



**GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
BRAHMAPUTRA AND BARAK BASIN ORGANISATION**

WATER QUALITY YEAR BOOK

2017-18

BRAHMAPUTRA BASIN

**HYDROLOGICAL OBSERVATION CIRCLE
CENTRAL WATER COMMISSION
GUWAHATI**

FEBRUARY-2019

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WATER QUALITY YEAR BOOK

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HISTORY SHEET (WATER QUALITY)

VOLUME - III

Site : Tuting State : Arunachal Pradesh Basin : BRAHMAPUTRA Tributary : Siang Sub-Sub Tributary : - Division : Upper Brahmaputra Division (UBD), Dibrugarh Drainage Area : ** Latitude : 28°59'26" Current Zero of Gauge (m) : 390	Water Year : 2017 - 2018 Code : 002-ubddib District : Upper Siang * Independent River : Brahmaputra Sub Tributary : - Local River : Siang Sub-Division : Subansiri Sub-Division, Naharlagun, Bank : Right Longitude : 94°53'42"	
CATEGORY	Opening Date	Closing Date
Gauge	: 12/04/2006	
Discharge	: 12/04/2006	
Sediment	:	
Water Quality	: 12/04/2006	
Reduced Level	Opening Date	Closing Date
390.0	04/12/2006	-

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Tuting(002-ubddib)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Siang

Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

PARAMETERS

	7/15/2017	10/15/2017	1/15/2018	4/15/2018
Q (cumec)	8927.168	4654.442	1255.397	1488.486
CHEMICAL				
Alk-Phen (mgCaCO ₃ /L)	3.0	0.2	0.1	0.1
ALK-TOT (mgCaCO ₃ /L)	106	31	34	48
Ca (mg/L)	16	24	18	15
Cl (mg/L)	4.0	6.0	11.0	5.0
CO ₃ (mg/L)	3.6	0.2	0.1	0.1
HCO ₃ (mg/L)	121	38	42	58
Mg (mg/L)	3.4	7.2	1.4	1.0
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
PHYSICAL				
Q (cumec)				
EC_FLD (μmho/cm)	170	123	250	230
EC_GEN (μmho/cm)	170	123	250	230
pH_FLD (pH units)	8.5	7.3	7.5	7.3
pH_GEN (pH units)	8.5	7.3	7.5	7.3
TDS (mg/L)	85	64	125	115
Temp (deg C)	31.0	23.0	18.0	22.5
CHEMICAL INDICES				
HAR_Ca (mgCaCO ₃ /L)	40	60	44	38
HAR_Total (mgCaCO ₃ /L)	54	90	50	42
RSC (-)	1.0	0.0	0.0	0.1

Station Name: Tuting(002-ubddib)
Local River: Siang

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Division: Upper Brahmaputra Division (UBD), Dibrugarh
Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	363	12947.26	980.54	3908.31	7149.71	1467.16	1652.79
CHEMICAL							
Alk-Phen (mgCaCO ₃ /L)	4	3.0	0.1	0.8	1.6	0.1	0.1
ALK-TOT (mgCaCO ₃ /L)	4	106	31	55	68	34	48
Ca (mg/L)	4	24	15	18	20	18	15
Cl (mg/L)	4	11.0	4.0	6.5	5.0	11.0	5.0
CO ₃ (mg/L)	4	3.6	0.1	1	1.9	0.1	0.1
HCO ₃ (mg/L)	4	121	38	65	80	42	58
Mg (mg/L)	4	7.2	1.0	3.2	5.3	1.4	1.0
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
PHYSICAL							
EC_FLD (μmho/cm)	4	250	123	193	147	250	230
EC_GEN (μmho/cm)	4	250	123	193	147	250	230
pH_FLD (pH units)	4	8.5	7.3	7.7	7.9	7.5	7.3
pH_GEN (pH units)	4	8.5	7.3	7.7	7.9	7.5	7.3
TDS (mg/L)	4	125	64	97	75	125	115
Temp (deg C)	4	31.0	18.0	23.6	27.0	18.0	22.5
CHEMICAL INDICES							
HAR_Ca (mgCaCO ₃ /L)	4	60	38	46	50	44	38
HAR_Total (mgCaCO ₃ /L)	4	90	42	59	72	50	42
RSC (-)	4	1.0	0.0	0.3	0.5	0.0	0.1

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Tuting(002-ubddib)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Siang

Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

	Flood (Jun-Oct)										
PARAMETERS	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	3004	8724		4475		5162	4373	6027	4124	7797	6790.81
BIOLOGICAL/BACTEOROLOGICAL											
DO							8.2	8.3	8.1	8.1	
DO_SAT%							100.26	103.35	102.87	101.66	
CHEMICAL											
ALK-TOT	62.18	60		70		50	40.9	65	50	33.13	68
Alk-Phen	0	0		0		0	0	0	0	0.41	1.6
CO3	0	0		0		0	0	0	0	0.5	2
Ca	8.4	26.4		16		10	9.15	18	12.8	40.5	20.0
Cl	5.25	8.16		9.94		10.94	3.5	2	2	2	5.0
HCO3	75.86	73.2		85.4		61	49.9	79.3	61	39.4	80
Mg	3.25	15.84		3.6		8.4	6.35	8.4	0.96	26.6	5.3
CHEMICAL INDICES											
HAR_Total	34.54	132		55		60	49.33	80	36	212.08	72
RSC	0.56	0		0.31		0.1	0	0	0.3	0	0.5
PESTICIDES											
PHYSICAL											
EC_FLD	119.4	166.1		151.25		175.74	162	161.5	198	211	147
EC_GEN	119.4	166.1		151.25		213.66	216	174	197.5	211	147
Secchi	21	66		40		24.38	22.88	45	32	101.25	
TDS	50.5	30.1				40.1	72.5	75	106	90	75
Temp						25	26.05	27.25	27.6	27	27.0
pH_FLD	7.11	7.54		6.83		7.73	7.85	8.1	8.35	8.8	7.9
pH_GEN	7.11	7.54		6.83		7.51	7.65	8	7.8	8.1	7.9
TRACE & TOXIC											

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Tuting(002-ubddib)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Siang

Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

	Winter (Nov-Feb)										
PARAMETERS	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	590.4					941.5	1184	1439	939.7	992.8	1255.4
BIOLOGICAL/BACTEOROLOGICAL											
DO						8.3	9.1	8.9	7.6	8.5	
DO_SAT%						80.54	92.29	90.34	75.48	78.87	
CHEMICAL											
ALK-TOT	71						60	50	40	103.25	34
Alk-Phen	0						0	0	0	51.38	0.1
CO3	0						0	0	0	61.9	0.1
Ca	10.4						20	16	16	8	18
Cl	3.98						1	2.45	2.5	4	11
HCO3	86.62						73.2	61	48.8	0.1	42
Mg	3.84						7.2	4.8	7.2	4.3	1.4
CHEMICAL INDICES											
HAR_Total	42						80	60	70	37.92	50
RSC	0.58						0	0	0	1.31	0
PESTICIDES											
PHYSICAL											
EC_FLD	216					243	259	160	250	200	250
EC_GEN	216						210	225	230	200	250
Secchi	26						50	40	40	20	
TDS	50.5						81	98	110	105	125
Temp						14	16.5	16.9	15.7	12	18
pH_FLD	7.14					7.35	8.1	7.1	7.5	6.9	7.5
pH_GEN	7.1						8.8	7.3	7.2	7.2	7.5
TRACE & TOXIC											

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Tuting(002-ubddib)

Local River: Siang

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

Summer (Mar-May)

PARAMETERS	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	712.8	622.6				980.8	1183	864.1	1370	1210	1488.49
BIOLOGICAL/BACTEOROLOGICAL											
DO						8.9	7.9	7.7	7.2	8.1	
DO_SAT%						105.88	90.51	91.52	85.66	85.56	
CHEMICAL											
ALK-TOT		80				40.9	70	70	40	53.77	48
Alk-Phen	0	0				0	0	0	0	0.08	0.1
CO3	0	0				0	0	0	0	0.1	0.1
Ca	32	24				9.6	24	3.2	16	26.4	15
Cl	25.56	7.81				3	1	2.45	1	7	5
HCO3		97.6				49.9	85.4	85.4	48.8	65.4	58
Mg	7.2	7.2				3.4	7.2	0.48	2.4	3.8	1
CHEMICAL INDICES											
HAR_Total	110	90				38.17	90	10	50	81.83	42
RSC		0				0.06	0	1.2	0	0	0.1
PESTICIDES											
PHYSICAL											
EC_FLD	194.1	165.5				226	265	200	229	208	230
EC_GEN	194.1	165.5				200	192	209	250	235	230
Secchi	80	60				24	60	8	40	66	
TDS	90	98.5				68	96	112	100	116	115
Temp						24.8	22.9	24.3	24.8	18	22.5
pH_FLD	6.75	7.74				6.8	8.1	8.3	6.6	8.1	7.3
pH_GEN	6.75	7.74				6.8	8.2	7.1	7.6	7.9	7.3
TRACE & TOXIC											

HISTORY SHEET (WATER QUALITY)

Water Year	: 2017 - 2018	
Site	: Passighat	
Code	: 005-UBDDIB	
State	: Arunachal Pradesh	
District	: East Siang	
Basin	: BRAHMAPUTRA	
Independent River	: Brahmaputra	
Tributary	: Siang	
Sub Tributary	: -	
Sub-Sub Tributary	: -	
Local River	: Siang	
Division	: Upper Brahmaputra Division (UBD), Dibrugarh	
Sub-Division	: Subansiri Sub-Division, Naharlagun,	
Drainage Area	: 305000.0 Sq. Km.	
Bank	: Right	
Latitude	: 28°4'22"	
Longitude	: 95°20'24"	
Current Zero of Gauge (m)	: 140	
CATEGORY	Opening Date	Closing Date
Gauge	: 05-18-1971	
Discharge	: 09/07/2009	
Sediment	:	
Water Quality	: 01-15-2004	
Reduced Level	Opening Date	Closing Date
140.0	18/05/1971	07/09/2009

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Passighat(005-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Siang

Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

PARAMETERS

	15/07/2017	15/10/2017	15/01/2018	15/04/2018
Q (cumec)	8207.63	5015.75	1477.25	4222.99
CHEMICAL				
Cl(mg/L)	9	22.36	27.52	9.37
SiO ₂ (mg/L)				
HCO ₃ (mg/L)	104.92	75.64	97.6	68
B(mg/L)				
ALK-TOT(mgCaCO ₃ /L)	86	62	80	56.37
Ca(mg/L)	13.76	11	6.69	10.94
F(mg/L)				
SO ₄ (mg/L)	2.33	1.2	1.2	
Alk-Phen(mgCaCO ₃ /L)	0	0	0	0.31
Mg(mg/L)	5.16	4.13	3.1	1.53
P-Tot(mgP/L)	0.43	0.39	0.46	
Na(mg/L)			5.46	5.44
CO ₃ (mg/L)	0	0	0	0.38
NO ₂ -N(mg/L)				
K(mg/L)			0.19	1.71
NH ₃ -N(mgN/L)				
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
BOD ₃₋₂₇ (mg/L)				
DO_SAT%(Percentage)	4.8			
COD(mg/L)	64	48	88	60
Chl-a(µg/L)				
Tcol-MPN(MPN/100mL)				
Fcol-MPN(MPN/100mL)				

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Passighat(005-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Siang

Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

PHYSICAL				
pH_FLD(pH unit)	7.8			
EC_GEN(μ mho/cm)	138.4	96.6	221	170
pH_GEN(pH unit)	8.16	7.47	8.6	7.3
Temp(Degrees Celsius ($^{\circ}$ C))	28.7			
EC_FLD(μ mho/cm)	122			
TDS(mg/L)	88	63	148	85
SS(mg/L)				
Colour_Cod(-)	Light Brown			Clear
Odour_Code(-)	odour free	odour free		odour free
CHEMICAL INDICES				
HAR_Total(mgCaCO ₃ /L)	70.23	56.16	35.62	49.41
HAR_Ca(mgCaCO ₃ /L)	175.58	140.4	89.06	123.52

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Passighat(005-UBDDIB)

Local River: Siang

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	16514.61	1222.83	4415.05	7255.96	1881.53	2995.09
CHEMICAL							
Cl	4	27.52	9	17.06	15.68	27.52	9.37
HCO3	4	104.92	68	86.54	90.28	97.6	68
P-Tot	3	0.46	0.39	0.43	0.41	0.46	
Na	2	5.46	5.44	5.45		5.46	5.44
Alk-Phen	4	0.31	0	0.08	0	0	0.31
ALK-TOT	4	86	56.37	71.09	74	80	56.37
SO4	3	2.33	1.2	1.58	1.76	1.2	
CO3	4	0.38	0	0.09	0	0	0.38
Mg	4	5.16	1.53	3.48	4.64	3.1	1.53
Ca	4	13.76	6.69	10.6	12.38	6.69	10.94
K	2	1.71	0.19	0.95		0.19	1.71
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTEOROLOGICAL							
COD	4	88	48	65	56	88	60
DO_SAT%	1	4.8	4.8	4.8	4.8		
PHYSICAL							
TDS	4	148	63	96	75.5	148	85
pH_GEN	4	8.6	7.3	7.88	7.81	8.6	7.3
EC_GEN	4	221	96.6	156.5	117.5	221	170
Temp	1	28.7	28.7	28.7	28.7		
pH_FLD	1	7.8	7.8	7.8	7.8		
EC_FLD	1	122	122	122	122		
CHEMICAL INDICES							
HAR_Total	4	70.23	35.62	52.86	63.2	35.62	49.41
HAR_Ca	4	175.58	89.06	132.14	157.99	89.06	123.52

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Passighat(005-UBDDIB)
Local River: Siang

Division: Upper Brahmaputra Division (UBD), Dibrugarh
Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

	Flood (Jun-Oct)										Winter (Nov-Feb)					
PARAMETERS	2009	2010	2011	2012	2013	2014	2015	2016	2017	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	
Q (cumec)	5091	8055	6767	9367	7424	6981	3966	11260	6612	1259	1351	1258	1243	866.7	1100	
BIOLOGICAL/BACTERIOLOGICAL																
COD									56							
DO							7.7	7.25								
DO_SAT%							98.06	90.32	4.8							
CHEMICAL																
ALK-TOT	53	58	57	42		51	68	61	74	70	78	80			68	
Alk-Phen	0	0	0	0		0	0	7.97	0	0	0	0			0	
B																
CO3	0	0	0	0	0	0	0	9.6	0	0	0	0	0	0	0	
Ca	18.06	25.8	19.78	14.14	23.22	21.5	24.94	18.06	12.38	24.08	17.2	15.48	13.76	25.8	36.12	
Cl	9	9.5	7.5	19.78	11.5	9	8.5	10	15.68	12	10	15	10	12	13	
F																
Fe					46.7								0.09	51.89		
HCO3	64.66	70.76	69.54	56.66	65.88	62.22	82.96	54.9	90.28	85.4	95.16	97.6	82.96	65.88	82.96	
K	0.53	1.71	1.23	0.15	0.14	0.19	1.58	1.38		0.1	0.13	0.1	0.7	0.2	2.24	
Mg	4.64	9.29	9.8	9.86	7.74	9.29	7.22	8.26	4.64	4.13	10.3	12.38	15.48	8.26	1.03	
NO3-N																
Na	1.96	2.45	2.45	2.82	3.8	3.92	3.72	4.3		5.96	2.03	3.21	3.1	3.65	8.36	
P-Tot									0.41							
SO4				1.16	1.17	1.21	1.2	1.85	1.77			1.21	1.1	1.16	2.05	
o-PO4-P																
CHEMICAL INDICES																
HAR_Ca									157.99							
HAR_Total	64.5	103.21	90.28	75.26	90.3	92.46	92.43	79.55	63.2	77.41	85.92	90.28	98.9	98.92	94.59	
Na%	6.16	4.95	6.72	7.3	9.63	8.77	9	10.38		14.38	4.91	7.22	6.38	7.45	15.75	
RSC	0	0	0	0	0.02	0	0	0		0	0	0	0	0	0	
SAR	0.11	0.11	0.13	0.14	0.19	0.18	0.18	0.21		0.3	0.1	0.15	0.14	0.16	0.37	
PESTICIDES																
PHYSICAL																
EC_FLD	115.5	130.25	147.7		126.6		131	144	122	205	218	166.1		205		
EC_GEN	115.5	130.25	147.7	175.91	146.7	126.85	124.9	119.7	117.5	205	218	166.1	202	205	145.3	
Secchi	45.15	64.5	49.45	35.72	58.05	53.75	62.35	45.15		60.2	43	38.7	34.4	64.5	90.3	
TDS	76	87.5	99	118.38	98.5	85	81	80	75.5	138	146	112	135	138	95	
Temp	29.75	23.5	24.75	27	22.9		27.95	26.75	28.7	22.9	19	20	15	21		
pH_FLD	7.5	7.4	6.99		8.02		8	7.6	7.8	8.22	7.28	6.95		7.52		
pH_GEN	7.5	7.4	6.99	6.44	7.48	7.17	7.4	7.96	7.82	8.22	7.28	6.95	7.42	7.52	7.2	
TRACE & TOXIC																
AI																

Station Name: Passighat(005-UBDDIB)
Local River: Siang

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Division: Upper Brahmaputra Division (UBD), Dibrugarh
Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

			Summer (Mar-May)									
2015-2016	2016-2017	2017-2018	PARAMETERS	2010	2011	2012	2013	2014	2015	2016	2017	2018
1729	1117	1477.25	Q (cumec)	1821	2400	6974	2342	971.5	1648	2438	1871	4223
			BIOLOGICAL/BACTEOROLOGICAL									
		88	COD									60
7.3	8.1		DO						6.9	8	8.5	
85.24	83.81		DO_SAT%						82.04	95.03	91.65	
			CHEMICAL									
74	78	80	ALK-TOT	48	64	60		62	40	64	60	56.37
4.98	0	0	Alk-Phen	0	0	0		0	0	4.98	0	0.32
			B									
6	0	0	CO3	0	0	0	0	0	0	6	0	0.38
44.72	30.96	6.69	Ca	17.2	17.2	22.36	15.48	13.76	18.92	17.2	18.92	10.94
10	12	27.52	Cl	9	5	9	12	14	8	8	9	9.37
			F									
			Fe				0.12					
78.08	95.16	97.6	HCO3	58.56	78.08	73.2	65.88	75.64	48.8	65.88	73.2	68
1.31	2.18	0.19	K	0.15	0.1	0.21	0.17	0.21	1.86	1.87	2.1	1.71
5.16	10.32	3.1	Mg	2.06	6.19	6.19	6.19	18.58	6.19	9.29	15.48	1.53
			NO3-N									
4	3.78	5.46	Na	4.8	4.24	3.21	3.1	3.8	7.35	3.21	3.75	5.44
		0.46	P-Tot									
2.1	2.4	1.2	SO4			1.2	1.21	1.2	2	2.21	2.1	
			o-PO4-P									
			CHEMICAL INDICES									
		89.06	HAR_Ca									123.52
133.3	120.4	35.62	HAR_Total	51.58	68.79	81.69	64.49	111.82	73.09	81.71	111.8	49.41
6.08	6.29		Na%	16.83	11.86	7.89	9.49	6.93	17.56	7.71	6.7	
0	0		RSC	0	0	0	0	0	0	0	0	
0.15	0.15		SAR	0.29	0.22	0.15	0.17	0.16	0.38	0.16	0.15	
			PESTICIDES									
			PHYSICAL									
147	180		EC_FLD	139	151.2	133.1			110	127	192	
199.8	213	221	EC_GEN	139	151.2	133.1	140	140.6	113.1	117.6	157.6	170
111.8	77.4		Secchi	43	43	55.9	38.7	34.4	47.3	43	47.3	
134	143	148	TDS	102	102	89	94	94	76	79	106	85
23.9	17		Temp	20	20	23.5	20		24.5	24	19.1	
8.6	8.1		pH_FLD	7.02	7.61	6.8			7.9	6.9	7.5	
7.6	8.1	8.6	pH_GEN	7.02	7.61	6.8	6.89	7.3	7.83	7.94	8.1	7.3
			TRACE & TOXIC									
			Al									

HISTORY SHEET (WATER QUALITY)

VOLUME - III

Site : Daporizo State : Arunachal Pradesh Basin : BRAHMAPUTRA Tributary : Subansiri Sub-Sub Tributary : - Division : Upper Brahmaputra Division (UBD), Dibrugarh Drainage Area : 15000.0 Sq. Km. Latitude : 27°59'22" Current Zero of Gauge (m) : 204	Water Year : 2017 - 2018 Code : 020-UBDDIB District : Upper Subansiri Independent River : Brahmaputra Sub Tributary : - Local River : Subansiri Sub-Division : Subansiri Sub-Division, Naharlagun, Bank : Right Longitude : 94°13'45"	
CATEGORY	Opening Date	Closing Date
Gauge	: 05-17-1978	
Discharge	: 05/12/2014	
Sediment	: 05/12/2014	
Water Quality	: 07-15-2014	
Reduced Level	Opening Date	Closing Date
204.0	15/05/1978	-

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Daporizo(020-UBDDIB)
Local River: Subansiri

Division: Upper Brahmaputra Division (UBD), Dibrugarh
Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

PARAMETERS	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	4045.93	156.53	757.05	1321.82	221.18	516.79
CHEMICAL							
Alk-Phen (mgCaCO ₃ /L)	4	1.2	0.1	0.4	0.7	0.1	0.1
ALK-TOT (mgCaCO ₃ /L)	4	85	28	60	56	43	85
Ca (mg/L)	4	23	3	17	20	23	3
Cl (mg/L)	4	7.0	2.0	4.3	4.0	7.0	2.0
CO ₃ (mg/L)	4	1.5	0.1	0.5	0.8	0.1	0.1
HCO ₃ (mg/L)	4	104	34	72	66	52	104
Mg (mg/L)	4	4.8	0.9	2.1	1.4	4.8	1.0
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
DO (mg/L)	1	7.1	7.1	7.1		7.1	
DO_SAT% (%)	1	77	77	77		77	
PHYSICAL							
EC_FLD (μmho/cm)	4	231	81	140	124	231	81
EC_GEN (μmho/cm)	4	231	81	140	124	231	81
pH_FLD (pH units)	4	7.5	7.1	7.3	7.5	7.1	7.1
pH_GEN (pH units)	4	7.5	7.1	7.3	7.5	7.1	7.1
TDS (mg/L)	4	115	29	61	44	115	41
Temp (deg C)	4	29.0	19.0	25.3	28.0	19.0	26.0
CHEMICAL INDICES							
HAR_Ca (mgCaCO ₃ /L)	4	58	8	42	50	58	8
HAR_Total (mgCaCO ₃ /L)	4	78	12	50	56	78	12
RSC (-)	4	1.5	0.0	0.5	0.2	0.0	1.5

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Daporizo(020-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Subansiri

Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

PARAMETERS	7/15/2017	10/15/2017	1/15/2018	4/15/2018
Q (cumec)	1122.95	1073.8	191.9	892.3
CHEMICAL				
Alk-Phen (mgCaCO ₃ /L)	1.2	0.1	0.1	0.1
ALK-TOT (mgCaCO ₃ /L)	83	28	43	85
Ca (mg/L)	23	17	23	3
Cl (mg/L)	5.0	3.0	7.0	2.0
CO ₃ (mg/L)	1.5	0.1	0.1	0.1
HCO ₃ (mg/L)	98	34	52	104
Mg (mg/L)	0.9	1.9	4.8	1.0
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
DO (mg/L)			7.1	
DO_SAT% (%)			77	
PHYSICAL				
Q (cumec)				
Colour_Cod (-)	Brown	Brown		
EC_FLD (μmho/cm)	131	118	231	81
EC_GEN (μmho/cm)	131	118	231	81
Odour_Code (-)	odour free	odour free		
pH_FLD (pH units)	7.5	7.5	7.1	7.1
pH_GEN (pH units)	7.5	7.5	7.1	7.1
TDS (mg/L)	29	59	115	41
Temp (deg C)	29.0	27.0	19.0	26.0
CHEMICAL INDICES				
HAR_Ca (mgCaCO ₃ /L)	58	42	58	8
HAR_Total (mgCaCO ₃ /L)	62	50	78	12
RSC (-)	0.4	0.0	0.0	1.5

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Daporizo(020-UBDDIB)

Local River: Subansiri

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

PARAMETERS	Flood (Jun-Oct)				Winter (Nov-Feb)				Summer (Mar-May)			
	2014	2015	2016	2017	2014-2015	2015-2016	2016-2017	2017-2018	2015	2016	2017	2018
Q (cumec)	1814	1196	1222	1098.4	276.2	173.2	175.8	191.9	292.0	342.5	364.9	892.3
BIOLOGICAL/BACTEOROLOGICAL												
DO		7.3	8.1			7.1	8.1	7.1	8.5	8	8.1	
DO_SAT%		96.39	100.84			70.5	83.81	77	99.2	95.19	85.58	
CHEMICAL												
ALK-TOT	60	60	31.82	56.0	40	50	27.75	43.0	70	70	35.5	85
Alk-Phen	0	0	1.81	1	0	0	1.49	0	0	0	0.25	0
CO3	0	0	2.17	1	0	0	1.8	0	0	0	0.3	0.1
Ca	26	11.2	32.65	20.0	16	20	4.8	23.0	3.2	20	9.6	3.0
Cl	1.5	2.5	3.95	40.0	1.47	3	8	7.0	2		6	2
HCO3	73.2	73.2	34.4	66	48.8	61	30.2	52	85.4	85.4	42.7	104.0
Mg	6	2.4	19.3	1.4	2.4	4.8	2.4	4.8	0.96	12	0.5	1
CHEMICAL INDICES												
HAR_Total	90	38	162.04	56	50	70	22	78	12	100	26.08	12
RSC	0	0.58	0.03	0	0	0	0.12	0	1.16	0	0.19	1.5
PESTICIDES												
PHYSICAL												
EC_FLD		136.5	187.5	124		178	180	231	125	105	96	81
EC_GEN	121	125	187.5	124	166	168	180	231	87	100	195	81
Secchi	65	28	81.62		40	50	12		8	50	24	
TDS	60.5	62.5	84	44.0	83	90	85	115.0	44	50	97	41.0
Temp		29.6	26.95	28.0		15.6	17	19	23.6	24.9	18.1	26
pH_FLD		8.3	8.45	8		7.5	7.8	7.1	8.5	6.8	7.9	7.1
pH_GEN	7.3	8.85	8.2	7.5	8.9	8.1	8.8	7.1	8.2	7.9	8.1	7.1
TRACE & TOXIC												

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Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Udaipur(049)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Tirap

Sub Division: Upper Brahmaputra Sub-Division-I, Dibrugarh

PARAMETERS

	15/07/2017	15/10/2017	15/01/2018	15/04/2018
Q (cumec)	122.38	52	7.44	16
CHEMICAL				
SO4(mg/L)	2.21	2.1	1.2	
CO3(mg/L)	0	0	0	0.03
ALK-TOT(mgCaCO3/L)	94	70	90	57.43
Cl(mg/L)	16	20.64	51.6	20.53
NO2-N(mg/L)				
SiO2(mg/L)				
Ca(mg/L)	10.32	5	8.03	5.89
NH3-N(mgN/L)				
HCO3(mg/L)	114.68	85.4	109.8	70
B(mg/L)				
Mg(mg/L)	14.45	1.03	5.16	7.33
K(mg/L)			0.84	1.85
Na(mg/L)			5.54	1.77
P-Tot(mgP/L)	0.39	0.41	0.49	
F(mg/L)				
Alk-Phen(mgCaCO3/L)	0	0	0	0.03
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
Tcol-MPN(MPN/100mL)				
Chlf-a(µg/L)				
DO_SAT%(Percentage)				
FCol-MPN(MPN/100mL)				
BOD3-27(mg/L)				
COD(mg/L)	80	80	32	36

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Udaipur(049)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Tirap

Sub Division: Upper Brahmaputra Sub-Division-I, Dibrugarh

	15/07/2017	15/10/2017	15/01/2018	15/04/2018
PHYSICAL				
pH_FLD(pH unit)				
pH_GEN(pH unit)	8.1	7.3	8.1	7.5
SS(mg/L)				
Colour_Cod(-)	Brown	Brown	Other	
Odour_Code(-)	odour free	odour free	odour free	odour free
EC_GEN(μ mho/cm)	115	114.8	222	157
EC_FLD(μ mho/cm)				
Temp(Degrees Celsius ($^{\circ}$ C))				
TDS(mg/L)	65	57	111	77
CHEMICAL INDICES				
HAR_Ca(mgCaCO ₃ /L)	197.81	58.52	115.89	107.17
HAR_Total(mgCaCO ₃ /L)	79.12	23.41	46.36	42.87

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Udaipur(049)

Local River: Tirap

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Upper Brahmaputra Sub-Division-I, Dibrugarh

PARAMETERS	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	618.74	6	67.46	120.35	13.66	49.68
CHEMICAL							
Cl	4	51.6	16	27.19	18.32	51.6	20.53
HCO3	4	114.68	70	94.97	100.04	109.8	70
P-Tot	3	0.49	0.39	0.43	0.4	0.49	
Na	2	5.54	1.77	3.65		5.54	1.77
Alk-Phen	4	0.03	0	0.01	0	0	0.03
ALK-TOT	4	94	57.43	77.86	82	90	57.43
SO4	3	2.21	1.2	1.84	2.15	1.2	
CO3	4	0.03	0	0.01	0	0	0.03
Mg	4	14.45	1.03	6.99	7.74	5.16	7.33
Ca	4	10.32	5	7.31	7.66	8.03	5.89
K	2	1.85	0.84	1.35		0.84	1.85
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	4	80	32	57	80	32	36
PHYSICAL							
TDS	4	111	57	77.5	61	111	77
pH_GEN	4	8.1	7.3	7.75	7.7	8.1	7.5
EC_GEN	4	222	114.8	152.2	114.9	222	157
CHEMICAL INDICES							
HAR_Total	4	79.12	23.41	47.94	51.27	46.36	42.87
HAR_Ca	4	197.81	58.52	119.85	128.17	115.89	107.17

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Udaipur(049)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Tirap

Sub Division: Upper Brahmaputra Sub-Division-I, Dibrugarh

	Flood (Jun-Oct)													
PARAMETERS	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	113.4	108.0	203.0	89.52	109.6	90.52	213.9	75.69	121.0	121.5	82.46	164.1	89.98	87.19
BIOLOGICAL/BACTERIOLOGICAL														
COD														80
DO										11.8	8.9	8.2	7.8	
DO_SAT%										150.79	107.81	100.19	93.56	
CHEMICAL														
ALK-TOT				51.5	32.5	91	50	52	51		49	49	60	82
Alk-Phen				0	0	0	0	0	0		0	0	3.49	0
B														
CO3	0	0.7		0	0	0	0	0	0	0	0	0	4.2	0
Ca	18.9	8		10.3	16.8	25.5	34.4	23.22	11.18	12.9	14.62	17.2	16.34	7.66
Cl	10.47	4.79		7.44	18.1	11	11.5	9	10	10.5	14	7	15	18.32
F		0.38												
Fe	0.3	0.27							0.13	51.89				
HCO3	31.72	59.78		62.83	39.65	111.02	61	63.44	62.22	52.46	59.78	59.78	64.66	100.04
K	1.45	0.66				2.07	1.53	1.19	0.13	0.17	0.19	1.8	1.37	
Mg	11	4.86		4.56	10.21	8.26	10.84	10.32	12.39	3.1	3.09	7.22	12.9	7.74
NO3-N		0.3												
Na	1.64	2.2				3.66	2.97	3.6	2.58	3.75	3.97	4.05	3.78	
P-Tot														0.4
SO4	1.66	1.99							1.16	1.19	1.21	1.25	1.95	2.15
o-PO4-P	0.2	0.12												
CHEMICAL INDICES														
HAR_Ca														128.17
HAR_Total	93.07	40.25		44.75	84.53	98.15	131.15	101.05	79.55	45.15	49.45	73.1	94.6	51.27
Na%	3.55	11.18				10.68	4.69	7.96	6.58	15.32	15.02	11.1	7.97	
RSC	0	0.2		0.17	0	0	0	0	0	0.03	0.15	0	0	
SAR	0.07	0.16				0.2	0.11	0.17	0.12	0.24	0.25	0.21	0.17	
PESTICIDES														
PHYSICAL														
EC_FLD				59.7	120.11	119.6	115.4	140.6	149.8	124.82	128.5	160.5	160.5	
EC_GEN	69.58	98		63	120.27	119.6	115.4	140.6	129.4	88.82	118	113	174	114.9
Secchi	47.25	19.1		25.75	41.87	63.75	86	58.05	27.95	31.87	36.55	43	40.85	
TDS	175			62.95	48.3				54.3	39	59	57	87	61
Temp	23	22.8	20	24					19.1	26.97	25.5	25.5	24.55	
Turb	1.6								17.88					
pH_FLD				7.11	7.05	7.61	7.72	8.1	7.26	7.69	7	7.15	7.75	
pH_GEN	7.48	7.89		7.11	7.07	7.61	7.72	8.1	6.85	7.75	7.15	7.9	7.5	7.7
TRACE & TOXIC														
Al	0.26	0.23												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Udaipur(049)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Tirap

Sub Division: Upper Brahmaputra Sub-Division-I, Dibrugarh

Winter (Nov-Feb)

PARAMETERS	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Q (cumec)	13.27	9.370	4.415	4.500	5.357	7.946	8.000
BIOLOGICAL/BACTERIOLOGICAL							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT			49.03	60	41.11	52	56
Alk-Phen			0.02	0	0.13	0	0
B							
CO3	0	0.03	0.02	0	0.16	0	0
Ca	34.05	20.7	16.4	16	13.35	10.32	18.92
Cl	14.17	9.41	18.1	31.95	5.54	12	18
F	1.52	0.5					
Fe	0.62	0.19					
HCO3	73.37	50.02	59.78	73.2	49.83	63.44	68.32
K	0.51	1.35	1.02	1.17	2.5	0.18	0.7
Mg	13.23	3.71	2.43	4.74	3.55	4.13	10.32
NO3-N		1.75					
Na	4.35	2.15	4	3.91	4.2	5.2	2.59
P-Tot							
SO4	3.45	1.08		7.8			
o-PO4-P	0.12	0.04					
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	136.41	67.19	51.12	59.74	48.17	43.01	90.3
Na%	8.09	8.45	14.29	12.25	15.16	20.83	5.86
RSC	0.13	0	0	0.01	0	0.18	0
SAR	0.17	0.13	0.24	0.22	0.26	0.35	0.12
PESTICIDES							
PHYSICAL							
EC_FLD			161.7	117.4	166.9	125.6	140.5
EC_GEN	146.92	130.75	161.7	117.4	166.9	126	140.5
Secchi	79.58	53.92	41	40	33.38	25.8	47.3
TDS	213.85			65.9	75.7		
Temp		15.85	15				
Turb	1.3	0.77					
pH_FLD			7.61	6.2	7.42	7.48	7.78
pH_GEN	7.98	7.64	7.61	6.2	7.42	7.5	7.78
TRACE & TOXIC							
Al	0.38						

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Udaipur(049)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Tirap

Sub Division: Upper Brahmaputra Sub-Division-I, Dibrugarh

Winter (Nov-Feb)

2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
6.274	9.371	5.179	6.311	8.306	10.20	7.44
						32
	7.1	9	9.2	8.1	7.8	
	68.91	89.27	95.19	96.22	80.7	
98	54		72	66	80	90
0	0		0	3.98	0	0
0	0	0	0	4.8	0	0
15.48	10.32	17.2	24.08	24.08	20.64	8.03
18	12	14	12	10	14	51.6
	0.09	55.35				
119.56	65.88	63.44	87.84	70.76	97.6	109.8
0.17	0.65	0.17	0.86	2.23	1.87	0.84
9.29	8.26	13.42	6.19	12.38	23.74	5.16
3.1	3	3.85	9.26	3.85	3.9	5.54
						0.49
1.1	1	1.22	2.12	2.65	2.1	1.2
						115.89
77.41	60.22	98.92	85.99	111.78	150.52	46.36
8.04	9.72	7.85	18.86	6.85	5.3	
0.42	0	0	0	0	0	
0.15	0.17	0.17	0.44	0.16	0.14	
130.2	148	186	121	196	169	
130.2	144		159	163	169	222
38.7	25.8	43	60.2	60.2	51.6	
	71.9		80	82	39	111
	14.1	15.1	17	24	17	
7.29	6.6	7.5	7.2	7.4	7.2	
7.29	7.5		7.1	7.7	8.5	8.1

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Udaipur(049)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Tirap

Sub Division: Upper Brahmaputra Sub-Division-I, Dibrugarh

Summer (Mar-May)

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
38.21	27.20	19.25	20.61	14.22	6.443	25.85	6.076	18.33	11.02	4.378	9.459	26.78	14.43	16
														36
									10.5	9.3	7.3	7.8	7.4	
									106.41	104.34	86.73	84.09	79.78	
			37.07	46	52	6	60	56		74	50	54	60	57.43
			0.03	0	3.98	0	0	0		0	0	3.98	0	0.03
	0.05													
0	0.3	0	0.04	0	4.8	0	0	0	0	0	0	4.8	0	0.03
16.4	9	22.4	8.2	26.4	13.76	10.32	22.36	13.76	43	22.36	6.88	8.6	8.6	5.89
12.96	7.1	5.33	6.39	24.85	8	10	13	16	13	17	15	7	19	20.53
	0.76	0.5												
0.25	0.27								0.14					
41.48	127.19	4.58	45.14	56.12	53.68	7.32	73.2	68.32	61	90.28	61	56.12	73.2	70
0.57	0.49	0.78	1.02	0.39	3.65	0.2	0.19	0.2	0.2	0.2	0.96	1.6	2	1.85
10.45	7.78	0.97	0.24	2.43	9.29	6.19	16.51	7.22	1.03	12.38	16.51	10.32	19.61	7.33
	0.35													
3.39	3.94	3.68	2.81	6.44	6.6	5.54	6.25	4.1	2.85	3.85	6.21	3.96	3.8	1.77
0.46	1.46							1	1.1	1.15	2.05	2.12	2.38	
0.19	0.06													
														107.17
84.54	54.62	60.05	21.51	76.12	73.11	51.59	124.69	64.48	111.79	107.48	85.99	64.5	103.21	42.87
7.84	13.31	11.62	21.14	15.5	15.67	18.97	9.88	12.18	5.25	7.26	13.53	11.55	7.32	
0	1.24	0	0.31	0	0	0	0	0	0	0	0	0	0	
0.16	0.23	0.21	0.26	0.32	0.34	0.34	0.24	0.22	0.12	0.16	0.29	0.22	0.16	
			69.4	137.5	102.5	100.1	140	155	116	121	191	179.3	92	
154.38	101.3	97.4	69.4	137.5	102.5	100.1	140	155	143	260	159	130	151	157
41	22.5	56	20.5	66	34.4	25.8	55.9	34.4	107.5	55.9	17.2	21.5	21.5	
135			62.6	72.7	55.4				72	130	80	65	75	77
21.5	19.5	16	15	32.8				25.8	16.1	21.1	24.1	19	19	
0.7	4.78	2.71												
			7.11	7	6.6	7.55	7.12	7.11	6.3	6.8	7.6	7.2	7.8	
7.45	7.6	7.1	7.11	7	6.6	7.55	7.1	7.11	6.7	6.9	7.1	7.7	7.2	7.5
0.13	0.15													

HISTORY SHEET (WATER QUALITY)

Water Year	: 2017 - 2018		
Site	: Bhalukpong	Code	: 029-UBDDIB
State	: Arunachal Pradesh	District	: West Kameng
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: Kamang	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Kamang
Division	: Upper Brahmaputra Division (UBD), Dibrugarh	Sub-Division	: Dhansiri (S) Kopilli Sub-Division, Nagaon
Drainage Area	: 10450.0 Sq. Km.	Bank	: Right
Latitude	: 27°0'51"	Longitude	: 92°38'59"
Current Zero of Gauge (m)	: 130		
CATEGORY	Opening Date	Closing Date	
Gauge	: 09-15-1980		
Discharge	: 01/01/1992		
Sediment	: 03-20-2014		
Water Quality	: 01-15-2004		
Reduced Level	Opening Date	Closing Date	
130.0	06/05/2014	-	
130.0	15/09/1980	06/05/2014	

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Bhalukpong(029-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Kamang

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	1085.3	214.3	449.5	524.6	280.6	544.9
CHEMICAL							
Cl	4	10.32	4.91	8.64	9.66	10.32	4.91
HCO3	4	56.12	41.48	47.71	53.68	41.48	42
P-Tot	3	0.45	0.41	0.43	0.43	0.43	
Na	2	5.42	4.8	5.11		5.42	4.8
Alk-Phen	4	0.03	0	0.01	0	0	0.03
ALK-TOT	4	46	34	39.12	44	34	34.49
SO4	3	2.26	1.4	1.92	2.18	1.4	
CO3	4	0.04	0	0.01	0	0	0.04
Mg	4	10.32	2.06	5.21	2.58	10.32	5.38
Ca	4	12.04	4.46	6.85	8.52	4.46	5.89
K	2	2.06	0.18	1.12		0.18	2.06
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	4	144	40	81	108	40	68
PHYSICAL							
TDS	4	63	24	44.5	34	63	47
pH_GEN	4	7.92	6.42	7.09	7.48	6.42	7
EC_GEN	4	94.3	35.6	66.38	50.5	94.3	70.2
Temp	1	34.5	34.5	34.5	34.5		
CHEMICAL INDICES							
HAR_Total	4	57.92	25.98	41.57	41.95	44.38	37.99
HAR_Ca	4	144.79	64.96	103.92	104.88	110.96	94.98

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Bhalukpong(029-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Kamang

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

PARAMETERS	15/07/2017	15/10/2017	15/01/2018	15/04/2018
Q (cumec)	564.6	416	244.4	751.35
CHEMICAL				
B(mg/L)				
Mg(mg/L)	3.1	2.06	10.32	5.38
F(mg/L)				
NH3-N(mgN/L)				
HCO3(mg/L)	51.24	56.12	41.48	42
CO3(mg/L)	0	0	0	0.04
P-Tot(mgP/L)	0.41	0.45	0.43	
ALK-TOT(mgCaCO3/L)	42	46	34	34.49
Na(mg/L)			5.42	4.8
K(mg/L)			0.18	2.06
Cl(mg/L)	9	10.32	10.32	4.91
SO4(mg/L)	2.26	2.1	1.4	
NO2-N(mg/L)				
SiO2(mg/L)				
Ca(mg/L)	12.04	5	4.46	5.89
Alk-Phen(mgCaCO3/L)	0	0	0	0.03
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTEOROLOGICAL				
Chlf-a(µg/L)				
FCol-MPN(MPN/100mL)				
COD(mg/L)	72	144	40	68
Tcol-MPN(MPN/100mL)				
DO_SAT%(Percentage)				
BOD3-27(mg/L)				

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Bhalukpong(029-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Kamang

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

	15/07/2017	15/10/2017	15/01/2018	15/04/2018
PHYSICAL				
Temp(Degrees Celsius (°C))	34.5			
Colour_Cod(-)	Clear	Clear	Clear	Clear
TDS(mg/L)	24	44	63	47
Odour_Code(-)	odour free	odour free	odour free	odour free
EC_FLD(μmho/cm)				
pH_GEN(pH unit)	7.92	7.03	6.42	7
SS(mg/L)				
EC_GEN(μmho/cm)	35.6	65.4	94.3	70.2
pH_FLD(pH unit)				
CHEMICAL INDICES				
HAR_Total(mgCaCO ₃ /L)	57.92	25.98	44.38	37.99
HAR_Ca(mgCaCO ₃ /L)	144.79	64.96	110.96	94.98

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Bhalukpong(029-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Kamang

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

	Flood (Jun-Oct)													
PARAMETERS	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	2017	1962	1388	1234	1188	977.6	731.7	1165	2117	733.1	336.7	539.7	590.7	490.3
BIOLOGICAL/BACTERIOLOGICAL														
COD														108
CHEMICAL														
ALK-TOT				33.5	60	34	31	33	37		144	42	35	44
Alk-Phen				0	0	0	0	0	0		0	0	0	0
CO3	0	1.65		0	0	0	0	0	0	0	0	0	0	0
Ca	14.6	11.7		9.2	21.4	13.76	11.18	12.9	10.32	17.8	22.36	9.46	14.62	8.52
Cl	12.96	5.15		110.44	18.1	9.5	8	9.5	8	21	19	7.5	8.5	9.66
F		0.29												
Fe	0.15	0.34							0.11	55.35				
HCO3	28.06	34.46		40.87	73.2	41.48	37.82	40.26	45.14	114.68	175.68	51.24	42.7	53.68
K	0.61	1.45				1.39	1.25	0.2	0.14	0.15	0.18	2.15	2.15	
Mg	6.32	2.92		4.32	8.99	7.74	8.26	10.32	5.68	3.1	25.29	12.9	7.23	2.58
NO3-N		0.5												
Na	0.7	2.2				4.58	3.1	3.05	3.25	3.7	4.38	3.33	3.88	
P-Tot														0.43
SO4	1.44	0.84							1.1	1.2	1.21	1.2	2	2.18
o-PO4-P	0.4	0.13												
CHEMICAL INDICES														
HAR_Ca														104.88
HAR_Total	62.83	41.4		41	90.96	66.65	62.35	75.25	49.45	57.4	161.25	77.4	66.65	41.95
Na%	2.35	11.41				12.62	9.62	10.7	13.03	12.42	9.86	9.39	10.91	
RSC	0	0.01		0.07	0.11	0	0	0	0	1	0.01	0	0	
SAR	0.04	0.17				0.24	0.17	0.17	0.21	0.21	0.19	0.17	0.21	
PESTICIDES														
PHYSICAL														
EC_FLD					72.65	89.55	58.7	60		247.05				
EC_GEN	23.08	86.67		71.75	73	89.75	58.7	59.85	61.6	247.05	336.3	62.35	67.8	50.5
Secchi	36.5	29.5		23	53.5	34.4	27.95	32.25	25.8	44.5	55.9	23.65	36.55	
TDS	185	142.67		71.5	76.55	60	39	40.5	41	165	225.5	42	45.5	34
Temp	22	23.64	25	23.5	23.05	21.5	17.5	21	22.5	23.6		32.05	31.1	34.5
Turb	2.6	2.7		1.8					5					
pH_FLD			6.8		7.48	7.15	7.08	6.72		6.46				
pH_GEN	6.98	7.62	7.38	7.02	7.5	7.13	7.08	6.72	6.78	6.46	7.01	6.89	7.38	7.47
TRACE & TOXIC														
AI	0.18	0.3												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Bhalukpong(029-UBDDIB)

Local River: Kamang

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

Winter (Nov-Feb)

PARAMETERS	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Q (cumec)	471.6	225.2	226.8	170.0	389.0	279.4	280.0	380.2
BIOLOGICAL/BACTERIOLOGICAL								
COD								
CHEMICAL								
ALK-TOT		52.12		48.5	23.12	46	26	50
Alk-Phen		0.05		0	0.09	0	0	0
CO3	0	0.03	0	0	0.11	0	0	0
Ca	20.83	19.52	10.6	16	12.57	13.76	17.2	12.04
Cl	6.27	7.48	7.1	19.88	8.56	10	7	9
F	1.71	0.5						
Fe	0.69	0.21						
HCO3	51.33	35.38	26.23	59.17	27.98	56.12	31.72	61
K	0.5	1.13	1.49	1.17	1.7	0.1	0.18	0.14
Mg	12.51	2.35	0.36	4.74	5.91	8.26	3.1	8.26
NO3-N		0.57						
Na	1.32	2.51	3.5	3.91	5.1	1.57	1.91	2.6
P-Tot								
SO4	3.35	1.43						1.2
o-PO4-P	0.11	0.11						
CHEMICAL INDICES								
HAR_Ca								
HAR_Total	101.62	60.12	28.02	59.74	56.05	68.82	55.92	64.52
Na%	3.11	8.61	20.3	12.25	16.09	4.75	6.92	8.09
RSC	0	0	0	0	0	0	0	0
SAR	0.06	0.14	0.29	0.22	0.3	0.08	0.11	0.14
PESTICIDES								
PHYSICAL								
EC_FLD				90	86.1	98.6	115.3	80.4
EC_GEN	115	127.33		90	86	98.6	115.3	80.4
Secchi	51.25	52.43	26.5	40	31.43	34.4	43	30.1
TDS	170	165.33	210	45.7	58	66	77	54
Temp	17.5	16.17		26.4	21	14	17.3	26
Turb	1.5	0.99	1.5					
pH_FLD			7.64	6.8	7.63	7.65	6.77	7.09
pH_GEN	7.81	7.25	7.6	6.8	7.6	7.65	6.77	7.09
TRACE & TOXIC								
AI	0.51							

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Bhalukpong(029-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Kamang

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

Winter (Nov-Feb)

