Hardness (mg/l)	Arsenic (mg/l)
27th	16-08-14 2.10 pm	7.5	30	28.7	7.37	0.03	68.8	20.49	7.4	32.5	0	30	–
28 th	23-08-14 12.05 pm	7.5	30	30.3	7.42	0.02	53.7	17.6	7.5	24.9	0	24	–
29 th	30-08-14 1.40 pm	7.75	36	29.9	7.31	0.02	51.7	16.86	7.4	24.6	0	30	–
30 th	05-09-14 11.15 am	7.5	27	31	7.22	0.03	60.1	18.13	7.24	28.2	0	36	0
31 th	13-09-14 3-00 pm	7.25	30	30.8	7.45	0.03	77.3	22.7	7.16	36.2	0	36	–

(3.B) Water Quality Parameters (Laboratory Tests)

Sampling	Date & Time	Depth	5 meter above from the bottom	2 meter above from the bottom	Color	
27th	16-08-14 2.10 pm	7.5	10	12	8	
28 th	23-08-14 12.05 pm	7.5	–	–	7.9	
29 th	30-08-14 1.40 pm	7.75	15	17	7.8	
30 th	05-09-14 11.15 am	7.5	–	–	7.6	
31 th	13-09-14 3-00 pm	7.25	8	10	5	

Sampling Week	Date & Time	Measurement time	Parameter	Water level + Depth (M)
27th	16-08-14 2.10 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum
28 th	23-08-14 12.05 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 11
29 th	30-08-14 1.40 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 15
30 th	05-09-14 11.15 am	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 12
31 th	13-09-14 3-00 pm	During Weekly Sampling	Water Level	(1)-Meters above national datum (2) 0 (Gauge was another point/place)

MONTHLY DWASA MEGHNA RIVER SURFACE WATER QUALITY MONITORING

(3.B) Water Quality Parameters (Laboratory Tests)

Sampling Month	Sampling Week	Date & Time	Depth (m)	As	Al	Fe	Mn	TDS	Algae
7th	30 th	05-09-14 & 11.15 am	7.5	0.002	0.269	1	<0.05	24	—

(3.C) River water salinity test at Meghna Bridge spot during high tide

Sampling Month	Sample Location	Date & Time	Tide	Parameter	Concentration (g/kg)
7th	Meghna Bridge	05-09-14 & 11.15 am	During high tide	Salinity	0.02

(3.D) River water Salinity test at four different points between Meghna Bridge and proposed new intake location

Sampling Month	Sampling Week	Sample Location	Date & Time	Measurement time	Concentration (g/kg)
7th	17th	Bishnondi Point	05-09-14 & 10.55 am	During monthly sampling	0.03
7th	17th	Chaitankanda point	05-09-14 & 11.15 am	During monthly sampling	0.03
7th	17th	numertech, near Anandabazar point	05-09-14 & 12.05 pm	During monthly sampling	0.02
7th	17th	Near Meghna bridge	05-09-14 & 12.55 pm	During monthly sampling	0.04