PARAMETERS	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	336.6	139.3	142.6	137.3	227.2	244.4
BIOLOGICAL/BACTERIOLOGICAL						
COD						40
CHEMICAL						
ALK-TOT	46		44	158	66	34
Alk-Phen	0		0	0	0	0
CO3	0	0	0	0	0	0
Ca	6.88	10.32	18.92	27.52	15.48	4.46
Cl	10	15	9	14	13	10.32
F						
Fe		55.35				
HCO3	56.12	39.04	53.68	192.76	80.52	41.48
K	0.33	0.18	1.5	1.87	1.53	0.18
Mg	5.16	4.13	4.13	7.22	27.86	10.32
NO3-N						
Na	3.4	3.7	3.47	3.75	3.75	5.42
P-Tot						0.43
SO4	1.2	1.21	2.4	2.1	2.05	1.4
o-PO4-P						
CHEMICAL INDICES						
HAR_Ca						110.96
HAR_Total	38.7	43.01	64.51	98.88	154.78	44.38
Na%	16	15.77	10.24	7.49	4.99	
RSC	0.15	0	0	1.19	0	
SAR	0.24	0.25	0.19	0.16	0.13	
PESTICIDES						
PHYSICAL						
EC_FLD	83.5	62.7				
EC_GEN	83.5	62.7	79.4	253	101.2	94.3
Secchi	17.2	25.8	47.3	68.8	38.7	
TDS	56	42	50	169	68	63
Temp	19.5	21		19.8	24.8	
Turb						
pH_FLD	6.99	6.97				
pH_GEN	6.99	6.97	6.87	7.66	7.88	6.42
TRACE & TOXIC						
AI						

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Bhalukpong(029-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Kamang

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

Summer (Mar-May)

PARAMETERS	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	563.5	280.2	224.1	289.1	250.9	385.0		537.3	165.6	177.1	165.0	158.7	225.6	751.4
BIOLOGICAL/BACTERIOLOGICAL														
COD														68
CHEMICAL														
ALK-TOT	65.35			28	40	32		16	86	40	32	68	52	34.49
Alk-Phen	0.17			0	0	0		0	0	0	0	0	0	0.03
CO3	0.25	0		0	0	0		0	0	0	0	0	0	0.04
Ca	6.08	17.6	7.4	16.8	8.6	17.2		12.04	36.12	15.48	10.32	10.32	13.76	5.89
Cl	4.97	8.52	4.26	19.17	12	8		7	20	11	11	14	19	4.91
F	0.66	0.5												
Fe	0.63								0.09					
HCO3	70.29	26.23	29.89	34.16	48.8	39.04		19.52	104.92	48.8	39.04	82.96	63.44	42
K	0.82	1.17	0.9	0.12	1.35	0.22		0.21	0.16	0.17	0.77	2.18	2.18	2.06
Mg	3.39	4.86	0.73	1.94	7.22	3.1		1.03	1.03	4.13	6.19	3.1	15.48	5.38
NO3-N	0.59													
Na	2.81	2.3	3.2	1.84	2.74	6.5		3.25	3.51	3.7	3.4	3.85	3.75	4.8
P-Tot														
SO4	10.04							1.1	1.2	1.2	2.21	1.9	2.1	
o-PO4-P	0.06													
CHEMICAL INDICES														
HAR_Ca														94.98
HAR_Total	28.42	64.25	21.54	50.1	51.58	55.92		34.39	94.59	55.91	51.59	38.72	98.9	37.99
Na%	20.27	7.1	23.52	7.4	10.13	20.17		16.98	7.47	12.6	12.41	16.86	7.48	
RSC	0.58	0		0	0	0		0	0	0	0	0.59	0	
SAR	0.26	0.13	0.3	0.11	0.17	0.38		0.24	0.16	0.22	0.21	0.27	0.16	
PESTICIDES														
PHYSICAL														
EC_FLD				51	73.4	73.8		36.5						
EC_GEN	100	56.2	63.7	51	73	73.8		36.5	241	67.4	67.8	29.7	73.9	70.2
Secchi	15	44	18.5	42	21.5	43		30.1	90.3	38.7	25.8	25.8	34.4	
TDS	105	200	64		49	49		24	162	45	45	20	49	47
Temp	23.83	19.33		32.7	17	18		24	18	29.9				
Turb	2.1	0.49	6											
pH_FLD				6.6	6.97	6.55		6.46						
pH_GEN	8.28	7.33	7.6	6.6	7	6.55		6.46	6.78	7.33	7.05	7.68	7.7	7
TRACE & TOXIC														
AI	0.14													

HISTORY SHEET (WATER QUALITY)

VOLUME - III

Site : Ranganadi NT Road crossing State : Assam Basin : BRAHMAPUTRA Tributary : Ranganadi Sub-Sub Tributary : - Division : Upper Brahmaputra Division (UBD), Dibrugarh Drainage Area : 2700 Sq. Km. Latitude : 27°12'15" Current Zero of Gauge (m) : 91.4	Water Year : 2017 - 2018 Code : 36-UBDDIB District : Lakhimpur Independent River : Brahmaputra Sub Tributary : - Local River : Ranganadi Sub-Division : Subansiri Sub-Division, Naharlagun, Bank : Left Longitude : 94°3'34"	
CATEGORY	Opening Date	Closing Date
Gauge	: 05-18-1978	
Discharge	: 02/01/1990	
Sediment	:	
Water Quality	: 03/01/1994	
Reduced Level	Opening Date	Closing Date
91.4	15/05/1978	

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Ranganadi NT Road crossing(36-UBDDIB) Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Ranganadi Sub Division: Subansiri Sub-Division, Naharl

PARAMETERS	15/07/2017	15/10/2017	15/01/2018	15/04/2018
Q (cumec)	41.94	78.73	5.14	13.42
CHEMICAL				
ALK-TOT(mgCaCO ₃ /L)		30	12	74.53
CO ₃ (mg/L)		0	0	0.31
Ca(mg/L)		7	4.46	13.47
HCO ₃ (mg/L)		36.6	14.64	90.3
SO ₄ (mg/L)		2.21	1.1	
Alk-Phen(mgCaCO ₃ /L)		0	0	0.26
SiO ₂ (mg/L)				
Mg(mg/L)		9.29	6.19	5.06
NH ₃ -N(mgN/L)				
K(mg/L)			1	1.67
F(mg/L)				
B(mg/L)				
P-Tot(mgP/L)		0.46	0.45	
Cl(mg/L)		12.04	12.04	10.71
Na(mg/L)			1.1	5.97
NO ₂ -N(mg/L)				
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTEOROLOGICAL				
Chl-a(μg/L)				
COD(mg/L)		128	96	72
FCol-MPN(MPN/100mL)				
BOD ₃₋₂₇ (mg/L)				
Tcol-MPN(MPN/100mL)				
DO_SAT%(Percentage)	6.1			

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Ranganadi NT Road crossing(36-UBDDIB) Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Ranganadi Sub Division: Subansiri Sub-Division, Naharl

	15/07/2017	15/10/2017	15/01/2018	15/04/2018
PHYSICAL				
TDS(mg/L)	95	47	105	123
EC_GEN(μ mho/cm)		70.6	156.2	183.2
pH_GEN(pH unit)		8.18	7.89	7.57
Colour_Cod(-)	Clear	Clear	Clear	Clear
pH_FLD(pH unit)	8.8			
EC_FLD(μ mho/cm)	114			
Odour_Code(-)	odour free	odour free	odour free	odour free
Temp(Degrees Celsius (°C))	28			
SS(mg/L)				
CHEMICAL INDICES				
HAR_Total(mgCaCO ₃ /L)		52.39	34.06	68.78
HAR_Ca(mgCaCO ₃ /L)		130.98	85.14	171.94

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Ranganadi NT Road crossing(36-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Ranganadi

Sub Division: Subansiri Sub-Division, Naharlagu

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	364	831.75	2.82	41.24	87.61	7.04	9.24
CHEMICAL							
Cl	3	12.04	10.71	11.6	12.04	12.04	10.71
HCO3	3	90.3	14.64	47.18	36.6	14.64	90.3
P-Tot	2	0.46	0.45	0.45	0.46	0.45	
Na	2	5.97	1.1	3.53		1.1	5.97
Alk-Phen	3	0.26	0	0.09	0	0	0.26
ALK-TOT	3	74.53	12	38.84	30	12	74.53
SO4	2	2.21	1.1	1.65	2.21	1.1	
CO3	3	0.31	0	0.1	0	0	0.31
Mg	3	9.29	5.06	6.85	9.29	6.19	5.06
Ca	3	13.47	4.46	8.31	7	4.46	13.47
K	2	1.67	1	1.34		1	1.67
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	3	128	72	98.67	128	96	72
DO_SAT%	1	6.1	6.1	6.1	6.1		
PHYSICAL							
TDS	4	123	47	92.5	71	105	123
pH_GEN	3	8.18	7.57	7.88	8.18	7.89	7.57
EC_GEN	3	183.2	70.6	136.67	70.6	156.2	183.2
Temp	1	28	28	28	28		
pH_FLD	1	8.8	8.8	8.8	8.8		
EC_FLD	1	114	114	114	114		
CHEMICAL INDICES							
HAR_Total	3	68.78	34.06	51.74	52.39	34.06	68.78
HAR_Ca	3	171.94	85.14	129.35	130.98	85.14	171.94

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Ranganadi NT Road crossing(36-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Ranganadi

Sub Division: Subansiri Sub-Division, Naharlag

	Flood (Jun-Oct)														
PARAMETERS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	97.70	160.2	42.50	60.37	91.20	64.63	36.80	60.55	246.3	130.2	18.91	62.26	121.8	129.2	60.3
BIOLOGICAL/BACTERIOLOGICAL															
COD															128
DO											7.9	7.7	7.7	8.15	
DO_SAT%											96.56	100.4	100.4	101.31	6.1
CHEMICAL															
ALK-TOT					57.5	60	60	43	45	43.71		75	65	53	30
Alk-Phen					0	0	0	0	0	0		0	0	4.98	0
CO3	0	0	0.3		0	0	0	0	0	0	0	0	0	6	0
Ca	20.13	18.9	8.4		16	14.4	11.38	13.76	18.92	11.06	21.5	16.34	16.34	17.2	7
Cl	8.99	10.47	5.86		11.51	18.11	8.5	9.5	7.5	6.31	13	15	8	9	12.04
F			0.47												
Fe	0.1	0.23	0.28							0.11	48.43				
HCO3	56.12	37.82	49.41		70.15	73.2	73.2	52.46	54.9	53.33	58.56	91.5	79.3	52.46	36.6
K	1.09	0.51	1.41				1.16	1.59	2.08	0.17	0.15	0.19	2.05	1.5	
Mg	8.02	10.45	3.16		3.12	7.41	8.77	7.74	8.25	5.11	1.54	18.57	7.22	5.68	9.29
NO3-N			0.33												
Na	1.5	2.05	2.1				4.32	2.24	2.95	3.33	3.72	3.78	3.72	3.65	
P-Tot															0.46
SO4	0.45	2.02	5.59							1.1	1.25	1.19	1.19	1.8	2.21
o-PO4-P	0.1	0.17	0.15												
CHEMICAL INDICES															
HAR_Ca															130.98
HAR_Total	83.75	90.79	34.16		53	66.88	65.01	66.65	81.7	49.45	60.19	118.25	70.95	66.65	52.39
Na%	4.58	4.7	11.92				12.5	7.33	8.96	13.29	12.73	7.71	10.98	10.43	
RSC	0	0	0.22		0.15	0.07	0.07	0	0	0	0.05	0.22	0.02	0	
SAR	0.08	0.09	0.17				0.23	0.13	0.16	0.21	0.22	0.16	0.2	0.2	
PESTICIDES															
PHYSICAL															
EC_FLD					85.1	93.65	121.2	75.25	82.38		141	100.5	100.5	139	114
EC_GEN	59.9	79.26	95.29		85.1	93.65	121.2	75.25	82.38	98.7	143.1	116.15	89.9	100	70.6
Secchi	50.46	47.25	21.12		40.29	36	28.45	34.4	47.3	27.95	53.75	40.85	40.85	43	
TDS	220.87	280			65.1	46.3	80.5	50.5	32	66.5	79	77.5	63	67	71
Temp	21.35	25	26.92	26.5		28.3	25	29.3	24	26	26.2	28.65	28.65	26.55	28
Turb	2.8	1.25	7.35							4.21					
pH_FLD					6.91	7.1	7.31	7.45	6.94		7.55	7.95	7.95	7.25	8.8
pH_GEN	7.28	7.46	7.49		6.91	7.11	7.31	7.45	6.94	6.74	7.14	7.38	6.97	8.01	8.18
TRACE & TOXIC															
Al	0.05	0.18	0.18												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Ranganadi NT Road crossing(36-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Ranganadi

Sub Division: Subansiri Sub-Division, Naharlag

	Winter (Nov-Feb)						
PARAMETERS	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2009-2010	2010-2011
Q (cumec)	10.06	6.039	5.100	42.19	6.120	8.656	4.100
BIOLOGICAL/BACTERIOLOGICAL							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT			59.27		80.5	80	70
Alk-Phen			0.12		0	0	0
CO ₃	0	0	0.22		0	0	0
Ca	19.7	28.06	26.88	15	24	27.52	15.48
Cl	12.43	9.09	7.56	8.16	29.82	9	7
F		1.33	0.5				
Fe	0.15	0.74	0.22				
HCO ₃	42.7	64.98	49.79	29.89	98.21	97.6	85.4
K	1.21	0.44	1.21	1.21	1.17	0.1	0.19
Mg	6.26	17.15	2.91	0.73	2.31	3.1	14.45
NO ₃ -N			0.7				
Na	4.5	3.41	3.01	3.5	2.76	5.54	2.58
P-Tot							
SO ₄	0.94	2.48	1.93		6.72		
o-PO ₄ -P	0.13	0.16	0.04				
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	75.32	137.86	83.4	40.54	69.62	81.72	98.91
Na%	17.11	6.78	10.22	15.34	7.81	12.87	5.4
RSC	0.1	0.06	0		0.22	0	0
SAR	0.3	0.14	0.17	0.24	0.14	0.27	0.11
PESTICIDES							
PHYSICAL							
EC_FLD					130	180.1	161.4
EC_GEN	143.57	140	136.7		130	180.1	161.4
Secchi	49.25	68.5	71	37.5	60	68.8	38.7
TDS	330	230			65.1	120	108
Temp	16	17	17.5			13	12
Turb	0.3	4.82	0.64				
pH_FLD					8.16	8.23	7.32
pH_GEN	7.8	8.05	8.02		8.2	8.2	7.32
TRACE & TOXIC							
Al	0.19	0.3					

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Ranganadi NT Road crossing(36-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Ranganadi

Sub Division: Subansiri Sub-Division, Naharlag

Winter (Nov-Feb)							
PARAMETERS	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	7.887	6.503	3.316	2.693	4.273	2.661	5.14
BIOLOGICAL/BACTERIOLOGICAL							
COD							96
DO		7.2	8.9	8.6	6.9	8.1	
DO_SAT%		69.86	92.24	89.15	80.48	85.56	
CHEMICAL							
ALK-TOT	108			70	74	76	12
Alk-Phen	0			0	5.98	0	0
CO3	0	0	0	0	7.2	0	0
Ca	12.04	15.48	25.8	25.8	34.4	20.64	4.46
Cl	13	8	11	9	9	8	12.04
F							
Fe		0.13	62.27				
HCO3	131.76	68.32	65.88	85.4	75.64	92.72	14.64
K	0.18	0.4	0.19	1.92	2.05	2.15	1
Mg	13.42	2.06	6.19	4.13	9.29	39.22	6.19
NO3-N							
Na	1.2	3.25	3.7	7.48	3.96	4.1	1.1
P-Tot							0.45
SO4	1.31	1.1	1.22	2.31	2	2.21	1.1
o-PO4-P							
CHEMICAL INDICES							
HAR_Ca							85.14
HAR_Total	86.02	47.28	90.29	81.71	124.71	215.02	34.06
Na%	2.96	12.93	8.2	16.25	6.37	3.97	
RSC	0.45	0.18	0	0	0	0	
SAR	0.06	0.21	0.17	0.36	0.15	0.12	
PESTICIDES							
PHYSICAL							
EC_FLD	164.1	155	238	140	120	120	
EC_GEN	164.1	143.8	165.4	119.2	159	162.3	156.2
Secchi	30.1	38.7	64.5	64.5	86	51.6	
TDS	110	96	111	85	107	109	105
Temp	13	14	17.8	17.9	23.3	18	
Turb							
pH_FLD	7.35	7.2	7.5	8.1	8.2	7.1	
pH_GEN	7.35	7.26	7.37	7.45	7.6	8.25	7.89
TRACE & TOXIC							
Al							

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Ranganadi NT Road crossing(36-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Ranganadi

Sub Division: Subansiri Sub-Division, Naharlag

Summer (Mar-May)														
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
63.88	5.886	3.849	2.072	5.024			2.394	10.32	8.339	2.124	1.900	5.034	2.566	13.42
														72
									9.1	8.1	7.8	8.8	7.9	
									108.14	92.73	92.81	104.54	83.53	
				64	32	72	70	76		24	38	50	76	74.53
				0	0	0	0	0		0	0	0	0	0.26
0	0.3	0		0	0	0	0	0	0	0	0	0	0	0.31
14.6	8.8	36.8	19.6	12	10.32	20.64	18.92	20.64	29.24	27.52	18.92	13.76	13.76	13.47
11.54	9.23	5.33	4.61	113.6	8	9	4	8	10	7	15	8	6	10.71
	0.76	0.5												
0.2	0.35								0.13					
39.04	111.02	64.05	76.86	78.08	39.04	87.84	85.4	92.72	75.64	29.28	46.36	61	92.72	90.3
0.94	1.02	2.35	0.82	1.17	4.58	0.11	0.14	0.17	0.21	0.18	1.26	1.6	2.18	1.67
7.84	2.89	5.83	0.85	3.4	3.1	6.19	7.22	6.19	1.03	8.26	7.22	5.16	14.45	5.06
	0.99													
2.17	2.6	4.37	4	4.83	7.27	3.7	5.46	4.25	4.1	3.65	6.15	4.25	4.1	5.97
0.65	1.2							1.21	1.31	1.22	1.96	1.95	2.1	
0.19	0.05													
														171.94
69.15	34.02	116.3	52.54	44.17	38.72	77.39	77.38	77.39	77.39	103.22	77.38	55.9	94.61	68.78
5.22	14.77	7.41	14	18.78	26.28	9.45	13.35	10.69	10.32	7.16	14.55	13.83	8.45	
0	1.15	0		0.4	0	0	0	0	0	0	0	0	0	
0.1	0.2	0.18	0.24	0.32	0.51	0.18	0.27	0.21	0.2	0.16	0.31	0.25	0.18	
				139.1	196.5	140.5	185.7	197.8	193	195	142	220	172	
65.62	132.75	185.2			96.5	140.5	185.7	197.8	167.1	195.7	176.5	65.2	195.1	183.2
36.5	22	92	49	30	25.8	51.6	47.3	51.6	73.1	68.8	47.3	34.4	34.4	
290				93	32	110	125	132	112	131	118	44	131	123
21.5	22	20		32.9	27.5	19	20	20	24.2	22.5	24.9	24	18.5	
0.85	1.6	0.49												
				7.2	7.57	7.5	7.62	6.8	6.7	7.8	8.1	7.1	7.2	
7.3	7.36	7.2			7.57	7.5	7.62	6.8	6.78	7.52	7.15	7.83	8.2	7.57
0.1	0.1													

HISTORY SHEET (WATER QUALITY)

VOLUME - III

Site : Chouldhowaghat State : Assam Basin : BRAHMAPUTRA Tributary : Subansiri Sub-Sub Tributary : - Division : Upper Brahmaputra Division (UBD), Dibrugarh Drainage Area : 24380.0 Sq. Km. Latitude : 27°26'51" Current Zero of Gauge (m) : 93	Water Year : 2017 - 2018 Code : 021-UBDDIB District : Lakhimpur Independent River : Brahmaputra Sub Tributary : - Local River : Subansiri Sub-Division : Subansiri Sub-Division, Naharlagun, Bank : Right Longitude : 94°15'10"	
CATEGORY	Opening Date	Closing Date
Gauge	: 05-16-1971	
Discharge	: 09/01/1982	
Sediment	: 11/01/1987	
Water Quality	: 12/01/1988	
Reduced Level	Opening Date	Closing Date
93.0	15/05/1978	

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Chouldhowaghat(021-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Subansiri

Sub Division: Subansiri Sub-Division, Naharlagun, Itana

PARAMETERS

	15/07/2017	15/10/2017	15/01/2018	15/04/2018
Q (cumec)	4179	3528	447.49	1270
CHEMICAL				
K(mg/L)			1.15	1.18
Na(mg/L)			1.2	6.24
NO ₂ -N(mg/L)				
F(mg/L)				
NH ₃ -N(mgN/L)				
Cl(mg/L)	8	17.2	30.96	9.37
Ca(mg/L)	20.64	3	4.91	5.89
CO ₃ (mg/L)	0	0	0	0.1
B(mg/L)				
ALK-TOT(mgCaCO ₃ /L)	92	56	148	37.87
HCO ₃ (mg/L)	112.24	68.32	180.56	46
Alk-Phen(mgCaCO ₃ /L)	0	0	0	0.08
SO ₄ (mg/L)	2.33	2.3	1.3	
SiO ₂ (mg/L)				
P-Tot(mgP/L)	0.45	0.47	0.47	
Mg(mg/L)	8.26	3.1	4.13	6.55
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
DO_SAT%(Percentage)	5.1			
Tcol-MPN(MPN/100mL)				
Fcol-MPN(MPN/100mL)				
Chl-a(µg/L)				
COD(mg/L)	120	104	120	48
BOD ₃₋₂₇ (mg/L)				

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Chouldhowaghat(021-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Subansiri

Sub Division: Subansiri Sub-Division, Naharlagun, Itana

	15/07/2017	15/10/2017	15/01/2018	15/04/2018
PHYSICAL				
Temp(Degrees Celsius (°C))	28.5			
EC_FLD(μmho/cm)	95			
Odour_Code(-)	odour free	odour free	odour free	odour free
TDS(mg/L)	95	53	105	58
SS(mg/L)				
EC_GEN(μmho/cm)	141.5	78.9	156.6	86
pH_GEN(pH unit)	8.46	77.17	7.76	7.38
pH_FLD(pH unit)	7.5			
Colour_Cod(-)	Brown	Clear	Clear	Clear
CHEMICAL INDICES				
HAR_Ca(mgCaCO3/L)	266.62	50.62	76.96	102.29
HAR_Total(mgCaCO3/L)	106.65	20.25	30.78	40.92

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Chouldhowaghat(021-UBDDIB)

Local River: Subansiri

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Subansiri Sub-Division, Naharlagun, Itanagar

PARAMETERS	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	11220.64	379.35	2327.07	4338.61	620.74	1207.46
CHEMICAL							
Cl	4	30.96	8	16.38	12.6	30.96	9.37
HCO3	4	180.56	46	101.78	90.28	180.56	46
P-Tot	3	0.47	0.45	0.46	0.46	0.47	
Na	2	6.24	1.2	3.72		1.2	6.24
Alk-Phen	4	0.08	0	0.02	0	0	0.08
ALK-TOT	4	148	37.87	83.47	74	148	37.87
SO4	3	2.33	1.3	1.98	2.32	1.3	
CO3	4	0.1	0	0.03	0	0	0.1
Mg	4	8.26	3.1	5.51	5.68	4.13	6.55
Ca	4	20.64	3	8.61	11.82	4.91	5.89
K	2	1.18	1.15	1.16		1.15	1.18
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	4	120	48	98	112	120	48
DO_SAT%	1	5.1	5.1	5.1	5.1		
PHYSICAL							
TDS	4	105	53	77.75	74	105	58
pH_GEN	4	77.17	7.38	25.19	42.81	7.76	7.38
EC_GEN	4	156.6	78.9	115.75	110.2	156.6	86
pH_FLD	1	7.5	7.5	7.5	7.5		
Temp	1	28.5	28.5	28.5	28.5		
EC_FLD	1	95	95	95	95		
CHEMICAL INDICES							
HAR_Total	4	106.65	20.25	49.65	63.45	30.78	40.92
HAR_Ca	4	266.62	50.62	124.13	158.62	76.96	102.29

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Chouldhowaghat(021-UBDDIB)

Local River: Subansiri

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Subansiri Sub-Division, Naharlagun, Itanaga

	Flood (Jun-Oct)														
PARAMETERS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	5020	4667	3840	4619	3388	4191	3492	6650	11731	7293	4415	3072	2820	5248	3853.5
BIOLOGICAL/BACTERIOLOGICAL															
COD															112
DO											8.15	8.85	7.85	8.4	
DO_SAT%											99.62	112.1	102.13	103.63	5.1
CHEMICAL															
ALK-TOT					54	40	52	50	48	42	46	51	62	50	74
Alk-Phen					0	0	0	0	0	0	0	0	0	5.98	0
CO3	0	0	0.6		0	0	0	0	0	0	0	0	0	7.2	0
Ca	13.8	18	13.3		12.4	14.4	20.64	17.2	15.48	12.04	24.25	17.2	18.92	15.48	11.82
Cl	9.7	11.54	5.68		216.96	18.11	9.5	9	7.5	18	12.65	10	5	10	12.6
F			0.38												
Fe	0.17	0.45	0.41							0.15	45.49				
HCO3	44.73	31.72	53.68		65.88	48.8	63.44	61	58.56	51.24	58.32	62.22	75.64	46.36	90.28
K	0.44	1.06	0.86				2.36	1.44	1.02	0.13	0.14	0.19	1.53	1.35	
Mg	5.22	9.42	3.83		5.04	6.32	4.13	9.8	9.8	10.83	2.74	5.16	8.77	10.32	5.68
NO3-N			0.78												
Na	0.77	0.85	1.15				1.71	2.59	2.3	2.5	3.76	3.95	3.77	3.87	
P-Tot															0.46
SO4	1.97	1.94	1.99							1.1	1.2	1.24	1.24	1.74	2.32
o-PO4-P	0.15	0.1	0.12												
CHEMICAL INDICES															
HAR_Ca															158.62
HAR_Total	56.27	84.23	49.2		52	62.32	68.81	83.85	79.55	75.25	70.95	64.5	83.86	81.7	63.45
Na%	3.32	2.28	5.26				4.99	6.29	7.17	6.56	10.61	11.79	9.93	9.25	
RSC	0.04	0	0.12		0.05	0	0	0	0	0	0	0	0	0	
SAR	0.05	0.04	0.07				0.09	0.12	0.13	0.12	0.2	0.21	0.19	0.19	
PESTICIDES															
PHYSICAL															
EC_FLD						103.95	109.05	100.35	115.4		107	119.5	124	99.5	95
EC_GEN	71.54	84.68	108.45		113.2	54	109.05	100.35	115.4	155.85	121.35	102.4	109.95	96	110.2
Secchi	34.87	45	33.25		31	36	51.6	43	38.7	30.1	60.2	43	47.3	38.7	
TDS	227.83	255			63.7	44.55	75	67	77.5	105	81	68.5	74	64.5	74
Temp	21.11	20.5	24	22.25		27.3	22.5	29.3	22	24	26.05	27.65	29.05	26	28.5
Turb	2.25	1.85	6.95							2.83					
pH_FLD						7.49	7.57	7.72	7.05		7.9	8.2	8.45	7.45	7.5
pH_GEN	7.43	7.16	7.28		7.56	7.51	7.55	7.72	7.05	6.39	7.33	7.81	7.51	8.04	42.81
TRACE & TOXIC															
AI	0.26	0.21	0.28												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Chouldhowaghat(021-UBDDIB)

Local River: Subansiri

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Subansiri Sub-Division, Naharlagun, Itanaga

	Winter (Nov-Feb)							
PARAMETERS	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Q (cumec)	867.1	872.1	930.3	903.8	585.3	1221	754.1	680.0
BIOLOGICAL/BACTERIOLOGICAL								
COD								
DO								
DO_SAT%								
CHEMICAL								
ALK-TOT				39.52	80.5	32.95	50	58
Alk-Phen				0.01	0	0.19	0	0
CO3	0	0	0.33	0.01	0	0.23	0	0
Ca	16.3	29.49	27.2	22	24	10.21	20.64	15.48
Cl	12.43	8.45	8.7	28.05	22.01	9.56	9	8
F		1.14	0.5					
Fe	0.18	1.13	0.24					
HCO3	40.26	70.41	49.71	48.19	98.21	39.73	61	70.76
K	0.45	0.25	1.25	1.41	1.56	2.8	0.14	1.05
Mg	6.8	14.39	3.4	0.73	10.93	3.52	4.13	15.48
NO3-N			1.28					
Na	2.25	1.52	2.99	4	5.29	4.35	2.22	3.85
P-Tot								
SO4	0.91	2.77	1.25		29.76			
o-PO4-P	0.11	0.13	0.03					
CHEMICAL INDICES								
HAR_Ca								
HAR_Total	69.1	130.21	82.17	58.04	105.56	40.19	68.81	103.2
Na%	8.32	2.86	12.63	12.73	9.72	17.85	6.57	7.47
RSC	0.04	0.07	0.08	0	0	0	0	0
SAR	0.13	0.06	0.19	0.23	0.22	0.3	0.12	0.17
PESTICIDES								
PHYSICAL								
EC_FLD					126.4	225	134.1	139.3
EC_GEN	137.33	215	121.45	100.1	126.4	225	134.1	139.3
Secchi	40.75	72.5	68	55	60	25.52	51.6	38.7
TDS	340	280		85	63.7	151	90	93
Temp	16.5	15.5	16			21	22.9	15.5
Turb	0.3	3	1					
pH_FLD					7.42	7.78	8.01	7.36
pH_GEN	7.75	8.08	7.81	7.19	7.4	7.8	8.01	7.36
TRACE & TOXIC								
AI	0.29	0.28						

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Chouldhowaghat(021-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Subansiri

Sub Division: Subansiri Sub-Division, Naharlagun, Itanaga

Winter (Nov-Feb)						
2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
604.2	653.8	902.7	607.2	723.0	542.6	447.49
						120
	8.2	8.8	8.8	7.9	8.6	
	79.57	91.22	92.97	93.86	90.84	
102			58	56	72	148
0			0	0	0	0
0	0	0	0	0	0	0
12.04	12.04	18.92	29.24	30.96	25.8	4.91
13	9	11	9	6	9	30.96
	0.09	55.35				
124.44	65.88	63.44	70.76	68.32	87.84	180.56
0.11	0.65	0.21	1.1	1.91	1.17	1.15
15.48	22.7	8.26	1.03	6.19	15.48	4.13
2.7	3	3.6	3.22	3.76	3.6	1.2
						0.47
1	1.2	1.2	2.35	2.05	2.3	1.3
						76.96
94.6	124.68	81.72	77.39	103.19	129	30.78
5.89	4.99	8.77	8.18	7.21	5.7	
0.17	0	0	0	0	0	
0.12	0.12	0.17	0.16	0.16	0.14	
140.5	147	159	151	131	100	
140.5	143.7	140.2	118.5	141.1	145.7	156.6
30.1	30.1	47.3	73.1	77.4	64.5	
94	96	94	79	93	98	105
14	14	17.9	18.1	24.1	18	
7.07	7.63	8.3	7.8	8.8	7.5	
7.07	7.24	7.38	7.4	7.89	8.26	7.76

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Chouldhowaghat(021-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Subansiri

Sub Division: Subansiri Sub-Division, Naharlagun, Itanaga

Summer (Mar-May)														
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1441	1621	1644	1073	583.1	964.7	942.7	1751	2481	1887	989.5	693.1	1427	1163	1270
														48
									8.5	8.2	8.1	8.8	8.2	
									99.22	95.65	98.05	102.68	86.77	
			36.08	42	38	40	44	38		66	44	52	38	37.87
			0.04	0	0	0	0	0		0	0	0	0	0.08
0	0.3	0	0.05	0	0	0	0	0	0	0	0	0	0	0.1
17.2	4	32	11.4	10.4	5.16	12.04	12.04	12.04	12.04	8.6	12.04	15.48	17.2	5.89
10.47	4.97	7.46	2.84	19.17	10	11	10	9	10	8	11	10	7	9.37
	0.95	0.5												
0.28	0.35								0.09					
25.62	87.84	29.89	43.92	51.24	46.36	48.8	53.68	46.36	39.04	80.52	53.68	63.44	46.36	46
0.9	0.62	0.78	1.09	0.39	1.25	0.1	0.11	0.24	0.2	0.19	0.97	2.1	1.6	1.18
9.42	5.47	2.92	2.19	7.17	4.13	2.06	3.1	7.22	3.1	15.48	9.29	5.16	12.38	6.55
	0.99													
2.55	0.6	1.38	3.29	1.38	1.86	4.24	3.7	3.1	4.25	3.7	3.1	4.8	3.8	6.24
1.56	1.1							1	1	1.21	1.95	2.12	2.3	
0.11	0.04													
														102.29
82.23	32.78	92.15	37.61	55.87	30.11	38.68	43.02	60.18	43.02	86	68.81	60.2	94.58	40.92
5.89	3.74	3.13	15.55	5.09	11.39	19.26	15.78	10.09	17.67	8.61	8.84	14.3	7.93	
0	0.8	0	0	0	0.16	0.03	0.02	0	0	0	0	0	0	
0.12	0.05	0.06	0.23	0.08	0.15	0.3	0.25	0.17	0.28	0.17	0.16	0.27	0.17	
				75.6	90.6	120.9	80.7	87.8	87	154	150	98	125	
112.92	93.65	69.8	74.9	76	91	120.9	80.7	87.8	63.2	109.4	88.4	86.2	97.8	86
43	10	80	28.5	26	12.9	30.1	30.1	30.1	30.1	21.5	30.1	38.7	43	
350			59.2	51	61	86	54	59	42	73	59	58	66	58
19.5	18	18.5			21	20	20	19	23.7	23.3	25.1	23.5	18.9	
0.75	2.86	4.01												
				7.1	7.32	7.4	7.67	6.56	6.6	7.9	7.2	7	7.8	
7.74	7.67	7.24	7.56	7.1	7.3	7.4	7.67	6.56	6.93	7.36	8.23	7.9	8.14	7.38
0.07	0.08													

HISTORY SHEET (WATER QUALITY)

Water Year	: 2017 - 2018
Site	: Chenimari (Khowang)
Code	: 013-UBDDIB
State	: Assam
District	: Dibrugarh
Basin	: BRAHMAPUTRA
Independent River	: Brahmaputra
Tributary	: Buridehing
Sub Tributary	: -
Sub-Sub Tributary	: -
Local River	: Buridehing
Division	: Upper Brahmaputra Division (UBD), Dibrugarh
Sub-Division	: Upper Brahmaputra Sub-Division-I,
Drainage Area	: 4923.0 Sq. Km.
Bank	: Left
Latitude	: 27°18'41"
Longitude	: 94°52'57"
Current Zero of Gauge (m)	: 92

CATEGORY	Opening Date	Closing Date
Gauge	: 05/01/1971	
Discharge	: 06/01/1978	
Sediment	: 06/01/1978	
Water Quality	: 06/01/1978	

Reduced Level	Opening Date	Closing Date
92.0	29/04/2014	31/12/2020
92.0	17/05/1971	29/04/2014

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Chenimari (Khowang)(013-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Buridehing

Sub Division: Upper Brahmaputra Sub-Division-I, D

PARAMETERS	15/07/2017	15/10/2017	15/01/2018	15/04/2018
Q (cumec)	797.44	236	31.48	37.18
CHEMICAL				
ALK-TOT(mgCaCO ₃ /L)	63.18	106	50	60.64
Na(mg/L)			3.7	4.3
Alk-Phen(mgCaCO ₃ /L)	0	0	0	0.4
P-Tot(mgP/L)		0.43	0.44	
SiO ₂ (mg/L)				
NH ₃ -N(mgN/L)				
SO ₄ (mg/L)	2.4	2.1	1.25	
K(mg/L)			1.05	2.11
Ca(mg/L)	8.6	6	7.14	6.73
B(mg/L)				
F(mg/L)				
HCO ₃ (mg/L)	77.08	129.32	61	73
NO ₂ -N(mg/L)				
CO ₃ (mg/L)	0	0	0	0.48
Mg(mg/L)	10.32	2.06	4.13	7.99
Cl(mg/L)	9	22.36	20.64	4.91
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
Tcol-MPN(MPN/100mL)				
COD(mg/L)	80	64	104	56
DO_SAT%(Percentage)	7.2			
Chl-a(µg/L)				
Fcol-MPN(MPN/100mL)				
BOD3-27(mg/L)				

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Chenimari (Khowang)(013-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Buridehing

Sub Division: Upper Brahmaputra Sub-Division-I, D

PARAMETERS	15/07/2017	15/10/2017	15/01/2018	15/04/2018
PHYSICAL				
EC_FLD($\mu\text{mho/cm}$)	167			
pH_GEN(pH unit)	8.3	7.5	8.6	7.7
SS(mg/L)				
Odour_Code(-)	odour free	odour free	odour free	odour free
Temp(Degrees Celsius ($^{\circ}\text{C}$))	26			
EC_GEN($\mu\text{mho/cm}$)	58	140.6	300	189
Colour_Cod(-)	Brown	Brown	Other	Clear
pH_FLD(pH unit)	7.6			
TDS(mg/L)	27	68	150	94
CHEMICAL INDICES				
HAR_Total(mgCaCO ₃ /L)	61.63	30.15	40.08	48.02
HAR_Ca(mgCaCO ₃ /L)	154.08	75.38	100.19	120.04

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Chenimari (Khowang)(013-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Buridehing

Sub Division: Upper Brahmaputra Sub-Division-I, Dibr

PARAMETERS	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	1580.43	16.59	259.25	489.08	80.36	110.36
CHEMICAL							
Cl	4	22.36	4.91	14.23	15.68	20.64	4.91
HCO3	4	129.32	61	85.1	103.2	61	73
P-Tot	2	0.44	0.43	0.44	0.43	0.44	
Na	2	4.3	3.7	4		3.7	4.3
Alk-Phen	4	0.4	0	0.1	0	0	0.4
ALK-TOT	4	106	50	69.95	84.59	50	60.64
SO4	3	2.4	1.25	1.92	2.25	1.25	
CO3	4	0.48	0	0.12	0	0	0.48
Mg	4	10.32	2.06	6.12	6.19	4.13	7.99
Ca	4	8.6	6	7.12	7.3	7.14	6.73
K	2	2.11	1.05	1.58		1.05	2.11
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	4	104	56	76	72	104	56
DO_SAT%	1	7.2	7.2	7.2	7.2		
PHYSICAL							
TDS	4	150	27	84.75	47.5	150	94
pH_GEN	4	8.6	7.5	8.03	7.9	8.6	7.7
EC_GEN	4	300	58	171.9	99.3	300	189
pH_FLD	1	7.6	7.6	7.6	7.6		
Temp	1	26	26	26	26		
EC_FLD	1	167	167	167	167		
CHEMICAL INDICES							
HAR_Total	4	61.63	30.15	44.97	45.89	40.08	48.02
HAR_Ca	4	154.08	75.38	112.42	114.73	100.19	120.04

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Chenimari (Khowang)(013-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Buridehing

Sub Division: Upper Brahmaputra Sub-Division-I, Dib

PARAMETERS	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	549.4	866.0	914.2	144.6	240.9	554.3	463.4	477.2	277.4	623.3	550.3	238.0	371.8	473.1	516.7
BIOLOGICAL/BACTERIOLOGICAL															
COD															72
DO											8.5	9.15	8.7	7.55	
DO_SAT%											104.89	109.91	112.13	87.22	7.2
CHEMICAL															
ALK-TOT			59.02		60	60	50	57	61	49	62	65	54	56	84.59
Alk-Phen			0		0	0	0	0	0	0	0	0	0	4.98	0
CO3	0	0	0.86		0	0	0	0	0	0	0	0	0	6	0
Ca	11.47	16.3	18.08		8.8	10.4	12.04	20.64	14.62	10.32	18.32	17.2	18.06	12.04	7.3
Cl	10.3	14.02	8.98		181.1	9.05	8.5	9	8.5	11	12	12	9.5	7	15.68
F			0.51												
Fe	0.2	0.17	0.41							0.12	48.61				
HCO3	45.55	30.5	56.26		73.2	73.2	61	69.54	74.42	59.78	62.46	79.3	65.88	56.12	103.2
K	1.43	0.7	1.29				1.5	1.35	1.57	0.22	0.15	0.2	1.7	1.7	
Mg	8.34	8.87	5.75		7.44	6.2	9.29	6.71	12.38	9.29	8.41	8.26	4.65	13.96	6.19
NO3-N			0.39												
Na	1068.27	1.45	2.28				3.04	2.86	2.9	4	3.71	3.86	3.94	3.89	
P-Tot															0.43
SO4	2.62	2.02	2.92							1.06	1.31	1.2	1.19	2.19	2.25
o-PO4-P	0.07	0.18	0.13												
CHEMICAL INDICES															
HAR_Ca															114.73
HAR_Total	63.43	77.71	66.79		53	51.82	68.81	79.56	88.13	64.49	77.4	77.42	64.5	88.29	45.89
Na%	39.96	3.88	10.19				8.92	7.36	8.32	12.02	11.15	9.9	11.94	8.64	
RSC	0.06	0	0.33		0.32	0.17	0	0	0	0	0	0	0	0	
SAR	70.86	0.07	0.16				0.16	0.14	0.16	0.22	0.2	0.19	0.22	0.18	
PESTICIDES															
PHYSICAL															
EC_FLD					80.1	101.8	149.3	147.15	129.4		123	93	95	94	167
EC_GEN	78.23	64.58	150.3		80.1	101.85	149.5	147.05	129.4	145.61	96.5	116.18	271	170.5	99.3
Secchi	28.67	40.75	39.1		22	26	30.1	51.6	36.55	25.19	45.15	42.49	45.15	30.1	
TDS	236.67	285			80	20				67	48.5	68	135.65	85	47.5
Temp	20.83	19.5	21.2	28						19.4	26.4	24.81	28.75	22.5	26
Turb	4.53	3.35								13.48					
pH_FLD					7.69	7.31	7.32	7.67	7.66		7.75	7.35	7.5	7.85	7.6
pH_GEN	7.5	7.3	7.88		7.69	7.33	7.35	7.67	7.66	6.76	7.35	7.5	8.05	7.2	7.9
TRACE & TOXIC															
AI	0.04	0.15	0.23												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Chenimari (Khowang)(013-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Buridehing

Sub Division: Upper Brahmaputra Sub-Division-I, Dib

	Winter (Nov-Feb)						
PARAMETERS	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	35.40	53.70	27.75	33.66	39.40	14.60	22.68
BIOLOGICAL/BACTERIOLOGICAL							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT					119.5	57.5	106
Alk-Phen					0	0.15	0
CO3	0	0	0.36		0	0.18	0
Ca	26.6	60.09	28.8	21.2	43	15.71	15.48
Cl	11.89	14.82	9.41	12.07	29.82	7.55	11
F		1.52	0.5				
Fe	0.15	0.62	0.3				
HCO3	42.7	110.18	68.93	90.28	145.79	69.78	129.32
K	0.86	0.3	1.21	1.41	1.17	2.6	0.1
Mg	9.42	16.46	3.46	0.49	9.36	2.12	3.1
NO3-N			0.99				
Na	5.5	3.81	2.9	6	3.91	3.6	6.69
P-Tot							
SO4	1.61	3.22	1.25		5.76		
o-PO4-P	0.04	0.14	0.03				
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	105.73	214.5	86.43	55.03	146.48	48.11	51.62
Na%	10.51	4.81	9.94	18.72	5.46	13.25	22.03
RSC	0	0.17	0.03		0	0.19	1.09
SAR	0.24	0.12	0.16	0.35	0.14	0.23	0.41
PESTICIDES							
PHYSICAL							
EC_FLD					212	245	141.4
EC_GEN	255.95	200	202.62	110	22	245	141
Secchi	66.5	146.83	68.27	53	107.5	39.27	38.7
TDS	250	173.33		78	80	121	
Temp	16.75	16.67	20.85				
Turb	0.35	3.39	1.44				
pH_FLD					7.77	7.74	7.72
pH_GEN	7.83	7.98	7.57	7.69	7.8	7.7	7.7
TRACE & TOXIC							
AI	0.09	0.22					

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Chenimari (Khowang)(013-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Buridehing

Sub Division: Upper Brahmaputra Sub-Division-I, Dib

Winter (Nov-Feb)							
2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
15.00	27.40	19.06	21.65	10.10	23.00	16.15	31.48
							104
		6.2	8.9	7.1	8.2	7.8	
		64.19	86.53	72.01	106.71	79.03	
102	148	98	80	100	94	78	50
0	0	0	0	0	4.98	0	0
0	0	0	0	0	6	0	0
18.92	20.64	3.44	22.36	34.4	25.8	17.2	7.14
11	16	12	15	14	14	10	20.64
		0.13	65.73				
124.44	180.56	119.56	97.6	122	102.48	95.16	61
1.04	0.1	0.65	0.19	1.94	1.7	2.23	1.05
16.51	16.51	23.74	13.42	8.26	20.64	24.77	4.13
3.04	2.78	3.45	3.75	10.3	3.9	4.2	3.7
							0.44
	1.1	1.1	1.22	2.15	2.21	2.2	1.25
							100.19
116.09	120.39	107.52	111.82	120.42	150.5	146.21	40.08
5.37	4.81	6.55	6.83	15.48	5.3	5.82	
0	0.57	0	0	0	0	0	
0.12	0.11	0.15	0.15	0.41	0.14	0.15	
185.2	150.9	272	275	92	95	90	
185.2	150.9	258		283	182	90	300
47.3	51.6	8.6	55.9	86	64.5	43	
		129		141	90.9	75	150
		17.3	14.9	16.5	29.5	16	
7.52	7.44	6.73	7.9	7.5	7.7	7.4	
7.52	7.44	7.3		8.6	8.5	7.9	8.6

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Chenimari (Khowang)(013-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Buridehing

Sub Division: Upper Brahmaputra Sub-Division-I, Dib

Summer (Mar-May)														
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
279.4	183.2	123.5	17.05	69.92	15.68	467.7	24.59	41.08	53.52	12.52	27.75	225.0	65.00	37.18
														56
									8.8	8.9	8.6	7.6	7.9	
									100.69	97.98	104.23	83.59	92.1	
			45.82	80	76	20	100	60		78	38	48	56	60.64
			0.16	0	3.98	0	0	0		0	0	4.98	0	0.4
0	0.3	0	0.19	0	4.8	0	0	0	0	0	0	6	0	0.48
18.1	9.4	20.8	7.4	17.6	12.04	10.32	20.64	15.48	15.48	20.64	15.48	10.32	13.76	6.73
12.07	7.1	8.16	4.61	20.94	8	12	9	13	13	14	17	9	9	4.91
	0.76	0.5												
0.28	0.35								0.09					
59.78	159.21	40.26	55.51	97.6	82.96	24.4	122	73.2	46.36	95.16	46.36	46.36	68.32	73
1.76	0.82	1.17	1.6	1.56	3.95	0.2	0.15	0.18	0.23	0.2	1.71	1.56	1.87	2.11
6.26	3.04	1.94	1.94	5.22	6.19	3.1	11.35	7.22	2.06	18.58	11.35	13.42	9.29	7.99
	0.6													
3.43	4.21	2.76	2.99	4.6	7.95	5.2	4.8	4.6	3.25	3.75	7.65	4.25	3.65	4.3
0.96	1.01							1	1.1	1.21	2.05	1.85	2.12	
0.06	0.04													
														120.04
71.32	36.16	60.1	26.6	65.77	55.89	38.72	98.89	68.78	47.28	129.02	85.99	81.72	73.11	48.02
9.03	19.83	8.91	18.57	12.92	22.21	22.59	9.59	12.73	12.98	5.98	15.97	10.02	9.58	
0	1.9	0	0.39	0.29	0.41	0	0.04	0	0	0	0	0	0	
0.17	0.31	0.16	0.25	0.25	0.46	0.36	0.21	0.24	0.21	0.14	0.36	0.21	0.19	
			118.3	158.3	142.1	95.5	180	162	98	95	158	93	89	
177.15	120.45	107.6	118.3	158	142	95.5	180	162	131	150	192	96	132	189
45.25	23.5	52	18.5	44	30.1	25.8	51.6	38.7	38.7	51.6	38.7	25.8	34.4	
260			75	106	84.4				65	71	96	48	66	94
18.75	17	18.5		32.6				25.8	22.2	20.5	25.8	20	23	
0.7	3.41	1.84												
			7.69	7.4	7.32	6.9	7.12	6.67	7.6	7.6	7.7	7.8	7.6	
7.48	7.77	7.61	7.69	7.4	7.3	6.9	7.1	6.67	6.6	7.2	6.9	7.5	7.3	7.7
0.16	0.27													

HISTORY SHEET (WATER QUALITY)

Water Year	: 2017 - 2018
Site	: Sivasagar
Code	: 018-ubddib
State	: Assam
District	: Sibsagar
Basin	: BRAHMAPUTRA
Independent River	: Brahmaputra
Tributary	: Dikhow
Sub Tributary	: -
Sub-Sub Tributary	: -
Local River	: Dikhow
Division	: Upper Brahmaputra Division (UBD), Dibrugarh
Sub-Division	: Upper Branchmaputra Sub-Division-II,
Drainage Area	: 3425.0 Sq. Km.
Bank	: Left
Latitude	: 26°58'54"
Longitude	: 94°34'44"
Current Zero of Gauge (m)	: 80

CATEGORY	Opening Date	Closing Date
Gauge	: 07/01/1971	
Discharge	: 02/01/1978	
Sediment	: 04/01/1981	
Water Quality	: 04/01/1981	
Reduced Level	Opening Date	Closing Date
80.0	29/04/2014	-

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Sivasagar(018-ubddib)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Dikhow

Sub Division: Upper Branchmaputra Sub-Division-II, Jorhat

PARAMETERS	15/07/2017	15/10/2017	15/01/2018	15/04/2018
Q (cumec)	347.78	109.22	12.62	26.74
CHEMICAL				
K(mg/L)			0.81	1.98
F(mg/L)				
P-Tot(mgP/L)	0.47	0.43	0.42	
Mg(mg/L)	6.19	4.13	4.13	11.35
SiO2(mg/L)				
NO2-N(mg/L)				
HCO3(mg/L)	65.88	85.4	119.56	46
Na(mg/L)			6.07	4.54
SO4(mg/L)	1.98	2	1.2	
B(mg/L)				
NH3-N(mgN/L)				
ALK-TOT(mgCaCO3/L)	54	70	98	37.82
Cl(mg/L)	11	17.2	70.52	11.6
Alk-Phen(mgCaCO3/L)	0	0	0	0.06
CO3(mg/L)	0	0	0	0.07
Ca(mg/L)	15.48	7	7.14	5.05
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
BOD3-27(mg/L)				
COD(mg/L)	40	104	32	44
Tcol-MPN(MPN/100mL)				
Chl-a(µg/L)				
DO_SAT%(Percentage)	7.8			
FCol-MPN(MPN/100mL)				

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Sivasagar(018-ubddib)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Dikhow

Sub Division: Upper Branchmaputra Sub-Division-II, Jorhat

PARAMETERS	15/07/2017	15/10/2017	15/01/2018	15/04/2018
PHYSICAL				
pH_FLD(pH unit)	7.5			
pH_GEN(pH unit)	7.61	8.11	7.19	7.19
Colour_Cod(-)	Clear	Clear	Clear	Clear
Temp(Degrees Celsius (°C))	29			
TDS(mg/L)	72	86	152	146
SS(mg/L)				
Odour_Code(-)	odour free	odour free	odour free	odour free
EC_GEN(μmho/cm)	107.4	128.6	226	217
EC_FLD(μmho/cm)	199			
CHEMICAL INDICES				
HAR_Total(mgCaCO3/L)	79.97	39.49	40.08	49.42
HAR_Ca(mgCaCO3/L)	199.94	98.73	100.19	123.54

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Sivasagar(018-ubddb)

Local River: Dikhow

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Upper Branhmaputra Sub-Division-II, Jorhat

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	364	869.42	6.9	138	280.59	21.28	51.82
CHEMICAL							
Cl	4	70.52	11	27.58	14.1	70.52	11.6
HCO₃	4	119.56	46	79.21	75.64	119.56	46
P-Tot	3	0.47	0.42	0.44	0.45	0.42	
Na	2	6.07	4.54	5.31		6.07	4.54
Alk-Phen	4	0.06	0	0.01	0	0	0.06
ALK-TOT	4	98	37.82	64.96	62	98	37.82
SO₄	3	2	1.2	1.73	1.99	1.2	
CO₃	4	0.07	0	0.02	0	0	0.07
Mg	4	11.35	4.13	6.45	5.16	4.13	11.35
Ca	4	15.48	5.05	8.67	11.24	7.14	5.05
K	2	1.98	0.81	1.39		0.81	1.98
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	4	104	32	55	72	32	44
DO_SAT%	1	7.8	7.8	7.8	7.8		
PHYSICAL							
TDS	4	152	72	114	79	152	146
pH_GEN	4	8.11	7.19	7.52	7.86	7.19	7.19
EC_GEN	4	226	107.4	169.75	118	226	217
Temp	1	29	29	29	29		
pH_FLD	1	7.5	7.5	7.5	7.5		
EC_FLD	1	199	199	199	199		
CHEMICAL INDICES							
HAR_Total	4	79.97	39.49	52.24	59.73	40.08	49.42
HAR_Ca	4	199.94	98.73	130.6	149.33	100.19	123.54

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Sivasagar(018-ubddib)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Dikhow

Sub Division: Upper Branhmaputra Sub-Division-II, Jorhat

	Flood (Jun-Oct)														
PARAMETERS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	345.0	185.6	213.9	352.8	299.8	385.8	334.1	483.4	171.1	397.4	320.8	169.0	181.4	320.5	228.5
BIOLOGICAL/BACTERIOLOGICAL															
COD															72
DO											7.9	8.45	8.55	7.9	
DO_SAT%											96.59	105.2	106.14	96.51	7.8
CHEMICAL															
ALK-TOT					74.5	40	53	50.3	49	35		62	68	68	62
Alk-Phen					0	0	0	0	0	0		0	0	3.98	0
CO3	0	0	0.01		0	0	0	0	0	0	0	0	0	4.8	0
Ca	14.27	18.1	12.2		10.4	12.71	13.76	16.34	13.76	10.32	18.92	14.62	30.1	12.04	11.24
Cl	11.01	9.94	6.92		253.79	13.7	9.5	7.5	8.5	8.5	13.5	8.5	12.5	10.5	14.1
F			0.47												
Fe	0.23	0.25	0.34							0.1	46.7				
HCO3	62.63	36.6	40.87		90.89	55.98	64.66	61.36	59.78	42.7	41.48	75.64	82.96	73.2	75.64
K	1.6	0.45	0.66				1.48	1.69	0.21	0.2	0.15	0.19	1.05	1.68	
Mg	7.33	9.9	6.32		5.04	7.6	7.23	9.29	9.81	11.35	5.16	16	7.22	12.9	5.16
NO3-N			0.4												
Na	3.9	3.15	1.3				3.5	3.47	5.1	3.67	3.9	3.9	3.88	3.83	
P-Tot															0.45
SO4	1.82	1.68	1.8							1.12	1.15	1.23	1.23	2.03	1.99
o-PO4-P	0.19	0.24	0.15												
CHEMICAL INDICES															
HAR_Ca															149.33
HAR_Total	66.21	86.51	56.82		47	63.89	64.5	79.56	75.25	73.11	68.8	103.2	105.35	83.85	59.73
Na%	11.09	7.33	6.53				10.76	8.66	15.49	10.29	11	9.17	7.51	8.98	
RSC	0.09	0	0		0.59	0	0	0	0	0	0	0	0	0	
SAR	0.21	0.15	0.09				0.19	0.17	0.29	0.19	0.21	0.18	0.17	0.18	
PESTICIDES															
PHYSICAL															
EC_FLD					103.65	116.57	104.7	100.2	132.7		143	225.5	96.5	249.5	199
EC_GEN	83.81	139.05	86.67		103.5	116.67	104.5	100.2	132.6	131.4	135.1	116.8	137.85	107.75	118
Secchi	35.67	45.25	31.73		26	32	34.4	40.85	34.4	25.8	47.3	36.55	75.25	30.1	
TDS	270	285	185.33		103	43	70	67.5	89	88	90.5	78.5	92.5	71.5	79
Temp	23.33	23	24.4	23.5		27.07	20.5	24.8	21	23.5	25.8	26.95	26.5	25.55	29
Turb	4.27	3	2.1		13.8					38.64					
pH_FLD				7.15	7.55	6.79	7.01	6.9	6.8		7.85	7	7.45	7.1	7.5
pH_GEN	7.22	7.38	6.96		7.55	6.79	7	6.91	6.78	6.55	6.76	6.93	6.76	7.83	7.86
TRACE & TOXIC															
Al	0.06	0.12	0.22												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Sivasagar(018-ubddib)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Dikhow

Sub Division: Upper Branchmaputra Sub-Division-II, Jorhat

Winter (Nov-Feb)

2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
21.52	19.67	20.27	11.35	11.36	12.68	14.07	20.00
		85.13		112.5	41.23	98	100
		0.05		0	0.26	0	0
0	0	0.17		0	0.31	0	0
17.2	48.82	23.52	18.4	35	18.07	51.6	32.68
10.47	9.43	35.83	12.07	22.01	5.54	11	9
	1.52	0.5					
0.15	0.61	0.19					
58.56	91.94	64.57	78.08	137.25	49.67	119.56	122
0.35	0.25	1.49	1.02	9.38	1.61	0.13	0.19
10.45	11.01	1.82	4.01	9.23	3.6	4.13	7.22
		1					
4.65	4.06	2.64	4.6	3.22	4.7	7.43	1.7
1.3	2.69	1.16		4.8			
0.13	0.15	0.04					
86.54	163.56	69.09	62.71	125.97	60.17	146.21	111.78
10.69	6.92	9.33	13.57	4.85	14.16	9.97	3.21
0	0.13	0		0	0	0	0
0.22	0.16	0.15	0.25	0.13	0.26	0.27	0.07
				201	136.7	216	224
51.39	155	154.93	190.2	201	137	216	224
43	118.25	64.3	46	87.5	45.17	129	81.7
210	240	160	210	134	92	145	150
19	21	18.4		26.5	21	17	14
0.1	3.66	0.23	0.7				
				7.7	7.82	8.29	6.9
7.51	8.44	7.31	7.77	7.7	7.8	8.3	6.9
0.09	0.18						

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Sivasagar(018-ubddib)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Dikhow

Sub Division: Upper Branhmaputra Sub-Division-II, Jorhat

Winter (Nov-Feb)						
2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
17.60	8.318	10.04	12.84	11.38	12.26	12.62
						32
	7.9	8.9	7.8	7.9	7.2	
	76.79	92.24	80.7	100.93	77.62	
122			100	84	94	98
0			0	0	8.96	0
0	0	0	0	0	10.8	0
12.04	12.04	18.92	30.96	18.92	17.2	7.14
15	12	14	14	10	10	70.52
	0.09	44.97				
148.84	75.64	139.64	122	102.48	92.72	119.56
0.1	0.85	0.18	4.55	1.98	2.1	0.81
15.48	16.51	33.02	6.19	29.93	28.9	4.13
3.51	3.35	3.85	18.37	4.1	3.8	6.07
						0.42
1.1	1.1	1.18	2.65	2.45	2.61	1.2
						100.19
94.6	98.89	184.88	103.19	172.01	163.42	40.08
7.52	6.85	4.37	26.91	4.9	4.78	
0.57	0	0	0	0	0	
0.16	0.15	0.12	0.79	0.14	0.13	
199.2	253	238	273	123	204	
199.2	217	305	150.5	226	220	226
30.1	30.1	47.3	77.4	47.3	43	
133	146	235	95	152	147	152
17.5	14.8	17.8	17	28	19	
7.47	6.85	7.8	8	7.4	7	
7.47	7	7.3	7.08	7.46	8.21	7.19

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Sivasagar(018-ubddib)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Dikhow

Sub Division: Upper Branhmaputra Sub-Division-II, Jorhat

Summer (Mar-May)														
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
85.37	40.20	95.96	44.87	21.38	13.06	82.70	8.154	11.03		11.10	10.29	76.54	27.02	26.74
														44
									8.9	7.8	7.5	7.7	7.4	
									103.89	91.05	87.43	88.07	81.39	
			49	96	34	30	92	62		102	28	48	38	37.82
			0	1.99	0	0	0	0		0	0	0	0	0.06
0	0.3	0	0	2.4	0	0	0	0	0	0	0	0	0	0.07
22.3	9.4	32	10.6	36.8	13.76	10.32	18.92	13.76	13.76	27.52	34.4	15.48	18.92	5.05
12.07	8.16	5.33	5.33	19.16	11	9	9	11	13	12	14	6	4	11.6
	0.57	0.5												
0.2	0.35								0.15					
21.96	65.42	50.02	59.78	112.24	41.48	36.6	112.24	75.64	143.96	124.44	34.16	58.56	46.36	46
0.57	0.31	1.17	1.09	1.2	4.5	0.18	0.19	0.19	0.17	0.19	0.65	1.91	1.89	1.98
8.32	5.95	2.92	0.24	1.4	4.13	5.16	16.51	14.45	14.45	11.35	34.06	7.22	19.61	11.35
	0.22													
4.5	3.79	3.68	2.39	7.9	7.74	5.89	5.8	4.1	4.2	3.7	10.25	3.76	3.8	4.54
1.51	1.01							1	1	1.27	1.85	1.85	1.95	
0.12	0.03													
														123.54
90.43	48.31	1295	27.51	97.83	51.61	47.3	116.09	94.61	94.61	116.09	227.92	68.78	129.01	49.42
10.41	14.58	7.9	15.28	14.77	22.77	21.34	9.86	8.66	8.86	6.51	8.95	10.36	5.96	
0	0.5	0	0.43	0	0	0	0	0	0.48	0	0	0	0	
0.21	0.24	0.17	0.2	0.35	0.47	0.37	0.24	0.18	0.19	0.15	0.3	0.2	0.15	
			130.4	184.1	215	92.2	231	184.2	260	250	156	138	113	
206.82	140	122.4	130.4	184.1	215	92.2	231	184.2	248	229	490	158.4	194.4	217
55.75	23.5	80	26.5	92	34.4	25.8	47.3	34.4	34.4	68.8	86	38.7	47.3	
270	130	190	130	123	92	62	155	123	166	154	328	106	130	146
22	18	19		32.5	19	18	27.7	23.5	23.7	23.7	23	22	20	
0.75	8.9	0.61	9											
			7.05	7.8	7.37	6.55	7.13	6.96	6.8	7.1	7.2	7.1	7	
7.65	7.8	7.82	7.05	7.8	7.4	6.55	7.13	6.96	7.38	6.86	6.28	7.08	7.67	7.19
0.14	0.35													

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Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Golaghat(026-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Dhansiri (South)

Sub Division: Upper Branchmaputra Sub-Division-II, Jorh

PARAMETERS	15/07/2017	15/10/2017	15/01/2018	15/04/2018
Q (cumec)	595.65	264.73	64.02	41.63
CHEMICAL				
NO ₂ -N(mg/L)				
Cl(mg/L)	9	18.92	37.84	4.91
CO ₃ (mg/L)	0	0	0	0.59
ALK-TOT(mgCaCO ₃ /L)	78	94	64	83.77
Na(mg/L)			5.96	1.4
Alk-Phen(mgCaCO ₃ /L)	0	0	0	0.49
NH ₃ -N(mgN/L)				
Ca(mg/L)	10.32	10	6.25	9.26
SiO ₂ (mg/L)				
P-Tot(mgP/L)		0.46	0.43	
F(mg/L)				
Mg(mg/L)	9.29	5.16	3.1	9.18
B(mg/L)				
K(mg/L)			0.07	0.87
HCO ₃ (mg/L)	95.16	114.68	78.08	101
SO ₄ (mg/L)	2	2.1	1.3	
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
Tcol-MPN(MPN/100mL)				
Fcol-MPN(MPN/100mL)				
DO_SAT%(Percentage)				
BOD ₃₋₂₇ (mg/L)				
COD(mg/L)	48	56	104	60
Chl-a(µg/L)				

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Golaghat(026-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Dhansiri (South)

Sub Division: Upper Branchmaputra Sub-Division-II, Jorh

PARAMETERS	15/07/2017	15/10/2017	15/01/2018	15/04/2018
PHYSICAL				
Temp(Degrees Celsius (°C)				
SS(mg/L)				
EC_FLD(μmho/cm)	70			
Odour_Code(-)			odour free	odour free
TDS(mg/L)	78	102	148	140
Colour_Cod(-)			Other	Clear
pH_FLD(pH unit)				
EC_GEN(μmho/cm)		152.2	221	209
pH_GEN(pH unit)		8.05	7.24	7.79
CHEMICAL INDICES				
HAR_Ca(mgCaCO3/L)	165.56	136.42	84.48	153.83
HAR_Total(mgCaCO3/L)	66.22	54.57	33.79	61.53

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Golaghat(026-UBDDIB)

Local River: Dhansiri (South)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Upper Branhmaputra Sub-Division-II, Jorhat

PARAMETERS	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	733.07	24.54	230.09	423.64	95.27	84.07
CHEMICAL							
Cl	4	37.84	4.91	17.67	13.96	37.84	4.91
HCO3	4	114.68	78.08	97.23	104.92	78.08	101
P-Tot	2	0.46	0.43	0.44	0.46	0.43	
Na	2	5.96	1.4	3.68		5.96	1.4
Alk-Phen	4	0.49	0	0.12	0	0	0.49
ALK-TOT	4	94	64	79.94	86	64	83.77
SO4	3	2.1	1.3	1.8	2.05	1.3	
CO3	4	0.59	0	0.15	0	0	0.59
Mg	4	9.29	3.1	6.68	7.22	3.1	9.18
Ca	4	10.32	6.25	8.96	10.16	6.25	9.26
K	2	0.87	0.07	0.47		0.07	0.87
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	4	104	48	67	52	104	60
PHYSICAL							
TDS	4	148	78	117	90	148	140
pH_GEN	3	8.05	7.24	7.69	8.05	7.24	7.79
EC_GEN	3	221	152.2	194.07	152.2	221	209
EC_FLD	1	70	70	70	70		
CHEMICAL INDICES							
HAR_Total	4	66.22	33.79	54.03	60.4	33.79	61.53
HAR_Ca	4	165.56	84.48	135.07	150.99	84.48	153.83

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Golaghat(026-UBDDIB)

Local River: Dhansiri (South)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Upper Branchmaputra Sub-Division-II, Jorhat

	Flood (Jun-Oct)														
PARAMETERS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	336.5	458.2	391.9	303.2	419.8	444.1	272.7	417.9	443.9	375.2	303.7	242.5	157.9	369.2	430.2
BIOLOGICAL/BACTEOROLOGICAL															
COD															52
DO											7.45	9.05	9.05	7.9	
DO_SAT%											90.31	114.65	114.43	97.37	
CHEMICAL															
ALK-TOT			105.04		69	80	51	58.3	54	57	48	57	79	71	86
Alk-Phen			0		0	0	0	0	0	0	0	0	0	8.47	0
CO3	0	0	0.28		0	0	0	0	0	0	0	0	0	10.2	0
Ca	12.67	16.3	14.46		13.6	5.6	13.76	18.06	17.2	8.6	20.98	18.92	17.2	19.78	10.16
Cl	11.6	12.07	6.91		182.49	14.02	12.1	7.5	40	10.5	9.25	13.5	21.5	9	13.96
F			0.41												
Fe	0.2	0.13	0.2							0.13	39.27				
HCO3	61.81	32.94	62.92		84.18	97.6	62.22	71.12	65.88	69.54	65.15	69.54	96.38	65.88	104.92
K	1.71	0.96	1.68				3.88	2.13	1.52	0.14	0.14	0.18	1.85	1.94	
Mg	6.24	11.48	5.11		5.52	7.53	9.8	10.32	6.19	9.29	4.13	6.19	10.32	8.77	7.23
NO3-N			0.41												
Na	1.93	2.94	3.38				5.85	4.68	2.05	2.8	3.46	4.22	3.86	3.82	
P-Tot															0.46
SO4	0.88	1.97	1.63							1.1	1.17	1.22	1.21	1.56	2.05
o-PO4-P	0.07	0.14	0.13												
CHEMICAL INDICES															
HAR_Ca															150.99
HAR_Total	57.65	88.59	55.5		57	45.39	75.25	88.15	68.79	60.21	68.81	73.09	86	86.01	60.4
Na%	6.38	7.07	14.65				13.93	10.34	7.85	9.32	10.2	11.4	10.75	8.64	
RSC	0.12	0	0.22		0.36	0.7	0	0	0	0	0	0	0.07	0	
SAR	0.11	0.14	0.24				0.3	0.22	0.13	0.16	0.19	0.22	0.2	0.18	
PESTICIDES															
PHYSICAL															
EC_FLD					134	128	151.95	139.9	129.9		144.5	145.5	109.5	352.5	70
EC_GEN	74.08	74.58	174.67		134	128	152.1	139.9	130.05	141.45	133.35	136.35	166.45	139.25	152.2
Secchi	31.54	40.75	36.03		34	14	34.4	45.15	43	21.5	51.6	47.3	43	49.45	
TDS	213.91	305	204.67		134	59.6	96	93.5	87	94.5	89	91.5	111.5	93.5	90
Temp	23.57	26.25	25.71	22.75		28.75	27.25	26.8	28.25	26.25	25.9	27.65	27.5	26	
Turb	7.2	4.1	2		10.5					15.24					
pH_FLD				7.43	7.11	7.25	7.04	7.29	6.88		7.65	7	7.4	7.15	
pH_GEN	7.15	7.71	7.55		7.11	7.25	7.06	7.29	6.88	6.61	6.94	7.2	7.15	7.84	8.05
TRACE & TOXIC															
Al	0.21	0.14	0.27												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Golaghat(026-UBDDIB)

Local River: Dhansiri (South)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Upper Branchmaputra Sub-Division-II, Jorhat

	Winter (Nov-Feb)						
PARAMETERS	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	182.5	120.1	145.2	43.48	42.48	34.89	68.93
BIOLOGICAL/BACTERIOLOGICAL							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT				61.57	104.25	39.51	88
Alk-Phen				0.03	0	0.17	0
CO3	0	2.86	0.29	0.04	0	0.21	0
Ca	21.5	44.8	24.7	15.6	23.5	19.64	44.72
Cl	13.84	9.94	8.52	8.16	24.85	3.52	9
F		1.52	0.5				
Fe	0.18	0.78	0.19				
HCO3	67.1	97.05	67.71	75.03	127.19	47.78	107.36
K	2.11	0.42	1.15	1.41	1.17	2.3	0.1
Mg	11.48	19.24	2.73	2.07	4.74	4.59	4.13
NO3-N			0.87				
Na	5.4	4.55	1.94	6	4.03	3.25	7.34
P-Tot							
SO4	0.82	2.52	1.82		8.16		
o-PO4-P	0.11	0.15	0.04				
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	101.59	187.21	73.14	47.61	78.49	68.22	129.01
Na%	10.18	6.91	7.3	20.96	10.99	9.07	11.03
RSC	0	0.12	0.09	0.28	0.63	0	0
SAR	0.23	0.17	0.12	0.38	0.21	0.17	0.28
PESTICIDES							
PHYSICAL							
EC_FLD				150.1	144	209	214
EC_GEN	282.41	165	179.2	150.1	144	209	214
Secchi	53.75	109.25	64.3	39	58.75	49.1	111.8
TDS	350	280	194.67	220	61.5	140	143
Temp	14.5	19.17	15.8		26.6	21	14.5
Turb	0.4	5.59	0.57	0.9			
pH_FLD				7.72	7.53	7.68	8.3
pH_GEN	7.4	8.15	7.61	7.72	7.55	7.7	8.3
TRACE & TOXIC							
Al	0.29	0.43	0				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Golaghat(026-UBDDIB)

Local River: Dhansiri (South)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Upper Branchmaputra Sub-Division-II, Jorhat

	Winter (Nov-Feb)							
PARAMETERS	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	62.00	65.88	56.52	40.21	42.36	33.94	53.06	64.02
BIOLOGICAL/BACTEOROLOGICAL								
COD								104
DO			7.5	9.9	9.3	8.7	7.3	
DO_SAT%			74.38	102.54	102.29	115.09	78.7	
CHEMICAL								
ALK-TOT	90	98			72	90	94	64
Alk-Phen	0	0			0	0	9.96	0
CO3	0	0	0	0	0	0	12	0
Ca	22.36	13.76	13.76	22.36	30.96	22.36	22.36	6.25
Cl	7	14	12	9	26	9	11	37.84
F								
Fe			0.09	48.43				
HCO3	109.8	119.56	151.28	75.64	87.84	109.8	90.28	78.08
K	1.2	0.1	0.65	0.17	1.73	1.87	1.56	0.07
Mg	10.32	19.61	13.42	13.42	1.03	29.93	36.12	3.1
NO3-N								
Na	5.24	1.09	4	3.7	9.47	3.9	3.76	5.96
P-Tot								0.43
SO4		1	1.2	1.24	2.1	2.38	2.62	1.3
o-PO4-P								
CHEMICAL INDICES								
HAR_Ca								84.48
HAR_Total	98.9	116.11	90.32	111.82	81.69	180.61	206.4	33.79
Na%	10.25	2.02	8.78	6.75	19.75	4.47	3.81	
RSC	0	0	0.69	0	0	0	0	
SAR	0.23	0.04	0.18	0.15	0.46	0.13	0.11	
PESTICIDES								
PHYSICAL								
EC_FLD	209	199.5	231	235	167	109	182	
EC_GEN	209	199.5	205	203	152.3	221	207	221
Secchi	55.9	34.4	34.4	55.9	77.4	55.9	55.9	
TDS	140		137	17	100	148	138	148
Temp	18	17.5	15	17.5	20	30	19	
Turb								
pH_FLD	7	7.52	7.32	7.9	7.2	7.4	7.03	
pH_GEN	7	7.52	7.04	7.51	7.02	7.88	8.37	7.24
TRACE & TOXIC								
AI								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Golaghat(026-UBDDIB)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Dhansiri (South)

Sub Division: Upper Branchmaputra Sub-Division-II, Jorhat

Summer (Mar-May)														
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
117.8	69.12	40.21	53.84	51.75	23.88	45.24	33.57	36.78	17.83	28.11	17.90	16.42	77.56	41.63
														60
									8.4	7.5	8.3	8.1	7.6	
									98.07	87.58	104.17	94.43	81.93	
			73.8	114	52	90	88	82		70	92	106	80	83.77
			0.15	1.99	3.98	0	0	0		0	0	7.97	0	0.49
0	0.3	0	0.18	2.4	4.8	0	0	0	0	0	0	9.6	0	0.59
25.8	11	43.2	17.8	21.6	20.64	18.92	13.76	13.76	13.76	43	24.08	17.2	20.64	9.26
12.43	6.04	4.97	5.33	23.07	8	13	8	15	13	14	11	9	18	4.91
	0.95	0.5												
0.3	0.35								0.15					
28.06	163.48	84.18	89.67	134.2	53.68	109.8	107.36	100.04	143.96	85.4	112.24	109.8	97.6	101
1.25	1.49	1.96	1.6	1.56	6.4	0.19	0.15	0.17	0.17	0.19	0.6	2.05	2.1	0.87
10.45	2.07	1.94	1.82	1.46	5.16	11.35	11.35	10.32	14.45	3.1	11.35	14.45	15.48	9.18
	0.7													
4.69	6.81	7.36	3.5	9.43	10.58	5.8	2.84	3.7	4.2	3.85	7.65	4.25	3.65	1.4
1.58	1.01							1	1	1.21	1.75	1.8	1.85	
0.09	0.04													
														153.83
108.04	36.11	116.1	52.09	60.08	73.1	94.59	81.69	77.4	94.61	120.42	107.49	103.21	116.1	61.53
8.94	28.12	11.92	12.35	24.89	22.14	11.81	7.07	9.46	8.86	6.51	13.4	8.09	6.31	
0	1.97	0	0.44	1.08	0	0	0.14	0.1	0.48	0	0	0.07	0	
0.2	0.49	0.3	0.21	0.53	0.54	0.26	0.14	0.18	0.19	0.15	0.32	0.18	0.15	
			204	212	219	218	197.9	196.3	247	110	115	156	247	
201.85	210	213	204	212	219	218	197.9	196.3	248	217	217	244	201	209
64.5	27.5	108	44.5	54	51.6	47.3	34.4	34.4	34.4	107.5	60.2	43	51.6	
340	220	210	240	142	147	146	133	133	166	144	145	164	134	140
19	23.33	19.5		32.6	24	22	28	29	23.8	23.9	27	23	19	
0.8	2	0.76	5.8											
			7.34	7.5	7.5	7.08	7.3	7.13	6.9	8.2	7.2	7.2	7.1	
7.59	7.8	7.43	7.34	7.5	7.5	7.08	7.3	7.13	7.38	7.15	7.33	7.8	7.67	7.79
0.03	0.25													

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Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Bhomoraguri(035)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Brahmaputra

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

PARAMETERS	15/07/2017	15/10/2017	15/01/2018	15/04/2018
Q (cumec)	29324	15692	3290	6090
CHEMICAL				
Cl(mg/L)	6	17.2	13.76	9.82
NO2-N(mg/L)				
Alk-Phen(mgCaCO3/L)	0	0	0	0.12
ALK-TOT(mgCaCO3/L)	82	80	46	57.63
CO3(mg/L)	0	0	0	0.15
HCO3(mg/L)	100.04	97.6	56.12	70
SO4(mg/L)	1	2	1.3	
F(mg/L)				
NH3-N(mgN/L)				
B(mg/L)				
Na(mg/L)			4.1	5.69
Mg(mg/L)	5.16	5.16	8.26	5.04
SiO2(mg/L)				
K(mg/L)			0.09	1.88
Ca(mg/L)	10.32	15	6.69	10.94
P-Tot(mgP/L)	0.43	0.41	0.44	
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
BOD3-27(mg/L)				
Tcol-MPN(MPN/100mL)				
DO_SAT%(Percentage)	6.3			
COD(mg/L)	88	88	80	60
FCol-MPN(MPN/100mL)				
Chl-a(µg/L)				

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Bhomoraguri(035)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Brahmaputra

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

PARAMETERS	15/07/2017	15/10/2017	15/01/2018	15/04/2018
PHYSICAL				
EC_FLD(μ mho/cm)	190			
EC_GEN(μ mho/cm)	117.7	124.4	210	131.8
Colour_Cod(-)	Clear	Clear	Clear	Clear
pH_FLD(pH unit)	6.1			
pH_GEN(pH unit)	7.9	6.92	7.36	7.35
TDS(mg/L)	79	83	141	88
Odour_Code(-)	odour free	odour free	odour free	odour free
Temp(Degrees Celsius (°C))	21			
SS(mg/L)				
CHEMICAL INDICES				
HAR_Total(mgCaCO ₃ /L)	55.9	75.4	48.53	58.18
HAR_Ca(mgCaCO ₃ /L)	139.75	188.5	121.31	145.46

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Bhomoraguri(035)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Brahmaputra

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

PARAMETERS	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	35245	2892	12446.76	22372.51	4549.56	6240.51
CHEMICAL							
Cl	4	17.2	6	11.69	11.6	13.76	9.82
HCO3	4	100.04	56.12	80.94	98.82	56.12	70
P-Tot	3	0.44	0.41	0.43	0.42	0.44	
Na	2	5.69	4.1	4.89		4.1	5.69
Alk-Phen	4	0.12	0	0.03	0	0	0.12
ALK-TOT	4	82	46	66.41	81	46	57.63
SO4	3	2	1	1.43	1.5	1.3	
CO3	4	0.15	0	0.04	0	0	0.15
Mg	4	8.26	5.04	5.9	5.16	8.26	5.04
Ca	4	15	6.69	10.74	12.66	6.69	10.94
K	2	1.88	0.09	0.99		0.09	1.88
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	4	88	60	79	88	80	60
DO_SAT%	1	6.3	6.3	6.3	6.3		
PHYSICAL							
TDS	4	141	79	97.75	81	141	88
pH_GEN	4	7.9	6.92	7.38	7.41	7.36	7.35
EC_GEN	4	210	117.7	145.98	121.05	210	131.8
Temp	1	21	21	21	21		
pH_FLD	1	6.1	6.1	6.1	6.1		
EC_FLD	1	190	190	190	190		
CHEMICAL INDICES							
HAR_Total	4	75.4	48.53	59.5	65.65	48.53	58.18
HAR_Ca	4	188.5	121.31	148.75	164.12	121.31	145.46

Station Name: Bhomoraguri(035)
Local River: Brahmaputra

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Division: Upper Brahmaputra Division (UBD), Dibrugarh
Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

	Flood (Jun-Oct)													
PARAMETERS	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	29244	25212	18656	19454	20714	22054	35540	26698	29861	18735	14411	13550	26112	22508
BIOLOGICAL/BACTERIOLOGICAL														
COD														88
DO												6.7	6.45	
DO_SAT%												75.76	75.95	6.3
CHEMICAL														
ALK-TOT				45	50	53	44	96			59	74	44	81
Alk-Phen				0	0	0	0	0			0	0	0	0
B														
CO3	0	0.34		0	0	0	0	0	0	0	0	0	0	0
Ca	12.1	12.5		10.8	16.6	13.36	18.92	21.5	10.32	25.8	18.06	21.5	20.64	12.66
Cl	11.54	5.68		7.26	18.11	7.5	9	11.5	12.5	10.5	6	6	6.5	11.6
F		0.29												
Fe	0.45	0.34							0.12	55.35				
HCO3	28.06	49.71		54.9	61	64.66	53.68	117.12	50.02	69.54	71.98	90.28	53.68	98.82
K	0.65	2.07				2.71	0.91	0.16	0.16	0.15	0.19	2.18	1.72	
Mg	7.29	3.89		8.64	4.98	3.61	6.71	17.55	13.42	3.61	9.81	11.86	7.74	5.16
NO3-N		0.45												
Na	0.97	1.17				1.9	3.04	2.85	3.18	3.82	4.35	3.92	3.83	
P-Tot														0.42
SO4	1.42	2.54							1.11	1.23	1.18	1.2	2.17	1.5
o-PO4-P	0.14	0.17												
CHEMICAL INDICES														
HAR_Ca														164.12
HAR_Total	60.63	47.45		63	62.26	48.44	75.26	126.85	81.7	79.56	86	103.19	83.85	65.65
Na%	3.16	6.33				14.87	8.04	4.72	8.33	9.75	9.94	10.43	8.94	
RSC	0	0.05		0	0	0.35	0	0	0	0	0	0	0	
SAR	0.05	0.09				0.17	0.15	0.11	0.16	0.19	0.2	0.2	0.18	
PESTICIDES														
PHYSICAL														
EC_FLD					111.45	111.8	101.75	220.2		121.9		108.5	157.5	190
EC_GEN	64.68	137.33		112.65	111.5	111.8	101.75	220.2	130.9	121.9	131.85	126.75	104.5	121.05
Secchi	30.25	31.63		27	41.5	33.4	47.3	53.75	25.8	64.5	45.15	53.75	51.6	
TDS	385	162		112.5	52.35	74.5	68.5	147.5	88	81.5	88.5	85	70	81
Temp	28.75	24	23.67	24	29.05	27	24	23.25	23	21.5		21.5	23.5	21
Turb	2.6	4.1		6.2					5.3					
pH_FLD			7.47		7.17	7.41	7.3	6.85		7.14		7.55	7	6.1
pH_GEN	7.25	7.73	7.57	7.38	7.15	7.39	7.3	6.85	6.16	7.14	7.18	7	7.64	7.41
TRACE & TOXIC														
AI	0.25	0.22												

Station Name: Bhomoraguri(035)
Local River: Brahmaputra

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Division: Upper Brahmaputra Division (UBD), Dibrugarh
Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

Winter (Nov-Feb)

PARAMETERS	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Q (cumec)	6860	4896	3493	3140	3339	3712	5190
BIOLOGICAL/BACTERIOLOGICAL							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT	110.04	111.19	55	96	28	74	88
Alk-Phen	0	0.07	0.75	0	0	0	0
B							
CO3	0	0.09	0.9	0	0	0	0
Ca	41.87	32.8	27	28	12.6	24.08	30.96
Cl	9.94	8.34	9.94	17.75	3.55	7	10
F	1.71	0.5					
Fe	0.58	0.16					
HCO3	82.48	67.71	65.27	117.12	34.16	90.28	107.36
K	0.83	0.65	9.78	2.35	3.52	0.1	0.1
Mg	14.42	4.19	5.35	7.05	4.01	10.32	6.19
NO3-N		1.25					
Na	1.77	2.25	5.5	4.6	2.07	4.24	3.1
P-Tot							
SO4	2.88	1.25		11.04			
o-PO4-P	0.16	0.03					
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	154.92	99.47	89.78	99.36	48.21	103.2	103.19
Na%	2.48	7.49	10.5	8.94	7.91	8.24	6.15
RSC	0.05	0	0	0	0	0	0
SAR	0.06	0.12	0.25	0.2	0.13	0.18	0.13
PESTICIDES							
PHYSICAL							
EC_FLD				204	139.1	186	201
EC_GEN	150	113.33	183.7	204	139.1	185.9	201
Secchi	100.5	86.17	67.5	70	31.5	60.2	77.4
TDS	195	179.33	180	136	93	125	135
Temp		16.8		26.4	21.3	12	16
Turb	1.73	0.46	1.5				
pH_FLD			7.7	7.16	7.05	7.6	6.84
pH_GEN	7.6	7.12	7.7	7.16	7.1	7.59	6.84
TRACE & TOXIC							
AI	0.37	0					

Station Name: Bhomoraguri(035)
Local River: Brahmaputra

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Division: Upper Brahmaputra Division (UBD), Dibrugarh
Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

Winter (Nov-Feb)							
PARAMETERS	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	5688	3180	2990	2770	2970	3080	3290
BIOLOGICAL/BACTERIOLOGICAL							
COD							80
DO					5.5	6.2	
DO_SAT%					62.91	68.19	
CHEMICAL							
ALK-TOT	114	80		62	118	98	46
Alk-Phen	0	0		7.97	0	6.97	0
B							
CO3	0	0	0	9.6	0	8.4	0
Ca	13.76	18.92	25.8	25.8	39.56	30.96	6.69
Cl	12	10	16	7	5	11	13.76
F							
Fe			58.81				
HCO3	139.08	97.6	87.84	56.12	143.96	102.48	56.12
K	0.15	0.42	0.19	2.32	1.6	1.92	0.09
Mg	21.67	8.26	12.38	5.16	1.03	38.18	8.26
NO3-N							
Na	5.01	3.25	3.25	5.46	3.8	3.85	4.1
P-Tot							0.44
SO4	2.1	1.11	1.21	2.15	1.95	2.21	1.3
o-PO4-P							
CHEMICAL INDICES							
HAR_Ca							121.31
HAR_Total	124.69	81.72	116.08	86	103.19	236.48	48.53
Na%	8.1	7.96	5.76	11.82	7.3	3.42	
RSC	0	0	0	0	0.3	0	
SAR	0.2	0.16	0.13	0.26	0.16	0.11	
PESTICIDES							
PHYSICAL							
EC_FLD	197.4		208		143	160	
EC_GEN	197.4	192.4	208	156.4	191.9	204	210
Secchi	34.4	47.3	64.5	64.5	98.9	77.4	
TDS	132	129	74	110	129	136	141
Temp	14	15	17		22	20	
Turb							
pH_FLD	7.27		7.32		6.2	6.3	
pH_GEN	7.27	6.73	7.32	6.92	7.51	8.3	7.36
TRACE & TOXIC							
AI							

Station Name: Bhomoraguri(035)
Local River: Brahmaputra

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Division: Upper Brahmaputra Division (UBD), Dibrugarh
Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

Summer (Mar-May)													
PARAMETERS	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	11118	6436	6660	5868	12836	8504	6937	8927	4620	5940	10300	8319	6090
BIOLOGICAL/BACTERIOLOGICAL													
COD													60
DO										8.3		6	
DO_SAT%										104.19		63.38	
CHEMICAL													
ALK-TOT			56	28	194	52	50		56	60	72	80	57.63
Alk-Phen			1	0	0	0	0		0	7.97	0	0	0.12
B													
CO3	0		1.2	0	0	0	0	0	0	9.6	0	0	0.15
Ca	28.8	17	20	20.64	29.24	17.2	17.2	17.2	25.8	15.48	10.32	25.8	10.94
Cl	3.91	4.61	24.14	10	22	7	15	13	13	10	13	9	9.82
F	0.5												
Fe								0.11					
HCO3	54.29	62.22	65.88	34.16	236.68	63.44	61	73.2	68.32	53.68	87.84	97.6	70
K	1.96	1.09	1.56	1.75	0.1	0.15	0.19	0.24	0.16	0.65	1.87	2.12	1.88
Mg	0.97	2.43	1.46	3.1	23.74	11.35	2.06	3.1	7.22	6.19	14.45	7.22	5.04
NO3-N													
Na	3.22	3.5	3.45	3.5	4	3	2.87	3.26	4.1	4.25	3.69	3.7	5.69
P-Tot													
SO4							1.61	2.1	1.16	1.9	2.15	2.2	
o-PO4-P													
CHEMICAL INDICES													
HAR_Ca													145.46
HAR_Total	76.05	52.62	56.08	64.52	172.02	90.29	51.58	55.92	94.58	64.49	86.01	94.58	58.18
Na%	8.2	12.38	11.47	10.27	4.85	6.77	10.78	11.24	8.64	12.46	8.39	7.68	
RSC	0		0	0	0.47	0	0	0.09	0	0	0	0	
SAR	0.16	0.21	0.2	0.19	0.13	0.14	0.17	0.19	0.18	0.23	0.17	0.17	
PESTICIDES													
PHYSICAL													
EC_FLD			127	132.7	443	124.9	129.2			138		170	
EC_GEN	123.9	120.6	127	132.7	443	124.9	129.2	134.2	129.1	111.7	127.1	135.1	131.8
Secchi	72	42.5	50	51.6	73.1	43	43	43	64.5	38.7	25.8	64.5	
TDS	210	121	85	89	296	84	87	90	86	75	85	72	88
Temp	19		32.7	20	22	19	18	22	19	27.1		18	
Turb	1.59	7											
pH_FLD			7.17	7.32	6.83	7.02	6.75			7.5		6.1	
pH_GEN	6.8	7.2	7.22	7.32	6.83	7.02	6.75	7.04	7.15	6.99	8.02	6.8	7.35
TRACE & TOXIC													
Al													

HISTORY SHEET (WATER QUALITY)

		Water Year	: 2017 - 2018
Site	: Jagibhakatgaon	Code	: 051
State	: Assam	District	: Marigaon
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: Kopili	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Kopili
Division	: Upper Brahmaputra Division (UBD), Dibrugarh	Sub-Division	: Dhansiri (S) Kopilli Sub-Division, Nagaon
Drainage Area	: 15925 Sq. Km.	Bank	: Left
Latitude	: 26°10'39"	Longitude	: 92°13'1"
Current Zero of Gauge (m)	: 40		

CATEGORY	Opening Date	Closing Date
Gauge	: 12-15-1980	
Discharge	: 12/01/1982	
Sediment	: 08/06/1991	
Water Quality	: 12-15-1988	
Reduced Level	Opening Date	Closing Date
40.0	25/01/1983	-

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Jagibhakatgaon(051)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Kopili

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

PARAMETERS	15/07/2017	15/10/2017	15/01/2018	15/04/2018
Q (cumec)	680.59	511.31	73.98	96.05
CHEMICAL				
Alk-Phen(mgCaCO ₃ /L)	0	0	0	0.05
B(mg/L)				
ALK-TOT(mgCaCO ₃ /L)	82	40	82	37.81
P-Tot(mgP/L)	0.43	0.49	0.42	
Cl(mg/L)	9	12.04	17.2	8.48
HCO ₃ (mg/L)	100.04	48.8	100.04	46
CO ₃ (mg/L)	0	0	0	0.06
Mg(mg/L)	10.32	1.03	10.32	6.94
Na(mg/L)			6.2	2.69
NO ₂ -N(mg/L)				
NH ₃ -N(mgN/L)				
Ca(mg/L)	6.88	5	4.91	5.89
SiO ₂ (mg/L)				
SO ₄ (mg/L)	2.1	1.95	1.3	
K(mg/L)			1.01	6.55
F(mg/L)				
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
COD(mg/L)	72	40	96	20
Tcol-MPN(MPN/100mL)				
DO_SAT%(Percentage)	6.3			
BOD ₃₋₂₇ (mg/L)				
FCol-MPN(MPN/100mL)				
Chl-a(µg/L)				

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Jagibhakatgaon(051)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Kopili

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

PARAMETERS	15/07/2017	15/10/2017	15/01/2018	15/04/2018
PHYSICAL				
EC_GEN(μ mho/cm)	126.8	70.9	106.5	107.8
pH_FLD(pH unit)	6.1			
Odour_Code(-)	odour free	odour free	odour free	odour free
SS(mg/L)				
TDS(mg/L)	85	47	71	72
Temp(Degrees Celsius ($^{\circ}$ C))	22			
EC_FLD(μ mho/cm)	178			
pH_GEN(pH unit)	8.44	7.51	6.45	7.15
Colour_Cod(-)	Brown	Brown	Light Brown	Clear
CHEMICAL INDICES				
HAR_Total(mgCaCO ₃ /L)	54.47	23.41	46.26	41.89
HAR_Ca(mgCaCO ₃ /L)	136.17	58.52	115.64	104.73

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Jagibhakatgaon(051)

Local River: Kopili

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

PARAMETERS	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	728.05	54.73	255.19	450.21	130.73	93.2
CHEMICAL							
Cl	4	17.2	8.48	11.68	10.52	17.2	8.48
HCO3	4	100.04	46	73.72	74.42	100.04	46
P-Tot	3	0.49	0.42	0.45	0.46	0.42	
Na	2	6.2	2.69	4.44		6.2	2.69
Alk-Phen	4	0.05	0	0.01	0	0	0.05
ALK-TOT	4	82	37.81	60.45	61	82	37.81
SO4	3	2.1	1.3	1.78	2.03	1.3	
CO3	4	0.06	0	0.01	0	0	0.06
Mg	4	10.32	1.03	7.15	5.67	10.32	6.94
Ca	4	6.88	4.91	5.67	5.94	4.91	5.89
K	2	6.55	1.01	3.78		1.01	6.55
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	4	96	20	57	56	96	20
DO_SAT%	1	6.3	6.3	6.3	6.3		
PHYSICAL							
TDS	4	85	47	68.75	66	71	72
pH_GEN	4	8.44	6.45	7.39	7.97	6.45	7.15
EC_GEN	4	126.8	70.9	103	98.85	106.5	107.8
Temp	1	22	22	22	22		
pH_FLD	1	6.1	6.1	6.1	6.1		
EC_FLD	1	178	178	178	178		
CHEMICAL INDICES							
HAR_Total	4	54.47	23.41	41.51	38.94	46.26	41.89
HAR_Ca	4	136.17	58.52	103.77	97.34	115.64	104.73

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Jagibhakatgaon(051)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Kopili

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

	Flood (Jun-Oct)														
PARAMETERS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	628.3	971.5	318.6	466.6	627.8	314.8	551.6	675.6	318.5	507.9	438.2	394.7	324.6	484.7	596
BIOLOGICAL/BACTERIOLOGICAL															
COD															56
DO											7.75	8.05	6.3	7.45	
DO_SAT%											95.55	102.16	80.49	91.77	6.3
CHEMICAL															
ALK-TOT					48.5	45	24	29	29	27.53		20	35	49	61
Alk-Phen					0	0	0	0	0	0		0	0	5.98	0
CO3	0	0	0.09		0	0	0	0	0	0	0	0	0	7.2	0
Ca	11.47	18.9	12.1		6.4	6.2	11.18	10.32	13.76	11.17	16.34	10.32	10.32	14.62	5.94
Cl	8.4	12.07	5.5		8.81	14.02	13	10	8	9.9	13	16	6	11.5	10.52
F			0.38												
Fe	0.15	0.27	0.39							0.11	58.81				
HCO3	39.85	30.5	38.74		59.17	54.9	29.28	35.38	35.38	33.58	42.7	24.4	42.7	45.14	74.42
K	0.63	0.76	1.41				2.83	1.98	0.27	0.24	0.18	0.19	1.85	1.7	
Mg	6.64	10.45	2.92		6.96	7.53	7.23	5.68	12.85	4.12	1.03	4.65	12.9	8.26	5.68
NO3-N			0.43												
Na	0.63	1.64	1.73				2.24	3.02	5.2	3.94	3.8	4.33	3.71	3.7	
P-Tot															0.46
SO4	1.58	2.18	1.9							1.2	1.16	1.21	1.19	2.03	2.03
o-PO4-P	0.17	0.15	0.14												
CHEMICAL INDICES															
HAR_Ca															97.34
HAR_Total	56.34	90.79	42.4		45	46.89	58.05	49.45	87.94	45.4	45.14	45.15	79.55	70.95	38.94
Na%	2.48	3.71	10.58				7.43	11.28	13.24	16.16	15.66	17.29	10.78	10.68	
RSC	0	0	0.13		0.34	0.07	0	0	0	0	0	0	0	0.07	
SAR	0.04	0.07	0.14				0.13	0.19	0.26	0.26	0.25	0.28	0.2	0.2	
PESTICIDES															
PHYSICAL															
EC_FLD					57.85	91.65	58.85	59.4	72.2		81.5	101	183.5	158	178
EC_GEN	59.07	64.37	74		57.85	42	58.5	59.4	72.2	87.76	72.5	78.7	72.15	76.1	98.85
Secchi	28.41	47.25	31.23		16	15.5	27.95	25.8	34.4	27.8	40.85	25.8	25.8	36.55	
TDS	252.17	280	204.67		57.5	31.7	39.5	45.5	48.5	58.6	48.5	52.5	48	51	66
Temp	27.17	27.5	30.33	28		28.9	28.5	26.5	28.5	27.53	26.15	28.4	28	25.5	22
Turb	2.95	3.05	2.6		29					3.97					
pH_FLD				7.05	6.84	6.68	6.63	6.71	6.64		7.8	7.05	7.35	7.4	6.1
pH_GEN	7.01	7.49	7.21		6.84	6.65	6.65	6.71	6.62	6.05	6.4	6.8	7	7.59	7.98
TRACE & TOXIC															
Al	0.24	0.18	0.18												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Jagibhakatgaon(051)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Kopili

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

	Winter (Nov-Feb)							
PARAMETERS	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Q (cumec)	204.5	275.7	150.3	81.94	177.1	118.4	96.19	110.0
BIOLOGICAL/BACTERIOLOGICAL								
COD								
DO								
DO_SAT%								
CHEMICAL								
ALK-TOT			53.42		112.3	27.89	36	36
Alk-Phen			0.04		0	0.02	0	0
CO3	0	2.04	0.05		0	0.03	0	0
Ca	24.1	25.96	16.43	11.4	12	23.57	13.76	17.2
Cl	11.01	10.45	24.38	9.94	17.9	4.53	6	9
F		1.14	0.5					
Fe	0.17	0.63	0.31					
HCO3	31.72	39.97	37.22	73.81	137	33.96	43.92	43.92
K	1.21	0.69	0.85	1.41	1.3	3.6	0.1	0.15
Mg	10.45	5.94	2.44	0.61	4.7	5.12	9.29	2.78
NO3-N			0.61					
Na	3.24	2.16	2.65	2.39	3.8	4	3.84	2.06
P-Tot								
SO4	1.8	2.59	1.41		3.8			
o-PO4-P	0.12	0.13	0.04					
CHEMICAL INDICES								
HAR_Ca								
HAR_Total	103.79	88.05	52.13	31.03	49.58	80.26	73.11	54.58
Na%	6.6	5.52	11.84	13.71	13.96	9.34	10.31	7.59
RSC	0	0	0.16		1.26	0	0	0
SAR	0.14	0.1	0.18	0.19	0.24	0.19	0.2	0.12
PESTICIDES								
PHYSICAL								
EC_FLD					82	100.6	96.7	88.5
EC_GEN	78.35	170	102.5	90.3	82	101	97	88.5
Secchi	60.25	63.5	41.75	28.5	30	58.92	34.4	43
TDS	180	245	195	220	55	67	65	59
Temp	18	19.17	20.33		26.5	21	15	17
Turb	2.1	4.68	4.85	0.6				
pH_FLD					7.3	7.03	7.51	6.77
pH_GEN	8.3	7.75	7.15	7.45	7.3	7	7.5	6.77
TRACE & TOXIC								
Al	0.41	0.4						

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Jagibhakatgaon(051)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Kopili

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

Winter (Nov-Feb)							
PARAMETERS	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	76.64	96.85	85.73	133.8	109.2	98.16	73.98
BIOLOGICAL/BACTERIOLOGICAL							
COD							96
DO		8.1	9.3	6.4	6.4	6.5	
DO_SAT%		78.6	96.34	66.22	81.77	70.07	
CHEMICAL							
ALK-TOT	48			28	68	42	82
Alk-Phen	0			0	0	0	0
CO3	0	0	0	0	0	0	0
Ca	10.32	6.88	12.04	10.32	18.92	20.64	4.91
Cl	9	11	10	11	9	8	17.2
F							
Fe		0.09	69.19				
HCO3	58.56	43.92	36.6	34.16	82.96	51.24	100.04
K	0.1	0.26	0.18	1.53	1.35	2.1	1.01
Mg	9.29	7.22	11.35	8.26	7.22	10.32	10.32
NO3-N							
Na	2.8	2.9	3.92	3.86	3.65	3.9	6.2
P-Tot							0.42
SO4	1.2	1	1.21	2.4	2	1.75	1.3
o-PO4-P							
CHEMICAL INDICES							
HAR_Ca							115.64
HAR_Total	64.51	47.28	77.39	60.22	77.38	94.6	46.26
Na%	8.68	11.79	9.97	11.98	9.17	8.07	
RSC	0	0	0	0	0	0	
SAR	0.15	0.18	0.19	0.22	0.18	0.18	
PESTICIDES							
PHYSICAL							
EC_FLD	94.9	108	121	100	175	158	
EC_GEN	94.9	104.8	99.7	64.7	132.2	108.3	106.5
Secchi	25.8	17.2	30.1	25.8	47.3	51.6	
TDS	64	70	67	40	88	72	71
Temp	18	14	17.6	17	28	19	
Turb							
pH_FLD	6.58	6.76	7.8	6.1	7.4	6.4	
pH_GEN	6.58	6.4	6.79	7.34	7.17	8	6.45
TRACE & TOXIC							
Al							

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Jagibhakatgaon(051)

Division: Upper Brahmaputra Division (UBD), Dibrugarh

Local River: Kopili

Sub Division: Dhansiri (S) Kopilli Sub-Division, Nagaon

	Summer (Mar-May)														
PARAMETERS	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	408.0	119.4	95.58	65.76	69.86	44.82	119.1	128.1	89.36	46.14	52.43	71.76	95.69	372.5	96.05
BIOLOGICAL/BACTERIOLOGICAL															
COD															20
DO										8.3	8.9	6.3	6.3	6.5	
DO_SAT%										98.63	105.9	73.44	74.84	68.66	
CHEMICAL															
ALK-TOT		85.53		27	50	30	24	16	32		112	36	56	110	37.8
Alk-Phen		0.25		0	0	0	0	0	0		0	0	3.98	0	0.05
CO3	0	0.3	0	0	0	0	0	0	0	0	0	0	4.8	0	0.06
Ca	20.6	8.6	48.2	7.4	24	6.88	15.48	15.48	18.92	18.92	20.64	13.76	17.2	41.28	5.89
Cl	13.49	7.1	12.78	4.97	7.81	12	9	6	7	11	17	13	9	21	8.48
F		0.95	0.5												
Fe	0.25	0.35								0.24					
HCO3	39.04	51.85	50.02	32.94	61	36.6	29.28	19.52	39.04	46.36	136.64	43.92	58.56	134.2	46
K	2.85	1.02	2.74	1.21	0.78	2.65	0.19	0.22	0.21	0.19	0.17	0.68	2.23	1.83	6.55
Mg	9.9	3.52	1.94	0.73	1.46	8.26	4.13	6.19	1.03	1.03	7.22	5.16	13.42	17.54	6.94
NO3-N		4.12													
Na	2.15	2.69	3.68	3.2	6.21	4.73	5.42	6.1	3.95	2.7	3.1	3.74	3.95	3.8	2.69
P-Tot															
SO4	1.49	1.39							1	1.2	1.22	1.95	2	2.15	
o-PO4-P	0.16	0.05													
CHEMICAL INDICES															
HAR_Ca															104.73
HAR_Total	92.76	36.18	128.6	21.54	66.07	51.62	55.91	64.49	51.59	51.59	81.68	55.9	98.92	176.28	41.89
Na%	4.72	13.58	5.73	23.2	16.8	15.87	17.42	17.09	14.24	10.2	7.65	12.6	7.84	4.45	
RSC	0	0.14	0	0.11	0	0	0	0	0	0	0.62	0	0	0	
SAR	0.1	0.2	0.14	0.3	0.33	0.29	0.32	0.33	0.24	0.16	0.15	0.22	0.17	0.12	
PESTICIDES															
PHYSICAL															
EC_FLD				96	99.4	89.9	88.5	108.4	103.5	148	120	119	180	160	
EC_GEN	75.22	80	86	96	99	90	88.5	108.4	103.5	133.9	123.5	107.8	105.3	303	107.8
Secchi	51.5	21.5	120.5	18.5	60	17.2	38.7	38.7	47.3	47.3	51.6	34.4	43	103.2	
TDS	260	210	210	96	67	60	59	73	69	90	82	72	71	203	72
Temp	23	23.33	24.33		32.6	21	24	24	22	24.2	24.9	23	24	18	
Turb	2.25	2.1	2.88	19.5											
pH_FLD				7.5	7.5	7.12	7.14	6.82	6.39	6.6	6.9	7.2	6	6.3	
pH_GEN	7.66	7.4	7.66	7.5	7.5	7	7.14	6.82	6.39	6.56	7.05	7.6	7.91	7.58	7.15
TRACE & TOXIC															
Al	0.1	0.28													

HISTORY SHEET (WATER QUALITY)			
		Water Year	: 2017 - 2018
Site	: SONAPUR	Code	: BKA00D7
State	: Assam	District	: Kamrup
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: Digaru	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Digaru
Division	: Middle Brahmaputra Division (MBD), Guwahati	Sub-Division	: Middle Brahmaputra Sub-Division,
Drainage Area	: 1210.0 Sq. Km.	Bank	: Right
Latitude	: 26°07'12"	Longitude	: 91°58'48"
Current Zero of Gauge (m)	: 44		
CATEGORY	Opening Date	Closing Date	
Gauge	: 07/01/1989		
Discharge	: 07/01/1989		
Sediment	: 07/01/1989		
Water Quality	: 07/01/1989		
Reduced Level	Opening Date	Closing Date	
44.0	1/7/1989	30/06/2018	

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: SONAPUR(BKA00D7)
Local River: Digaru

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS				
	01/07/2017	04/10/2017	01/01/2018	02/04/2018
Q (cumec)	176.2	203.2	56.06	36.12
CHEMICAL				
Cl(mg/L)	7	12	1.79	4.02
NO3-N(mgN/L)	0	0		
P-Tot(mgP/L)	0.45	0.45	0.38	
Fe(mg/L)	0.2	0.2	0.2	
NO2-N(mg/L)	0	0		
Mg(mg/L)	5.16	6.19	4.13	4.7
Alk-Phen(mgCaCO3/L)	0	0	0	0.02
B(mg/L)	0	0		
CO3(mg/L)	0	0	0	0.02
NO2+NO3(mgN/L)	0	0		
HCO3(mg/L)	65.88	39.04	22	22
SO4(mg/L)	1.9	2.58	1	
ALK-TOT(mgCaCO3/L)	54	32	18.03	18.07
Ca(mg/L)	34.4	3.44	15.48	2.53
K(mg/L)			1	2.75
Na(mg/L)			4.86	4.22
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
BOD3-27(mg/L)	0.5	1	0.9	1.1
COD(mg/L)	16	56	80	40
FCol-MPN(MPN/100mL)		27	30	
Tcol-MPN(MPN/100mL)		40	50	
PHYSICAL				
Turb(NTU)	1.95	0.5	2.1	1.67
Secchi(Meters)	86	8.6	38.7	6.32
Colour_Cod(-)	Brown	Brown	Clear	Brown
Odour_Code(-)	odour free	odour free	odour free	odour free
TDS(mg/L)	28	26	36	36
EC_GEN(μmho/cm)	41.9	39.3	54.4	54.4
EC_FLD(μmho/cm)	49.6			
pH_GEN(pH unit)	7.34	7.11	6.96	6.96
Temp(Degrees Celsius (°C))	28.8	30.4	17	21
pH_FLD(pH unit)	6.86	6.77		
CHEMICAL INDICES				
HAR_Total(mgCaCO3/L)	107.5	34.39	55.91	25.91
RSC(-)	0	0	0	0
Na%(Percentage)			15.67	23.94
SAR(-)			0.28	0.36

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: SONAPUR(BKA00D7)
Local River: Digaru

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS							
	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	361	341.9	2.84	103.09	181.04	50.42	39.86
CHEMICAL							
Cl	4	12	1.79	6.2	9.5	1.79	4.02
HCO3	4	65.88	22	37.23	52.46	22	22
P-Tot	3	0.45	0.38	0.43	0.45	0.38	
B	2	0	0	0	0		
NO2-N	2	0	0	0	0		
Na	2	4.86	4.22	4.54		4.86	4.22
Fe	3	0.2	0.2	0.2	0.2	0.2	
NO2+NO3	2	0	0	0	0		
NO3-N	2	0	0	0	0		
Alk-Phen	4	0.02	0	0	0	0	0.02
ALK-TOT	4	54	18.03	30.52	43	18.03	18.07
SO4	3	2.58	1	1.83	2.24	1	
CO3	4	0.02	0	0	0	0	0.02
Mg	4	6.19	4.13	5.05	5.68	4.13	4.7
Ca	4	34.4	2.53	13.96	18.92	15.48	2.53
K	2	2.75	1	1.88		1	2.75
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
Tcol-MPN	2	50	40	45	40	50	
COD	4	80	16	48	36	80	40
BOD3-27	4	1.1	0.5	0.88	0.75	0.9	1.1
FCOL-MPN	2	30	27	28.5	27	30	
PHYSICAL							
TDS	4	36	26	31.5	27	36	36
pH_GEN	4	7.34	6.96	7.09	7.23	6.96	6.96
EC_GEN	4	54.4	39.3	47.5	40.6	54.4	54.4
Turb	4	2.1	0.5	1.56	1.23	2.1	1.67
pH_FLD	2	6.86	6.77	6.82	6.82		
Temp	4	30.4	17	24.3	29.6	17	21
Secchi	4	86	6.32	34.91	47.3	38.7	6.32
EC_FLD	1	49.6	49.6	49.6	49.6		
CHEMICAL INDICES							
Na%	2	23.94	15.67	19.8		15.67	23.94
RSC	4	0	0	0	0	0	0
HAR_Total	4	107.5	25.91	55.93	70.95	55.91	25.91
SAR	2	0.36	0.28	0.32		0.28	0.36

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: SONAPUR(BKA00D7)
Local River: Digaru

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	197	120	135	68.6	110	91.5	106	165	179	138.0	137	114	113.3	138.6	189.7
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27															0.83
COD															42.67
FCol-MPN															27
Tcol-MPN															40
CHEMICAL															
ALK-TOT							31.26	22	24	36	25	36	20	34	43
Alk-Phen							0	0	0	0	0	0	0	0	0
B										0	0	0	0	0	0
CO3	0	0	0.03	0.03			0	0	0	0	0	0	0	0	0
Ca	18.92	16.34	20.17	25.93			12.95	17.2	14.62	14.68	18.92	10.81	6.88	14.62	18.92
Cl	8	11.5	9.92	12.08			10.58	18	6	12.93	12	11.14	13	10.5	9.5
F		2.2	0.5	0.5			0.05								
Fe	0.17	0.2	0.5		0.5					0.1	0.18	0.15	0.21	0.25	0.2
HCO3	48.8	31.72	26.44	37.99			38.14	26.84	29.28	42.78	30.5	42.14	24.4	41.48	52.46
K	1.6	1.7	2.68				1.45	1.72	0.27	0.16	0.19	0.19	1.45	2.1	
Mg	6.19	5.68	2.72	0.77			3.1	4.13	8.26	4.54	1.54	4.87	7.22	7.74	5.68
NO2+NO3										0	0	0	0	0	0
NO2-N										0	0	0	0	0	0
NO3-N			1.58							0	0	0	0	0	0
Na	1.5	2.15	3.36				4.35	3.85	4	3.11	3.38	3.57	4	3.98	
P-Tot										0.33	0.38	0.36	0.43	0.41	0.45
SO4	1.65	1	1.9							1.11	1.15	1.22	1.16	2.1	2.24
o-PO4-P	0.15		0.51												
CHEMICAL INDICES															
HAR_Total	73.09	64.5	59.7	68.03			45.17	60.21	70.97	55.9	53.74	47.3	47.28	68.8	70.95
Na%	4.45	6.52	12.86				16.35	11.88	11.25	10.86	12.21	14.21	15.15	11.24	
RSC	0	0	0	0			0	0	0	0	0	0	0	0	0
SAR	0.08	0.12	0.23				0.28	0.22	0.21	0.18	0.2	0.23	0.25	0.21	
PESTICIDES															
PHYSICAL															
EC_FLD			69						64.04	71.76	74.08	74.97	75.04	75.3	49.6
EC_GEN	31.33	30	56.25		30.59	46.3	59.45	41.84	41.99	52.45	41.7	168.5	48.9	50.85	40.67
Secchi	47.3	40.85	51.3	64.83			32.25	43	36.89	36.55	47.3	27.95	17.2	36.89	49.34
TDS	210	180	131.25	220.77	38	31	39.5	28	28.05	35.5	28.5	113	33	34.16	27.05
Temp	26	28.5	25.56	27.62	26.08	26	26.5	24.47	26	27.5	26	26.5	28	27.05	29.56
Turb	3.8				9.26			1.46	6.07	6.7	10.58	12.32	4.67	2.9	1.26
pH_FLD			7.35	7.55					6.66	7.09	8.1	7.3	6.77	7.28	6.82
pH_GEN	6.5	7.19	6.99	7.47	7.05	6.7	6.74	6.78	6.69	6.88	6.19	6.83	7.19	6.81	7.23
TRACE & TOXIC															
Al	0.13	0.85	1.2												

Station Name: SONAPUR(BKA00D7)
Local River: Digaru

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS	Winter (Nov-Feb)					
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Q (cumec)	66.8	66.44	50.27	21.54	50.87	49.67
BIOLOGICAL/BACTERIOLOGICAL						
BOD3-27						
COD						
FCol-MPN						
Tcol-MPN						
CHEMICAL						
ALK-TOT				31.84	59.84	16.4
Alk-Phen				0.08	0	0.01
B						
CO3	0	0	0.08	0.1	0	0.01
Ca	14.85	22.36	7.95	13	23.52	7.07
Cl	9.95	11	8.05	12.08	17.89	5.03
F		0.07	0.5		0.05	0.05
Fe	0.21	0.29	0.74	0.5		
HCO3	22.99	24.4	34.83	38.64	73	19.99
K	1.24	0.61	1	1.2	0.8	2.64
Mg	5.16	12.39	2.96	0.68	9.4	1.05
NO2+NO3						
NO2-N						
NO3-N			0.7			
Na	2.47	1.8	2.43	2.8	3	3.41
P-Tot						
SO4	1	1.29	1.3			
o-PO4-P	0.08		0.16			
CHEMICAL INDICES						
HAR_Total	57.9	107.5	32.21	35.33	97.97	22.05
Na%	8.82	4.83	16.89	14.21	6.22	22.64
RSC	0	0	0.23	0	0	0
SAR	0.15	0.09	0.21	0.21	0.13	0.32
PESTICIDES						
PHYSICAL						
EC_FLD						
EC_GEN	28.57	80	50		56.1	52.8
Secchi	47.3	55.9	19.6	32.5	58.8	17.68
TDS	291.43	150	174	200	38	35
Temp	19.29	19.5	18.73	14	18	15
Turb	6.1			1.7	6.7	
pH_FLD			7.14			
pH_GEN	8.2	7.21	7.42	8.48	6.26	6.6
TRACE & TOXIC						
Al	0.66	0.61				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: SONAPUR(BKA00D7)
Local River: Digaru

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS									
	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	50.5	61.31	43.00	39.71	42.31	82.59	44.26	23.29	56.06
BIOLOGICAL/BACTERIOLOGICAL									
BOD3-27									0.9
COD									80
FCol-MPN									30
Tcol-MPN									50
CHEMICAL									
ALK-TOT	38	34	44			16	30	60	18.03
Alk-Phen	0	0	0			0	0	0	0
B			0	0	0	0	0	0	
CO3	0	0	0	0	0	0	0	0	0
Ca	15.48	10.32	18.23	10.32	13.76	13.76	15.48	13.76	15.48
Cl	10	8	10	12	10	13	8	12	1.79
F									
Fe			0.05	0.1	0.2	0.21	0.2	0.22	0.2
HCO3	46.36	41.48	53.68	48.8	31.72	19.52	36.6	73.2	22
K	0.1	1	1	0.35	0.17	0.26	1.8	2.18	1
Mg	4.13	9.29	1.44	7.22	7.22	7.22	1.03	12.38	4.13
NO2+NO3			0	0	0	0	0	0	
NO2-N			0	0	0	0	0	0	
NO3-N			0	0	0	0	0	0	
Na	3.77	3.8	3.8	3.35	3.7	3.75	3.9	3.85	4.86
P-Tot			0.5	0.36	0.4	0.43	0.46	0.39	0.38
SO4			1	1.1	1.21	2.75	2.05	1.2	1
o-PO4-P									
CHEMICAL INDICES									
HAR_Total	55.91	64.51	51.58	55.88	64.48	64.48	42.99	85.98	55.91
Na%	12.82	11.24	13.56	11.53	11.13	11.24	15.81	8.68	15.67
RSC	0	0	0	0	0	0	0	0	0
SAR	0.22	0.21	0.23	0.2	0.2	0.2	0.26	0.18	0.28
PESTICIDES									
PHYSICAL									
EC_FLD			69.08	63.08	62.08	45.07	66.03	55.5	
EC_GEN	48.6	54.7	56	52.3	59.5	179.7	52.9	51.6	54.4
Secchi	38.7	25.8	45.58	25.8	34.4	34.4	38.7	34.4	38.7
TDS	32	38	37	36	40	120	35	35	36
Temp	14	15	13	12	19	16	14	15	17
Turb		1.1	2.51	1.6	8.67	7.1	4.1	2.35	2.1
pH_FLD			6.72	7.56	6.32	4.32	7.15	6.82	
pH_GEN	6.94	6.56	6.4	7.25	6.35	5.6	7.28	6.97	6.96
TRACE & TOXIC									
Al									

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: SONAPUR(BKA00D7)
Local River: Digaru

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS	Summer (Mar-May)															
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Q (cumec)	32.6	40.2	9.42	8.87	33.3	44.2	33	45.1	12.4	15.5	24.7	43.8	54	180	36.1	
BIOLOGICAL/BACTERIOLOGICAL																
BOD3-27														0.3	1.1	
COD														32	40	
FCol-MPN																
Tcol-MPN																
CHEMICAL																
ALK-TOT				49.27	20	28	26	38			38	30	34	38	18.07	
Alk-Phen				0.09	0	0	0	0			0	0	0	0	0.02	
B									0	0	0	0	0	0		
CO3	0	0.22	0.81	0.11	0	0	0	0	0	0	0	0	0	0	0.02	
Ca	19.78	8.75	27.21	11.45	8	8.6	8.6	10.32	13.76	8.6	27.52	5.16	15.48	6.88	2.53	
Cl	12	8.5	10.07	4.12	45.05	12	11	5	12	12	24	10	7	9	4.02	
F		0.05	0.5		0.05	0.05										
Fe	0.25	0.59		0.5					0.27	0.27	0.16	0.21	0.22	0.22		
HCO3	28.06	49.72	109.61	59.88	24.4	34.16	31.72	46.36	48.8	48.8	46.36	36.6	41.48	46.36	22	
K	1.25	0.95	2.9			2.54	0.1	1.3	0.31	0.24	0.13	0.21	0.97	2.18	2.75	
Mg	8.26	1.22	2.88	0.99	2.4	5.16	5.16	4.13	3.1	6.19	4.13	12.38	6.19	15.48	4.7	
NO2+NO3									0	0	0	0	0	0		
NO2-N									0	0	0	0	0	0		
NO3-N		1.25							0	0	0	0	0	0		
Na	2.6	2.3	5			4.69	3.2	3.6	3.7	2.1	3.8	4.25	3.76	4	4.22	
P-Tot									0.36	0.36	0.39	0.44	0.46	0.44		
SO4	1	1.78							1.1	1.1	1.2	2.12	2.62	2		
o-PO4-P									0.12							
CHEMICAL INDICES																
HAR_Total	69.52	26.91	80.03	32.75	30	43	43	43.01	47.32	47.29	86.01	64.48	64.49	81.7	25.91	
Na%	7.18	15.15	11.53			18.17	13.98	14.99	14.49	8.82	8.78	12.61	11.12	9.42	23.94	
RSC	0	0.29	0.23	0.33	0	0	0	0	0	0	0	0	0	0	0	
SAR	0.12	0.19	0.24			0.31	0.21	0.24	0.23	0.13	0.18	0.23	0.2	0.19	0.36	
PESTICIDES																
PHYSICAL																
EC_FLD									78.04	80.9	72.03	75.8	69.02	60.9		
EC_GEN	66.15	75		83.6	149.8	63.6	77.5	62.4	72	72.2	228	71.4	75.3	56.2	54.4	
Secchi	43	21.6	68.02	28.62	20	21.5	21.5	25.8	34.4	21.5	68.8	12.9	38.7	17.2	6.33	
TDS	290.77	80	210	83	101	43	52	42	48	48	153	48	50	38	36	
Temp	19.23	20	20	18	21	18	20	19	21	21	16	23	19	23.8	21	
Turb				1.9	4.7			3.87	1.77	1.47	18.72	6.25	3.65	2.45	1.67	
pH_FLD			7.46						6.76	7.3	6.76	6.8	5.77	7.48		
pH_GEN	8.02	7.12	7.9	7.3	5.92	6.98	7.62	6.56	6.55	6.6	6.42	6.84	7.15	6.79	6.96	
TRACE & TOXIC																
Al	0.82	0.62														

HISTORY SHEET (WATER QUALITY)			
		Water Year	: 2017 - 2018
Site	: Pandu	Code	: 025-MBDGHY
State	: Assam	District	Kamrup
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Brahmaputra
Division	: Middle Brahmaputra Division (MBD), Guwahati	Sub-Division	: Middle Brahmaputra Sub-Division,
Drainage Area	: 417100.0 Sq. Km.	Bank	: Left
Latitude	: 26°10'31"	Longitude	: 91°40'18"
Current Zero of Gauge (m)	: 39		
CATEGORY	Opening Date	Closing Date	
Gauge	: 5/15/1972		
Discharge	: 11/18/1998		
Sediment	: 11/27/2003		
Water Quality	: 4/1/2003		
Reduced Level	Opening Date	Closing Date	
39.0	5/15/1972	,-	

Station Name: Pandu(025-MBDGHY)
Local River: Brahmaputra

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS				
	01/07/2017	03/10/2017	01/01/2018	02/04/2018
Q (cumec)	22331	20343	4142	4451
CHEMICAL				
CO3(mg/L)	0	0	6	0.37
Cl(mg/L)	8	14	2.23	2.68
ALK-TOT(mgCaCO3/L)	52	92	80.49	46.52
HCO3(mg/L)	63.44	112.24	86	56
B(mg/L)	0	0		
NO2-N(mg/L)	0	0		
NO2+NO3(mgN/L)	0	0		
Ca(mg/L)	17.2	15.48	10.32	10.1
NO3-N(mgN/L)	0	0		
Mg(mg/L)	25.8	6.19	13.42	5.16
P-Tot(mgP/L)	0.46	0.39	0.43	
SO4(mg/L)	2.15	2.1	2.05	
Alk-Phen(mgCaCO3/L)	0	0	4.98	0.31
Fe(mg/L)	0.21	0.25	0.18	
Na(mg/L)			3.7	4.01
K(mg/L)			1.7	2.37
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
DO(mg/L)	9.74	10.34		10.72
DO_SAT%(Percentage)	120.05	129.77		122.61
COD(mg/L)	64	16	104	88
BOD3-27(mg/L)	0.6	1.2	1.2	1
FCol-MPN(MPN/100mL)		50	60	
Tcol-MPN(MPN/100mL)		70	90	
PHYSICAL				
TDS(mg/L)	70	85	157	157
Turb(NTU)	3.5	2.5	5.1	1.03
Temp(Degrees Celsius (°C))	26	27	20	22
EC_FLD(µmho/cm)	439	333		397
Odour_Code(-)	odour free	odour free	odour free	odour free
Secchi(Meters)	43	38.7	25.8	25.25
Colour_Cod(-)	Brown	Light Brown	Light Brown	Clear
pH_FLD(pH unit)	7.59	8.15		7.85
EC_GEN(µmho/cm)	104.2	127.1	234	234
pH_GEN(pH unit)	7.33	7.99	8	7.85
CHEMICAL INDICES				
HAR_Total(mgCaCO3/L)	150.5	64.49	81.72	46.75
RSC(-)	0	0.56	0	0
Na%(Percentage)			8.82	14.99
SAR(-)			0.18	0.26

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Pandu(025-MBDGHY)
Local River: Brahmaputra

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS							
	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	44746	1430.06	13066.1	23454.46	5029.05	6272.9
CHEMICAL							
Cl	4	14	2.23	6.73	11	2.23	2.68
HCO3	4	112.24	56	79.42	87.84	86	56
P-Tot	3	0.46	0.39	0.43	0.43	0.43	
B	2	0	0	0	0		
Na	2	4.01	3.7	3.86		3.7	4.01
NO2-N	2	0	0	0	0		
Fe	3	0.25	0.18	0.21	0.23	0.18	
NO2+NO3	2	0	0	0	0		
NO3-N	2	0	0	0	0		
Alk-Phen	4	4.98	0	1.32	0	4.98	0.31
ALK-TOT	4	92	46.52	67.75	72	80.49	46.52
SO4	3	2.15	2.05	2.1	2.12	2.05	
CO3	4	6	0	1.59	0	6	0.37
Mg	4	25.8	5.16	12.64	15.99	13.42	5.16
Ca	4	17.2	10.1	13.28	16.34	10.32	10.1
K	2	2.37	1.7	2.03		1.7	2.37
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
Tcol-MPN	2	90	70	80	70	90	
COD	4	104	16	68	40	104	88
BOD3-27	4	1.2	0.6	1	0.9	1.2	1
DO	3	10.72	9.74	10.27	10.04		10.72
Fcol-MPN	2	60	50	55	50	60	
DO_SAT%	3	129.77	120.05	124.15	124.91		122.61
PHYSICAL							
TDS	4	157	70	117.25	77.5	157	157
pH_GEN	4	8	7.33	7.79	7.66	8	7.85
EC_GEN	4	234	104.2	174.82	115.65	234	234
Turb	4	5.1	1.03	3.03	3	5.1	1.03
pH_FLD	3	8.15	7.59	7.86	7.87		7.85
Temp	4	27	20	23.75	26.5	20	22
Secchi	4	43	25.25	33.19	40.85	25.8	25.25
EC_FLD	3	439	333	389.67	386		397
CHEMICAL INDICES							
Na%	2	14.99	8.82	11.91		8.82	14.99
RSC	4	0.56	0	0.14	0.28	0	0
HAR_Total	4	150.5	46.75	85.86	107.5	81.72	46.75
SAR	2	0.26	0.18	0.22		0.18	0.26

Station Name: Pandu(025-MBDGHY)
Local River: Brahmaputra

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	31265	28657	26890	21178	18723	25657	20461	33291	24150	32427	21643	20429	21176	24665	21337
BIOLOGICAL/BACTEOROLOGICAL															
BOD3-27							0.4	0.4	0.4	0.4	0.75	0.78	0.78	0.5	0.96
COD															35.2
DO			7.6				8.2		8.51	8.77	9.58	9.69	11.38	9.52	10.1
DO_SAT%			91.98				103.81		108.79	108.1	115.94	119.44	137.72	117.42	125.88
FCol-MPN															50
Tcol-MPN															70
CHEMICAL															
ALK-TOT							50	68	48	65	58	58	59	63	72
Alk-Phen							0	0	0	0	0	0	0	0	0
B										0	0	0	0	0	0
CO3	0	0	0.11	0.15			0	0	0	0	0	0	0	0	0
Ca	17.2	24.17	20	18.08			20.64	15.48	18.06	15.48	28.38	18.92	14.62	18.92	16.34
Cl	8	12.84	11.35	10.06	12.08		7.5	13	8.5	13	12	11.86	10.5	10.5	11
F		0.05	0.5	0.5											
Fe	0.17	0.22	1.4		0.5					0.12	0.16	0.16	0.24	0.22	0.23
HCO3	58.56	25.04	61.73	59.93			61	82.96	58.56	79.3	70.76	71.81	71.98	76.86	87.84
K	2.15	1.49	2.29				1.04	2.63	0.6	0.22	0.23	0.18	1.2	1.72	
Mg	4.81	4.67	2.82	1.65			5.68	11.35	16	10.84	7.74	6.49	9.81	8.25	15.99
NO2+NO3										0	0	0	0	0	0
NO2-N										0	0	0	0	0	0
NO3-N			0.68							0	0	0	0	0	0
Na	1.5	1.31	1.55				2.29	2.02	4.25	4.45	3.87	3.61	3.83	3.56	
P-Tot										0.29	0.39	0.36	0.47	0.39	0.43
SO4	1.63	1	1.85							1.1	1.14	1.22	1.23	2.03	2.12
o-PO4-P	0.12		0.61												
CHEMICAL INDICES															
HAR_Total	63.04	79.55	61.3	52.08			75.27	85.99	111.82	83.85	103.2	75.26	77.4	81.7	107.5
Na%	4.87	3.35	4.74				6.29	4.72	7.57	10.37	7.55	9.45	9.6	10.02	
RSC	0	0	0	0			0	0	0	0	0	0	0	0.11	0.28
SAR	0.08	0.06	0.08				0.12	0.1	0.17	0.21	0.17	0.18	0.19	0.19	
PESTICIDES															
PHYSICAL															
EC_FLD									339.5	354	464.5	338.5	560	486.5	386
EC_GEN	102.99	95	130		24	157.7	118.4	151.24	115.8	130.05	135.3	115.5	119.85	115.5	115.65
Secchi	43	60.2	49.63	45.2			51.6	38.7	45.15	38.95	70.95	49.45	36.55	47.3	40.85
TDS	260	285	174.67	204.44	24	105.5	79.5	101.13	78	86.76	90.5	77.5	80.5	77.5	77.5
Temp	25	27	25.47		24.5	23.5	27.5	26.47	28	26	25	26	25	26	26.5
Turb	3.55				4.6			1.61	7.59	10.38	21.75	11.33	5.29	3.39	3
pH_FLD			6.83			7.4			7.24		7.97	7.82	7.77	7.7	7.87
pH_GEN	7.57	7.4	7.33	7.49	7.76	7.25	7.51	7.1	7.44	7.52	7.11	7.06	7.2	7.5	7.66
TRACE & TOXIC															
Al		0.6	0.6												

Station Name: Pandu(025-MBDGHY)
Local River: Brahmaputra

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS	Winter (Nov-Feb)								
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Q (cumec)	9360	5659	7854	3869	3647	4520	4725	5073	4404
BIOLOGICAL/BACTERIOLOGICAL									
BOD3-27							0.3	0.4	0.4
COD									
DO			6.6		4.2				10.05
DO_SAT%			71.15		38.97				99.66
FCol-MPN									
Tcol-MPN									
CHEMICAL									
ALK-TOT				57.39	95.9	41.07	84	110	122
Alk-Phen				0.02	0	0.1	0	0	0
B									0
CO3	0	0	0.44	0.02	0	0.12	0	0	0
Ca	18.01	23.72	29.51	27.39	23.52	21.21	25.8	18.92	22.36
Cl	12.53	10.53	7.17	8.05	21.87	8.56	17	13	8
F		0.06	0.5		0.05	0.05			
Fe	0.26	0.58	0.38	0.5					0.15
HCO3	59.07	15.4	102.96	69.98	117	49.86	102.48	134.2	148.84
K	2.66	1	1.41	1.5	1.2	3.24	0.1	0.8	0.8
Mg	6.03	7.93	3.83	2.18	9.4	6.55	10.32	16.51	11.35
NO2+NO3									0
NO2-N									0
NO3-N			0.58						0
Na	2.98	2.43	2.32	4	3.5	5.08	4.61	5.01	5.01
P-Tot									0.65
SO4	1.71	1	1.97						2.05
o-PO4-P	0.08		0.14						
CHEMICAL INDICES									
HAR_Total	61.83	92.45	92.19	77.56	97.97	80.32	107.5	116.09	103.19
Na%	8.56	5.32	8.19	9.89	7.15	11.62	8.57	8.58	9.52
RSC	0.01	0	0.74	0	0	0	0	0	0.39
SAR	0.15	0.11	0.13	0.2	0.15	0.25	0.19	0.2	0.22
PESTICIDES									
PHYSICAL									
EC_FLD									547
EC_GEN	148.57	85	150		201	202	190.1	200	205
Secchi	43	60.2	72.65	68.47	58.8	53.02	64.5	47.3	55.9
TDS	300	210	205.33	170	134	135	127	134	138
Temp	21.71	18.5	17.6	20	12	15	13	16	15
Turb	2.7			1.4	8.2			1	2.22
pH_FLD			7.71		6.4		7.65		6.97
pH_GEN	8	7.88	7.69	7.48	7.4	7.42	8.12	6.84	7.26
TRACE & TOXIC									
Al	1	0.55							

Station Name: Pandu(025-MBDGHY)
Local River: Brahmaputra

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS						
	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	3953	3611	3348	3850	4179	4142
BIOLOGICAL/BACTERIOLOGICAL						
BOD3-27	0.6	0.5	0.6	0.3	0.8	1.2
COD						104
DO	9.92	11.38	11.08	9.42	9.2	
DO_SAT%	96.25	115.3	117.04	93.42	99.18	
FCol-MPN						60
Tcol-MPN						90
CHEMICAL						
ALK-TOT	78	66	84	126	88	80.49
Alk-Phen	0	0	0	0	4.98	4.98
B	0	0	0	0	0	
CO3	0	0	0	0	6	6
Ca	24.08	29.24	17.2	37.84	29.24	10.32
Cl	11	11	10	9	8	2.23
F						
Fe	0.14	0.17	0.23	0.21	0.22	0.18
HCO3	95.16	80.52	102.48	153.72	95.16	86
K	0.35	0.17	0.32	1.6	2.12	1.7
Mg	20.64	20.64	13.42	10.32	25.8	13.42
NO2+NO3	0	0	0	0	0	
NO2-N	0	0	0	0	0	
NO3-N	0	0	0	0	0	
Na	3.2	3.8	3.2	3.42	2.85	3.7
P-Tot	0.3	0.38	0.43	0.47	0.4	0.43
SO4	1.1	1.21	2.1	2.45	1.24	2.05
o-PO4-P						
CHEMICAL INDICES						
HAR_Total	146.2	159.1	98.92	137.6	180.6	81.72
Na%	4.57	4.97	6.6	5.08	3.3	8.82
RSC	0	0	0	0	0	0
SAR	0.12	0.13	0.14	0.13	0.09	0.18
PESTICIDES						
PHYSICAL						
EC_FLD	597	876	528	777	506	
EC_GEN	197.7	202	203	201	199.1	234
Secchi	60.2	73.1	43	94.6	73.1	25.8
TDS	133	135	136	134	133	157
Temp	14	16	18	15	19	20
Turb	0.57	8.64	8.1	6.94	2.92	5.1
pH_FLD	7.91	8.1	8.22	7.94	8.07	
pH_GEN	6.67	7.1	6.83	7.71	8.26	8
TRACE & TOXIC						
AI						

Station Name: Pandu(025-MBDGHY)
Local River: Brahmaputra

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	6080	8196	3662	4641	6554	3752	11378	8182	4513	3338	3019	3355	4253	4449	4451
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27							0.5			0.6	0.7	0.55	0.65	0.78	1
COD														16	88
DO										10.35	9.73	10.16	10.76	10.43	10.72
DO_SAT%										125.26	117.75	120.69	106.7	119.3	122.61
FCol-MPN															
Tcol-MPN															
CHEMICAL															
ALK-TOT				98.58	74.02	72	64	58		64	80	66	70	86	46.52
Alk-Phen				0.23	0	1.99	0	0		0	0	0	6.97	0	0.31
B		0.05							0	0	0	0	0	0	
CO3	0	0.48	1.48	0.28	0	2.4	0	0	0	0	0	0	8.4	0	0.37
Ca	17.2	14.85	17.64	22.08	20	25.8	18.92	13.76	24.08	20.64	18.92	20.64	15.48	44.72	10.1
Cl	7.5	6.18	5.54	6.4	34.5	9	9	7	11	15	10	11	10	11	2.68
F		0.05	0.5		0.05	0.05									
Fe	0.27	0.4		0.5					0.1	0.18	0.17	0.22	0.25	0.19	
HCO3	40.26	89.31	99.92	119.7	90.3	82.96	78.08	70.76	75.64	78.08	97.6	80.52	68.32	104.92	56
K	1	0.81	2.8			3.71	1.3	0.1	0.19	0.19	0.16	0.3	2.1	2.23	2.37
Mg	10.32	1.42	5.81	0.5	2.4	7.22	5.16	16.51	11.35	8.26	12.38	10.32	9.29	1.03	5.16
NO2+NO3									0	0	0	0	0	0	
NO2-N									0	0	0	0	0	0	
NO3-N		1.56							0	0	0	0	0	0	
Na	3	2.17	4.8			5.03	4.86	3.7	4.2	4.2	4	3.65	4.5	3.8	4.01
P-Tot									0.15	0.35	0.36	0.46	0.49	0.42	
SO4	1.85	2.43							1	1.1	1.21	1.9	2.38	2.3	
o-PO4-P															
CHEMICAL INDICES															
HAR_Total	75.55	41.81	68.31	57.28	60	94.58	68.8	103.19	107.49	86.02	98.88	94.6	77.41	116.09	46.75
Na%	5.33	11.34	12.74			9.97	13.1	7.29	7.86	9.63	8.13	7.76	10.96	6.51	14.99
RSC	0	0.67	0.33	0.83	0.28	0	0	0	0	0	0	0	0	0	0
SAR	0.09	0.16	0.25			0.23	0.26	0.16	0.18	0.2	0.18	0.16	0.22	0.15	0.26
PESTICIDES															
PHYSICAL															
EC_FLD										436	447	731	404	561	397
EC_GEN	122.5	105		172	138.2	173.2	122.3	136.2	142.5	165.6	169.3	165.4	151	163.5	234
Secchi	34.4	35.35	44.1	55.2	50	64.5	47.3	34.4	60.2	51.6	47.3	51.6	38.7	111.8	25.25
TDS	316.67	115	190	172	93	117	82	91	95	113	114	111	101	109	157
Temp	26	22	20	23	23	19	20	21	25	25	25	24	15	22	22
Turb				0.3	6.1			0.74	0.75	2.69	7.96	6.35	4.67	3.21	1.03
pH_FLD			7.82		7.51		7.76			7.97	8.21	7.89	8.08	8.38	7.85
pH_GEN	7.63	7.65	7.5	7.4	6.56	7.96	7.77	7.14	6.85	7.39	7.59	7.2	7.36	7.97	7.85
TRACE & TOXIC															
Al	0.75	0.62													

HISTORY SHEET (WATER QUALITY)			
		Water Year	: 2017 - 2018
Site	: KULSI	Code	: BY00045
State	: Assam	District	Kamrup
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: Kulsi	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Kulsi
Division	: Middle Brahmaputra Division (MBD), Guwahati	Sub-Division	: Middle Brahmaputra Sub-Division,
Drainage Area	: 2500.0 Sq. Km.	Bank	: Right
Latitude	: 25°58'45"	Longitude	: 91°23'09"
Current Zero of Gauge (m)	: 48		
CATEGORY	Opening Date	Closing Date	
Gauge	: 28/03/1990		
Discharge	: 01/06/1991		
Sediment	: 15/02/2002		
Water Quality	: 01/08/1992		
Reduced Level	Opening Date	Closing Date	
48.0	28/03/1990	-	

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: KULSI(BY00045)
Local River: Kulsi

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS				
	01/07/2017	03/10/2017	01/01/2018	02/04/2018
Q (cumec)	108.86	237.94	45.58	28.42
CHEMICAL				
NO2+NO3(mgN/L)	0	0		
CO3(mg/L)	0	0	0	0.02
Alk-Phen(mgCaCO3/L)	0	0	0	0.02
ALK-TOT(mgCaCO3/L)	28	46	19.67	29.54
HCO3(mg/L)	34.16	56.12	24	36
Ca(mg/L)	15.48	13.76	12.04	3.37
SO4(mg/L)	1.95	3.1	1.12	
NO2-N(mg/L)	0	0		
P-Tot(mgP/L)	0.47	0.48	0.3	
Fe(mg/L)	0.22	0.21	0.21	
NO3-N(mgN/L)	0	0		
Cl(mg/L)	11	8	2.23	1.79
B(mg/L)	0	0		
Mg(mg/L)	13.42	10.32	5.16	4.58
K(mg/L)			0.9	1.93
Na(mg/L)			3.2	4.01
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
COD(mg/L)	40	72	56	28
BOD3-27(mg/L)	1.1	1.2	1	0.9
Tcol-MPN(MPN/100ml)		33	40	
Fcol-MPN(MPN/100ml)		22	34	
PHYSICAL				
EC_GEN(μmho/cm)	14.8	30.2	39.1	39.1
Temp(Degrees Celsius (°C))	26	26	19	25
pH_GEN(pH unit)	7.64	7.42	7.22	7
Colour_Cod(-)	Other	Other	Clear	Clear
pH_FLD(pH unit)	7.3	7.33		7.58
Odour_Code(-)	odour free	odour free	odour free	odour free
Secchi(Meters)	38.7	34.4	30.1	8.42
TDS(mg/L)	10	20	26	26
Turb(NTU)	2.65	2.1	1.9	1.57
CHEMICAL INDICES				
HAR_Total(mgCaCO3/L)	94.62	77.4	51.6	27.51
RSC(-)	0	0	0	0.05
SAR(-)			0.19	0.33
Na%(Percentage)			11.72	22.69

Station Name: KULSI(BY00045)
Local River: Kulsi

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS							
	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	364	2343.01	16.95	129.49	239.39	52.1	46.76
CHEMICAL							
Cl	4	11	1.79	5.76	9.5	2.23	1.79
HCO3	4	56.12	24	37.57	45.14	24	36
P-Tot	3	0.48	0.3	0.42	0.47	0.3	
B	2	0	0	0	0		
NO2-N	2	0	0	0	0		
Na	2	4.01	3.2	3.61		3.2	4.01
Fe	3	0.22	0.21	0.21	0.22	0.21	
NO2+NO3	2	0	0	0	0		
NO3-N	2	0	0	0	0		
Alk-Phen	4	0.02	0	0	0	0	0.02
ALK-TOT	4	46	19.67	30.8	37	19.67	29.54
SO4	3	3.1	1.12	2.06	2.53	1.12	
CO3	4	0.02	0	0	0	0	0.02
Mg	4	13.42	4.58	8.37	11.87	5.16	4.58
Ca	4	15.48	3.37	11.16	14.62	12.04	3.37
K	2	1.93	0.9	1.41		0.9	1.93
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
Tcol-MPN	2	40	33	36.5	33	40	
COD	4	72	28	49	56	56	28
BOD3-27	4	1.2	0.9	1.05	1.15	1	0.9
FCol-MPN	2	34	22	28	22	34	
PHYSICAL							
TDS	4	26	10	20.5	15	26	26
pH_GEN	4	7.64	7	7.32	7.53	7.22	7
EC_GEN	4	39.1	14.8	30.8	22.5	39.1	39.1
Turb	4	2.65	1.57	2.05	2.38	1.9	1.57
Temp	4	26	19	24	26	19	25
pH_FLD	3	7.58	7.3	7.4	7.32		7.58
Secchi	4	38.7	8.42	27.91	36.55	30.1	8.42
CHEMICAL INDICES							
Na%	2	22.69	11.72	17.2		11.72	22.69
RSC	4	0.05	0	0.01	0	0	0.05
HAR_Total	4	94.62	27.51	62.78	86.01	51.6	27.51
SAR	2	0.33	0.19	0.26		0.19	0.33

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: KULSI(BY00045)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: KULSI

Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS		Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Q (cumec)	208.4	140	189.9	155.9	169.3	135.8	250.6	186.8	206.5	154.2	139.9	143.1	134.2	108.2	173.4	
BIOLOGICAL/BACTEOROLOGICAL																
BOD3-27															1.17	
COD															61.33	
DO											2.9					
DO_SAT%											36.04					
FCol-MPN															22	
Tcol-MPN															33	
CHEMICAL																
ALK-TOT							19	22	21	26	32	30	22	27	37	
Alk-Phen							0	0	0	0	0	0	0	0	0	
B										0	0	0	0	0	0	
CO3	0	0	0.03	0.13			0	0	0	0	0	0	0	0	0	
Ca	18.06	12.04	25.01	7.85			8.6	20.64	20.64	12.04	16.34	12.53	6.02	11.18	14.62	
Cl	7	12	9.37	13.08			9	8	6	10	14	13.57	10.5	11.5	9.5	
F			0.5	0.5												
Fe	0.01	0.15	4.1		0.5					0.12	0.15	0.19	0.25	0.23	0.22	
HCO3	31.72	32.94	23.94	27.97			23.18	26.84	25.62	31.72	39.04	38.69	26.84	32.94	45.14	
K	0.9	0.7	1.09				0.61	1.05	0.6	0.2	0.2	0.2	1.6	1.35		
Mg	4.64	4.13	4.18	1.06			3.61	3.1	8.26	9.28	6.71	3.98	3.61	7.22	11.87	
NO2+NO3										0	0	0	0	0	0	
NO2-N										0	0	0	0	0	0	
NO3-N			1.37							0	0	0	0	0	0	
Na	1.65	1.45	1.18				1.83	2.03	3.9	3.52	3.5	3.89	3.81	3.85		
P-Tot										0.29	0.38	0.39	0.47	0.38	0.47	
SO4	1.79		2.24							1.15	1.13	1.21	1.21	1.99	2.52	
o-PO4-P	0.02		0.53													
CHEMICAL INDICES																
HAR_Total	64.5	47.31	76.65	24.04			36.54	64.52	86.02	68.79	68.79	47.31	30.11	58.03	86.01	
Na%	5.47	6.04	4.35				9.55	6.31	9.17	10.95	10.16	15.08	20.61	12.48		
RSC	0	0	0	0			0	0	0	0	0	0	0	0	0	
SAR	0.09	0.09	0.07				0.13	0.11	0.19	0.19	0.18	0.24	0.3	0.22		
PESTICIDES																
PHYSICAL																
EC_FLD											31	35	38.5	36.5		
EC_GEN	26.97	25	35		23.2	39.55	23.3	36.09	24.45	28.5	29.06	32.8	33.7	32.45	22.5	
Secchi	45.15	30.1	57.96	19.62			21.5	51.6	51.6	30.1	41.57	30.1	15.05	27.95	36.55	
TDS	230	160	155	231.11	23	26.5	15.5	23.87	16.5	19	19.33	22	22.5	22	15	
Temp	26.5	27	25.5		25.5	26.5	27.5	24.47	25.5	25	26.11	27	27	27	26	
Turb	3.8				10.55			5.35	11.07	12.39	7.52	3.76	3.47	2.8	2.37	
pH_FLD											7.29	7.02	7.27	6.88	7.32	
pH_GEN	7.03	7.02	7.05	7.48	6.8	6.7	6.52	6.92	6.87	7.29	6.43	6.95	6.97	6.92	7.53	
TRACE & TOXIC																
Al		0.7	1.5													

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: KULSI(BY00045)

Local River: Kulsi

Division: Middle Brahmaputra Division (MBD), Guwahati

Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	58.94	66.92	63.37	41.63	53.77	42.17	37.78
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27							
COD							
DO							
DO_SAT%							
FCol-MPN							
Tcol-MPN							
CHEMICAL							
ALK-TOT				12.29	50	21.35	32
Alk-Phen				0	0	0.04	0
B							
CO3	0	0	0.49	0	0	0.05	0
Ca	12.9	12.9	13.54	4.9	13.68	12.57	12.04
Cl	12.5	11	6.29	9.06	15.9	6.04	15
F	0.06	0.05	0.5	0.5	0.05	0.05	
Fe	0.08	0.43	0.53	0.5			
HCO3	25.84	21.95	42.4	14.99	61	25.94	39.04
K	0.75	0.3	1.25	0.7	0.9	1.9	0.1
Mg	2.58	4.64	1.01	1.79	9.4	5	5.16
NO2+NO3							
NO2-N							
NO3-N			0.6				
Na	2.85	1.65	2.95	2.3	2.8	3.25	3.87
P-Tot							
SO4	1.19	1.25	1.3				
o-PO4-P	0.01		0.15				
CHEMICAL INDICES							
HAR_Total	42.92	51.6	38.07	19.71	73.37	52.26	51.6
Na%	12.13	6.57	17	19.63	7.61	11.51	14.07
RSC	0	0	0.18	0	0	0	0
SAR	0.16	0.1	0.24	0.23	0.14	0.2	0.24
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	34.29	80	70		40.3	38.2	38.8
Secchi	34.4	32.25	31.49	12.25	34.2	31.43	30.1
TDS	217.14	140	198.33	160	27	25	26
Temp	23	17	25	13	14	18	14
Turb	3.5			0.3	4.2		
pH_FLD							
pH_GEN	7.34	7.33	8.01	7	6.42	7.28	7.32
TRACE & TOXIC							
AI	0.85	0.79					

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: KULSI(BY00045)

Local River: Kulsi

Division: Middle Brahmaputra Division (MBD), Guwahati

Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS								
Winter (Nov-Feb)								
	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	47.14	39.8	30.61	25.52	35.23	38.12	42.8	45.58
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27								1
COD								56
DO				1.7				
DO_SAT%				18.33				
FCol-MPN								34
Tcol-MPN								40
CHEMICAL								
ALK-TOT	30		30		30		50	19.67
Alk-Phen	0		0		0		0	0
B		0	0	0	0	0	0	
CO3	0	0	0	0	0	0	0	0
Ca	17.2	43.69	10.32	15.48	15.48	17.2	12.04	12.04
Cl	8	8	10	7	9	10	7	2.23
F								
Fe		0.15	0.12	0.21	0.25	0.2	0.21	0.21
HCO3	36.6	63.44	36.6	31.72	36.6	48.8	30.5	24
K	0.9	0.9	0.3	0.16	0.45	1.5	1.5	0.9
Mg	2.06	1.65	9.29	8.26	2.06	5.16	14.45	5.16
NO2+NO3		0	0	0	0	0	0	
NO2-N		0	0	0	0	0	0	
NO3-N		0	0	0	0	0	0	
Na	4.1	4.1	3.6	3.85	4.3	4.1	3.4	3.2
P-Tot		0.4	0.34	0.42	0.46	0.45	0.36	0.3
SO4		1.2	1.2	1.22	1.9	2.38	1.18	1.12
o-PO4-P								
CHEMICAL INDICES								
HAR_Total	51.58	116.1	64.51	73.12	47.28	64.5	90.31	51.6
Na%	14.51	7.08	10.85	10.31	16.4	11.89	7.48	11.72
RSC	0	0	0	0	0	0	0	0
SAR	0.25	0.17	0.2	0.2	0.27	0.22	0.16	0.19
PESTICIDES								
PHYSICAL								
EC_FLD				42	39	290		
EC_GEN	38.3	55.7	40.8	41	40.6	39.9	42.1	39.1
Secchi	43	109.22	25.8	38.7	38.7	43	30.1	30.1
TDS	26	37	27	27	27	27	28	26
Temp	17	13	16	19	15	19	18	19
Turb	3.2	4.55	1.44	6.54	4	3.15	2.15	1.9
pH_FLD			7.54	7.55	7.34	7.24	6.95	
pH_GEN	6.6	6.32	6.84	6.65	7.24	7.89	7.48	7.22
TRACE & TOXIC								
AI								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: KULSI(BY00045)

Local River: KULSI

Division: Middle Brahmaputra Division (MBD), Guwahati

Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS	Summer (Mar-May)															
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Q (cumec)	23.32	27.92	9.121	14.9	30.57	71.76	35.31	60.66	17.75	26.24	16.23	16.92	37.23	157.6	28.42	
BIOLOGICAL/BACTEOROLOGICAL																
BOD3-27														1	0.9	
COD														16	28	
DO										4.2						
DO_SAT%										49.89						
FCol-MPN																
Tcol-MPN																
CHEMICAL																
ALK-TOT				24.62	31.97	28	28	22			58	44	42	30	29.54	
Alk-Phen				0.03	0	0	0	0			0	0	0	0	0.02	
B		0.22							0	0	0	0	0	0		
CO3	0	0.22	0.28	0.04	0	0	0	0	0	0	0	0	0	0	0.02	
Ca	16.34	3.14	19.24	8.18	3.2	10.32	8.6	6.88	15.48	6.88	13.76	17.2	15.48	8.6	3.37	
Cl	11.5	7.75	4.53	2.29	21.08	7	7	8	10	14	10	10	13	9	1.79	
F		0.05	0.5		0.05	0.05										
Fe	0.17	0.45		0.5					0.12	0.12	0.21	0.21	0.23	0.21		
HCO3	35.38	53.38	59.68	29.95	39	34.16	34.16	26.84	48.8	92.72	70.76	53.68	51.24	36.6	36	
K	1.15	0.5	1.3			2.1	0.1	0.1	0.25	0.27	0.17	0.35	1.68	1.5	1.93	
Mg	6.19	4.1	2.87	0.2	1.4	3.1	4.13	11.35	3.1	8.26	7.22	1.03	6.19	13.42	4.58	
NO2+NO3									0	0	0	0	0	0		
NO2-N									0	0	0	0	0	0		
NO3-N		1.05							0	0	0	0	0	0		
Na	2.65	2.02	4.1			3.91	3.51	3.2	4.1	1.6	4.12	4.1	3.78	3.85	4.01	
P-Tot									0.32	0.32	0.38	0.48	0.48	0.41		
SO4	1.35	1.66							1	1	1.2	2.05	2.45	2.1		
o-PO4-P																
CHEMICAL INDICES																
HAR_Total	54.91	24.2	60.06	21.28	13.83	38.72	38.71	64.49	51.62	51.62	64.48	47.29	64.49	77.42	27.51	
Na%	6.24	15.93	12.67			17.11	16.52	9.81	14.71	6.33	12.24	15.78	11.04	9.63	22.69	
RSC	0	0.41	0	0.07	0.36	0	0	0	0	0.5	0	0	0	0	0.05	
SAR	0.1	0.18	0.23			0.27	0.25	0.17	0.25	0.1	0.22	0.26	0.21	0.19	0.33	
PESTICIDES																
PHYSICAL																
EC_FLD										61	55	55	51			
EC_GEN	72.31	40		56.1	45.9	48.8	55.3	44.3	60.2	56.2	53.1	50.3	47.5	35.5	39.1	
Secchi	38.7	7.85	48.1	20.45	8	25.8	21.5	17.2	38.7	17.2	34.4	43	38.7	21.5	8.42	
TDS	230.77	65	200	56	31	33	37	30	40	37	36	34	32	24	26	
Temp	20.62	22.5		20	18	23	20	20	26	24	25	25	24	19	25	
Turb				2.1	3.6			2.36	0.55	0.87	6.62	4.1	3.42	2.3	1.57	
pH_FLD										7.81	7.6	7.25	7.31	6.3	7.58	
pH_GEN	7.46	7.05	7.7	7.2	6.7	7.04	7.67	6.69	6.75	7.24	6.7	7.1	7.42	6.89	7	
TRACE & TOXIC																
Al	0.95	0.43														

HISTORY SHEET (WATER QUALITY)			
		Water Year	: 2017 - 2018
Site	: DUDHNAI	Code	: bv000f5
State	: Assam	District	: Goalpara
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: Dudhnai	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Dudhnai
Division	: Middle Brahmaputra Division (MBD), Guwahati	Sub-Division	: Middle Brahmaputra Sub-Division,
Drainage Area	: 478.0 Sq. Km.	Bank	: Right
Latitude	: 25°58'44"	Longitude	: 90°47'26"
Current Zero of Gauge (m)	: 45		
CATEGORY	Opening Date	Closing Date	
Gauge	: 07/01/1989		
Discharge	: 07/01/1989		
Sediment	: 4/1/2003		
Water Quality	: 4/1/2003		
Reduced Level	Opening Date	Closing Date	
45.0	7/1/1989	,-	

Station Name: DUDHNAI(bv000f5)
Local River: Dudhnai

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS				
	01/07/2017	03/10/2017	01/01/2018	02/04/2018
Q (cumec)	19.64	62.03	8.05	5.98
CHEMICAL				
NO2+NO3(mgN/L)	0	0		
Ca(mg/L)	10.32	12.04	25.8	4.21
B(mg/L)	0	0		
SO4(mg/L)	2.2	2.2	1.5	
Cl(mg/L)	7	4	2.68	5.36
Mg(mg/L)	10.32	8.26	10.32	5.23
HCO3(mg/L)	61	68.32	34	30
Fe(mg/L)	0.26	0.22	0.17	
NO2-N(mg/L)	0	0		
CO3(mg/L)	0	0	0	0.01
P-Tot(mgP/L)	0.39	0.49	0.45	
NO3-N(mgN/L)	0	0		
ALK-TOT(mgCaCO3/L)	50	56	27.87	24.61
Alk-Phen(mgCaCO3/L)	0	0	0	0.01
Na(mg/L)			3.51	5.1
K(mg/L)			0.6	1
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
BOD3-27(mg/L)	0.4	0.6	0.8	1.2
COD(mg/L)	56	88	88	52
Tcol-MPN(MPN/100mL)		40	60	
Fcol-MPN(MPN/100mL)		33	40	
PHYSICAL				
Colour_Cod(-)	Other	Other	Clear	Other
pH_FLD(pH unit)	5.64			6.37
Temp(Degrees Celsius (°C))	32.5	25	15	17
TDS(mg/L)	26	35	42	42
EC_FLD(µmho/cm)	82			58.13
Secchi(Meters)	25.8	30.1	64.5	10.52
Turb(NTU)	1.9	1.6	2.3	18.63
EC_GEN(µmho/cm)	39.4	51.8	62.1	62.1
Odour_Code(-)	odour free	odour free	odour free	odour free
pH_GEN(pH unit)	7.79	7.58	7.54	6.37
CHEMICAL INDICES				
HAR_Total(mgCaCO3/L)	68.8	64.52	107.5	32.32
RSC(-)	0	0	0	0
Na%(Percentage)			6.62	24.99
SAR(-)			0.15	0.39

Station Name: DUDHNAI(bv000f5)
Local River: Dudhnai

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS							
	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	200.16	2.25	28.52	52.42	11.54	10.91
CHEMICAL							
Cl	4	7	2.68	4.76	5.5	2.68	5.36
HCO3	4	68.32	30	48.33	64.66	34	30
P-Tot	3	0.49	0.39	0.44	0.44	0.45	
B	2	0	0	0	0		
NO2-N	2	0	0	0	0		
Na	2	5.1	3.51	4.3		3.51	5.1
Fe	3	0.26	0.17	0.22	0.24	0.17	
NO2+NO3	2	0	0	0	0		
NO3-N	2	0	0	0	0		
Alk-Phen	4	0.01	0	0	0	0	0.01
ALK-TOT	4	56	24.61	39.62	53	27.87	24.61
SO4	3	2.2	1.5	1.97	2.2	1.5	
CO3	4	0.01	0	0	0	0	0.01
Mg	4	10.32	5.23	8.53	9.29	10.32	5.23
Ca	4	25.8	4.21	13.09	11.18	25.8	4.21
K	2	1	0.6	0.8		0.6	1
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
Tcol-MPN	2	60	40	50	40	60	
COD	4	88	52	71	72	88	52
BOD3-27	4	1.2	0.4	0.75	0.5	0.8	1.2
FCol-MPN	2	40	33	36.5	33	40	
PHYSICAL							
TDS	4	42	26	36.25	30.5	42	42
pH_GEN	4	7.79	6.37	7.32	7.68	7.54	6.37
EC_GEN	4	62.1	39.4	53.85	45.6	62.1	62.1
Turb	4	18.63	1.6	6.11	1.75	2.3	18.63
pH_FLD	2	6.37	5.64	6.01	5.64		6.37
Temp	4	32.5	15	22.38	28.75	15	17
Secchi	4	64.5	10.52	32.73	27.95	64.5	10.52
EC_FLD	2	82	58.13	70.07	82		58.13
CHEMICAL INDICES							
Na%	2	24.99	6.62	15.8		6.62	24.99
RSC	4	0	0	0	0	0	0
HAR_Total	4	107.5	32.32	68.28	66.66	107.5	32.32
SAR	2	0.39	0.15	0.27		0.15	0.39

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: DUDHNAI(bv000f5)
Local River: Dudhna

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS	Flood (Jun-Oct)															
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Q (cumec)	50.1	24.1	39.2	41.1	26.6	33.9	27.5	32.3	32.8	24.1	32.97	46.5	34.3	15.7	40.8	
BIOLOGICAL/BACTERIOLOGICAL																
BOD3-27															0.53	
COD															77.33	
DO			3.6								6.7	5.3				
DO_SAT%			43.57								82.36	64.14				
FCol-MPN															33	
Tcol-MPN															40	
CHEMICAL																
ALK-TOT	51						29	26	30	38	39	28	29	40	53	
Alk-Phen	0						0	0	0	0	0	0	0	0	0	
B										0	0	0	0	0	0	
CO3	0	0	0.04	0.04			0	0	0	0	0	0	0	0	0	
Ca	8.6	19.78	26.8	13.36			10.32	13.76	12.04	15.48	31.82	21.13	8.6	6.02	11.18	
Cl	9.5	17	7.23	11.07			7	12	8	13.5	16	11.57	11	7.5	5.5	
F			0.5	0.5												
Fe	0.18	0.2	0.36		0.5					0.11	0.15	0.17	0.24	0.25	0.24	
HCO3	62.22	34.16	24.92	37.99			35.38	31.72	36.6	46.36	47.58	41.48	35.38	48.8	64.66	
K	1.2	1.25	1.38				0.96	1.62	0.15	0.19	0.25	0.2	1.8	1.59		
Mg	6.71	3.61	3.22	2.58			4.13	2.06	8.26	3.61	2.58	1.93	5.68	12.9	9.29	
NO2+NO3										0	0	0	0	0	0	
NO2-N										0	0	0	0	0	0	
NO3-N			1.13							0	0	0	0	0	0	
Na	3.4	2.25	1.92				3.08	1.99	3.2	3.6	3.75	3.87	3.47	4.1		
P-Tot										0.3	0.38	0.38	0.43	0.39	0.44	
SO4	1	1	1.84							1.12	1.19	1.21	1.23	1.98	2.2	
o-PO4-P	0.25		0.44													
CHEMICAL INDICES																
HAR_Total	49.46	64.29	77.07	44.15			43.01	42.98	64.5	53.74	90.3	61.31	45.17	68.8	66.66	
Na%	11.25		5.04				13.21	8.79	9.74	12.75	9.16	12.04	14.22	11.27		
RSC	0.3		0	0			0	0	0	0	0	0	0	0	0	
SAR	0.2		0.09				0.2	0.13	0.17	0.21	0.18	0.21	0.23	0.22		
PESTICIDES																
PHYSICAL																
EC_FLD	60.52		78								60	57.5	76.5	72.5	82	
EC_GEN	45.23	35	40		50.95	90.3	45.25	50.73	50.15	49.85	53.8	126.65	61.1	60.15	44.91	
Secchi	21.5		68.72	33.4			25.8	34.4	30.1	38.7	79.55	53.75	21.5	15.05	27.71	
TDS	240	230	188.12	221.11	50.5	62	30.5	34.27	34	33.5	36.5	85	40.5	40	30	
Temp	26.5	27	23.69		25	24	24.5	24.53	24	25	26	25	27.5	26.5	29.17	
Turb	2.95				13.65			5.29	8.59	5.52	14.36	30.7	5.65	3.31	1.77	
pH_FLD			6.8								6.47	5.99	5.69	4.94	5.64	
pH_GEN	6.94	7.03	7.16	7.36	7.14	6.97	6.92	6.88	7.05	7.36	6.74	6.73	7.61	7.28	7.7	
TRACE & TOXIC																
Al		0.55	0.8													

Station Name: DUDHNAI(bv000f5)
Local River: Dudhnai

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	11.66	16.24	18.08	5.383	8.941	7.144	3.602
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27							
COD							
DO	5.8		4.5				
DO_SAT%	63.79		49.49				
FCol-MPN							
Tcol-MPN							
CHEMICAL							
ALK-TOT	32			29.51		21.32	44
Alk-Phen	0			0.01		0.02	0
B							
CO3	0	0	0.12	0.01		0.02	0
Ca	13.76	21.91	13.93	6.95		10.1	12.04
Cl	15.29	9	8.81	9.06		7.05	12
F		0.07	0.5			0.05	
Fe	0.08	0.32	0.65	0.5			
HCO3	40.09	17.85	53.86	35.98		25.97	53.68
K	0.91	0.36	1	0.6		1.89	1
Mg	4.13	11.13	0.52	1.34		3.58	4.13
NO2+NO3							
NO2-N							
NO3-N			0.57				
Na	3.03	2.31	2.6	1.8		4.18	4.12
P-Tot							
SO4	1.21	1	1.18				
o-PO4-P	0.25		0.13				
CHEMICAL INDICES							
HAR_Total	51.56	102.54	37	22.96		40.17	47.31
Na%	8.74		14.19	14.22		17.67	15.64
RSC	0		0.35	0.13		0	0
SAR	0.14		0.2	0.16		0.29	0.26
PESTICIDES							
PHYSICAL							
EC_FLD	55.8		60.87				
EC_GEN	53.75	95	50			60	60.8
Secchi	34.4		32.16	17.38		25.25	30.1
TDS	252.5	160	207.14	110		40	41
Temp	18.5	20	20	14		12	13
Turb	4.4			0.5			
pH_FLD	7.3		7.1				
pH_GEN	8.14	7.42	7.37	7.35		6.98	7.9
TRACE & TOXIC							
Al	0.85	0.44					

Station Name: DUDHNAI(bv000f5)
Local River: Dudhnai

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS								
Winter (Nov-Feb)								
	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	3.713	5.617	4.788	3.989	4.74	9.108	5.11	8.05
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27								0.8
COD								88
DO				9.3	5.7			
DO_SAT%				86.29	56.53			
FCol-MPN								40
Tcol-MPN								60
CHEMICAL								
ALK-TOT	46		38	26	42		50	27.87
Alk-Phen	0		0	0	0		0	0
B		0	0	0	0	0	0	
CO3	0	0	0	0	0	0	0	0
Ca	13.76	32.68	12.04	6.88	10.32	12.04	12.04	25.8
Cl	9	9	11	15	6	8	9	2.68
F								
Fe		0.23	0.14	0.13	0.23	0.21	0.21	0.17
HCO3	56.12	65.88	46.36	31.72	51.24	65.88	61	34
K	0.6	0.6	0.25	0.11	0.32	2.1	1.7	0.6
Mg	8.26	1.03	3.1	6.19	9.29	3.1	19.61	10.32
NO2+NO3		0	0	0	0	0	0	
NO2-N		0	0	0	0	0	0	
NO3-N		0	0	0	0	0	0	
Na	4.5	4.5	3.65	3.9	4.1	3.8	3.85	3.51
P-Tot		0.4	0.3	0.42	0.47	0.46	0.37	0.45
SO4		1.5	1.16	1.27	3.3	2.15	1.2	1.5
o-PO4-P								
CHEMICAL INDICES								
HAR_Total	68.82	85.99	43.02	42.99	64.51	43.02	111.81	107.5
Na%	12.41	10.16	15.55	16.55	12.17	15.38	6.9	6.62
RSC	0	0	0	0	0	0.22	0	0
SAR	0.24	0.21	0.24	0.26	0.22	0.25	0.16	0.15
PESTICIDES								
PHYSICAL								
EC_FLD				59	56		47	
EC_GEN	62.2	62.1	61.4	96.5	90.8	63.8	69.6	62.1
Secchi	34.4	81.7	30.1	17.2	25.8	30.1	30.1	64.5
TDS	42	41	41	65	61	43	47	42
Temp	11	11	13	12	15	16	14	15
Turb	3.6	3.09	2.54	8.48	7.1	4.1	2.16	2.3
pH_FLD			6.94	6.72	5.12	6	4.94	
pH_GEN	6.67	6.85	6.81	7.12	7.36	7.42	7.99	7.54
TRACE & TOXIC								
AI								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: DUDHNAI(bv000f5)
Local River: Dudhna

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	4.91	8.17	2.11	1.51	7.24	21.8	3.72	3.63	1.13	0.99	1	3.19	8.81	42.6	5.98
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27														0.1	1.2
COD														16	52
DO										4	6.9				
DO_SAT%										49.3	85.05				
FCol-MPN															
Tcol-MPN															
CHEMICAL															
ALK-TOT				65.73		32	46	40			48	40	42	32	24.61
Alk-Phen				0.16		0	0	0			0	0	0	0	0.01
B									0	0	0	0	0	0	
CO3	0	0.21	0.12	0.19		0	0	0	0	0	0	0	0	0	0.01
Ca	12.04	5.95	30.46	13.9		10.32	10.32	8.6	15.48	17.2	15.48	8.6	18.92	15.48	4.21
Cl	8	6.38	7.55	3.2		9	8	12	10	14	21	7	5	9	5.36
F		0.05	0.5			0.05									
Fe	0.27	0.3		0.5					0.15	0.15	0.21	0.19	0.21	0.19	
HCO3	24.4	57.33	39.62	79.8		39.04	56.12	48.8	53.68	51.24	58.56	48.8	51.24	39.04	30
K	1.35	0.6	2.3			2.89	0.1	0.1	0.21	0.29	0.13	0.27	1.2	1.85	1
Mg	3.61	3.24	0.95	2.49		5.16	4.13	15.48	7.22	1.03	8.26	9.29	7.22	6.19	5.23
NO2+NO3									0	0	0	0	0	0	
NO2-N									0	0	0	0	0	0	
NO3-N		1.06							0	0	0	0	0	0	
Na	2.75	2.5	5.1			5.11	3.81	3.51	3.6	3.4	3.87	4	4	4	5.1
P-Tot									0.27	0.41	0.36	0.46	0.47	0.37	
SO4	1.75	1.69							1.1	1.1	1.2	1.9	2.61	2.2	
o-PO4-P															
CHEMICAL INDICES															
HAR_Total	44.94	22.52	80.11	45.12		47.3	43.01	86	68.78	47.29	73.12	60.21	77.38	64.49	32.32
Na%		17.42	11.81			17.99	16.2	8.22	10.24	13.46	10.37	12.66	9.98	11.57	24.99
RSC		0.5	0	0.42		0	0.07	0	0	0	0	0	0	0	0
SAR		0.21	0.25			0.32	0.25	0.17	0.19	0.22	0.2	0.23	0.2	0.22	0.39
PESTICIDES															
PHYSICAL															
EC_FLD										84	87	93	70	82	58.13
EC_GEN	55	53.85		87.8		76.6	81.4	67.3	76.9	95.9	115.7	77.1	75	51.9	62.1
Secchi		11.78	76.15	34.75		25.8	25.8	21.5	38.7	43	38.7	21.5	47.3	38.7	10.53
TDS	240	70.77	210	88		51	54	45	52	64	78	51	50	35	42
Temp	22	21.54		25		19	15	18	26	26	26	21	21	19	17
Turb				0.6				5.1	0.7	1.21	9.1	6.25	5.56	2.25	18.63
pH_FLD										7.69	6.7	5.88	5.56	5.19	6.37
pH_GEN	7.18	7.39	7.5	7.4		7.08	7.71	6.77	6.95	6.86	7.19	7.64	7.63	7.51	6.37
TRACE & TOXIC															
Al	0.88	0.35													

HISTORY SHEET (WATER QUALITY)			
		Water Year	: 2017 - 2018
Site	: PANCHARATNA	Code	: BB000D6
State	: Assam	District	Goalpara
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Brahmaputra
Division	: Middle Brahmaputra Division (MBD), Guwahati	Sub-Division	: Middle Brahmaputra Sub-Division,
Drainage Area	: 468790.0 Sq. Km.	Bank	: Left
Latitude	: 26°11'57"	Longitude	: 90°34'36"
Current Zero of Gauge (m)	: 27		
CATEGORY	Opening Date	Closing Date	
Gauge	: 20/05/1971		
Discharge	: 18/07/1976		
Sediment	: 14/10/1976		
Water Quality	: 07/01/1983		
Reduced Level	Opening Date	Closing Date	
27.0	5/20/1971	-	

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: PANCHARATNA(BB000D6)

Local River: Brahmaputra

Division: Middle Brahmaputra Division (MBD), Guwahati

Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS

	01/07/2017	03/10/2017	01/01/2018	02/04/2018
Q (cumec)	26202.65	25700.02	5613.08	4966.58
CHEMICAL				
P-Tot(mgP/L)	0.43	0.38	0.39	
Mg(mg/L)	15.48	7.22	10.32	7.62
SO4(mg/L)	2.1	2	1	
Fe(mg/L)	0.19	0.23	0.16	
Alk-Phen(mgCaCO3/L)	0	0	3.32	0.32
HCO3(mg/L)	75.64	85.4	80	54
Cl(mg/L)	9	19	3.12	4.46
NO2-N(mg/L)	0	0		
B(mg/L)	0	0		
ALK-TOT(mgCaCO3/L)	62	70	72.24	44.91
Ca(mg/L)	10.32	15.48	25.8	9.26
NO3-N(mgN/L)	0	0		
CO3(mg/L)	0	0	4	0.39
NO2+NO3(mgN/L)	0	0		
Na(mg/L)			5.4	7.05
K(mg/L)			0.8	2.52
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTERIOLOGICAL				
COD(mg/L)	8	24	64	56
BOD3-27(mg/L)	0.6	0.8	1	0.8
Tcol-MPN(MPN/100mL)		60	70	
Fcol-MPN(MPN/100mL)		40	40	
PHYSICAL				
Temp(Degrees Celsius (°C))	24	23	16	17
Colour_Cod(-)	Brown	Brown	Brown	Clear
pH_GEN(pH unit)	7.94	7.56	7.89	7.89
EC_GEN(μmho/cm)	110.8	87	205	205
Odour_Code(-)	odour free	odour free	odour free	odour free
Turb(NTU)	2.5	1.8	4.2	1.88
Secchi(Meters)	25.8	38.7	64.5	23.15
EC_FLD(μmho/cm)	109.6	109.2		80.2
TDS(mg/L)	74	58	137	137
CHEMICAL INDICES				
RSC(-)	0	0.03	0	0
HAR_Total(mgCaCO3/L)	90.3	68.78	107.5	54.9
Na%(Percentage)			9.82	21
SAR(-)			0.23	0.42

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: PANCHARATNA(BB000D6)

Local River: Brahmaputra

Division: Middle Brahmaputra Division (MBD), Guwahati

Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS							
	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	326	53177.89	3530.64	16694.15	28142.82	6618.39	6502.94
CHEMICAL							
Cl	4	19	3.12	8.9	14	3.12	4.46
HCO3	4	85.4	54	73.76	80.52	80	54
P-Tot	3	0.43	0.38	0.4	0.41	0.39	
B	2	0	0	0	0		
Na	2	7.05	5.4	6.23		5.4	7.05
NO2-N	2	0	0	0	0		
Fe	3	0.23	0.16	0.19	0.21	0.16	
NO2+NO3	2	0	0	0	0		
NO3-N	2	0	0	0	0		
Alk-Phen	4	3.32	0	0.91	0	3.32	0.32
ALK-TOT	4	72.24	44.91	62.29	66	72.24	44.91
SO4	3	2.1	1	1.7	2.05	1	
CO3	4	4	0	1.1	0	4	0.39
Mg	4	15.48	7.22	10.16	11.35	10.32	7.62
Ca	4	25.8	9.26	15.21	12.9	25.8	9.26
K	2	2.52	0.8	1.66		0.8	2.52
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
Tcol-MPN	2	70	60	65	60	70	
COD	4	64	8	38	16	64	56
BOD3-27	4	1	0.6	0.8	0.7	1	0.8
Fcol-MPN	2	40	40	40	40	40	
PHYSICAL							
TDS	4	137	58	101.5	66	137	137
pH_GEN	4	7.94	7.56	7.82	7.75	7.89	7.89
EC_GEN	4	205	87	151.95	98.9	205	205
Turb	4	4.2	1.8	2.6	2.15	4.2	1.88
Temp	4	24	16	20	23.5	16	17
Secchi	4	64.5	23.15	38.04	32.25	64.5	23.15
EC_FLD	3	109.6	80.2	99.67	109.4		80.2
CHEMICAL INDICES							
Na%	2	21	9.82	15.41		9.82	21
RSC	4	0.03	0	0.01	0.02	0	0
HAR_Total	4	107.5	54.9	80.37	79.54	107.5	54.9
SAR	2	0.42	0.23	0.32		0.23	0.42

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: PANCHARATNA(BB000D6)
Local River: Brahmaputra

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS															
	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	35473	46948	36875	20373	23495	4675	19683	33226	24771	37805	23730	23458	28206	30406	25951
BIOLOGICAL/BACTEOROLOGICAL															
BOD3-27															0.73
COD															18.67
DO			5.3	6.6		5.2	5.2	4.8	5.2	5.35	5.8				
DO_SAT%			64.14	80.63		62.41	60.07	52.79	59.48	57.13	64.66				
Fcol-MPN															40
Tcol-MPN															60
CHEMICAL															
ALK-TOT				54.32			52.02	96	54	62	61	62	51	56	66
Alk-Phen				0.12			0	0	0	0	0	0	0	0	0
B										0	0	0	0	0	0
CO3	0	0	0.08	0.14			0	0	0	0	0	0	0	0	0
Ca	10.32	32.68	28.22	15.71			14.62	20.64	22.36	15.48	25.8	14.71	20.64	12.04	12.9
Cl	8.5	20	8.08	10.06			7.5	9	8.5	11	13.5	8.59	11	10	14
F		0.05	0.5	0.5											
Fe	0.23	0.25	0.87		0.5					0.11	0.16	0.17	0.26	0.25	0.21
HCO3	51.24	19.52	57.54	65.99			63.46	117.12	65.88	75.64	74.42	71.6	62.22	68.32	80.52
K	1.75	2.3	2.4				0.95	2.24	0.27	0.19	0.18	0.21	1.4	2.09	
Mg	6.71	3.1	2.43	4.06			8.77	6.19	3.1	9.29	8.26	5.27	3.09	29.41	11.35
NO2+NO3										0	0	0	0	0	0
NO2-N										0	0	0	0	0	0
NO3-N			0.56							0	0	0	0	0	0
Na	2.6	1.3	1.11				2.3	4.51	4.85	3.9	3.83	3.8	3.59	4.17	
P-Tot										0.29	0.39	0.36	0.45	0.41	0.41
SO4	1.2	1	2.13							1.08	1.2	1.21	1.21	1.9	2.05
o-PO4-P	0.22		0.73									0	0		
CHEMICAL INDICES															
HAR_Total	53.74	94.62	78.64	56.19			73.09	77.39	68.8	77.41	98.92	60.2	64.5	152.64	79.54
Na%	9.19	2.83	3				6.51	10.94	13.24	9.99	8.68	12.25	10.91	5.88	
RSC	0	0	0	0			0	0.38	0	0	0	0.11	0	0	0.02
SAR	0.15	0.06	0.06				0.12	0.22	0.25	0.19	0.18	0.21	0.2	0.15	
PESTICIDES															
PHYSICAL															
EC_FLD									138.7	123.9	71.05	104.9	125.98	52.8	109.4
EC_GEN	112.4	110	135.33		198.3	82.85	111	111.18	116.29	129.9	131.1	103.9	123.9	115.15	98.9
Secchi	25.8	81.7	69.82	39.27			36.55	51.6	55.42	38.7	64.5	40.85	51.6	30.1	32.25
TDS	380	260	205.33	226.15	198.5	55.5	74.5	74.25	72.44	86.5	88	70	83.5	77.5	66
Temp	23.75	24	25	25.54	24	25	22.5	20.44	21.56	18.75	21.25	19	21.75	23	23.5
Turb	3.7				2.55			1.66	16.35	6.45	19.35	7.84	5.37	3.5	2.15
pH_FLD			8.1	8.28		7.8	7.8	7.9	7.5	7.55	7.7	7.62			
pH_GEN	6.96	7.5	7.24	7.77	7.81	7.46	7.36	7.2	7.31	7.2	7.12	6.89	7.21	7.28	7.75
TRACE & TOXIC															
Al		0.5	1												

Station Name: PANCHARATNA(BB000D6)
Local River: Brahmaputra

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS	Winter (Nov-Feb)								
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Q (cumec)	10052	6947	8936	3067	3487	3473	4850	6253	6117
BIOLOGICAL/BACTERIOLOGICAL									
BOD3-27									
COD									
DO			5.2		6		4	5.3	
DO_SAT%			55.22		59.5		38.81	53.7	
FCol-MPN									
Tcol-MPN									
CHEMICAL									
ALK-TOT				60.66	150.82	60.78	70	104	
Alk-Phen				0.01	0	0.14	0	0	
B									0
CO3	0	0	0.57	0.01	0	0.17	0	0	0
Ca	21.45	19.78	29.86	20.84	31.36	28.28	25.8	29.24	27.52
Cl	16.16	11	6.7	13.09	17.89	6.04	13	13	14
F		0.08	0.5		0.05	0.05			
Fe	0.08	0.51	0.38	0.5					0.06
HCO3	60.23	29.28	98.91	73.99	184	73.81	85.4	126.88	151.28
K	2.12	1	1.07	1.3	0.7	3.09	0.1	0.2	0.11
Mg	4.02	10.32	13.06	1.7	4.7	11.98	10.32	9.29	15.48
NO2+NO3									0
NO2-N									0
NO3-N			0.32						0
Na	3.47	2.1	2.63	1.6	1.9	4.77	4.65	4.2	1.8
P-Tot									0.25
SO4	1.47	1	1.43						1
o-PO4-P	0.11		0.18						
CHEMICAL INDICES									
HAR_Total	64.41	92.45	133.74	59.18	97.98	120.62	107.5	111.81	133.3
Na%	9.38	4.61	10.92	5.43	4.03	7.73	8.64	7.58	2.87
RSC	0	0	0.63	0.03	1.06	0	0	0	0
SAR	0.17	0.09	0.16	0.09	0.08	0.19	0.2	0.17	0.07
PESTICIDES									
PHYSICAL									
EC_FLD									
EC_GEN	235.71	145	150		130	201	185.7	202	196.1
Secchi	51.6	49.45	73.46	52.1	78.4	70.7	64.5	73.1	68.8
TDS	245.71	190	204.67	120	87	135	124	135	131
Temp	19.43	18	19.27	15	15	16	14	16	12
Turb	0.4			1.4	8.1			2.1	1.89
pH_FLD			8		8.4		7.8	7.6	
pH_GEN	7.87	7.87	7.66	7.13	7.5	7.4	7.9	7.02	7.61
TRACE & TOXIC									
AI	0.25	0.52							

Station Name: PANCHARATNA(BB000D6)
Local River: Brahmaputra

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS						
	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	6490	4052	4303	4066	4446	5613
BIOLOGICAL/BACTERIOLOGICAL						
BOD3-27						1
COD						64
DO	5.2	5.3				
DO_SAT%	51.62	50.35				
FCol-MPN						40
Tcol-MPN						70
CHEMICAL						
ALK-TOT	82	62		124	96	72.24
Alk-Phen	0	0		0	6.97	3.32
B	0	0	0	0	0	
CO3	0	0	0	0	8.4	4
Ca	12.04	25.8	13.76	24.08	43	25.8
Cl	11	10	12	10	10	3.12
F						
Fe	0.11	0.12	0.19	0.2	0.2	0.16
HCO3	100.04	75.64	100.04	151.28	100.04	80
K	0.35	0.14	0.36	1.85	1.85	0.8
Mg	20.64	11.35	12.38	9.29	4.13	10.32
NO2+NO3	0	0	0	0	0	
NO2-N	0	0	0	0	0	
NO3-N	0	0	0	0	0	
Na	3.25	3.8	3.82	4.1	3.75	5.4
P-Tot	0.28	0.41	0.45	0.43	0.35	0.39
SO4	1.16	1.21	2.6	2.05	1.24	1
o-PO4-P				0		
CHEMICAL INDICES						
HAR_Total	116.1	111.79	85.98	98.91	124.71	107.5
Na%	5.77	6.91	8.83	8.14	6.05	9.82
RSC	0	0	0	0.51	0	0
SAR	0.13	0.16	0.18	0.18	0.15	0.23
PESTICIDES						
PHYSICAL						
EC_FLD	109.5	116.2	118.4		199.4	
EC_GEN	193.2	203	209	194.3	198.3	205
Secchi	30.1	64.5	34.4	60.2	107.5	64.5
TDS	129	137	140	130	133	137
Temp	15.5	13.5	16.5	14	15	16
Turb	0.68	16.78	6.7	4.67	2.97	4.2
pH_FLD	7.6	7.6				
pH_GEN	7.37	7.77	7.37	7.7	8.13	7.89
TRACE & TOXIC						
AI						

Station Name: PANCHARATNA(BB000D6)
Local River: Brahmaputra

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Middle Brahmaputra Sub-Division, Guwahati

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	7701	7655	4755	5213	5185	3065	9255	6264	4561	4686	4611	3567	4533	4792	4967
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27														0.1	0.8
COD														8	56
DO		6.4	6.8		5.3	5	5.3		5.3	5.3					
DO_SAT%		69	77.78		53.7	49.58	53.7		66.52	56.04					
Fcol-MPN															
Tcol-MPN															
CHEMICAL															
ALK-TOT				45.92	88.11	78	64	62			72	70	66	82	44.91
Alk-Phen				0.02	0	2.99	0	0			0	0	9.96	0	0.32
B		0.05							0	0	0	0	0	0	0
CO3	0	0.34	0.55	0.02	0	3.6	0	0	0	0	0	0	12	0	0.39
Ca	15.48	15.55	16.03	22.08	22.4	22.36	20.64	18.92	27.52	17.2	24.08	24.08	8.6	25.8	9.26
Cl	15	7.21	49.29	3.2	15.32	8	9	7	9	8	13	12	10	7	4.46
F		0.05	0.5		0.05	0.05									
Fe	0.2	0.38		0.5					0.15	0.15	0.18	0.2	0.25	0.2	
HCO3	39.04	125.17	59.13	55.98	107.5	87.84	78.08	75.64	73.2	36.6	87.84	85.4	56.12	100.04	54
K	1.25	0.83	2			1.69	1.6	0.1	0.19	0.12	0.16	0.32	2.1	2.12	2.52
Mg	7.74	7.42	6.78	0.5	1.9	5.16	5.16	29.93	8.26	10.32	4.13	14.45	16.51	13.42	7.62
NO2+NO3									0	0	0	0	0	0	
NO2-N									0	0	0	0	0	0	
NO3-N		0.88							0	0	0	0	0	0	
Na	3.3	2.6	5.8			4.66	4.38	5.4	4.1	4.8	3.85	3.85	3.25	3.76	7.05
P-Tot									0.21	0.36	0.35	0.47	0.43	0.4	
SO4	1.25	1.52							1	1.12	1.18	1.95	2.31	2.1	
o-PO4-P		0.27													
CHEMICAL INDICES															
HAR_Total	61.8	66.36	68.33	57.28	63.92	77.4	73.1	172.01	103.22	86	77.41	120.41	90.29	120.42	54.9
Na%	7.36	10	15.19			11.35	11.3	6.44	7.97	10.88	9.78	6.53	7.13	6.27	21
RSC	0	0.75	0	0	0.49	0.02	0	0	0	0	0	0	0	0	0
SAR	0.12	0.16	0.31			0.23	0.22	0.18	0.18	0.23	0.19	0.15	0.15	0.15	0.42
PESTICIDES															
PHYSICAL															
EC_FLD									110.4	99.86	173.2	164.5	199.8	162.24	80.2
EC_GEN	135.38	139.38		158.9	139.5	179.5	150.3	131.1	154.3	169.3	166.4	160.4	143.9	155.8	205
Secchi	34.4	38.81	40.08	55.2	56	55.9	51.6	47.3	68.8	43	60.2	60.2	21.5	64.5	23.15
TDS	215.38	168.75	220	159	93	121	101	88	103	113	111	109	96	104	137
Temp	22.96	20.97	22	24	16	15	16	15	27	18.5	18	18	18	18	17
Turb		2		0.4	6.3			1.91	0.45	1.25	16.25	6.25	4.1	3.1	1.88
pH_FLD		8.5	8.6		8	8.1	8		7.4	7.5	7.55				
pH_GEN	7.77	7.76	7.8	6.6	6.87	8.17	7.81	7.03	7.15	7.22	7.56	7.01	7.13	7.45	7.89
TRACE & TOXIC															
Al	0.17	0.2													

HISTORY SHEET (WATER QUALITY)			
		Water Year	: 2017 - 2018
Site	: Beki Road bridge	Code	: 002-LBDJPG
State	: Assam	District	: Barpeta
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: Beki	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Beki
Division	: Middle Brahmaputra Division (MBD), Guwahati	Sub-Division	: Manas Sub-Division, Berpeta Road
Drainage Area	: 25730.0 Sq. Km.	Bank	: Right
Latitude	: 26°29'40"	Longitude	: 90°54'55"
Current Zero of Gauge (m)	: 40		
CATEGORY	Opening Date	Closing Date	
Gauge	: 14/06/1971		
Discharge	: 16/06/2003		
Sediment	:		
Water Quality	: 01/07/2003		
Reduced Level	Opening Date	Closing Date	
40.0	6/14/1971	-	

Station Name: Beki Road bridge(002-LBDJPG)
Local River: Beki

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS											
	01/06/2017	03/07/2017	01/08/2017	04/09/2017	03/10/2017	01/11/2017	04/12/2017	01/01/2018	01/02/2018	1/3/2018	1/4/2018
Q (cumec)	663.65	1183.03	3855.99	4458.02	3810.9	1177.53	406.48	297.55	238.92	227.419	
CHEMICAL											
Na(mg/L)	1.8	2.17	2.8	2.5	2.7		2.9				
K(mg/L)	0.9	1.78	2.1	2.4	2.6		2.9				
Cl(mg/L)	4.5	6.7	7.05	9.1	8.7	6.3	5.9	3	1.8	1.9	3
NO2-N(mg/L)											
SO4(mg/L)											2.1
Alk-Phen(mgCaCO3/L)											
NH3-N(mgN/L)											
Ca(mg/L)											12
Mg(mg/L)											13.1
P-Tot(mgP/L)											
CO3(mg/L)											
ALK-TOT(mgCaCO3/L)											
F(mg/L)											44
HCO3(mg/L)											
SiO2(mg/L)											
B(mg/L)											
TRACE & TOXIC											
PESTICIDES											
BIOLOGICAL/BACTERIOLOGICAL											
COD(mg/L)	8	11	10	10	9	10	8	10	6	4	6
DO_SAT%(Percentage)	96.47	90.19	10.6	8.3	8.6	8.1	8	8.2	8.7	98.9	96.7
DO(mg/L)	8.6	8.2								9	8
BOD3-27(mg/L)	0.8	1.4	1.1	1	0.9	1.1	1.2	1.1	0.7	0.8	1.1
Chlf-a(µg/L)											
Tcol-MPN(MPN/100mL)											
Fcol-MPN(MPN/100mL)											
PHYSICAL											
EC_GEN(µmho/cm)	115	153	182	166	202	162	157	142	100	94	151
Colour_Cod(-)	Clear	Clear									
Turb(NTU)	4.1	3.7								1	1.2
Temp(Degrees Celsius (°C))	21	20	20	20	20	20.2	18	15	15	18.4	18.8
TDS(mg/L)	74	70	104	90	121	105	106	95	44	61	101
Odour_Code(-)	odour free	odour free									
pH_GEN(pH unit)	6.9	6.9	7.1	6.2	6.3	7	7.1	7.05	8.77	7.51	7.93
SS(mg/L)											
pH_FLD(pH unit)							7.1				
EC_FLD(µmho/cm)							157	142	100		
CHEMICAL INDICES											
HAR_Ca(mgCaCO3/L)											
HAR_Total(mgCaCO3/L)											84

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Beki Road bridge(002-LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Beki

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	335	6481.93	37	1490.92	2783.98	372.81	464.08
CHEMICAL							
Na	6	2.9	1.8	2.48	2.39	2.9	
Cl	9	9.1	1.8	5.89	7.21	4.25	
K	6	2.9	0.9	2.11	1.96	2.9	
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
DO_SAT%	9	96.47	8	27.46	42.83	8.25	
COD	9	11	6	9.11	9.6	8.5	
BOD3-27	9	1.4	0.7	1.03	1.04	1.02	
DO	2	8.6	8.2	8.4	8.4		
PHYSICAL							
TDS	9	121	44	89.89	91.8	87.5	
Temp	9	21	15	18.8	20.2	17.05	
pH_GEN	9	8.77	6.2	7.04	6.68	7.48	
EC_GEN	9	202	100	153.22	163.6	140.25	
EC_FLD	3	157	100	133		133	
Turb	2	4.1	3.7	3.9	3.9		
pH_FLD	1	7.1	7.1	7.1		7.1	
CHEMICAL INDICES							

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Beki Road bridge(002-LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Beki

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	4188	2056	1943	1619	1699	1816	2987	2925		2697	1923	2006	1331	2284	2794
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27								0.8		0.95	1.1	0.85	1.3	1.08	1.03
COD										7.14	6.12	5.05	9.15	10.52	9.62
DO										6.25			7.3		8.4
DO_SAT%													89.16		35.06
CHEMICAL															
ALK-TOT	59.39	74.18	72.8	67.85	63.6	68									
Alk-Phen	0	0.96	0.6	0	1.79	4.48									
B			0												
CO3	0	1.16	0.72	0	2.16	5.4									
Ca	34.82	40.32	17.52	15.33	12.44	25.35									
Cl	13.98	7.18	7.24	5.84	11	4.4	5.89	2.52		8.19	1.71	3.72	2.45	3.3	7.99
F			0												
Fe	0.1	0.07	0.05	0.1	0.09										
HCO3	72.46	88.14	87.35	82.78	73.2	71.98									
K	1.04	1.12	1.33	1.17	1.8	2.92	1.69	2.62		2.7	1.8	1.35	1.75	1.92	2.25
Mg	6.3	12.37	13.12	11.92	16.45	6.29									
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na	4.09	2.65	2.12	2.88	1.89	4.38	1.72	2.75		3.35	1.9	2.1	1.6	2.54	2.59
SO4	5.05	1.53	3.58	0.56	0.71										
o-PO4-P	2	0.59	0.93	0.77	0.7										
CHEMICAL INDICES															
HAR_Total	99.84	145.96	98.47	87.16	99.65	89.57									
Na%	11.3	4.33	4.23	6.96	4.3	9.69									
RSC	0	0	0	0	0	0									
SAR	0.22	0.1	0.09	0.14	0.09	0.22									
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	109.5	115.9	147.8	116.24	149.06	120.95	169.65	199.5		171.7	165.46	115.45	104.3	133	166.49
Secchi	89.25	102.14	43.8	37.8	31.56	63.61									
TDS	83.5	80.72	105.8	80.26	107.09	102.05	88.94	92		84.1	100.9	87.5	78.95	100.6	93.73
Temp	23.75	21.5	24.8	23	17.62	19.32	19.45				20	24	25.5		20.17
Turb	31.5	30.28	38	21.06	10.46	22.16	23.4	4.8		19.15	1.8	1.8	14.6	10.68	3.9
pH_FLD															
pH_GEN	7.95	7.74	7.8	7.76	7.46	7.42	7.68	7.39		7.3	8.23	7.22	7.65	7.46	6.66
TRACE & TOXIC															
AI	0.63	0.04	0												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Beki Road bridge(002-LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Beki

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS								
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Q (cumec)	392	494	523.8	446.4	316.9	535	470.3	333.9
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27								0.85
COD								
DO								
DO_SAT%								
CHEMICAL								
ALK-TOT	49.83	66.17	73	72	83.88			
Alk-Phen	0	1.04	0	0	2.24			
B			0					
CO3	0	1.25	0	0	2.7			
Ca	23	18.85	9.9	19.75	24.4			
Cl	12.66	8.98	7.37	5.77	5.68	5.52	1.67	2.01
F			0					
Fe	0.2	0.05	0.08	0.12				
HCO3	60.8	78.19	89.06	87.84	96.84			
K	0.98	1.21	1.6	1.66	2.28	2.5	1.28	2.7
Mg	23.37	11.76	24.54	25.61	12.79			
NH3-N			0					
NO2+NO3			0					
NO2-N			0					
NO3-N			0					
Na		4.25	2.88	2.47	2.86	3.5	2.5	3.8
SO4	6.37	2.09	4.02	0.73				
o-PO4-P	0.34	0.46	0.85	0.78				
CHEMICAL INDICES								
HAR_Total	154.87	92.76	127.01	156.07	114.28			
Na%		10.07	4.88	3.56	5.23			
RSC	0	0	0	0	0			
SAR		0.2	0.11	0.09	0.12			
PESTICIDES								
PHYSICAL								
EC_FLD								
EC_GEN	144.35	158.75	170.25	129.58	167.82	162.75	165.07	144.5
Secchi	57.93	46.5	24.75	48.89	61			
TDS	80.04	96.25	99	77.34	102.67	95.75	93.17	72
Temp	16	15.25	16.12	16	15	14.8	16.6	
Turb	4.07	3.5	2.5	0.68	1.2	0.62	0.9	0.65
pH_FLD								
pH_GEN	7.52	7.75	7.68	7.63	7.38	7.02	7.13	7.35
TRACE & TOXIC								
Al	0.84	0.04	0					

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Beki Road bridge(002-LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Beki

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS							
Winter (Nov-Feb)							
	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	526.4	254.7	450.4	479	538.1	696.3	530.11
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27		1	0.6	1.2	1.07	1.2	1.03
COD		18.36	4.08	6.1	11.72	9.24	8.5
DO		6.5			6.8	7.8	
DO_SAT%					74.73	77.4	8.25
CHEMICAL							
ALK-TOT							
Alk-Phen							
B							
CO3							
Ca							
Cl	2	8.82	2.29	4.3	2.92	4.3	4.25
F							
Fe							
HCO3							
K	4.7	3.5	1.42	2.7	2.05	2.23	2.9
Mg							
NH3-N							
NO2+NO3							
NO2-N							
NO3-N							
Na	6.5	3.7	2.18	3.6	2.1	3.23	2.9
SO4							
o-PO4-P							
CHEMICAL INDICES							
HAR_Total							
Na%							
RSC							
SAR							
PESTICIDES							
PHYSICAL							
EC_FLD							133
EC_GEN	145	100.92	69.16	142.5	113.65	147.58	140.25
Secchi							
TDS	87	66.3	47.7	111.2	82.1	106.22	87.5
Temp			12	14	20	14.92	17.05
Turb	0.2	1.9	2.8	3.2	7.77	6.2	
pH_FLD							7.1
pH_GEN	7.27	7.93	8.3	7.73	7.53	6.94	7.48
TRACE & TOXIC							
AI							

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Beki Road bridge(002-LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Beki

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	394.9	511.4	369.8	442.8	338.3	400	496	407.2	423.9	398	351.6	537.2	588.3	492.9	227.42
BIOLOGICAL/BACTEOROLOGICAL															
BOD3-27								1.3		1.4	0.9	1.1	0.9	1.3	1.9
COD										16	6.12	4.1	13.5	8	10
DO										6.4		7.9	7.6	7.77	17.8
DO_SAT%										87.74		92.1	54.41	87.79	195.6
CHEMICAL															
ALK-TOT	75.33	68	67.33	72	56	49.67	64.75	55.74	65.57	55.74	81.97	19.67	75.41	62.02	
Alk-Phen	0	1	3.98	0	0.66	0.65	0	0	0	0	0	0	0	1.49	
B			0												
CO3	0	0.82	4.8	0	0.8	0.78	0	0	0	0	0	0	0	1.8	
Ca	23.53	6.43	14.87	19.8	18.33	19.24	19.68	22.5	28.46	17.63	60.95	35.3	48.12	22.46	12
Cl	10.3	6.89	5.68	7.46	4.85	10.99	1.01	2.52	12	5.5	5.15	1.9	3.37	3.37	4.9
F		0	0												
Fe	0.06	0.12	0.09	0.1	0.09										
HCO3	91.91	69.84	72.39	87.84	66.69	59	79	68	80	68	100	24	92	72	44
K	0.87	1.32	1.3	1.96	2.67	1.68	0.98	4.2	3.1	4.05	1.4	1.1	2.54	1.66	
Mg	25.31	15.05	10.81	22.96	9.03	4.86	3.85	3.9	3.16	2.89	1.86	6.75	1.87	0.94	13.1
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na			3.37	2.07	4.33	3.26	3.1	5.9	2.8	3.11	5.5	1.4	2.33	2.34	
SO4	2.85	2.71	0.62	0.82	0.72			1.5		20.8	22.5	25.3	30.1	13.4	2.1
o-PO4-P	0.32	0.64	0.76	0.81	0.68										
CHEMICAL INDICES															
HAR_Total	164.3	78.1	82.22	145.18	83.46	68.35	65.24	72.5	84.32	56.12	160.12	116.38	128.09	60.07	84
Na%			8.11	2.99	9.65	8.79	9.24	14.2	6.47	9.97	6.89	2.53	3.06	4.68	
RSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04	
SAR			0.16	0.08	0.21	0.16	0.17	0.3	0.13	0.18	0.19	0.06	0.07	0.08	
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	132.67	152	145	121.65	133.33	192.33	164	189.6	142	150.3	126.3	125	146.9	118.43	245
Secchi	58.83	15.83	37.17	49.5	45.83	48.1	49.2	56.25	71.15	44.07	152.38	88.25	120.3	56.15	0
TDS	96.67	98.67	96	80.6	89.33	111.67	82	82.49	81.5	78.32	104.8	101.3	112.53	71.15	162
Temp	19.67	18	17.67	19	16	16.2				32.89	21	23	18.67	21.36	37.2
Turb	0.97	2.97	1	9.5	3	1.2	1.6	1	3.5	6.3	1.3	10.1	7.63	9.16	2.2
pH_FLD															0
pH_GEN	7.66	7.7	7.8	7.2	7.27	7.97	7.08	7.55	7.2	7.55	7.45	7.6	7.73	6.86	15.44
TRACE & TOXIC															0
Al	0.09	0	0												0

HISTORY SHEET (WATER QUALITY)			
		Water Year	: 2017 - 2018
Site	: Kokrajhar	Code	: 039LBDJPG
State	: Assam	District	: Kokrajhar
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: Gaurang	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Gaurang
Division	: Middle Brahmaputra Division (MBD), Guwahati	Sub-Division	: Manas Sub-Division, Berpeta Road
Drainage Area	: 770.0 Sq. Km.	Bank	: Left
Latitude	: 26°23'49"	Longitude	: 90°15'18"
Current Zero of Gauge (m)	: 35		
CATEGORY	Opening Date	Closing Date	
Gauge	: 21/08/1971		
Discharge	: 21/08/1971		
Sediment	: 01/01/1997		
Water Quality	: 15/06/1983		
Reduced Level	Opening Date	Closing Date	
35.0	8/21/1971	,-	

PARAMETERS											
	01/06/2017	03/07/2017	01/08/2017	04/09/2017	03/10/2017	01/11/2017	04/12/2017	01/01/2018	01/02/2018	1/3/2018	1/4/2018
Q (cumec)	25.44	80.5	111.65	141.06	243.73	62.37	28.97	19.28	14.99	16.4	
CHEMICAL											
Cl(mg/L)	5	3.8	4.53	5.3	4.9	5.4	5.7	3.1	2	1.5	3
Na(mg/L)	3	3.19	4	3.4	3.1		2.7				
K(mg/L)	1.4	2.13	2.9	2.4	2.5		3.2				
Ca(mg/L)											4
CO3(mg/L)											
Alk-Phen(mgCaCO3/L)											
SO4(mg/L)											1.85
ALK-TOT(mgCaCO3/L)											
SiO2(mg/L)											
48											48
F(mg/L)											
B(mg/L)											
Mg(mg/L)											12.1
NH3-N(mgN/L)											
P-Tot(mgP/L)											
NO2-N(mg/L)											
TRACE & TOXIC											
PESTICIDES											
BIOLOGICAL/BACTERIOLOGICAL											
DO_SAT%(Percentage)	100.93	97.1	10.2	9.3	9.3	8.7	8.2	8.4	8.6	94.5	101
DO(mg/L)	7.9	7.6								8.6	9.2
BOD3-27(mg/L)	1.1	1.2	1	1.2	0.8	0.9	1	1	0.8	1.1	0.8
COD(mg/L)	9	11	9	9	9	10	7	8	8	6	5
Chf-a(µg/L)											
Tcol-MPN(MPN/100mL)											
Fcol-MPN(MPN/100mL)											
PHYSICAL											
Colour_Cod(-)	Clear	Clear									
Turb(NTU)	1.7	1.3								2	3
TDS(mg/L)	71	62	84	91	78	60	53	69	85	103	56
pH_GEN(pH unit)	7.1	6.9	7	6.3	6.7	6.7	6.9	6.98	8.46	7.5	7.5
Temp(Degrees Celsius (°C))	28	28	27	29	26	24	23	20	20	24	23
EC_GEN(µmho/cm)	109	132	151	159	131	97	81	96	130	155	86
Odour_Code(-)	odour free	odour free									
SS(mg/L)											
pH_FLD(pH unit)							6.9				
EC_FLD(µmho/cm)							81	96	130		
CHEMICAL INDICES											
HAR_Total(mgCaCO3/L)											60
HAR_Ca(mgCaCO3/L)											

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Kokrajhar(039LBDJPG)
Local River: Gaurang

Division: Middle Brahmaputra Division (MBD), Guwahati
Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	2095.35	6.84	84.06	172.34	24.36	15.14
CHEMICAL							
Na	6	4	2.7	3.23	3.34	2.7	
Cl	9	5.7	2	4.41	4.71	4.05	
K	6	3.2	1.4	2.42	2.27	3.2	
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
DO_SAT%	9	100.93	8.2	28.97	45.37	8.48	
COD	9	11	7	8.89	9.4	8.25	
BOD3-27	9	1.2	0.8	1	1.06	0.93	
DO	2	7.9	7.6	7.75	7.75		
PHYSICAL							
TDS	9	91	53	72.56	77.2	66.75	
Temp	9	29	20	25	27.6	21.75	
pH_GEN	9	8.46	6.3	7	6.8	7.26	
EC_GEN	9	159	81	120.67	136.4	101	
EC_FLD	3	130	81	102.33		102.33	
Turb	2	1.7	1.3	1.5	1.5		
pH_FLD	1	6.9	6.9	6.9		6.9	
CHEMICAL INDICES							

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Kokrajhar(039LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Gaurang

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS	Flood (Jun-Oct)															
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Q (cumec)	205	141	92.5	89.2	172	145	122	152		161	58.8	77.8	90.7	93.6	120	
BIOLOGICAL/BACTEROLOGICAL																
BOD3-27								0.45		1	0.9	0.95	1.2	1.14	1.05	
COD										16.32	6.12	7.15	10.2	11.32	9.31	
DO										6			7.4		7.75	
DO_SAT%													92.05		37.11	
CHEMICAL																
ALK-TOT	63.04	73.86	53.74	54.38	50.4	47										
Alk-Phen	0	0.59	0	0	0	1.24										
B			0													
CO3	0	0.72	0	0	0	1.5										
Ca	8.46	33.08	12.67	11.86	13.48	18.95										
Cl	9.52	6.63	7.41	5.22	12	4.42	5.29	2.02		6.34	1.71	4.29	3.25	2.62	4.85	
F			0													
Fe	0.1	0.06	0.04	0.11	0.1											
HCO3	76.91	88.65	65.56	63.44	61.49	54.29										
K	1.53	1.14	1.2	1.03	32.3		1.27	2.95		2.15	1.7	1.35	1.65	1.56	2.51	
Mg	6.5	8.65	11.95	8.42	8.16	3.61										
NH3-N			0													
NO2+NO3			0													
NO2-N			0													
NO3-N			0													
Na	3.2	2.3	3.47	2.43	1.38		2.45	2.85		2.75	1.5	2.85	2.15	2.04	3.46	
SO4	6.72	1.72	3.52	0.42	0.63											
o-PO4-P	1.79	0.76	0.49	0.98	0.72											
CHEMICAL INDICES																
HAR_Total	55.9	109.46	76.51	65.07	67.72	62.44										
Na%	8.49	5.6	10.17	7.28	3.82											
RSC	0.28	0	0.01	0.03	0.02	0										
SAR	0.16	0.11	0.19	0.13	0.07											
PESTICIDES																
PHYSICAL																
EC_FLD																
EC_GEN	107.01	95	107	76.4	107.14	97.25	102.68	132.5		119.4	102.48	96.3	78.3	106.5	137.95	
SS						2										
Secchi	20.75	83.4	31.7	29.3	33.7	47.38										
TDS	81	68.8	76.8	62.2	75.56	69.47	55.04	60.05		54.85	74.8	72.05	59.2	80	78.24	
Temp	25	25.6	24.9	24.5	24.7	22.05	27.62				21	24.5	26.5		27.56	
Turb	7.5	22.4	14	4.8	9.2	10.67	5.46	11.1		8.75	1.6	0.8	17.4	14.64	1.5	
pH_FLD																
pH_GEN	7.67	7.43	7.42	7.36	7.2	7.31	7.81	7.24		7.3	8.06	6.9	7.15	7.72	6.78	
TRACE & TOXIC																
Al	0.04	0.05	0													

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Kokrajhar(039LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Gaurang

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	23.4	27.55	28.39	22.35	22.18	21.82	29.84
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT	41.17	61.39	54.91	51.5	48.5		
Alk-Phen	0	0	0	0	0		
B			0				
CO3	0	0	0	0	0		
Ca	16.67	16.6	11.34	12.95	13.7		
Cl	9.23	7.41	7.1	6.21	4.7	4.48	1.67
F			0				
Fe	0.22	0.03	0.06	0.13			
HCO3	50.22	74.9	66.99	62.83	59.17		
K	1.09	0.93	1.12	1.09	1.46	2	1.26
Mg	22.32	6.19	17.29	14.61	12.27		
NH3-N			0				
NO2+NO3			0				
NO2-N			0				
NO3-N			0				
Na		3.34	1.92	2.47	2.6	3	2.89
SO4	1.92	2.48	2.75	0.44			
o-PO4-P	0.53	0.37	0.4	0.92			
CHEMICAL INDICES							
HAR_Total	134.65	66.21	98.5	93.25	85.38		
Na%		10.11	4.08	5.88	6.76		
RSC	0	0.09	0	0	0		
SAR		0.18	0.08	0.12	0.13		
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	95	100.5	95.47	79.5	113.85	88.25	85.87
SS							
Secchi	41.67	41.38	27.47	32.38	34.25		
TDS	56	61.25	57.1	47.8	61.25	51	50.17
Temp	19.5	20	20.7	20.38	19.12	22.75	21.33
Turb	1.23	2	3.5	0.85	0.9	0.75	0.9
pH_FLD							
pH_GEN	7.46	7.6	7.5	7.4	7.37	7.13	7.38
TRACE & TOXIC							
Al	0.05	0.04	0				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Kokrajhar(039LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Gaurang

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS								
Winter (Nov-Feb)								
	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	20.83	15.69	16.22	16.69	20.71	21.58	28.99	31.4
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27	0.6		0.9	0.7	1.1	1	1.26	0.92
COD			18.36	4.08	8.2	11.22	9.64	8.25
DO			6.3			7.82	7.5	
DO_SAT%						88.8	74.17	8.48
CHEMICAL								
ALK-TOT								
Alk-Phen								
B								
CO3								
Ca								
Cl	2.02	2.5	8.4	1.43	4.3	2.65	3.53	4.05
F								
Fe								
HCO3								
K	2.7	4.3	3.5	1.01	2.6	1.78	1.97	3.2
Mg								
NH3-N								
NO2+NO3								
NO2-N								
NO3-N								
Na	3.85	7.3	4.5	1.19	4	2.05	3.17	2.7
SO4								
o-PO4-P								
CHEMICAL INDICES								
HAR_Total								
Na%								
RSC								
SAR								
PESTICIDES								
PHYSICAL								
EC_FLD								102.33
EC_GEN	149.5	173	48.83	75.67	86.5	77.78	123.04	101
SS								
Secchi								
TDS	79	88	31.6	52.2	67.5	55.87	88.77	66.75
Temp				13	14	21.5	14.85	21.75
Turb	0.8	0.2	2	1.6	3.6	4.85	11.1	
pH_FLD								6.9
pH_GEN	6.95	8.2	8.23	8.4	7.6	7.35	7.31	7.26
TRACE & TOXIC								
AI								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Kokrajhar(039LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Gaurang

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS		Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Q (cumec)	14.9	20.5	9.91	16.4	19	10.5	17.5	17.4	7.02	8.5	8.68	9.7	13.7	25.75	15.14	
BIOLOGICAL/BACTEOROLOGICAL																
BOD3-27								1		1.4	1.1	0.9	0.7	1.33	1.9	
COD										16	8.16	6.1	10.1	7.33	11.0	
DO										8.3		8	7.23	7.8	17.8	
DO_SAT%										93.1		98.61	55.07	92.1	195.5	
CHEMICAL																
ALK-TOT	66	126	49.25	63	40	49.38	80.33	65.16	65.57	39.34	124.59	36.07	88.52	51.68		
Alk-Phen	0	1.49	0	0	0	0.34	0	0	0	0	0	0	0	1.25		
B			0													
CO3	0	1.8	0	0	0	0.41	0	0	0	0	0	0	0	1.5		
Ca	18.4	10.3	9.45	16.3	11.5	9.22	40	16.8	27.25	25.65	48.12	41.7	38.5	25.66	4.0	
Cl	9.23	8.52	4.7	7.63	6.46	5.57	1.5	2.88	12	12	5.43	2.3	4.52	3.4	4.5	
F			0													
Fe	0.12	0.04	0.06	0.05	0.09											
HCO3	80.52	150.06	60.08	76.86	48.8	59.41	98	79.5	80	48	152	44	108	60	48.0	
K	0.81	0.9	0.9	1.37	1.73	1.53	1.8	4	3	3.5	0.8	1.5	3.82	1.54		
Mg	9.27	39.18	9.77	8.38	7.03	3.64	2.8	3.5	1.94	1.91	3.82	3.8	2.86	1.91	12.1	
NH3-N			0													
NO2+NO3			0													
NO2-N			0													
NO3-N			0													
Na			2.04	1.38	2.05	5.07	2.3	7.1	5.8	6.04	6.5	1.9	3.75	2.64		
SO4	0.78	2.93	0.28	0.7	0.72			2.3		22.6	18.5	29.3	36.4	12.8	1.9	
o-PO4-P	0.43	0.45	0.26	0.54	0.7											
CHEMICAL INDICES																
HAR_Total	84.64	189.02	64.83	75.68	59.04	38.22	111.67	56.58	76.21	72.08	136.22	120.08	108.17	72.11	60.0	
Na%			6.38	3.82	6.95	24.37	4.22	20.09	13.65	14.68	9.37	3.29	6.93	5.56		
RSC	0.15	0	0	0.04	0	0.23	0	0.18	0	0	0	0	0	0		
SAR			0.11	0.07	0.12	0.41	0.09	0.41	0.29	0.31	0.24	0.08	0.16	0.1		
PESTICIDES																
PHYSICAL																
EC_FLD																
EC_GEN	86	194.3	85.59	94.75	167.67	95.27	198	102.5	90.4	85.89	85.41	79	110.7	80.28	241.0	
SS																
Secchi	46	25.75	24.59	40.75	28.67	23.04	100	42	68.12	64.12	120.3	104.25	96.25	64.15		
TDS	56	124.35	57.14	63.1	116.67	54.33	104	44.25	43.6	41.98	70.9	64	84.52	46.82	159.0	
Temp	21.83	20.65	20.88	23.25	22.33	21				21	23	26	19.07	23.55	47.0	
Turb	1.3	0.97	0.4	0.75	1.33	1.43	1	1.2	1.8	4.1	2	6.7	6.1	5.4	5.0	
pH_FLD																
pH_GEN	7.44	7.85	7.44	6.75	7.23	7.6	7.8	6.98	7	6.85	7.21	7.7	7.88	7	15.0	
TRACE & TOXIC																
Al	0.07	0.01	0													

HISTORY SHEET (WATER QUALITY)

VOLUME - III

Site : Manas N H Crossing State : Assam Basin : BRAHMAPUTRA Tributary : Manas Sub-Sub Tributary : - Division : Middle Brahmaputra Division (MBD), Guwahati Drainage Area : 2171.0 Sq. Km. Latitude : 26°27'51" Current Zero of Gauge (m) : 42	Water Year : 2017 - 2018 Code : 004-LBDJPG District : Barpeta Independent River : Brahmaputra Sub Tributary : - Local River : Manas Sub-Division : Manas Sub-Division, Berpeta Road Bank : Longitude : 90°44'56"
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CATEGORY	Opening Date	Closing Date
Gauge	5/15/1971	
Discharge	11/27/2003	
Sediment		
Water Quality	4/1/2003	
Reduced Level	Opening Date	Closing Date
42.0	15/05/1971	-

PARAMETERS											
	01/06/2017	03/07/2017	01/08/2017	04/09/2017	03/10/2017	01/11/2017	04/12/2017	01/01/2018	01/02/2018	1/3/2018	1/4/2018
Q (cumec)	46.2	85.58	61.81	96.59	341.43	108.45	74.55	67.54	53.03	52.067	
CHEMICAL											
Cl(mg/L)	3.5	2.8	5.03	6.9	5.8	4.9	5.1	4.2	3.6	1.5	3
Na(mg/L)	2.8	3.77	4	3.9	3.4		3.1				
K(mg/L)	1	2.04	2.9	3.3	2.9		2.6				
CO3(mg/L)											
Mg(mg/L)											15.5
P-Tot(mgP/L)											
NH3-N(mgN/L)											
SO4(mg/L)											0.95
SiO2(mg/L)											
ALK-TOT(mgCaCO3/L)											
F(mg/L)											
B(mg/L)											
Alk-Phen(mgCaCO3/L)											
NO2-N(mg/L)											
Ca(mg/L)											14.4
HCO3(mg/L)											72
TRACE & TOXIC											
PESTICIDES											
BIOLOGICAL/BACTERIOLOGICAL											
DO(mg/L)	7.9	8.2								9.4	9.2
BOD3-27(mg/L)	1.1	1.4	18	1.1	1	1	1.3	1	0.8	0.8	0.8
COD(mg/L)	8	10	12	12	10	11	11	8	4	4	5
DO_SAT%(Percentage)	97.37	104.77	7.5	8.9	9.1	8	8.7	8.4	8.6	103.29	101
Chl-f-a(µg/L)											
Tcol-MPN(MPN/100ml)											
Fcol-MPN(MPN/100ml)											
PHYSICAL											
Temp(Degrees Celsius (°C))	26	28	29	27	26	23	20	17	17	19	22
EC_GEN(µmho/cm)	390	385	415	391	184	381	356	350	291	408	419
Colour_Cod(-)	Clear	Clear									
Turb(NTU)	3.2	2.6								2	2.2
pH_GEN(pH unit)	7.2	7.1	7	7	6.9	7.3	7.2	7.11	8.12	7.76	8.1
Odour_Code(-)	odour free	odour free									
TDS(mg/L)	250	208	29	231	110	233	229	231	192	268	275
pH_FLD(pH unit)							7.2				
EC_FLD(µmho/cm)							356	350	291		
SS(mg/L)											
CHEMICAL INDICES											
HAR_Ca(mgCaCO3/L)											
HAR_Total(mgCaCO3/L)											100

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Manas N H Crossing(004-LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Manas

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	970.04	45.52	93.69	137.2	67.95	54.91
CHEMICAL							
Na	6	4	2.8	3.49	3.57	3.1	
Cl	9	6.9	2.8	4.65	4.81	4.45	
K	6	3.3	1	2.46	2.43	2.6	
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
DO_SAT%	9	104.77	7.5	29.04	45.53	8.43	
COD	9	12	4	9.56	10.4	8.5	
BOD3-27	9	18	0.8	2.97	4.52	1.02	
DO	2	8.2	7.9	8.05	8.05		
PHYSICAL							
TDS	9	250	29	190.33	165.6	221.25	
Temp	9	29	17	23.67	27.2	19.25	
pH_GEN	9	8.12	6.9	7.21	7.04	7.43	
EC_GEN	9	415	184	349.22	353	344.5	
EC_FLD	3	356	291	332.33		332.33	
Turb	2	3.2	2.6	2.9	2.9		
pH_FLD	1	7.2	7.2	7.2		7.2	
CHEMICAL INDICES							

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Manas N H Crossing(004-LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Manas

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS	Flood (Jun-Oct)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Q (cumec)	125	161	80.2	132	181	106	235		111	76.9	87.4	113	102	126	
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27							0.5		0.85	1.3	1.2	1.1	1.06	5.02	
COD									10.2	6.12	7.15	7.15	11.32	10.62	
DO									6.1			7.4		8.05	
DO_SAT%												93.78		36.98	
CHEMICAL															
ALK-TOT	218.25	190	240.52	164	179.5										
Alk-Phen	5.1	3.59	3.62	3.59	4.73										
B		0													
CO3	6.15	4.32	4.36	4.32	5.7										
Ca	56	20.72	24.38	19.64	34.35										
Cl	6.04	9.23	5.77	11.22	4.57	8.19	2.52		4.05	2.28	3.72	2	3.36	5.6	
F		0													
Fe	0.08	0.06	0.09	0.1											
HCO3	253.76	223.02	284.58	191.3	207.4										
K	1.14	1.44	1.37	1.72	3.08	1.31	3.02		2.45	1.8	2.05	1.45	1.88	2.87	
Mg	63.91	38.66	43.05	31.32	27.67										
NH3-N		0													
NO2+NO3		0													
NO2-N		0													
NO3-N		0													
Na	2.99	2.28	2.53	2.44	4.62	2.09	3.37		2.8	2	2.95	1.25	2.56	3.71	
SO4	2.51	4.81	0.99	0.89											
o-PO4-P	1.04	1.36	0.85	0.88											
CHEMICAL INDICES															
HAR_Total	359.09	212.89	237.33	179.61	201.17										
Na%	6.37	2.12	2.43	3.96	5.07										
RSC	0	0.01	0.23	0.27	0.03										
SAR	0.13	0.07	0.07	0.09	0.14										
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	301.38	357.2	281.24	397.1	319.64	395.16	359.5		376.5	426.13	248.65	130.45	302.72	349.63	
Secchi	140.24	51.8	59.3	49.1	85.88										
TDS	222.84	245.8	186.14	274.42	217.59	196.23	168		185	238.6	191.2	98.85	227.8	159.41	
Temp	25	26.4	27	26.4	27.85	27				22	23	27.5		27.22	
Turb	3.51	7	2.26	2.54	4.19	2.3	5.6		15.7	1.8	0.75	22.7	16.64	2.9	
pH_FLD															
pH_GEN	7.61	7.78	7.84	7.52	7.37	7.47	6.9		7.55	8.25	7.18	7.15	7.34	7.03	
TRACE & TOXIC															
Al	0.06	0													

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Manas N H Crossing(004-LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Manas

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS

	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	42.88	84.06	164.3	48.29	69.54	95.04	90.21
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT	200.33	214.29	193.5	270.5	268		
Alk-Phen	0.66	2.36	2.24	2.24	5.98		
B			0				
CO3	0.8	2.85	2.7	2.7	7.2		
Ca	52.2	41.25	12.85	31.4	46.9		
Cl	12.31	8.41	6.75	7.72	5.95	6.02	1.75
F			0				
Fe	0.18	0.04	0.09	0.1			
HCO3	242.78	255.64	230.58	324.52	312.32		
K	1.12	1	1.35	1.96	2.63	3	1.15
Mg	26.45	25.8	48.57	54.86	26.64		
NH3-N			0				
NO2+NO3			0				
NO2-N			0				
NO3-N			0				
Na		4.6	3.67	2.3	3.23	4.5	2.14
SO4	4.54	1.89	3.38	1.1			
o-PO4-P	0.56	0.45	1.37	0.93			
CHEMICAL INDICES							
HAR_Total	240.69	215.48	234.5	307.07	228.25		
Na%		4.36	3.42	1.61	3.08		
RSC	0.27	0.32	0	0	1.06		
SAR		0.13	0.11	0.06	0.09		
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	429.67	424.4	353	226.75	220.92	397.41	417.8
Secchi	130.5	103	32.12	78.5	117.25		
TDS	239.67	253.8	201.75	130.05	134.22	206.22	235.2
Temp		19.33	21.5	21.25	20.75	17.67	23
Turb	0.93	1.8	3.5	1	0.9	1	0.9
pH_FLD							
pH_GEN	7.81	7.98	7.92	7.85	7.35	6.95	6.99
TRACE & TOXIC							
AI	0.08	0.03	0				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Manas N H Crossing(004-LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Manas

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS								
Winter (Nov-Feb)								
	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	72.48	40.12	58.18	36.98	50.6	78.04	49.77	75.89
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27	0.7		0.9	1	1.1	0.95	1.42	1.02
COD			16.32	4.08	8.2	10.7	10.84	8.5
DO			6.3			6.88	7.75	
DO_SAT%						77.19	42.31	8.43
CHEMICAL								
ALK-TOT								
Alk-Phen								
B								
CO3								
Ca								
Cl	2.01	3	8.4	2.57	4	2.42	3.63	4.45
F								
Fe								
HCO3								
K	3.3	4.9	3.4	1.9	2.9	1.9	2	2.6
Mg								
NH3-N								
NO2+NO3								
NO2-N								
NO3-N								
Na	3.25	5.6	2.8	2.26	3.3	1.73	2.53	3.1
SO4								
o-PO4-P								
CHEMICAL INDICES								
HAR_Total								
Na%								
RSC								
SAR								
PESTICIDES								
PHYSICAL								
EC_FLD								332.33
EC_GEN	240	354	286.44	101.51	248.6	178.22	265.39	344.5
Secchi								
TDS	152	215	159.7	70	193.9	129.63	190.29	221.25
Temp				13	10	20.75	14	19.25
Turb	1.1	0.5	2.6	5	5.8	7.95	9.15	
pH_FLD								7.2
pH_GEN	7.3	7.8	8.43	8.4	7.81	7.08	7.54	7.43
TRACE & TOXIC								
AI								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Manas N H Crossing(004-LBDJPG)

Division: Middle Brahmaputra Division (MBD), Guwahati

Local River: Manas

Sub Division: Manas Sub-Division, Berpeta Road

PARAMETERS																
Summer (Mar-May)																
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)		39.5		55.4	43.5	59.1	48	70	54.5	34.4	34.1	33.1	43.7	62	56.1	52.14
BIOLOGICAL/BACTERIOLOGICAL																
BOD3-27									0.8		1.5	0.9	1	1	1.33	1.6
COD											14	6.12	4.1	14.83	8.67	9.0
DO											9		6.1	7.03	8.1	18.6
DO_SAT%											104.92		69.77	50.67	90.03	204.3
CHEMICAL																
ALK-TOT	233	274.67	209.75	213.33	247	232.09	184.59	150.82	178.69	62.3	196.72	68.85	52.46	85.25	37.9	
Alk-Phen	4.48	5.98	4.48	3.65	1.49	3.64	5.31	0	0	0	0	0	0	0	0.91	
B				0												
CO3	5.4	7.2	5.4	4.4	1.8	5.6	6.39	0	0	0	0	0	0	0	1.1	0.0
Ca	50	42.13	15.4	19.13	24.9	35.86	51.3	64.8	55.4	73.75	27.25	59.35	48.12	46.52	40.1	14.4
Cl	16.86	10.3	7.1	7.81	8.52	8.03	5.92	1.51	2.88	10	6.2	5.72	2.3	3.87	2.96	4.5
F				0												
Fe	0.17	0.12	0.05	0.05	0.11	0.09										
HCO3	273.28	320.45	244.91	251.32	297.68	278.01	212.2	184	218	76	240	84	64	104	44	72.0
K	1.17	0.96	1.09	1.13	1.95	2.27	1.67	1.1	4	3.7	3.98	0.9	1.6	2.9	2.06	0.0
Mg	27.7	42.16	38.64	43.17	39.73	33.15	6.81	5.2	5.8	2.91	1.91	2.88	4.79	2.82	1.88	15.5
NH3-N				0												
NO2+NO3				0												
NO2-N				0												
NO3-N	0			0												
Na	5.73			2.76	2.76	4	3.1	2.8	4.8	2.8	3.1	5	1.8	2.84	2.16	
SO4	11.52	3.6	3.07	0.82	0.98	0.74			1.8		18.3	20.5	25.8	22.7	11.2	1.0
o-PO4-P	1.37	0.79	1.33	1.07	0.94	0.78										
CHEMICAL INDICES																
HAR_Total	224.01	281	199.49	227.72	227.79	228.04	156.6	183.67	162.67	196.5	76.08	160.38	140.26	128.05	108.08	100.0
Na%	6.13			2.58	2.58	3.66	4.52	3.2	5.88	2.94	7.69	6.32	2.69	3.67	3.05	
RSC	0.38	0.22	0.25	0.03	0.43	0.23	0.57	0	0.33	0	2.42	0	0	0	0	
SAR	0.18			0.08	0.08	0.12	0.11	0.09	0.16	0.09	0.15	0.17	0.07	0.09	0.07	
PESTICIDES																
PHYSICAL																
EC_FLD																
EC_GEN	388	420.67	317.05	398.67	411	393.33	373.13	298	376	402.8	448.8	368.6	428	338.83	258.19	827.0
Secchi	125	105.33	39.07	47.83	62.25	90.17	128.25	162	138.5	184.38	68.12	148.38	120.3	116.3	100.25	
TDS	295	254.33	204	244	266.5	266.67	210.67	159	123	219.3	231.61	305.9	346.7	258.27	191.73	543.0
Temp			23.53	24.67	24.25	27.33	22				23	23	22	18.13	20.59	41.0
Turb	2	1.33	9.3	1.33	1.5	1.67	1.7	1.5	1.6	2.2	1.8	1	11.5	7.97	6.78	4.2
pH_FLD																0.0
pH_GEN	8.05	8.08	8.07	7.87	7.15	7.43	8.04	7.06	7.1	7.8	7.88	7.51	7.4	8	7.05	15.9
TRACE & TOXIC																
AI	0.04	0.08	0.01	0												

HISTORY SHEET (WATER QUALITY)		
Water Year		: 2017 - 2018
Site	: SANKOSH LRP	Code : 007-LBDJPG
State	: West Bengal	District : Koch Bihar
Basin	: BRAHMAPUTRA	Independent River : Brahmaputra
Tributary	: Sankosh	Sub Tributary : -
Sub-Sub Tributary	: -	Local River : Sankosh
Division	: Lower Brahmaputra Division (LBD), Jalpaiguri	Sub-Division : Torsa Raidak Sankosh Sub-Division,
Drainage Area	: 8230.0 Sq. Km.	Bank : Left
Latitude	: 26°27'28"	Longitude : 89°51'28"
Current Zero of Gauge (m)	:	
CATEGORY	Opening Date	Closing Date
Gauge	: 05-08-74	
Discharge	: 12-03-77	
Sediment	: 05/15/1997	
Water Quality	: 07-01-03	
Reduced Level	Opening Date	Closing Date
40.0	03/12/1977	31/12/2010
40.0	01/01/2011	31/10/2017
40.0	01/01/2017	31/07/2017
40.0	18/05/2014	31/12/2016
0.0	21/04/2018	30/04/2018

Station Name: SANKOSH LRP(007-LBDJPG)
Local River: Sankosh

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

	01/06/2017	03/07/2017	01/08/2017	04/09/2017	03/10/2017	01/11/2017	04/12/2017	01/01/2018	01/02/2018	05/03/2018	02/04/2018	01/05/2018
Q (cumec)	203.22	646.44	686.6	1027.08	832.57	578.61	413.21	344.73	324.77	273.12	280.16	296.72
CHEMICAL												
Na(mg/L)	1.6	1.71	2.5	2.9	3.2		2					
K(mg/L)	0.9	1.62	2.7	3.1	3		4.3					
Cl(mg/L)	5	3.8	4.53	5.9	5.4	8.3	7.9	3.1	3.1	1.1	3	13
F(mg/L)												
B(mg/L)												
Alk-Phen(mgCaCO3/L)											0	
NO2-N(mgN/L)												
HCO3(mg/L)											76	
CO3(mg/L)											0	
Ca(mg/L)											14.4	
Mg(mg/L)											11.6	
P-Tot(mgP/L)												
NH3-N(mgN/L)												
SO4(mg/L)											0.7	
SiO2(mg/L)												
ALK-TOT(mgCaCO3/L)											62.29	
TRACE & TOXIC												
PESTICIDES												
BIOLOGICAL/BACTERIOLOGICAL												
DO_SAT%(Percentage)	92.1	96.14	12	10.6	10.4	8.6	8.6	7.3	7.5	8.2	8.3	9.3
BOD3-27(mg/L)	0.9	1.2	1.6	1.5	1.2	1.3	1.1	0.8	0.8	1.1	1	1.1
COD(mg/L)	10	11	13	10	11	12	9	8	8	4	6	6
DO(mg/L)	7.9	7.8										
FCol-MPN(MPN/100mL)												
Chlf-a(µg/L)												
Tcol-MPN(MPN/100mL)												
PHYSICAL												
Turb(NTU)	5.5	4.5										
EC_GEN(µmho/cm)	138	108	132	126	164	115	102	141	141	150	168	106.8
pH_GEN(pH unit)	7.2	6.9	7.1	6.7	6.8	7	6.9	7.34	7.34	7.2	7.34	7.18
Colour_Cod(-)	Clear	Clear										
TDS(mg/L)	89	56	78	65	101	71	69	93	93	99	116	67
Temp(Degrees Celsius (°C))	23	26	24	25	14	21	19	11	11	14	18	18
Odour_Code(-)	odour free	odour free										
EC_FLD(µmho/cm)							102	141	141			
SS(mg/L)												
pH_FLD(pH unit)							6.9					
CHEMICAL INDICES												
HAR_Total(mgCaCO3/L)											89	
HAR_Ca(mgCaCO3/L)											222.5	

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: SANKOSH LRP(007-LBDJPG)

Local River: Sankosh

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	2142.02	196.86	518.04	760.12	378.61	297.29
CHEMICAL							
Cl	12	13	1.1	5.34	4.93	5.6	5.7
K	6	4.3	0.9	2.6	2.26	4.3	
CO3	1	0	0	0			0
Mg	1	11.6	11.6	11.6			11.6
Na	6	3.2	1.6	2.32	2.38	2	
SO4	1	0.7	0.7	0.7			0.7
Alk-Phen	1	0	0	0			0
ALK-TOT	1	62.29	62.29	62.29			62.29
HCO3	1	76	76	76			76
Ca	1	14.4	14.4	14.4			14.4
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	12	13	4	9	11	9.25	5.33
BOD3-27	12	1.6	0.8	1.13	1.28	1	1.07
DO	2	7.9	7.8	7.85	7.85		
DO_SAT%	12	96.14	7.3	23.25	44.25	8	8.6
PHYSICAL							
TDS	12	116	56	83.08	77.8	81.5	94
Temp	12	26	11	18.67	22.4	15.5	16.67
pH_GEN	12	7.34	6.7	7.08	6.94	7.14	7.24
EC_GEN	12	168	102	132.65	133.6	124.75	141.6
EC_FLD	3	141	102	128		128	
Turb	2	5.5	4.5	5	5		
pH_FLD	1	6.9	6.9	6.9		6.9	
CHEMICAL INDICES							
HAR_Total	1	89	89	89			89
HAR_Ca	1	222.5	222.5	222.5			222.5

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: SANKOSH LRP(007-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Sankosh

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS	Flood (Jun-Oct)															
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Q (cumec)	1755	946.1	844.7	765	886	753	698	959.2	752	750	848.5	492.3	515.5	609	679.18	
BIOLOGICAL/BACTEOROLOGICAL																
BOD3-27								0.58		0.92	1.3	0.96	1.16	1.08	1.32	
COD										17.99	7.14	6.1	8.58	12.12	11.08	
DO										6.31			6.82		7.85	
DO_SAT%										73.82			84.34		36.58	
CHEMICAL																
ALK-TOT	58	64.39	45.64	45.15	51.2	49.2										
Alk-Phen	0	0.79	0	0.77	0.8	1.99										
B			0													
CO3	0	0.95	0	0.92	0.96	2.4										
Ca	8.6	34.03	10.29	12.69	8.96	18.88										
Cl	18.64	6.89	6.78	5.38	12.14	5.18	6.09	2.27	2.53	5.17	1.78	3.83	2.78	3.3	5.18	
F			0													
Fe	0.17	0.14	0.08	0.08	0.09											
HCO3	70.76	76.62	55.68	53.21	60.51	55.14										
K	1.31	1.49	1.21	1.21	0.99	1.52	1.68	2.06	5.04	3.94	1.86	1.5	1.86	1.9	2.75	
Mg	9.9	11.82	12.34	7.63	10.42	6.05										
NH3-N			0													
NO2+NO3			0													
NO2-N			0													
NO3-N			0													
Na	4.26	2.53	1.85	1.61	2.38	3.36	3	2.35	4.97	3.04	1.35	3.12	1.9	2.56	2.73	
SO4	3.65	0.2	0.34	0.38	0.47											
o-PO4-P	0.23	0.67	0.33	0.54	0.33											
CHEMICAL INDICES																
HAR_Ca																
HAR_Total	62.76	122.16	76.91	61.96	65.84	72.41										
Na%	12.59	6.08	4.97	6.2	8.03	9.08										
RSC	0	0	0	0.01	0.04	0										
SAR	0.23	0.12	0.09	0.1	0.13	0.17										
PESTICIDES																
PHYSICAL																
EC_FLD																
EC_GEN	92.2	83.8	92	84.2	102.5	91.8	142.21	163.7	115.6	119.92	111.53	106.98	112.6	114.24	134.63	
Secchi	21.8	85.7	25.7	31.8	22.4	47.2										
TDS	65.07	60	63.6	57.4	72.64	66.8	69.7	81.77	59.32	55.66	76.05	76.32	85.44	86.2	78.32	
Temp	22	20.6	20.2	21	21	21.4	20.25			25	22	25.2	26.2		22.2	
Turb	28.53	15	16	9.8	9.6	20.8	12.32	6.55	5.7	16.09	11.35	1	23.2	13.72	5	
pH_FLD																
pH_GEN	7.11	7.55	7.62	7.62	7.58	7.36	7.7	7.26	7.34	7.33	8.08	7.29	7.3	7.38	6.93	
TRACE & TOXIC																
AI	0.12	0.04	0.01													

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: SANKOSH LRP(007-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Sankosh

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	256.1	264.8	292.8	181.3	194.1	186.4	289.6
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT	66	61.43	51.5	59.5	95.5		
Alk-Phen	0	0	0	0	0.75		
B			0				
CO3	0	0	0	0	0.9		
Ca	18.4	14.9	10.75	17.15	18.5		
Cl	12.66	7.96	6.48	5.5	5.68	5.27	2.1
F			0				
Fe	0.11	0.03	0.07	0.07			
HCO3	80.52	74.95	62.83	72.59	114.68		
K	1.03	0.9	0.95	1.03	1.28	2.5	1.07
Mg	20.94	9.3	18.29	14.91	10.42		
NH3-N			0				
NO2+NO3			0				
NO2-N			0				
NO3-N			0				
Na		3.11	3	1.94	2.43	4.5	2.66
SO4	1.49	0.24	0.3	0.37			
o-PO4-P	0.21	0.31	0.48	0.3			
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	133.24	73.69	103.07	105.02	89.66		
Na%		9.01	6.45	3.7	5.67		
RSC	0.04	0	0	0	0.64		
SAR		0.16	0.13	0.08	0.11		
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	154.33	132.75	108.37	104.5	103.08	109	144.25
Secchi	46	37.12	26.67	42.88	46.25		
TDS	83.67	78	62.67	58.33	60.75	78.5	74.27
Temp	15	16.62	16.9	14.25	15	16	14
Turb	0.93	1.25	4	0.43	1.35	0.88	0.85
pH_FLD							
pH_GEN	7.28	7.41	7.61	7.42	7.38	7.09	7.43
TRACE & TOXIC							
AI	0.14	0.02	0				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: SANKOSH LRP(007-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Sankosh

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

Winter (Nov-Feb)

	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	160.8	318.5	222.5	205.9	449.2	311.3	377	332.26
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27	0.82		1.2	0.95	1.05	1.08	1.3	1
COD			19.72	10.2	8.15	11.67	11.64	9.25
DO			6.03			7.12	8.35	
DO_SAT%						75.22	49.44	8
CHEMICAL								
ALK-TOT								
Alk-Phen								
B								
CO3								
Ca								
Cl	2.39	3.37	8.76	2.72	4.22	3.08	4.27	5.6
F								
Fe								
HCO3								
K	5.23	4.42	3.47	1.24	2.02	2.3	2.4	4.3
Mg								
NH3-N								
NO2+NO3								
NO2-N								
NO3-N								
Na	5.77	5.62	3.75	2.55	3.08	2.25	3.2	2
SO4								
o-PO4-P								
CHEMICAL INDICES								
HAR_Ca								
HAR_Total								
Na%								
RSC								
SAR								
PESTICIDES								
PHYSICAL								
EC_FLD								128
EC_GEN	139.5	111.5	101.76	108.12	120.45	119.37	146.58	124.75
Secchi								
TDS	72	61	50.2	74.42	89.3	85.65	105.47	81.5
Temp				14.65	16.25	17.75	15.08	15.5
Turb	0.85	2.83	3.63	2.17	2.02	5.95	13.85	
pH_FLD								6.9
pH_GEN	7.15	7.16	7.98	8.11	7.78	7.32	7.15	7.14
TRACE & TOXIC								
AI								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: SANKOSH LRP(007-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Sankosh

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	146.6	151.6	98.74	155.1	101.7	132.4	105.3	37.92	193.2	140.8	129.2	262.2	220.8	134.4	170
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27								0.87		0.9	1.13	1.16	0.83	1.23	1.07
COD										12.55	9.52	4.9	12.13	7.33	5.33
DO										5.45		7.45	7.4	7.33	
DO_SAT%										61.69		84.93	55.45	81.64	8.6
CHEMICAL															
ALK-TOT	73.33	78	59.33	71.08	54.67	47.97	62.3	48.03	91.8	55.74	85.25	19.67	75.41	51.68	62.29
Alk-Phen	0	0	1	0	2.32	2.44	0	0	0	0	0	0	0	1.25	0
B			0												
CO3	0	0	1.2	0	2.8	2.94	0	0	0	0	0	0	0	1.5	0
Ca	23.53	12.1	13.73	12.82	13.2	18.84	43	23.6	44.87	16.04	35.29	27.27	43.31	16.04	14.4
Cl	9.23	7.63	5.33	8.25	7.34	10.84	1.8	2.49	12.2	8.8	4.63	2.25	4.3	3.7	5.7
F			0	0											
Fe	0.1	0.05	0.05	0.07	0.11										
HCO3	89.47	95.16	69.95	86.72	61	52.54	76	58.6	112	68	104	24	92	60	76
K	0.64	1.37	1.03	0.98	1	1.48	1.5	4	3.7	5.27	1.05	1.59	3.09	2.37	
Mg	11.14	9.42	9.07	18.02	8.34	3.16	4.6	3.8	2.91	2.89	1.89	5.79	2.8	2.89	11.6
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na			2.26	2.24	2.17	2.38	3.45	4.9	3.66	5.15	5.11	1.79	2.91	2.97	
SO4	0.91	0.22	0.35	0.48	0.5			1		25.4	20.5	36.3	30.7	10.7	0.7
o-PO4-P	0.23	0.25	0.65	0.3	0.4										
CHEMICAL INDICES															
HAR_Ca															222.5
HAR_Total	105.24	69.48	72.13	107.1	67.76	60.27	126.67	74.83	124.3	52.14	96.1	92.3	119.94	52.14	89
Na%			6.64	4.36	6.55	7.43	5	12.23	4.21	16.59	12.51	2.94	4.53	9.99	
RSC	0	0.27	0.01	0	0	0	0	0	0	0.08	0	0	0	0	
SAR			0.12	0.09	0.12	0.13	0.12	0.26	0.1	0.33	0.28	0.06	0.11	0.17	
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	104.67	143.26	110.09	103	111	106.9	183.23	131.02	115.88	146.68	156.02	112.04	134.84	108.61	141.6
Secchi	58.83	30.25	34.52	31.5	33	47.1	107.5	59	112.17	40.1	88.23	68.17	108.28	40.1	
TDS	68.67	92.91	73.65	67.97	70.33	58	101.92	60.24	73.83	76.61	116.72	88.24	103.14	69.81	94
Temp	18.33	20.11	20.74	17.67	15.33	12				24.07	19.36	20.86	18.53	20.68	16.67
Turb	1.3	0.91	1	1.13	2.53	1.53	1.23	1.94	1.35	6.12	1.72	16.78	11.16	5.95	
pH_FLD															
pH_GEN	7.43	7.5	7.5	7	7.23	8.02	6.96	7.42	7.71	7.94	7.1	7.73	8.03	6.96	7.24
TRACE & TOXIC															
Al	0.09	0.03	0		0										

HISTORY SHEET (WATER QUALITY)		
		Water Year : 2017 - 2018
Site	: Chepan	Code : 024-LBDJPG
State	: West Bengal	District : Jalpaiguri
Basin	: BRAHMAPUTRA	Independent River : Brahmaputra
Tributary	: Torsa	Sub Tributary : Raidak-I
Sub-Sub Tributary	: -	Local River : Raidak-I
Division	: Lower Brahmaputra Division (LBD), Jalpaiguri	Sub-Division : Torsa Raidak Sankosh Sub-Division,
Drainage Area	: 124.0 Sq. Km.	Bank :
Latitude	: 26°29'32"	Longitude : 89°42'3"
Current Zero of Gauge (m)	: 40	
CATEGORY	Opening Date	Closing Date
Gauge	: 04/12/1977	
Discharge	: 04/12/1977	
Sediment	:	
Water Quality	: 01/07/2003	
Reduced Level	Opening Date	Closing Date
40.0	31/12/2020	-
40.0	01/01/2011	30/12/2020
40.0	04/12/1977	31/12/2010
40.0	31/05/2017	01/01/2051
40.0	06/05/2014	31/05/2015

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Chepan(024-LBDJPG)
Local River: Raidak-I

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS												
	01/06/2017	03/07/2017	01/08/2017	04/09/2017	03/10/2017	01/11/2017	04/12/2017	01/01/2018	01/02/2018	05/03/2018	02/04/2018	01/05/2018
Q (cumec)	9.04	33.44	25.9	37.78	33.7	17.82	13.14	8.36	7.7	7.18	5.86	8.2
CHEMICAL												
Cl(mg/L)	4.1	3.8	4.53	3.7	4.2	6.8	6.4	3.7	3.7	3.1	3	13
Na(mg/L)	2	2.78	3.2	3	3.4		2.4					
K(mg/L)	1.1	2.24	2.8	2.7	3		3.1					
B(mg/L)												
HCO3(mg/L)											92	
SiO2(mg/L)												
F(mg/L)												
Ca(mg/L)											11.2	
NO2-N(mgN/L)												
P-Tot(mgP/L)												
ALK-TOT(mgCaCO3/L)											75.41	
CO3(mg/L)											0	
Alk-Phen(mgCaCO3/L)											0	
NH3-N(mgN/L)												
Mg(mg/L)											13.6	
SO4(mg/L)											0.8	
TRACE & TOXIC												
PESTICIDES												
BIOLOGICAL/BACTEOROLOGICAL												
DO_SAT%(Percentage)	90.77	100.4	7.1	7.6	9.8	9.3	8.8	8.9	8.9	7.5	8.4	7.9
DO(mg/L)	7.5	8										
BOD3-27(mg/L)	0.8	1.2	0.9	0.8	1	1.3	1.2	1	1	1	1.1	1.2
COD(mg/L)	8	9	8	8	9	12	9	4	4	8	6	4
Chl-f-a(µg/L)												
Tcol-MPN(MPN/100mL)												
Fcol-MPN(MPN/100mL)												
PHYSICAL												
pH_GEN(pH unit)	7	7.3	9	6.8	6.9	6.7	7.1	7.33	7.33	7.1	7.5	7.46
Colour_Cod(-)	Clear	Clear										
TDS(mg/L)	72	106	128	119	94	116	121	88	88	119	124	123
Turb(NTU)	1.4	1										
Temp(Degrees Celsius (°C))	25	27	25	21	25	25	22	18	18	21	23	22
EC_GEN(µmho/cm)	111	225	221	203	151	197	180	135	135	182	185	191.4
Odour_Code(-)	odour free	odour free										
EC_FLD(µmho/cm)							180	96	135			
SS(mg/L)												
pH_FLD(pH unit)							7.1					
CHEMICAL INDICES												
HAR_Total(mgCaCO3/L)											80.67	
HAR_Ca(mgCaCO3/L)											201.67	

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Chepan(024-LBDJPG)

Local River: Raidak-I

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	363	613.86	0	22.64	38.68	10.07	12.73
CHEMICAL							
Cl	12	13	3	5	4.07	5.15	6.37
K	6	3.1	1.1	2.49	2.37	3.1	
CO3	1	0	0	0			0
Mg	1	13.6	13.6	13.6			13.6
Na	6	3.4	2	2.8	2.88	2.4	
SO4	1	0.8	0.8	0.8			0.8
Alk-Phen	1	0	0	0			0
ALK-TOT	1	75.41	75.41	75.41			75.41
HCO3	1	92	92	92			92
Ca	1	11.2	11.2	11.2			11.2
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	12	12	4	7.42	8.4	7.25	6
BOD3-27	12	1.3	0.8	1.04	0.94	1.12	1.1
DO	2	8	7.5	7.75	7.75		
DO_SAT%	12	100.4	7.1	22.95	43.13	8.98	7.93
PHYSICAL							
TDS	12	128	72	108.17	103.8	103.25	122
pH_GEN	12	9	6.7	7.29	7.4	7.11	7.35
Temp	12	27	18	22.67	24.6	20.75	22
EC_GEN	12	225	111	176.37	182.2	161.75	186.13
EC_FLD	3	180	96	137		137	
Turb	2	1.4	1	1.2	1.2		
pH_FLD	1	7.1	7.1	7.1		7.1	
CHEMICAL INDICES							
HAR_Total	1	80.67	80.67	80.67			80.67
HAR_Ca	1	201.67	201.67	201.67			201.67

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Chepan(024-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Raidak-I

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	82.1	33.2	29	28	29.7	43.9	37	26.2	35.7	22.3	22.5	21.8	46.6	30.4	28
BIOLOGICAL/BACTEOROLOGICAL															
BOD3-27								0.5		1.12	1.3	1	1.16	1.08	0.93
COD										17.33	7.14	6.52	9.4	10.92	8.38
DO										6.22			7.28		7.75
DO_SAT%										80.78			89.73		35.06
CHEMICAL															
ALK-TOT	105	115.89	106	118.69	82.4	110.8									
Alk-Phen	0	1.94	1.2	0.38	1.39	2.99									
B			0												
CO3	0	2.34	1.44	0.46	1.68	3.6									
Ca	19	50.64	14.08	22.73	11.04	33.04									
Cl	14.56	8.07	8.24	6.24	11.22	4.76	4.99	2.52	2.11	4.96	1.96	4.52	2.98	3.6	4.12
F			0												
Fe	0.17	0.11	0.09	0.1	0.17										
HCO3	128.1	136.64	126.39	143.87	97.11	127.86									
K	1.31	5.05	1.42	1.8	1.17	2.22	1.59	2.46	5.08	4.08	1.56	1.74	1.84	1.86	2.7
Mg	10.63	22.61	20.92	16.72	17.57	10.25									
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na	3.04	3.8	1.96	2.51	2.88	4.24	2.3	2.81	5.13	3.38	1.88	3.86	2.14	2.48	3.11
SO4	7.06	1.43	0.64	0.58	0.62										
o-PO4-P	0.16	0.83	0.54	0.52	0.53										
CHEMICAL INDICES															
HAR_Ca															
HAR_Total	91.8	198.67	122.38	126.94	100.8	125.33									
Na%	6.85	5.81	3.23	3.99	6.06	6.79									
RSC	0.28	0	0	0.04	0.03	0									
SAR	0.14	0.14	0.08	0.1	0.13	0.17									
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	173.5	193.2	196.6	176.9	187.31	207.4	321.42	248.65	239.6	209.52	250.2	169.92	190.96	185.72	183.59
Secchi	47.5	127.3	35.2	56.7	26.67	82.6									
TDS	120	133.4	139.6	120.9	133.34	145.6	158.13	126.87	119.2	97.89	180.7	121.58	147.1	140.2	105.24
Temp	26.5	24.6	23.1	25.6	26	21.2	21.75			24	22.5	24.8	26		24.46
Turb	20.5	3.4	4.8	1.06	2	5.68	4.54	8.58	5	7.88	15.25	0.9	25.96	13.32	1.2
pH_FLD															
pH_GEN	7.12	7.57	7.5	7.42	7.27	6.94	7.87	7.2	7.14	7.21	7.97	7.1	6.96	7.26	7.42
TRACE & TOXIC															
Al	0.09	0.05	0												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Chepan(024-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Raidak-I

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	14.9	9.968	9.718	9.206	9.523	5.909	7.893
BIOLOGICAL/BACTEOROLOGICAL							
BOD3-27							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT	113	89.52	110.5	100	118.5		
Alk-Phen	0	0.26	0	0	1.99		
B			0				
CO3	0	0.31	0	0	2.4		
Ca	42.2	23.88	10.3	18.95	26.25		
Cl	12.6	8.47	6.3	7.54	5.41	4.66	2.25
F			0				
Fe	0.16	0.06	0.06	0.13			
HCO3	137.86	108.58	134.81	122	139.69		
K	1.29	1.1	1.35	1.51	1.34	2.67	2.43
Mg	29.83	14.94	30.01	21.41	19.87		
NH3-N			0				
NO2+NO3			0				
NO2-N			0				
NO3-N			0				
Na		4.25	2.83	1.99	2.99	4.67	4.44
SO4	1.92	0.67	0.58	0.62			
o-PO4-P	0.32	0.48	0.42	0.49			
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	229.78	128.12	150.79	136.6	148.4		
Na%		6.09	4.13	3.06	4.3		
RSC	0	0	0	0	0		
SAR		0.16	0.1	0.07	0.11		
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	203.91	215.25	212.45	136.39	158.9	180.67	252.77
Secchi	105.5	59	25.61	47.37	66.77		
TDS	115.36	116.75	121.42	83.66	97.12	128.67	135.54
Temp	19	18.75	20.58	16	15.67	15	19.67
Turb	0.45	0.77	2.67	0.64	0.95	0.83	0.87
pH_FLD							
pH_GEN	7.42	7.66	7.48	7.25	7.19	6.74	7.11
TRACE & TOXIC							
AI	0.07	0.03	0				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Chepan(024-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Raidak-I

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

Winter (Nov-Feb)

	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	8.088	8.661	8.543	10.8	11.24	12.65	11.59	11.755
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27	0.82		1.18	1.08	1.15	0.95	1.28	1.12
COD			22.44	9.18	10.2	10.2	10.04	7.25
DO			6.22			6.68	8.4	
DO_SAT%						72.79	8.4	8.97
CHEMICAL								
ALK-TOT								
Alk-Phen								
B								
CO3								
Ca								
Cl	2.39	4.47	8.16	2.29	3.93	2.85	3.73	5.15
F								
Fe								
HCO3								
K	4.78	6.1	3.84	1.55	1.62	1.93	2.2	3.1
Mg								
NH3-N								
NO2+NO3								
NO2-N								
NO3-N								
Na	5.28	6.03	2.83	2.3	2.83	1.93	2.83	2.4
SO4								
o-PO4-P								
CHEMICAL INDICES								
HAR_Ca								
HAR_Total								
Na%								
RSC								
SAR								
PESTICIDES								
PHYSICAL								
EC_FLD								137
EC_GEN	216.75	182.25	180.06	193.66	146.7	150.6	152.7	161.75
Secchi								
TDS	108.75	100	103.93	129.48	108.22	107.97	109.55	103.25
Temp				13.9	16.5	20	14	20.75
Turb	0.78	0.95	2.1	2.2	1.37	5.95	8.95	
pH_FLD								7.1
pH_GEN	7.4	7.18	8.11	7.93	7.9	7.45	7.13	7.12
TRACE & TOXIC								
Al								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Chepan(024-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Raidak-I

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	7.86	9.93	5.08	6.66	7.69	4.68	10.6	8.62	9.906	6.383	6.513	7.043	8.044	7.385	7.08
BIOLOGICAL/BACTEOROLOGICAL															
BOD3-27							0.8	0.83		0.97	1.07	1.06	0.77	1.23	1.1
COD										12.73	8.16	4.48	11.5	6.67	6
DO										6.17		7.85	7.3	7.03	
DO_SAT%										73.35		93.16	55.03	7.03	7.93
CHEMICAL															
ALK-TOT	146.67	113	103.75	97.33	105.33	82.34	149.18	92.54	59.02	49.18	98.36	22.95	81.97	45.9	75.41
Alk-Phen	0	2.49	4.23	0	1.33	0.59	0	0	0	0	0	0	0	0	0
B			0												
CO3	0	3	5.1	0	1.6	0.7	0	0	0	0	0	0	0	0	0
Ca	30.4	9.5	16.12	9.13	17.73	24.04	38	32.4	42.48	16.04	35.29	43.3	35.29	28.87	11.2
Cl	9.23	8.16	6.83	8.64	6.98	5.57	1.92	2.17	13.7	6.52	5.26	2.52	3.61	2.66	6.37
F			0												
Fe	0.13	0.06	0.06	0.17	0.14										
HCO3	178.93	131.76	116.2	118.75	125.25	99.02	182	112.9	72	60	120	28	100	56	92
K	0.95	1.02	1.81	1.24	1.59	1.96	1.22	4.64	5.72	4.74	1.27	1.54	2.37	2.09	
Mg	23.33	18.77	20.24	18.1	17.78	4.37	3.1	5	3.4	0.95	2.88	1.88	2.86	1.9	13.6
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na			2.43	2.77	3.13	3.22	2.9	4.57	3.46	4.32	4.57	2.04	2.44	2.11	
SO4	5.18	0.43	0.6	0.62	0.56			1.8		12.8	20.5	18.6	24.5	16.3	0.8
o-PO4-P	0.28	0.32	0.54	0.55	0.52										
CHEMICAL INDICES															
HAR_Ca															201.67
HAR_Total	173.2	101.97	122.82	98.26	118.41	78.32	107.92	101.83	120.37	44.06	100.23	116.08	100.14	125.04	80.67
Na%			4.22	5.92	5.44	7.72	4.76	9.18	4.38	13.79	9.87	3.23	3.87	4.04	
RSC	0.49	0.3	0	0.31	0	0.09	0.83	0	0	0.1	0	0	0	0	
SAR			0.1	0.12	0.13	0.15	0.1	0.22	0.11	0.24	0.22	0.07	0.08	0.08	
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	201	218.48	183	193.7	200.33	186.33	199.42	224.04	215.12	207.9	201.68	204.28	176.94	165.2	186.13
Secchi	76	23.75	43	23.09	44.33	60.11	95	81	106.2	40.1	88.23	108.25	88.23	72.17	
TDS	131.33	140.26	127.33	131.66	133.67	104	111.58	108.2	105.05	109.17	151.17	160.79	134.68	99	122
Temp	21.67	22.04	21.33	20	16	13				21.27	22.68	22.95	18.53	14	22
Turb	0.6	0.92	0.83	0.57	2	1.47	1.29	2.11	1.53	7.95	1.14	1.64	3.91	9.08	
pH_FLD															
pH_GEN	7.48	7.77	7.5	6.97	7.13	7.61	7.43	7.16	7.52	7.76	7.23	7.21	7.93	6.86	7.35
TRACE & TOXIC															
Al	0.08	0.03	0												

HISTORY SHEET (WATER QUALITY)		
		Water Year : 2017 - 2018
Site	: Tufanganj	Code : 025-LBDJPG
State	: West Bengal	District Koch Bihar
Basin	: BRAHMAPUTRA	Independent River : Brahmaputra
Tributary	: Torsa	Sub Tributary : Raidak-I
Sub-Sub Tributary	: -	Local River : Raidak-I
Division	: Lower Brahmaputra Division (LBD), Jalpaiguri	Sub-Division : Torsa Raidak Sankosh Sub-Division,
Drainage Area	: 520.0 Sq. Km.	Bank : Left
Latitude	: 26°18'31"	Longitude : 89°40'28"
Current Zero of Gauge (m)	: 26.7	
CATEGORY	Opening Date	Closing Date
Gauge	: 05/19/1976	
Discharge	: 11/19/2003	
Sediment	:	
Water Quality	: 07-01-03	
Reduced Level	Opening Date	Closing Date
26.7	01/01/2011	31/12/2020
26.7	19/11/2003	31/12/2010
26.7	01/05/2017	31/12/2050
26.7	21/04/2014	31/05/2015

Station Name: Tufanganj(025-LBDJPG)
Local River: Raidak-I

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

	01-06-17	03/07/2017	01-08-17	04-09-17	03/10/2017	01/11/2017	04-12-17	01-01-18	01/02/2018	05-03-18	02-04-18	01/05/2018
Q (cumec)	22.91	75.85	69.12	124.61	156.79		28.61	19.28	13.82	12.17	11.23	14.7
CHEMICAL												
Na(mg/L)	4	3.38	4.5	4.2	3.8		2.1					
K(mg/L)	1.1	2.21	3.2	3.5	2.9		2.9					
Cl(mg/L)	3.5	3.8	4.53	5.3	5.4	5.4	5	2.4	2.4	3.4	3	13
SiO2(mg/L)												
P-Tot(mgP/L)												
CO3(mg/L)											0	
Mg(mg/L)											12.2	
SO4(mg/L)											1	
ALK-TOT(mgCaCO3/L)											73.77	
NH3-N(mgN/L)												
Alk-Phen(mgCaCO3/L)											0	
B(mg/L)												
F(mg/L)												
NO2-N(mgN/L)												
Ca(mg/L)											11.5	
HCO3(mg/L)											90	
TRACE & TOXIC												
PESTICIDES												
BIOLOGICAL/BACTERIOLOGICAL												
DO_SAT%(Percentage)	103.49	102.21	7.5	7.6	8.7	8.9	9	7.5	7.5	7.7	8	8.2
COD(mg/L)	8	10	8	9	9	10	9	6	6	4	5	6
BOD3-27(mg/L)	1	1.4	1	0.8	1	1.1	1.2	0.9	0.9	1	0.9	1.2
DO(mg/L)	8.1	8										
FCol-MPN(MPN/100mL)												
Chf-a(µg/L)												
Tcol-MPN(MPN/100mL)												
PHYSICAL												
Odour_Code(-)	odour free	odour free										
Temp(Degrees Celsius (°C))	28	28	25	28	27	25	23	21	21	17	20	17
EC_GEN(µmho/cm)	134	258	298	290	197	248	215	185	185	209	195	250
Turb(NTU)	3.1	2.4										
pH_GEN(pH unit)	7.9	7.5	7.3	6.6	6.8	7.2	7	7.77	7.77	8.42	8.1	7.58
TDS(mg/L)	86	118	172	160	120	154	145	121	121	139	130	160
Colour_Cod(-)	Clear	Clear										
pH_FLD(pH unit)							7					
EC_FLD(µmho/cm)							215	185	185			
SS(mg/L)												
CHEMICAL INDICES												
HAR_Total(mgCaCO3/L)											78.42	
HAR_Ca(mgCaCO3/L)											196.04	

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Tufanganj(025-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Raidak-I

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	350	632.53	0	61.26	116.73	19.51	17.72
CHEMICAL							
Cl	13	13	2.4	4.63	4.51	3.8	5.6
K	6	3.5	1.1	2.63	2.58	2.9	
CO3	1	0	0	0			0
Mg	1	12.2	12.2	12.2			12.2
Na	6	4.5	2.1	3.66	3.98	2.1	
SO4	1	1	1	1			1
Alk-Phen	1	0	0	0			0
ALK-TOT	1	73.77	73.77	73.77			73.77
HCO3	1	90	90	90			90
Ca	1	11.5	11.5	11.5			11.5
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	13	10	4	7.31	8.8	7.75	5
BOD3-27	13	1.4	0.8	1.02	1.04	1.03	1
DO	2	8.1	8	8.05	8.05		
DO_SAT%	13	103.49	7.5	22.64	45.9	8.23	7.98
PHYSICAL							
TDS	13	172	86	135.08	131.2	135.25	139.75
Temp	13	28	17	23.08	27.2	22.5	18.5
pH_GEN	13	8.42	6.6	7.54	7.22	7.43	8.05
EC_GEN	13	298	134	219.92	235.4	208.25	212.25
EC_FLD	3	215	185	195		195	
Turb	2	3.1	2.4	2.75	2.75		
pH_FLD	1	7	7	7		7	
CHEMICAL INDICES							
HAR_Total	1	78.42	78.42	78.42			78.42
HAR_Ca	1	196.04	196.04	196.04			196.04

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Tufanganj(025-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Raidak-I

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)		87.3	65.5	78.4	117	126	65.1	69.3	67.4	77.5	55.9	98.7	138	74	89.9
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27								0.62		0.9		1.2	1.24	1.2	1.02
COD										15.1	8.16	8.16	11.02	11.72	8.77
DO										6.6			7.08		8.05
DO_SAT%										81.6			86.09		37.14
CHEMICAL															
ALK-TOT	105.75	83.02	63.5	123.77	93.6	118.8									
Alk-Phen	0	0.96	0	2.68	1.99	5.18									
B			0												
CO3	0	1.16	0	3.23	2.4	6.24									
Ca	18.34	53.82	15.8	21.68	11.76	34.72									
Cl	16.15	6.91	5.75	7.4	12.21	5.4	6.29	2.41	2.39	5.11	1.78	5.21	2.42	2.92	4.92
F			0												
Fe	0.17	0.1	0.09	0.06	0.11										
HCO3	129.02	98.93	77.47	144.43	109.31	132.25									
K	0.96	1.33	1.36	1.8	1.2	1.66	1.53	1.83	5.87	4.42	1.58	2.08	1.56	1.8	3.03
Mg	15.37	18.29	17.96	18.61	10.04	15.02									
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na	1.22	2.53	2.68	3.91	2.76	4.36	2.34	2.44	5.94	4.1	1.68	4.3	1.6	2.18	4.11
SO4	5.9	1.14	0.35	0.49	0.54										
o-PO4-P	0.1	0.71	0.55	0.58	0.43										
CHEMICAL INDICES															
HAR_Ca															
HAR_Total	109.89	200.04	114.32	128.59	71.22	149.37									
Na%	2.14	3.76	4.48	7.19	7.91	5.84									
RSC	0.11	0	0	0.01	0.59	0									
SAR	0.05	0.09	0.11	0.16	0.14	0.15									
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	103.2	194.8	230	176.86	239.54	219	223.91	259.62	260.2	237.06	300.53	194.13	173.38	216.3	239.24
Secchi	48.79	134	39.5	54.37	29.4	86.8									
TDS	74.4	134.2	163.6	121.96	162.74	154.4	111.66	141.24	135.1	108.69	195.3	136.74	132.42	163.4	134.05
Temp	29	27.4	30.2	30.25	22.7	29.2	28.75			23	23.5	24.8	25.2		27.12
Turb	5.3	4.8	13	2.31	3	8.36	2.21	8.02	4.7	12.19	9.7	0.7	15.16	13.22	2.75
pH_FLD															
pH_GEN	7.34	7.63	7.52	7.56	7.34	7.06	7.75	7.41	7.58	7.28	7.99	7.23	7.76	7.44	7.17
TRACE & TOXIC															
AI	0.12	0.04	0		0										

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Tufanganj(025-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Raidak-I

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	18.06	22.41	21.9	19.11	20.11	19.28	19.81
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT	112.67	54.48	106	152.5	158		
Alk-Phen	1	0	0.5	0.5	4.48		
B			0				
CO3	1.2	0	0.6	0.6	5.4		
Ca	37.93	16.37	12.05	21.05	20.2		
Cl	15.74	8.68	7.01	7.54	5.68	5.24	2.12
F			0				
Fe	0.14	0.04	0.05	0.08			
HCO3	135.01	66.46	128.1	184.83	181.78		
K	1.17	0.92	1.38	1.45	3.81	1.5	1.75
Mg	12.19	8.71	36.3	29.01	13.55		
NH3-N			0				
NO2+NO3			0				
NO2-N			0				
NO3-N			0				
Na		2.88	3.15	2	4.24	4.25	3.04
SO4	2.32	0.61	0.48	0.46			
o-PO4-P	0.2	0.49	0.54	0.47			
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	145.63	80.64	181.37	173.49	106.95		
Na%		6.63	3.68	2.44	7.61		
RSC	0.2	0	0	0.07	1.04		
SAR		0.13	0.1	0.07	0.18		
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	263.87	274.5	126.75	165.42	189.15	239.75	220.34
Secchi	97.26	40.75	30.12	52.62	50.5		
TDS	146.09	154.75	73.5	98.4	114.25	145.5	129.66
Temp	22.26	21.5	17	22.5	22.25	22	21
Turb	0.95	1.22	2	0.95	0.65	0.62	0.81
pH_FLD							
pH_GEN	7.65	7.78	7.6	7.65	7.37	6.85	7.27
TRACE & TOXIC							
AI	0.07	0.02	0				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Tufanganj(025-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Raidak-I

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

Winter (Nov-Feb)

	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	19.92	16.5	21.1	24	19.57	16.78	22.25	12.34
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27	0.58				1.17	1.02	1.28	1.02
COD			18.36	10.71	9.7	12.22	9.64	7.75
DO						7.03	7.85	
DO_SAT%						78.11	46.14	8.22
CHEMICAL								
ALK-TOT								
Alk-Phen								
B								
CO3								
Ca								
Cl	2.52	4.85	8.28	2.5	4.65	2.65	3.93	3.8
F								
Fe								
HCO3								
K	5.05	5.2	3.39	1.32	1.55	2.1	2.2	2.9
Mg								
NH3-N								
NO2+NO3								
NO2-N								
NO3-N								
Na	5.95	6.27	3.17	2.32	3.42	1.93	2.83	2.1
SO4								
o-PO4-P								
CHEMICAL INDICES								
HAR_Ca								
HAR_Total								
Na%								
RSC								
SAR								
PESTICIDES								
PHYSICAL								
EC_FLD								195
EC_GEN	217.5	219.25	195.99	248.19	214.38	196.92	204.28	208.25
Secchi								
TDS	108.75	117	78.33	167.6	161.3	141.32	146.92	135.25
Temp				15.05	16	20.5	14	22.5
Turb	0.88	2.67	2.93	3.15	2.95	7.72	9.05	
pH_FLD								7
pH_GEN	7.3	7.12	8.21	7.88	7.97	7.25	6.88	7.44
TRACE & TOXIC								
AI								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Tufanganj(025-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Raidak-I

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS															
	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	11.2	18	10.4	12.3	13.9	11.3	20.6	16.7	10.6	12.4	11.1	11.9	11.90	14.9	7.62
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27							0.7	0.9			1.1	1.25	0.83	1.23	1
COD										16.76	6.94	7.15	11.47	8	5
DO												7.55	7.5	8.13	
DO_SAT%												84.83	54.52	84.76	7.97
CHEMICAL															
ALK-TOT	120.67	94	121.33	115.33	129.33	97.7	88.52	126.64	75.41	98.36	121.31	36.07	65.57	48.23	73.77
Alk-Phen	0.66	3.98	4.98	0	3.32	3.37	0	0	0	0	0	0	0	1.16	0
B			0												
CO3	0.8	4.8	6	0	4	4.07	0	0	0	0	0	0	0	1.4	0
Ca	31.6	12.9	16.13	8.6	18.87	22.05	39.6	36.8	38.48	22.45	30.48	56.14	36.89	19.25	11.5
Cl	10.3	7.63	5.33	7.45	7.34	9.7	1.81	2.8	13.2	7.07	5.06	1.44	3.98	3.45	5.6
F			0												
Fe	0.09	0.06	0.06	0.09	0.11										
HCO3	145.59	104.92	135.83	140.71	149.65	110.93	108	154.5	92	120	148	44	80	56	90
K	1.08	1.06	1.69	1.09	1.39	2.14	1.3	4.99	4.08	4.61	1.14	0.89	3.79	2.34	
Mg	28.55	22.96	23.37	23.69	9.4	2.68	2.1	3.4	1.94	0.94	1.9	3.8	1.89	0.94	12.2
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na			2.74	2.36	2.91	3.7	2.64	5.74	3.78	4.48	5.52	1.07	3.19	2.67	
SO4	1.79	0.41	0.42	0.53	0.5			1.5		20.4	19.5	30.4	21.6	12.5	1
o-PO4-P	0.24	0.36	0.43	0.43	0.45										
CHEMICAL INDICES															
HAR_Ca															196.04
HAR_Total	197.97	127.93	137.7	120.22	86.32	66.26	107.75	106.17	104.28	60.04	84.12	156.18	100.1	52.04	78.42
Na%			4.12	4.2	6.71	10.67	4.03	10.56	5.3	13.04	14.01	1.37	6.02	6.99	
RSC	0	0	0.07	0.13	0.87	0.63	0	0.42	0	0.77	0.75	0	0	0	
SAR			0.1	0.1	0.14	0.2	0.09	0.26	0.12	0.26	0.3	0.03	0.13	0.11	
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	242.39	193.65	169.96	260.63	238.33	233.03	263.33	262.73	208.86	284.67	262.56	265.68	229.79	182.89	212.25
Secchi	80	32.25	39.09	21.5	47.17	55.11	99	92	96.2	56.12	76.2	140.35	92.22	48.12	
TDS	157.7	124.87	108.78	168.8	154.67	127	139.38	120.54	103.06	147.83	195.17	206.19	174.94	123.71	139.75
Temp	25	24.28	17	26.67	25.33	25				26	20.91	20.67	19.07	17.36	18.5
Turb	0.9	0.9	1	0.57	2.67	1.2	0.5	1.47	1.79	6.25	2.22	3.65	9.92	7.73	
pH_FLD															
pH_GEN	7.8	7.8	7.64	7.27	7.33	8.2	7.14	6.83	7.65	8.11	7.36	7.89	7.99	7.19	8.05
TRACE & TOXIC															
AI	0.09	0.02	0												

HISTORY SHEET (WATER QUALITY)

		Water Year	: 2017 - 2018
Site	: Ghugumari	Code	: 030-LBDJPG
State	: West Bengal	District	Koch Bihar
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: Torsa	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Torsa
Division	: Lower Brahmaputra Division (LBD), Jalpaiguri	Sub-Division	: Torsa Raidak Sankosh Sub-Division,
Drainage Area	: 4530.0 Sq. Km.	Bank	:
Latitude	: 26°17'3"	Longitude	: 89°27'39"
Current Zero of Gauge (m)	: 35m.		
CATEGORY	Opening Date	Closing Date	
Gauge	: 02/16/1972		
Discharge	: 02/26/1972		
Sediment	: 03/21/1973		
Water Quality	: 09/15/1972		
Reduced Level	Opening Date	Closing Date	
35.0	26/02/1972	31-12-50	

Station Name: Ghugumari(030-LBDJPG)
Local River: Torsa

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

	01/06/2017	03/07/2017	03/08/2017	04/09/2017	03/10/2017	01/11/2017	04/12/2017	01/01/2018	01/02/2018	05/03/2018	02/04/2018	01/05/2018
Q (cumec)	182.54	488.35	382.28	589.26	417.97	159.44	89.51	71.01	42.56	54.92	38.17	91.03
CHEMICAL												
Cl(mg/L)	4.1	5.7	7.05	5.3	5.8	7.8	6.9	3.1	3.1	2.7	3	14.9
Na(mg/L)	1.9	2.42	2.5	2.8	3		3					
K(mg/L)	1.3	2.8	2.4	3	2.8		3.2					
Alk-Phen(mgCaCO3/L)											0	
CO3(mg/L)											0	
ALK-TOT(mgCaCO3/L)											75.41	
Ca(mg/L)											12	
SiO2(mg/L)												
B(mg/L)												
P-Tot(mgP/L)												
HCO3(mg/L)											92	
NH3-N(mgN/L)												
NO2-N(mgN/L)												
F(mg/L)												
SO4(mg/L)											1	
Mg(mg/L)											18	
TRACE & TOXIC												
PESTICIDES												
BIOLOGICAL/BACTEOROLOGICAL												
BOD3-27(mg/L)	0.8	1.4	1.6	1.5	1.2	1.2	1.4	0.9	0.9	0.9	1.2	0.9
DO(mg/L)	7.2	8.4										
DO_SAT(Percentage)	88.75	107.32	11.4	9.9	9.7	9	7.9	7.4	7.4	8.2	9.6	8.3
COD(mg/L)	9	10	13	13	10	11	11	6	6	6	8	4
Tcol-MPN(MPN/100mL)												
Chl-f-a(µg/L)												
Fcol-MPN(MPN/100mL)												
PHYSICAL												
Colour_Cod(-)	Clear	Clear										
TDS(mg/L)	150	103	106	98	89	106	118	93	93	78	126	101
Turb(NTU)	2.8	2.1										
pH_GEN(pH unit)	7.1	7.1	7	6.7	7.1	7.1	7.1	8.4	8.4	8.31	7.89	8.56
EC_GEN(µmho/cm)	230	183	184	162	148	181	172	141	141	117	193	158.9
Odour_Code(-)	odour free	odour free										
Temp(Degrees Celsius (°C))	26	28		26	26	21	20	19	19	22	23	23
SS(mg/L)												
EC_FLD(µmho/cm)							172	141	141			
pH_FLD(pH unit)							7.1					
CHEMICAL INDICES												
HAR_Total(mgCaCO3/L)											95	
HAR_Ca(mgCaCO3/L)											237.5	

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Ghugumari(030-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Torsa

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	3119.49	31.46	236.62	455.8	71.67	87.27
CHEMICAL							
Cl	12	14.9	2.7	5.79	5.59	5.23	6.87
K	6	3.2	1.3	2.58	2.46	3.2	
CO3	1	0	0	0			0
Mg	1	18	18	18			18
Na	6	3	1.9	2.6	2.52	3	
SO4	1	1	1	1			1
Alk-Phen	1	0	0	0			0
ALK-TOT	1	75.41	75.41	75.41			75.41
HCO3	1	92	92	92			92
Ca	1	12	12	12			12
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	12	13	4	8.92	11	8.5	6
BOD3-27	12	1.6	0.8	1.16	1.3	1.1	1
DO	2	8.4	7.2	7.8	7.8		
DO_SAT%	12	107.32	7.4	23.74	45.41	7.92	8.7
PHYSICAL							
TDS	12	150	78	105.08	109.2	102.5	101.67
Temp	11	28	19	23	26.5	19.75	22.67
pH_GEN	12	8.56	6.7	7.56	7	7.75	8.25
EC_GEN	12	230	117	167.57	181.4	158.75	156.3
EC_FLD	3	172	141	151.33		151.33	
Turb	2	2.8	2.1	2.45	2.45		
pH_FLD	1	7.1	7.1	7.1		7.1	
CHEMICAL INDICES							
HAR_Total	1	95	95	95			95
HAR_Ca	1	237.5	237.5	237.5			237.5

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Ghugumari(030-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Torsa

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	1039	446	373	398	479	585	398	635	397	434	473	410	609	477	412
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27								0.62		0.96	1.2	1	1.16	1.1	1.33
COD										19.38	9.18	6.92	9	11.32	11.23
DO										6.32			7.74		7.8
DO_SAT%										79.64			95.37		37.32
CHEMICAL															
ALK-TOT	82.75	80.99	77.3	80.44	71.6	75.09									
Alk-Phen	0	1.57	1.59	1.84	1.59	2.34									
B			0												
CO3	0	1.89	1.92	2.22	1.92	2.82									
Ca	14.7	32.89	11	16.38	12.4	27.24									
Cl	14.02	7.83	9.16	6.09	12.28	5.39	6.37	2.9	2.56	4.81	1.74	4.29	2.7	3.26	5.92
F			0												
Fe	0.35	0.09	0.13	0.16	0.13	0									
HCO3	100.96	94.96	90.4	93.64	83.45	85.88									
K	2.01	8.76	1.65	1.6	1.44	2.22	1.99	2.48	5.54	4.82	1.95	1.92	1.72	1.68	2.66
Mg	10.63	21.01	17.3	11.64	12.1	6.91									
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na	2.94	16.56	1.74	2.21	2.94	5	1.58	2.11	4.5	3.48	1.73	3.72	1.8	2.34	2.7
SO4	7.54	1.44	0.77	0.71	0.67										
o-PO4-P	0.15	0.6	0.52	0.54	0.53										
CHEMICAL INDICES															
HAR_Ca															
HAR_Total	81.05	160.34	99.59	87.92	81.42	96.76									
Na%	7.2	16.68	3.44	5.7	7.61	9.75									
RSC	0.08	0	0	0.01	0.07	0									
SAR	0.14	0.67	0.07	0.11	0.15	0.22									
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	137.35	135	153.2	127.62	159.16	153.75	167.28	172.6	179.4	160.58	145.83	135.69	141.76	143.54	178.95
Secchi	36.75	82.5	27.5	41.2	31	67.99									
TDS	97	94.4	104.6	88.84	111.8	100.51	88.06	86.1	89.6	75.08	103.05	97.6	107.88	108.6	107.51
Temp	26	26.3	24.6	24.9	26.7	26.41	28			21	22.5	24	26	26	26.44
Turb	19.5	12	10.4	11	5.8	18.76	19.82	8.9	4.38	12.81	14.6	0.68	35.86	11.94	2.45
pH_FLD															
pH_GEN	7.47	7.83	7.86	7.74	7.54	7.13	7.66	7.64	7.64	7.1	7.94	7.31	7.26	7.58	6.99
TRACE & TOXIC															
Al	0.19	0.07	0.01												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Ghugumari(030-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Torsa

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	102.5	77.36	84.26	77.6	91.21	78.56	82.94
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT	87.33	73.13	85.5	81.12	96.5		
Alk-Phen	0	0	3.24	1	2.74		
B			0				
CO3	0	0	3.9	1.2	3.3		
Ca	24.67	21.32	12.5	18.9	27.5		
Cl	12.66	9.03	5.5	6.48	6.48	4.99	2.33
F			0				
Fe	0.22	0.07	0.07	0.17			
HCO3	106.55	89.22	96.38	96.53	111.02		
K	2.03	1.64	1.5	1.87	2.08	3.25	1.35
Mg	17.05	8.61	28.98	18.56	16.46		
NH3-N			0				
NO2+NO3			0				
NO2-N			0				
NO3-N			0				
Na		3.91	2.46	2.42	3.51	6	2.33
SO4	4.64	0.71	0.72	0.67			
o-PO4-P	0.18	0.33	0.49	0.55			
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	132.71	88.11	151.99	124.58	137.35		
Na%		8.95	3.62	3.95	5.28		
RSC	0	0	0	0	0		
SAR		0.18	0.09	0.09	0.13		
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	176.67	181.5	176.5	138.38	147.85	170.5	148.76
Secchi	61.67	53.5	31.25	47.25	68.75		
TDS	102	100.5	101.25	82.25	89.23	97.5	93.3
Temp	20.67	20	19.75	19	20	20.75	20
Turb	0.93	1	2.25	0.8	0.9	1	1.03
pH_FLD							
pH_GEN	7.54	7.97	7.87	7.8	7.32	7.08	7.29
TRACE & TOXIC							
AI	0.11	0.03	0				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Ghugumari(030-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Torsa

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

Winter (Nov-Feb)

	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	93.84	81.09	81.2	119.3	82.12	85.66	94.04	90.63
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27	0.75		1.12	0.9	1.05	0.87	1.32	1.1
COD			17.34	7.14	8.18	10.2	10.84	8.5
DO			6.08			6.77	8.2	
DO_SAT%						74.63	8.2	7.92
CHEMICAL								
ALK-TOT								
Alk-Phen								
B								
CO3								
Ca								
Cl	2.52	3.62	8.64	2.43	4.21	3.15	4.57	5.23
F								
Fe								
HCO3								
K	5.52	5.95	4.11	1.48	1.62	2.12	2.43	3.2
Mg								
NH3-N								
NO2+NO3								
NO2-N								
NO3-N								
Na	5.92	6.02	3.09	2.34	3.15	2.37	3.5	3
SO4								
o-PO4-P								
CHEMICAL INDICES								
HAR_Ca								
HAR_Total								
Na%								
RSC								
SAR								
PESTICIDES								
PHYSICAL								
EC_FLD								151.33
EC_GEN	137.5	166.25	151.81	169.08	153.07	138.45	141.13	158.75
Secchi								
TDS	70.25	90.75	88.95	117.6	114.72	99.42	101.45	102.5
Temp				13.88	18	20.25	18.2	19.75
Turb	0.7	2.38	2.17	2.92	1.75	7.92	11.45	
pH_FLD								7.1
pH_GEN	7.33	7.29	8.13	7.99	7.92	7.33	7.48	7.75
TRACE & TOXIC								
AI								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Ghugumari(030-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Torsa

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	49.2	72.9	43.9	61.2	63.8	47.1	87.6	74.7	62.2	120	51.3	84.1	74.2	67.2	61.4
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27							0.8	1		1.2	1.27	1.08	0.7	1.2	1
COD										14	10.2	6.54	10.8	8	6
DO										6.22		7.05	7.33	7.37	
DO_SAT%										77.03		88.5	53.47	7.37	8.7
CHEMICAL															
ALK-TOT	100.67	89	92.8	90	82.59	110.33	86.89	139.75	65.57	39.34	81.97	26.23	78.69	29.51	75.41
Alk-Phen	1.66	2.49	3.19	1	1.41	4.1	0	0	0	0	0	0	0	0	0
B			0												
CO3	2	3	3.84	1.2	1.69	4.93	0	0	0	0	0	0	0	0	0
Ca	26.93	18.9	17.88	12.67	17.71	27.66	42	42.6	40.88	14.43	36.89	48.18	43.31	24.06	12
Cl	9.35	7.45	6.25	7.45	6.43	5.15	2.32	2.59	12.3	6.25	5.61	2.51	3.98	2.7	6.87
F			0												
Fe	0.12	0.1	0.06	0.14	0.11										
HCO3	118.75	102.48	105.41	107.36	97.31	124.56	106	170.5	80	48	100	32	96	36	92
K	1.66	1.49	1.52	1.24	1.67	2.49	1.48	5.78	4.8	5.21	1.47	1.45	2.89	2.72	
Mg	18.75	11	12.95	20.53	12.06	4.13	4.1	4.52	4.37	2.89	2.88	2.84	2.83	2.88	18
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na			2.8	3.68	3.44	3.43	3.76	5.09	3.64	4.43	4.78	2.09	2.86	2.06	
SO4	1.79	0.6	0.71	1.04	0.72			2.1		15.8	18.4	21.2	19.4	12.4	1
o-PO4-P	0.22	0.34	0.58	0.5	0.49										
CHEMICAL INDICES															
HAR_Ca															237.5
HAR_Total	145.46	93.07	95.09	117.22	95.31	86.35	122.08	125.33	120.41	48.12	104.22	132.28	120.07	107.45	95
Na%			5.93	6.42	7.23	6.95	6.27	8.14	4.46	15.63	10.01	2.55	4.38	3.08	
RSC	0	0.14	0	0	0	0.49	0	0.3	0	0	0	0	0	0	
SAR			0.12	0.15	0.15	0.14	0.15	0.21	0.11	0.29	0.23	0.06	0.1	0.06	
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	176	184.17	165.13	170.17	168	184.4	173.58	209.63	176.35	189.67	187.09	160.9	163.42	121.96	156.3
Secchi	67.33	47.25	47.25	31.67	43	69.14	105	106.5	102.2	36.08	92.22	120.45	108.28	60.15	
TDS	112	119	112.09	114.23	110	95.67	90.74	98.27	86.63	98.43	140.75	127.23	125.33	76.32	101.67
Temp	24.67	21.13	20	21	23.67	20				25.47	22.23	24.41	19.68	14	22.67
Turb	1.33	0.83	0.76	1.33	2.27	1.4	1.81	2.23	1.87	5.72	0.81	8.05	9.91	3.55	
pH_FLD															
pH_GEN	7.75	8.07	7.87	7.2	7.27	8.09	7.33	7.22	7.36	7.94	7.38	7.7	7.96	6.86	8.25
TRACE & TOXIC															
Al	0.08	0.04	0												

HISTORY SHEET (WATER QUALITY)		
Water Year		: 2017 - 2018
Site	: Barabisha	Code : 006-LBDJPG
State	: West Bengal	District : Jalpaiguri
Basin	: BRAHMAPUTRA	Independent River : Brahmaputra
Tributary	: Sankosh	Sub Tributary : -
Sub-Sub Tributary	: -	Local River : Sankosh
Division	: Lower Brahmaputra Division (LBD), Jalpaiguri	Sub-Division : Torsa Raidak Sankosh Sub-Division,
Drainage Area	: 4573.0 Sq. Km.	Bank : Left
Latitude	: 26°28'28"	Longitude : 89°47'11"
Current Zero of Gauge (m)	: 40	
CATEGORY	Opening Date	Closing Date
Gauge	: 04/12/1977	
Discharge	: 04-12-77	
Sediment	: 03/16/1991	
Water Quality	: 07-01-03	
Reduced Level	Opening Date	Closing Date
40.0	06/05/2014	30/11/2016
40.0	11/07/2017	01/01/2051
40.0	04/12/1977	31/12/2010
40.0	31/12/2020	-
40.0	01/12/2020	30/12/2020
40.0	01/06/2011	30/11/2020
40.0	01/01/2011	31/05/2011

Station Name: Barabisha(006-LBDJPG)
Local River: Sankosh

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

	01/06/2017	03/07/2017	01/08/2017	04/09/2017	03/10/2017	01/11/2017	04/12/2017	01/01/2018	01/02/2018	05/03/2018	02/04/2018	01/05/2018
Q (cumec)	213.31	216.41	301.48	422.43	295.22	174.04	129.72	106.23	36.44	35.88	26.5	34.44
CHEMICAL												
Na(mg/L)	1.9	1.98	3	2.5	2.4		1.9					
K(mg/L)	1.1	1.59	2.3	2.8	3		2.9					
Cl(mg/L)	4.5	4.7	5.03	6.4	5.8	5.9	6.3	2.5	2.5	1.5	2.3	13
Ca(mg/L)											12	
SO4(mg/L)											1.2	
HCO3(mg/L)											72	
NH3-N(mgN/L)												
B(mg/L)												
F(mg/L)												
NO2-N(mgN/L)												
P-Tot(mgP/L)												
SiO2(mg/L)												
CO3(mg/L)											0	
Mg(mg/L)											17	
Alk-Phen(mgCaCO3/L)											0	
ALK-TOT(mgCaCO3/L)											59.02	
TRACE & TOXIC												
PESTICIDES												
BIOLOGICAL/BACTERIOLOGICAL												
DO(mg/L)	7.8	8.4										
BOD3-27(mg/L)	0.9	1.2	1.5	1.8	1.2	1.2	1.4	0.9	0.9	0.9	1.2	0.8
DO_SAT%(Percentage)	104.98	86.91	11.6	10.4	8.9	8.3	9.2	8.6	8.6	7.8	8.1	7.5
COD(mg/L)	9	9	12	11	10	12	10	8	8	8	7	6
Fcol-MPN(MPN/100mL)												
Chl-a(µg/L)												
Fcol-MPN(MPN/100mL)												
PHYSICAL												
TDS(mg/L)	185	120	97	78	105	73	69	65	65	91	95	88
pH_GEN(pH unit)	7.1	7.1	7.1	6.7	7.1	7.3	7.2	7.73	7.73	7.51	7.52	7.16
Turb(NTU)	8.6	6.9										
EC_GEN(µmho/cm)	285	122	148	139	162	116	105	98	98	138	146	136.5
Odour_Code(-)	odour free	odour free										
Colour_Cod(-)	Clear	Clear										
Temp(Degrees Celsius (°C))	31	17	14	15	14	13	12	11	11	10	10	10
pH_FLD(pH unit)							7.2					
EC_FLD(µmho/cm)							105	98	98			
SS(mg/L)												
CHEMICAL INDICES												
HAR_Total(mgCaCO3/L)											92.5	
HAR_Ca(mgCaCO3/L)											231.25	

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Barabisha(006-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Sankosh

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	1613.73	25.85	177.65	318.77	93.13	53.21
CHEMICAL							
Cl	12	13	1.5	5.04	5.29	4.3	5.6
K	6	3	1.1	2.28	2.16	2.9	
CO3	1	0	0	0			0
Mg	1	17	17	17			17
Na	6	3	1.9	2.28	2.36	1.9	
SO4	1	1.2	1.2	1.2			1.2
Alk-Phen	1	0	0	0			0
ALK-TOT	1	59.02	59.02	59.02			59.02
HCO3	1	72	72	72			72
Ca	1	12	12	12			12
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTEOROLOGICAL							
COD	12	12	6	9.17	10.2	9.5	7
BOD3-27	12	1.8	0.8	1.16	1.32	1.1	0.97
DO	2	8.4	7.8	8.1	8.1		
DO_SAT%	12	104.98	7.5	23.41	44.56	8.68	7.8
PHYSICAL							
TDS	12	185	65	94.25	117	68	91.33
pH_GEN	12	7.73	6.7	7.27	7.02	7.49	7.4
Temp	12	31	10	14	18.2	11.75	10
EC_GEN	12	285	98	141.12	171.2	104.25	140.17
EC_FLD	3	105	98	100.33		100.33	
Turb	2	8.6	6.9	7.75	7.75		
pH_FLD	1	7.2	7.2	7.2		7.2	
CHEMICAL INDICES							
HAR_Total	1	92.5	92.5	92.5			92.5
HAR_Ca	1	231.25	231.25	231.25			231.25

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Barabisha(006-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Sankosh

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS	Flood (Jun-Oct)															
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Q (cumec)	538	263	219	253	335	259	443	244	262	240	300	295	409	290	290	
BIOLOGICAL/BACTEOROLOGICAL																
BOD3-27								0.54		0.94	1.1	1.04	1.14	1.18	1.36	
COD										14.28	7.14	7.35	9.38	12.12	10.38	
DO										6.12			7.78		8.1	
DO_SAT%										80.44			93.86		36.65	
CHEMICAL																
ALK-TOT	94	127.42	92.7	65.38	70.8	58.2										
Alk-Phen	0	1.36	0.8	1.72	1.59	3.39										
B			0													
CO3	0	1.64	0.96	2.08	1.92	4.08										
Ca	10.3	38.58	14.72	17.31	13.76	28.16										
Cl	22.37	6.93	6.67	5.17	9.44	4.76	4.59	2.83	2.81	4.38	2	4.41	2.54	3.36	5.62	
F			0													
Fe	0.25	0.11	0.06	0.05	0.09											
HCO3	114.68	152.11	111.14	75.55	82.47	62.71										
K	1.76	1.49	1.35	1.21	1.2	1.52	1.39	1.9	3.83	3.22	1.75	1.38	1.82	1.96	2.55	
Mg	14.03	15.04	14.6	8.24	21.31	9.19										
NH3-N			0													
NO2+NO3			0													
NO2-N			0													
NO3-N			0													
Na	2.3	4.02	1.7	2.3	2.5	3.84	1.28	2.16	4.06	2.68	1.84	3.64	1.86	2.32	2.56	
SO4	3.29	1.23	0.5	0.51	0.54											
o-PO4-P	0.13	0.72	0.42	0.44	0.43											
CHEMICAL INDICES																
HAR_Ca																
HAR_Total	84.22	139.26	97.65	76.49	123.2	108.67										
Na%	5.88	9.62	3.38	6.63	4.59	7.57										
RSC	0.21	0.28	0.36	0.04	0	0										
SAR	0.11	0.2	0.07	0.12	0.1	0.17										
PESTICIDES																
PHYSICAL																
EC_FLD																
EC_GEN	247.6	108.59	122.4	105.18	135.06	112.8	137.48	155.06	152.8	185.64	135.4	129.89	92.86	134.22	168.05	
Secchi	26.33	98.08	36.8	42.99	34.4	70.4										
TDS	139	77.08	90.6	71.91	97.72	80.6	71.25	82.48	77.2	88.33	100.05	92.7	71.22	100.4	113.54	
Temp	22	21.5	20.6	22.5	26.12	20.8	22			23	23.5	24.8	24.8	14	17.63	
Turb	2.93	33.33	18.6	5.49	4	9.36	3.64	8.18	6.22	11.66	11	0.82	19.6	12.56	7.75	
pH_FLD																
pH_GEN	7.41	7.65	7.48	7.58	7.38	7.08	7.92	7.27	7.6	7.24	7.98	7.19	7.08	7.04	7.01	
TRACE & TOXIC																
Al	0.14	0.04	0													

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Barabisha(006-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Sankosh

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	90.12	82.92	75.73	69.73	79.22	83.33	195.6
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT	81.33	113.78	67	77.5	65.54		
Alk-Phen	0	0.26	0	0	0		
B			0				
CO3	0	0.31	0	0	0		
Ca	26.4	25.18	8.6	16.4	27.15		
Cl	14.08	9.01	8.25	7.46	5.54	4.98	2.22
F			0				
Fe	0.14	0.05	0.06	0.07	0.09		
HCO3	99.23	138.18	81.74	94.55	79.96		
K	1.07	1.17	1.01	1.11	1.16	2.5	1.37
Mg	18.1	14.19	22.45	20.59	27.95		
NH3-N			0				
NO2+NO3			0				
NO2-N			0				
NO3-N			0				
Na		4.83	3.12	1.96	2.56	4	2.29
SO4	3.84	0.71	0.58	0.44	0.58		
o-PO4-P	0.23	0.52	0.51	0.33	0.36		
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	141.43	127.68	115.03	126.81	180.88		
Na%		7.01	5.79	3.32	3.02		
RSC	0	0.13	0	0	0		
SAR		0.18	0.13	0.08	0.08		
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	122.33	138.77	262.75	108.69	113.17	117.69	135.69
Secchi	66	59.94	21.5	41.63	68.88		
TDS	70.33	88.29	149	64.98	68.25	75.07	75.67
Temp	13.67	17	22.5	13.67	12.75	14.67	14.67
Turb	0.83	0.9	1.98	1.15	1	0.87	0.83
pH_FLD							
pH_GEN	7.36	7.45	7.8	7.48	7.18	6.95	7.14
TRACE & TOXIC							
AI	0.07	0.02	0				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Barabisha(006-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Sankosh

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

Winter (Nov-Feb)

	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	86.19	101.2	84.3	149.2	120.4	98.69	86.16	111.6
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27	0.68		1.17	1.12	1.05	0.95	1.44	1.1
COD			16.32	9.18	7.68	11.22	12.04	9.5
DO			5.97			7.25	8.4	
DO_SAT%						78.23	8.4	8.68
CHEMICAL								
ALK-TOT								
Alk-Phen								
B								
CO3								
Ca								
Cl	2.27	4.5	7.52	2.15	3.91	2.5	4.3	4.3
F								
Fe								
HCO3								
K	4.72	4.75	3.3	1.38	1.5	1.87	2.17	2.9
Mg								
NH3-N								
NO2+NO3								
NO2-N								
NO3-N								
Na	5.95	4.4	2.63	2.22	2.72	1.73	2.87	1.9
SO4								
o-PO4-P								
CHEMICAL INDICES								
HAR_Ca								
HAR_Total								
Na%								
RSC								
SAR								
PESTICIDES								
PHYSICAL								
EC_FLD								100.33
EC_GEN	140.5	121	147.73	127.21	131.92	116.48	125.89	104.25
Secchi								
TDS	70.5	67.5	85.03	85.1	99.3	83.58	90.65	68
Temp				14.42	16.75	19	14	11.75
Turb	0.75	2.2	1.73	2.72	1.07	7.55	9.85	
pH_FLD								7.2
pH_GEN	7.55	7.12	7.89	7.95	7.84	7.42	7.41	7.49
TRACE & TOXIC								
AI								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Barabisha(006-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Sankosh

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	51.1	63.4	38.9	48	36.3	36.6	93.7	31.8	33.7	109	72.2	90.9	60.5	54.3	32.3
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27							0.6	0.9		1.35	1.13	1.24	1.2	1.3	0.97
COD										13.45	8.84	6.94	13.5	8	7
DO										7.47		7.6	7.37	8.37	
DO_SAT%										92.77		85.54	55.59	8.37	7.8
CHEMICAL															
ALK-TOT	83.33	101	64.67	88.67	62.18	76.15	92.62	77.54	68.85	49.18	75.41	29.51	81.97	36.07	59.02
Alk-Phen	0	1.99	1.99	0	0	5.32	0	0	0	0	0	0	0	0	0
B			0												
CO3	0	2.4	2.4	0	0	6.4	0	0	0	0	0	0	0	0	0
Ca	29.8	13.8	13.2	12.67	23	32.02	28	28.4	48.9	14.43	33.68	40.1	40.1	19.25	12
Cl	8.4	6.57	6.04	6.98	14.56	5.69	1.3	2.81	10.2	4.68	4.47	2.75	4.34	3.21	5.6
F			0												
Fe	0.09	0.05	0.06	0.38	0.1										
HCO3	101.67	118.34	74.01	108.17	75.86	79.88	113	94.6	84	60	92	36	100	44	72
K	1	1.06	1.24	0.96	1.06	3.7	2.88	4.91	3.58	4.04	0.96	1.87	3.39	2.62	
Mg	11.14	13.55	14.3	21.22	20.99	6.32	2.1	2.9	4.37	0.95	1.89	2.86	2.86	1.91	17
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na			3.1	2.14	1.95	2.72	2.4	4.65	2.96	3.2	3.76	2.15	3.03	2.46	
SO4	1.84	0.53	0.56	0.51	0.52			1.2		16.5	22.6	28.3	33.2	14.7	1.2
o-PO4-P	0.27	0.35	0.39	0.4	0.43										
CHEMICAL INDICES															
HAR_Ca															231.25
HAR_Total	120.91	90.95	92.57	120.09	145.65	106.38	78.75	83.08	140.46	40.03	92.07	112.17	112.17	84.98	92.5
Na%			6.84	3.74	2.8	4.77	5.16	8.75	3.64	10.52	9.32	3.67	5.14	7.12	
RSC	0	0.54	0	0	0	0	0.28	0	0	0.19	0	0	0	0	
SAR			0.14	0.09	0.07	0.11	0.1	0.19	0.09	0.17	0.2	0.08	0.12	0.12	
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	125.67	176.83	190.67	123.43	130	162.37	190.53	244.48	195.4	142.13	152.53	130.99	242.03	100.51	140.17
Secchi	74.5	34.5	33	31.67	61.67	80.05	70	71	122.25	36.08	84.2	100.25	100.25	48.12	
TDS	81.33	114.26	132.67	83.47	86	96	102.53	114.45	95.06	73.96	113.05	103.48	186.2	59.18	91.33
Temp	17	18.74	26.67	14	16.67	15				24.07	18.45	21.82	17.18	14	10
Turb	0.73	0.79	1	0.8	2	1.3	1.65	1.28	1.99	6.99	1.69	7.7	5.57	7.96	
pH_FLD															
pH_GEN	7.5	7.81	7.8	7.07	7.1	7.87	7.15	7.48	7.51	7.74	7.16	7.2	7.99	6.94	7.4
TRACE & TOXIC															
AI	0.07	0.02	0												

HISTORY SHEET (WATER QUALITY)		
		Water Year : 2017 - 2018
Site : Hasimara		Code : 029-LBDJPG
State : West Bengal		District : Jalpaiguri
Basin : BRAHMAPUTRA		Independent River : Brahmaputra
Tributary : Torsa		Sub Tributary : -
Sub-Sub Tributary : -		Local River : Torsa
Division : Lower Brahmaputra Division (LBD), Jalpaiguri		Sub-Division : Torsa Raidak Sankosh Sub-Division,
Drainage Area : 3920.0 Sq. Km.		Bank : Left
Latitude : 26°43'44"		Longitude : 89°19'37"
Current Zero of Gauge (m) : 110		
CATEGORY	Opening Date	Closing Date
Gauge :	12-12-77	
Discharge :	12-12-77	
Sediment :	06-08-83	
Water Quality :	07-01-03	
Reduced Level	Opening Date	Closing Date
110.0	18/05/2014	31/12/2014
110.0	31/12/2020	31/12/2020
110.0	01/01/2011	30/12/2020
110.0	01/01/2021	-
110.0	12/12/1977	31/12/2010
110.0	01/04/2017	31/12/2050

Station Name: Hasimara(029-LBDJPG)
Local River: Torsa

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

	01/06/2017	03/07/2017	01/08/2017	04/09/2017	03/10/2017	01/11/2017	04/12/2017	01/01/2018	01/02/2018	05/03/2018	02/04/2018	01/05/2018
Q (cumec)	130.25	336.27	456.89	408.03	356.38	164.81	66.53	42.44	34.46	30.8	30.54	63.6
CHEMICAL												
K(mg/L)	0.9	2.01	2.6	2.9	2.6		2.7					
Cl(mg/L)	3.3	3.8	4.53	4.8	5	5.4	5	2.4	2.4	1.5	2.3	13
Na(mg/L)	1.9	2.14	2.5	3.1	3		2.2					
Mg(mg/L)											21.8	
ALK-TOT(mgCaCO3/L)											49.18	
SO4(mg/L)											1	
P-Tot(mgP/L)												
Alk-Phen(mgCaCO3/L)											0	
CO3(mg/L)											0	
Ca(mg/L)											8.8	
SiO2(mg/L)												
NH3-N(mgN/L)												
B(mg/L)												
NO2-N(mgN/L)												
F(mg/L)												
HCO3(mg/L)											60	
TRACE & TOXIC												
PESTICIDES												
BIOLOGICAL/BACTEOROLOGICAL												
BOD3-27(mg/L)	1	1.2	1.5	1.6	1.4	1.1	1.4	1	1	1	1.2	1.1
DO(mg/L)	6.8	8										
COD(mg/L)	9	10	12	11	12	9	12	5.9	5.9	6	7	4
DO_SAT%(Percentage)	74.79	87.99	11	10.1	10.2	9.4	8.2	7.3	7.3	8.3	9.6	8.2
Chl-f-a(µg/L)												
Tcol-MPN(MPN/100mL)												
Fcol-MPN(MPN/100mL)												
PHYSICAL												
Temp(Degrees Celsius (°C)	20	20	21	21	21	19	19	18	18	16	17	18
Colour_Cod(-)	Clear	Clear										
pH_GEN(pH unit)	7	6.9	6.9	6.7	7	6.5	6.6	8.88	8.88	8.3	8.1	7.4
TDS(mg/L)	96	60	65	62	109	73	80	59	59	79	84	61
Turb(NTU)	3.4	2.3										
EC_GEN(µmho/cm)	147	110	124	115	175	117	120	96	96	121	128	98.3
Odour_Code(-)	odour free	odour free										
SS(mg/L)												
pH_FLD(pH unit)							6.6					
EC_FLD(µmho/cm)							120	96	96			
CHEMICAL INDICES												
HAR_Ca(mgCaCO3/L)											227.92	
HAR_Total(mgCaCO3/L)											91.17	

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Hasimara(029-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Torsa

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	1540.68	23.7	198.99	396.34	55.58	57.84
CHEMICAL							
Cl	12	13	1.5	4.45	4.29	3.8	5.6
K	6	2.9	0.9	2.28	2.2	2.7	
CO3	1	0	0	0			0
Mg	1	21.8	21.8	21.8			21.8
Na	6	3.1	1.9	2.47	2.53	2.2	
SO4	1	1	1	1			1
Alk-Phen	1	0	0	0			0
ALK-TOT	1	49.18	49.18	49.18			49.18
HCO3	1	60	60	60			60
Ca	1	8.8	8.8	8.8			8.8
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	12	12	4	8.65	10.8	8.2	5.67
BOD3-27	12	1.6	1	1.21	1.34	1.12	1.1
DO	2	8	6.8	7.4	7.4		
DO_SAT%	12	87.99	7.3	21.03	38.82	8.05	8.7
PHYSICAL							
TDS	12	109	59	73.92	78.4	67.75	74.67
pH_GEN	12	8.88	6.5	7.43	6.9	7.72	7.93
Temp	12	21	16	19	20.6	18.5	17
EC_GEN	12	175	96	120.61	134.2	107.25	115.77
EC_FLD	3	120	96	104		104	
Turb	2	3.4	2.3	2.85	2.85		
pH_FLD	1	6.6	6.6	6.6		6.6	
CHEMICAL INDICES							
HAR_Total	1	91.17	91.17	91.17			91.17
HAR_Ca	1	227.92	227.92	227.92			227.92

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Hasimara(029-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Torsa

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	1511	337	195	298	478	388	334	472	387	301	213	254	628	377	338
BIOLOGICAL/BACT EOROLOGICAL															
BOD3-27								0.7		0.96	1.1	1.06	1.28	1.14	1.38
COD										15.81	9.23	6.52	9.38	12.12	11
DO										6.08			7.34		7.4
DO_SAT%										75.78			88.1		32.27
CHEMICAL															
ALK-TOT	75	54.39	44.4	54.69	52.8	54.4									
Alk-Phen	0	0	1.39	0.57	1.39	0.4									
B			0												
CO3	0	0	1.68	0.69	1.68	0.48									
Ca	6.9	31.92	12	12.32	11.04	16.88									
Cl	16.51	7.7	7.45	5.87	10.22	4.54	4.79	2.9	2.49	5.37	1.56	4.29	6.84	3.72	4.64
F			0												
Fe	0.43	0.07	0.09	0.17	0.17										
HCO3	91.5	66.35	50.75	65.32	61	65.39									
K	2.7	1.3	1.19	1.41	1.42	3.2	1.65	2.36	4.72	3.88	1.47	1.56	1.62	2.26	2.56
Mg	11.48	17.4	7.9	7.18	9.19	6.27									
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na	2.75	2.64	1.72	3.2	2.92	4.6	1.68	2.24	4.3	2.96	1.45	3.64	1.84	2.56	2.77
SO4	3.79	1.58	0.77	0.72	0.61										
o-PO4-P	0.14	0.67	0.48	0.51	0.63										
CHEMICAL INDICES															
HAR_Ca															
HAR_Total	65.09	151.58	62.91	61.3	65.87	68.32									
Na%	8.23	3.77	4.75	9.5	9.3	12.1									
RSC	0.21	0	0	0.04	0.02	0									
SAR	0.15	0.1	0.09	0.17	0.16	0.24									
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	115	90.4	96.2	91.9	111.42	90.76	117.76	133	164.8	118.83	149.07	116.46	111.74	115.66	134.76
Secchi	17.25	79.6	30	31	27.6	42.2									
TDS	82	63.8	72.4	64.76	78.02	67.6	63.28	64.7	81.6	55.83	99.2	83.7	85.24	87	78.44
Temp	18.5	19.6	21	20.2	21.4	20.8	21.5			23	22	24.2	24.6		20.66
Turb	27.5	27.6	14.2	7.04	10.6	26.98	18.7	9.92	5.76	12.43	3.35	0.96	32.78	12.18	2.85
pH_FLD															
pH_GEN	7.29	7.7	7.88	7.6	7.58	7.14	7.73	7.56	7.44	7.15	8.1	7.29	7.5	7.46	6.9
TRACE & TOXIC															
AI	0.06	0.05	0.01												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Hasimara(029-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Torsa

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	83.28	55.33	65.47	60.76	56.45	65.96	56.91
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT	66.67	53.28	57.5	110.5	66		
Alk-Phen	0	0	0.75	0	1.49		
B			0				
CO3	0	0	0.9	0	1.8		
Ca	16.67	14.79	14.6	14.6	21.95		
Cl	11.36	8.69	8.43	7.37	6.03	4.7	1.88
F			0				
Fe	0.19	0.08	0.07	0.18			
HCO3	81.33	65	68.32	134.81	76.86		
K	2.06	1.09	1.5	1.11	1.79	4.25	1.48
Mg	16.04	7.37	17.47	11.76	11.24		
NH3-N		0	0				
NO2+NO3			0				
NO2-N			0				
NO3-N			0				
Na		3.34	2.8	1.89	3.09	6	2.29
SO4	2.86	0.7	0.74	0.72			
o-PO4-P	0.13	0.34	0.59	0.55			
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	108.49	66.36	109.27	85.48	101.7		
Na%		10.12	5.73	4.57	6.41		
RSC	0.11	0.02	0	0.86	0		
SAR		0.18	0.12	0.09	0.14		
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	119.67	123.25	151	97.73	117.15	116.35	133.18
Secchi	41.67	37	36.5	36.5	54.88		
TDS	69.67	73.75	88.75	59.25	70.02	72.38	75.52
Temp	16.67	17.88	18.75	14.5	16.75	15	18
Turb	0.9	0.97	2.75	0.55	0.82	1	0.71
pH_FLD							
pH_GEN	7.49	7.77	7.7	7.82	7.3	7.22	7.4
TRACE & TOXIC							
AI	0.06	0.05	0				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Hasimara(029-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Torsa

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS

Winter (Nov-Feb)

	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	50.35	56.25	106.1	77.84	75.62	125.3	141.6	77.06
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27	0.67		1.12	1.05	1.15	0.88	1.52	1.12
COD			19.38	8.67	8.17	9.7	12.84	8.2
DO			6.17			7.28	8.2	
DO_SAT%						80.99	8.2	8.05
CHEMICAL								
ALK-TOT								
Alk-Phen								
B								
CO3								
Ca								
Cl	2.27	3.62	8.56	1.93	3.88	2.73	4.17	3.8
F								
Fe								
HCO3								
K	4.88	4.97	3.45	1.24	1.52	1.93	2.33	2.7
Mg								
NH3-N								
NO2+NO3								
NO2-N								
NO3-N								
Na	5.38	6.25	2.54	1.78	2.6	1.88	3.13	2.2
SO4								
o-PO4-P								
CHEMICAL INDICES								
HAR_Ca								
HAR_Total								
Na%								
RSC								
SAR								
PESTICIDES								
PHYSICAL								
EC_FLD								104
EC_GEN	125.25	142.75	102.06	105.82	104.65	94.78	144.95	107.25
Secchi								
TDS	63.25	77.25	59.6	73.1	78.28	68.05	104.65	67.75
Temp				13.65	16.75	20.75	14	18.5
Turb	0.78	0.7	1.18	3.4	2.23	7.03	6.25	
pH_FLD								6.6
pH_GEN	7.4	7.26	8.44	7.67	7.73	7.35	7.39	7.72
TRACE & TOXIC								
AI								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Hasimara(029-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Torsa

Sub Division: Torsa Raidak Sankosh Sub-Division, Coochbehar

PARAMETERS															
	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	35.5	47.8	32.7	51.2	42.5	41	69.7	31.3	51.8	40.4	31.6	46.8	51.1	48.3	41.6
BIOLOGICAL/BACT EOROLOGICAL															
BOD3-27							0.6	0.9		0.89	1.1	1.16	0.82	1.23	1.1
COD										11.36	8.16	4.9	13.73	8	5.67
DO										6.6		6.8	7.53	7.03	
DO_SAT%										75.64		81.71	58.73	7.03	8.7
CHEMICAL															
ALK-TOT	82.67	46	60	107.33	48.86	42.84	80.33	36.89	62.3	42.62	65.57	19.67	85.25	59.02	49.18
Alk-Phen	0	0	2.37	1	0	4.05	0	0	0	0	0	0	0	0	0
B			0												
CO3	0	0	2.85	1.2	0	4.89	0	0	0	0	0	0	0	0	0
Ca	22.93	15.5	16.37	10.27	15.11	18.03	39	25.6	27.65	12.83	27.27	48.12	36.89	20.85	8.8
Cl	10.3	7.1	7.1	8.99	6.9	6.15	2.36	2.59	13	6.27	4.34	2.93	4.29	2.91	5.6
F			0		0										
Fe	0.11	0.1	0.08	0.18	0.17										
HCO3	100.85	56.12	67.4	128.51	59.62	42.34	98	45	76	52	80	24	104	72	60
K	1.26	1.11	1.29	1.28	2.32	1.8	1.66	4.49	4.6	4.3	1.13	1.61	3.33	1.82	
Mg	11.5	4.74	8.09	12.55	8.2	3.16	3.5	4.1	1.46	1.92	1.9	1.87	2.86	2.88	21.8
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na			2.67	3	3.91	3.15	3.22	4.12	3.22	3.4	3.91	2.29	3.17	2.09	
SO4	1.74	0.43	0.74	0.64	0.66			1.5		21.6	16.8	26.4	31.6	10.6	1
o-PO4-P	0.23	0.43	0.68	0.71	0.6										
CHEMICAL INDICES															
HAR_Ca															227.92
HAR_Total	105.26	58.49	73.56	77.98	71.93	58.23	112.08	81.08	75.21	40.08	76.09	128.09	104.14	94.07	91.17
Na%			7.37	7.76	10.38	8.77	5.26	10.16	6.78	12.16	11.48	3.42	4.44	3.49	
RSC	0.04	0	0	0.67	0	0	0	0	0	0.05	0	0	0	0	
SAR			0.14	0.15	0.2	0.15	0.12	0.22	0.14	0.2	0.23	0.08	0.1	0.06	
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	122	115.57	115.83	107.03	109.17	108.57	164.68	136.08	124.87	119.93	126.75	122.2	108.08	96.21	115.77
Secchi	57.33	38.75	41.67	25.67	37.17	45.09	97.5	64	69.12	32.08	68.17	120.3	92.22	52.12	
TDS	76.67	74.3	76	72.4	73.67	62.67	85.68	63.28	63.91	63.03	94.12	96.71	81.62	58.68	74.67
Temp	19.67	20.35	17.67	14.83	16.33	15				19.87	19.14	23	21.39	14	17
Turb	0.87	1.31	5	1	0.8	1.17	1.28	1.64	1.18	5.52	1.22	43.32	10.04	11.71	
pH_FLD															
pH_GEN	7.59	7.67	7.77	7.4	7.07	8.07	7.51	7.36	7.07	7.65	7.24	7.53	7.97	6.87	7.93
TRACE & TOXIC															
Al	0.08	0.04	0												

HISTORY SHEET (WATER QUALITY)		
		Water Year : 2017 - 2018
Site	: Mathabhanga	Code : 028-LBDJPG
State	: West Bengal	District Koch Bihar
Basin	: BRAHMAPUTRA	Independent River : Brahmaputra
Tributary	: Jaldhaka	Sub Tributary : -
Sub-Sub Tributary	: -	Local River : Jaldhaka
Division	: Lower Brahmaputra Division (LBD), Jalpaiguri	Sub-Division : Jaldhaka Lower Teesta Sub-Division,
Drainage Area	: 3039.0 Sq. Km.	Bank :
Latitude	: 26°19'31"	Longitude : 89°14'4"
Current Zero of Gauge (m)	: 40	
CATEGORY	Opening Date	Closing Date
Gauge	: 11/20/1972	
Discharge	: 08/14/1995	
Sediment	: 06-01-96	
Water Quality	: 06-01-96	
Reduced Level	Opening Date	Closing Date
40.0	01/01/2011	30/11/2020
40.0	01/12/2020	-
40.0	14/08/1995	31/12/2010
40.0	21/04/2014	01/12/2020

Station Name: Mathabhanga(028-LBDJPG)
Local River: Jaldhaka

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS

	01/06/2017	01/07/2017	01/08/2017	01/09/2017	03/10/2017	01/11/2017	01/12/2017	01/01/2018	01/02/2018	01/03/2018	02/04/2018	01/05/2018
Q (cumec)	202.13	474.84	795.72	643.13	489.84	310.16	113.16	101.62	92.63	78.36	80.64	98.34
CHEMICAL												
K(mg/L)	1.5	2.34	3.3	3.6	3		3.3					
Cl(mg/L)	4.1	4.7	5.03	7.5	6.8	7.8	6.7	4.7	4.7	3.4	3	14.9
Na(mg/L)	2.4	3.36	3.6	3.8	3.2		2.6					
NO2-N(mgN/L)												
Alk-Phen(mgCaCO3/L)											0	
Ca(mg/L)											6.4	
ALK-TOT(mgCaCO3/L)											65.57	
NH3-N(mgN/L)												
CO3(mg/L)											0	
HCO3(mg/L)											80	
Mg(mg/L)											16.5	
SO4(mg/L)											1.1	
B(mg/L)												
SiO2(mg/L)												
F(mg/L)												
P-Tot(mgP/L)												
TRACE & TOXIC												
PESTICIDES												
BIOLOGICAL/BACTERIOLOGICAL												
DO(mg/L)	7.9	8.4										
COD(mg/L)	7	10	13	12	11	13	10	7.8	7.8	8	8	6
DO_SAT%(Percentage)	97.37	96.08	11.8	10.9	8.7	9	8.2	8.2	8.2	8.1	8.4	7.5
BOD3-27(mg/L)	0.7	1.3	1.6	1.5	1.4	1.4	1.4	0.9	0.9	0.8	1.1	0.8
FCol-MPN(MPN/100mL)												
Tcol-MPN(MPN/100mL)												
Chl-f-a(µg/L)												
PHYSICAL												
Odour_Code(-)	odour free	odour free										
TDS(mg/L)	81	68	78	70	108	46	58	52	52	134	109	115
pH_GEN(pH unit)	7.1	7	7	6.3	6.8	6.4	6.3	7.42	7.42	7.2	9.08	7.4
EC_GEN(µmho/cm)	125	150	152	133	180	72	80	78	78	203	165	178.6
Temp(Degrees Celsius (°C))	26	22	25	28	24	20	18	15	15	21	22	22
Turb(NTU)	0.9	0.4										
Colour_Cod(-)	Clear	Clear										
SS(mg/L)												
EC_FLD(µmho/cm)							80	91	78			
pH_FLD(pH unit)							6.3	7.56				
CHEMICAL INDICES												
HAR_Ca(mgCaCO3/L)											169.79	
HAR_Total(mgCaCO3/L)											67.92	

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Mathabhanga(028-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Jaldhaka

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	2961.34	75.5	308.29	570.98	125.13	110.31
CHEMICAL							
Cl	13	14.9	2.4	5.83	5.63	5.26	7.1
K	6	3.6	1.5	2.84	2.75	3.3	
CO3	1	0	0	0			0
Mg	1	16.5	16.5	16.5			16.5
Na	6	3.8	2.4	3.16	3.27	2.6	
SO4	1	1.1	1.1	1.1			1.1
Alk-Phen	1	0	0	0			0
ALK-TOT	1	65.57	65.57	65.57			65.57
HCO3	1	80	80	80			80
Ca	1	6.4	6.4	6.4			6.4
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	13	13	6	9.2	10.6	8.92	7.33
BOD3-27	13	1.6	0.7	1.13	1.3	1.1	0.9
DO	2	8.4	7.9	8.15	8.15		
DO_SAT%	13	97.37	7.5	22.44	44.97	8.58	8
PHYSICAL							
TDS	13	134	46	79.31	81	53.6	119.33
Temp	13	28	15	21.15	25	17	21.67
pH_GEN	13	9.08	6.3	7.15	6.84	7.02	7.89
EC_GEN	13	203	72	129.66	148	79.8	182.2
EC_FLD	4	91	78	85		85	
Turb	2	0.9	0.4	0.65	0.65		
pH_FLD	2	7.56	6.3	6.93		6.93	
CHEMICAL INDICES							
HAR_Total	1	67.92	67.92	67.92			67.92
HAR_Ca	1	169.79	169.79	169.79			169.79

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Mathabhanga(028-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Jaldhaka

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS	Flood (Jun-Oct)															
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Q (cumec)	430	401	392	730	715	363	465	539	379	632	493	605	457	421	521	
BIOLOGICAL/BACTERIOLOGICAL																
BOD3-27										0.84	1.15	1	1.26	1.04	1.35	
COD										11.22	10.2	7.33	11.02	10.92	10.92	
DO										6.64			7		8.15	
DO_SAT%										76.24			87.62		37.01	
CHEMICAL																
ALK-TOT	59.03	55.12	71.69	50.96	37.6	42										
Alk-Phen	0	0	1.05	0	1.79	0										
B			0													
CO3	0	0	1.27	0	2.16	0										
Ca	18.43	23.55	11.04	9.71	12.76	14.2										
Cl	20.72	10.69	7.45	7.69	8.45	4.31	5.4		2.66	5.81	1.84	5.43	2.36	2.96	6.22	
F			0													
Fe	0.2	0.1	0.06	0.1	0.06											
HCO3	72.01	67.25	84.88	62.17	41.48	51.24										
K	1.7	1.72	1.2	1.11	1.67	2.62	1.76		6.12	5.1	1.8	1.88	1.64	1.82	3.15	
Mg	8.36	15.48	15.05	9.73	8.16	7.59										
NH3-N			0													
NO2+NO3			0													
NO2-N			0													
NO3-N	0		0													
Na	4.14	4	1.5	3.4	4.32	5.31	2.36		5.7	3.1	2.16	4.5	1.7	2.16	3.46	
SO4	4.78	2.96	0.8	0.62	0.77											
o-PO4-P	0.66	0.73	0.55	0.6	0.55											
CHEMICAL INDICES																
HAR_Ca																
HAR_Total	79.89	108.65	91.09	61.38	65.92	67.14										
Na%	10.21	11.51	3.94	12.6	13.52	14.1										
RSC	0.01	0.28	0.09	0.01	0	0										
SAR	0.2	0.22	0.07	0.21	0.25	0.28										
PESTICIDES																
PHYSICAL																
EC_FLD																
EC_GEN	92.4	102.8	90.77	95.2	107.64	100.39	107.87		166.98	120.34	115.84	111.31	111.64	98.16	149.02	
Secchi	46	59.3	27.54	24	31.9	35.5										
TDS	63.53	67.4	65.69	66.6	75.12	72.97	55.14		83.4	56.51	98.6	81.82	83.74	74.2	81.63	
Temp	26	27.8	30.37	30.8	26.6	26.82	29			25	24	24.4	26.8		25.1	
Turb	2.27	8.76	9	3.6	5.36	4.9	9.74		5.18	11.42	1.75	0.88	10.84	15.14	0.65	
pH_FLD																
pH_GEN	7.2	7.48	7.41	7.32	7.38	6.79	7.38		7.61	7.01	7.59	7.03	7.1	7.24	6.82	
TRACE & TOXIC																
Al	0.54	0.03	0													

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Mathabhanga(028-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Jaldhaka

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	93.17	112.6	96.6	121.7	91.18	102.3	86.1
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT	62	88	76.54	106	79.5		
Alk-Phen	1.66	1	2.78	1.25	1		
B			0				
CO3	2	1.2	3.35	1.5	1.2		
Ca	37.93	8.55	19.45	9.9	24.1		
Cl	11.24	7.72	7.26	12.34	6.03	4.99	2.03
F			0				
Fe	0.13	0.07	0.06	0.07			
HCO3	71.57	104.92	86.57	126.27	94.55		
K	1.32	0.98	1	2.14	1.59	2	1.92
Mg	15.3	11.21	16.01	29.8	8.87		
NH3-N			0				
NO2+NO3			0				
NO2-N			0				
NO3-N			0				
Na			1.98	9.5	3.1	3.5	4.07
SO4	2.78	7.87	0.5	0.53			
o-PO4-P	0.34	0.49	0.52	0.6			
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	158.57	68.08	114.69	148.91	97.21		
Na%			4.13	12.73	6.64		
RSC	0.05	0.62	0.03	0	0.05		
SAR			0.09	0.36	0.14		
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	104.47	194.25	184.55	175.55	116.55	191.2	144.99
Secchi	94.83	21.38	48.38	24.75	60.25		
TDS	59.33	116.5	90.75	102.3	70.65	115.5	84.18
Temp	19.17	19.75	20.75	20.25	17.5	19.75	18.33
Turb	0.83	1.25	1.27	2	1.4	1.88	0.79
pH_FLD							
pH_GEN	7.52	7.77	7.67	7.12	7.35	6.94	7.47
TRACE & TOXIC							
AI	0.21	0.02	0				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Mathabhanga(028-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Jaldhaka

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS

Winter (Nov-Feb)

	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	92.66	102	107.9	159.7	152.1	171.7	139.3	123.51
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27	0.65		1.27	1	1.12	0.85	1.34	1.1
COD			19.89	7.14	9.7	9.17	9.64	8.92
DO			5.85			7.5	8.4	
DO_SAT%						81.81	88.8	8.58
CHEMICAL								
ALK-TOT								
Alk-Phen								
B								
CO3								
Ca								
Cl	1.5	3.88	10.54	3.07	4.5	3.02	3.93	5.26
F								
Fe								
HCO3								
K	7.01	6.3	4.62	2.11	2.15	2.4	2.53	3.3
Mg								
NH3-N								
NO2+NO3								
NO2-N								
NO3-N								
Na	7.21	6.83	4.99	2.86	3.63	2.12	2.8	2.6
SO4								
o-PO4-P								
CHEMICAL INDICES								
HAR_Ca								
HAR_Total								
Na%								
RSC								
SAR								
PESTICIDES								
PHYSICAL								
EC_FLD								85
EC_GEN	210.5	201.5	187.7	153.67	184.15	143	134.14	79.8
Secchi								
TDS	108.5	109.75	107.63	112.08	146.15	103.08	96.54	53.6
Temp				15.95	16.25	19.5	18.08	17
Turb	0.75	2.4	3.45	2.5	1.03	7.85	5.55	
pH_FLD								6.93
pH_GEN	7.5	6.99	8.41	7.97	7.64	7.45	7.14	7.02
TRACE & TOXIC								
AI								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Mathabhanga(028-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Jaldhaka

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	125	85.8	113	91.1	71.2	69.2	100	118	141	120	100	123	144	75.9	51.5
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27								0.9		1.25	1.13	1.04	0.97	1.17	0.9
COD										18	6.8	6.12	13.5	6	7.33
DO										5.9		7.65	7.3	7.77	
DO_SAT%										69.19		90.1	53.43	85.98	8
CHEMICAL															
ALK-TOT	65.33	96	98	77.33	96	61.73	54.1	63.93	59.02	101.64	55.74	13.11	65.57	51.68	65.57
Alk-Phen	1	2.66	3.32	0.66	0	1.4	0	0	0	0	0	0	0	1.25	0
B			0												
CO3	1.2	3.2	4	0.8	0	1.69	0	0	0	0	0	0	0	1.5	0
Ca	16.07	10.8	21.8	6.87	30.4	25.65	29	15.6	25.25	20.84	27.27	24.06	35.29	16.04	6.4
Cl	8.05	10.06	8.4	7.45	6.39	6.37	2.34	2.46	11.8	8.77	5.12	2.19	4.38	3.26	7.1
F			0												
Fe	0.1	0.06	0.27	0.07	0.06										
HCO3	77.27	110.61	111.43	92.72	117.12	71.88	66	78	72	124	68	16	80	60	80
K	1.3	0.98	1.11	1.79	1.71	2.13	1.24	4.6	4.14	5.3	1.55	1.7	3.03	3	
Mg	4.9	29.2	14.26	27.86	11.14	2.93	2.5	1	3.16	1.91	2.87	3.85	2.86	3.86	16.5
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na			1.96	4.5	2.02	4	3.58	5.21	2.78	5.27	5.44	1.64	3.08	2.68	
SO4	2.34	1.01	0.61	0.77	0.72			2.3		18.6	20.5	20.4	22.3	14.6	1.1
o-PO4-P	0.4	0.39	0.52	0.51	0.6										
CHEMICAL INDICES															
HAR_Ca															169.79
HAR_Total	60.59	148.67	113.9	133.27	122.41	76.33	82.92	43.17	76.29	60.06	80.13	76.19	100.14	56.18	67.92
Na%			3.8	6.8	3.49	9.94	8.51	19.41	4.13	15.25	12.58	2.75	5.35	6.15	
RSC	0.4	0	0	0	0	0	0	0.42	0	0.84	0	0	0	0	
SAR			0.08	0.17	0.08	0.2	0.17	0.37	0.08	0.31	0.26	0.05	0.12	0.1	
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	161	219.33	161.97	214.73	202.67	181	174.89	231.66	120.41	273.03	247.13	183.3	182.54	157.78	182.2
Secchi	40.17	27	54.5	17.17	76	64.12	72.5	39	63.12	52.1	68.17	60.15	88.23	40.1	
TDS	103	147	110.47	144.57	142.67	110.5	92.32	111.02	72.64	149.75	184.68	146.18	139.9	104.25	119.33
Temp	23.67	23.33	29	24.67	26.67	21				22.87	20	22.36	18.67	20.36	21.67
Turb	18	3.5	0.7	0.57	0.87	1.3	1.35	2.22	9.34	5.02	2.31	5.35	5.8	5.8	
pH_FLD															
pH_GEN	7.48	7.97	7.7	7.43	7.23	8.45	7.5	7.24	7.25	7.41	7.37	7.6	8.03	6.9	7.89
TRACE & TOXIC															
Al	0.06	0.04	0												169.79

HISTORY SHEET (WATER QUALITY)		
		Water Year : 2017 - 2018
Site	: TEESTA BAZAR	Code : 014-LBDJPG
State	: West Bengal	District : Darjiling
Basin	: BRAHMAPUTRA	Independent River : Brahmaputra
Tributary	: Teesta	Sub Tributary : -
Sub-Sub Tributary	: -	Local River : Teesta
Division	: Lower Brahmaputra Division (LBD), Jalpaiguri	Sub-Division : Upper Teesta Upper Mahananda Sub-
Drainage Area	: 7714.0 Sq. Km.	Bank : Right
Latitude	: 27°3'17"	Longitude : 88°25'31"
Current Zero of Gauge (m)	: 200	
CATEGORY	Opening Date	Closing Date
Gauge	: 01/05/1969	
Discharge	: 01-05-72	
Sediment	:	
Water Quality	: 01-01-03	
Reduced Level	Opening Date	Closing Date
200.0	01/06/2015	31/12/2099
200.0	01/05/1969	31/12/1969
200.0	01/01/1970	31/03/2003
200.0	01/04/2003	30/04/2003
200.0	01/05/2003	-
200.0	05/01/1969	30/04/1969
200.0	18/05/2014	31/05/2015

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: TEESTA BAZAR(014-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaigur

Local River: Teesta

Sub Division: Upper Teesta Upper Mahananda Sub-Division, S

PARAMETERS

	01/07/2017	03/10/2017	01/01/2018	02/04/2018
Q (cumec)	527.78	845.1	421.1	118.83
CHEMICAL				
Na(mg/L)	2.01	3		
Cl(mg/L)	6.7	3.6	3.2	2.1
K(mg/L)	3.49	2.2		
SO4(mg/L)				1.4
CO3(mg/L)				0
NO2-N(mgN/L)				
F(mg/L)				
B(mg/L)				
NH3-N(mgN/L)				
Mg(mg/L)				11.2
Alk-Phen(mgCaCO3/L)				0
P-Tot(mgP/L)				
HCO3(mg/L)				60
Ca(mg/L)				4
SiO2(mg/L)				
ALK-TOT(mgCaCO3/L)				49.18
TRACE & TOXIC				
PESTICIDES				
BIOLOGICAL/BACTEOROLOGICAL				
DO(mg/L)	8			
COD(mg/L)	11	8	7	4
DO_SAT%(Percentage)	95.03	9.1	8	8
BOD3-27(mg/L)	1.2	1	0.9	0.4
Tcol-MPN(MPN/100mL)				
Chlf-a(µg/L)				
Fcol-MPN(MPN/100mL)				
PHYSICAL				
Odour_Code(-)	odour free			
Temp(Degrees Celsius (°C))	24	26	11	
Turb(NTU)	1			
pH_GEN(pH unit)	6.4	6.8	6.72	6.89
EC_GEN(µmho/cm)	40	56	70	82
TDS(mg/L)	20	32	52	52
Colour_Cod(-)	Clear			
SS(mg/L)				
EC_FLD(µmho/cm)			70	
pH_FLD(pH unit)				
CHEMICAL INDICES				
HAR_Ca(mgCaCO3/L)				111.67
HAR_Total(mgCaCO3/L)				44.67

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: TEESTA BAZAR(014-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Teesta

Sub Division: Upper Teesta Upper Mahananda Sub-Division, Silig

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	334	912.6	66.52	416.27	593.3	352.28	183.78
CHEMICAL							
Cl	4	6.7	2.1	3.9	5.15	3.2	2.1
K	2	3.49	2.2	2.85	2.85		
CO3	1	0	0	0			0
Mg	1	11.2	11.2	11.2			11.2
Na	2	3	2.01	2.51	2.51		
SO4	1	1.4	1.4	1.4			1.4
Alk-Phen	1	0	0	0			0
ALK-TOT	1	49.18	49.18	49.18			49.18
HCO3	1	60	60	60			60
Ca	1	4	4	4			4
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACT							
EOROLOGICAL							
COD	4	11	4	7.5	9.5	7	4
BOD3-27	4	1.2	0.4	0.88	1.1	0.9	0.4
DO	1	8	8	8	8		
DO_SAT%	4	95.03	8	30.03	52.07	8	8
PHYSICAL							
TDS	4	52	20	39	26	52	52
Temp	3	26	11	20.33	25	11	
pH_GEN	4	6.89	6.4	6.7	6.6	6.72	6.89
EC_GEN	4	82	40	62	48	70	82
EC_FLD	1	70	70	70		70	
Turb	1	1	1	1	1		
CHEMICAL INDICES							
HAR_Total	1	44.67	44.67	44.67			44.67
HAR_Ca	1	111.67	111.67	111.67			111.67

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: TEESTA BAZAR(014-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Teesta

Sub Division: Upper Teesta Upper Mahananda Sub-Division, Sili

PARAMETERS	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	1583	1021	960	947	968.5	1500			845.4					1776	686
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27														1.1	1.08
COD														9.1	9.2
DO															8
DO_SAT%															43.47
CHEMICAL															
ALK-TOT	40	41	26.67	31.75	28.67	30			38.52						
Alk-Phen	0	0	0	0	0	0			0						
B															
CO3	0	0	0	0	0	0			0						
Ca	5.75	8.39	10.8	8.04	9.73	10.3			14.4						
Cl	13.14	9.6	6.39	5.24	7.45	5.5			5					4.15	4.09
F															
Fe	0.21	0.22	0.17	0.09	0.11										
HCO3	38.82	50.02	32.53	38.74	34.97	36.6			47						
K	1.06	0.98	1.08	1.02	1.41	4.5			4.3					2.05	2.4
Mg	8.69	11.69	6.24	6.52	5.91	5.22			4.8						
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na	5.72	1.38	1.95	1.79	4.73	6			4.8					2.8	2.84
SO4	4.86	2.06	0.99	0.7	0.66										
o-PO4-P	0.15	0.69	0.37	0.49	0.54										
CHEMICAL INDICES															
HAR_Ca															
HAR_Total	51.46	66.56	55.04	46.45	48.97	47.52			56						
Na%	16.59	5.02	6.7	8.1	17.35	19.78			14.58						
RSC	0	0	0	0	0	0			0						
SAR	0.35	0.08	0.11	0.12	0.3	0.38			0.28						
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	39.85	39.25	53.33	55.1	63.99	70.35			81					99.95	49
Secchi	14.35	21.76	27	20	24.83	25.75			36						
TDS	33	29.45	37.67	36.77	42.16	50.5			49					74	26.75
Temp				19	20.5	23									25.12
Turb	19.69	6.12	20.33	15	24.57	58.5			2.1					20.55	1
pH_GEN	7.29	7.32	7.17	7.5	7.27	7.1			7.3					8.05	6.63
TRACE & TOXIC															
Al	0.5	0.04	0												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: TEESTA BAZAR(014-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Teesta

Sub Division: Upper Teesta Upper Mahananda Sub-Division, Sili

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	169.9	211.4	206.6	328.6	218.6		
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT	37	37	40.18	46	39.79		
Alk-Phen	0	0	2.17	0	0.94		
B			0				
CO3	0	0	2.62	0	1.14		
Ca	13	9.3	9.58	10.4	14.74		
Cl	4.97	6.92	6.52	8.16	6.09		
F			0				
Fe	0.2	0.21	0.18	0.1			
HCO3	45.14	45.14	43.7	56.12	46.23		
K	0.8	0.8	0.96	1.9	1.71		
Mg	17.25	9.42	17.22	15.19	2.07		
NH3-N			0				
NO2+NO3			0				
NO2-N			0				
NO3-N			0				
Na		0.37	1.94	2.25	2.14		
SO4	1.13	2.26	0.77	0.72	0.86		
o-PO4-P	0.23	0.26	0.29	0.57			
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	104.39	62.48	91.33	89.28	45.11		
Na%		2.89	6.03	5.2	9.12		
RSC	0	0.13	0	0	0.06		
SAR		0.03	0.1	0.11	0.14		
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	58.7	80	67.27	60.65	77.37		
Secchi	32.5	23.25	23.9	26	36.07		
TDS	36.5	48	44.6	37.35	46		
Temp			13	11	11		
Turb	0.5	1	1	0.7	1		
pH_GEN	7.2	7.7	7.71	7.2	7.1		
TRACE & TOXIC							
Al	0.14	0.05	0				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: TEESTA BAZAR(014-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Teesta

Sub Division: Upper Teesta Upper Mahananda Sub-Division, Sili

PARAMETERS

Winter (Nov-Feb)

	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)						640	441.8	421.1
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27						1.2	1.2	0.9
COD						16.3	10	7
DO						7.1	7.6	
DO_SAT%						67.38	73.74	8
CHEMICAL								
ALK-TOT								
Alk-Phen								
B								
CO3								
Ca								
Cl						1.7	4.3	3.2
F								
Fe								
HCO3								
K						1.8	3	
Mg								
NH3-N								
NO2+NO3								
NO2-N								
NO3-N								
Na						1	3.5	
SO4								
o-PO4-P								
CHEMICAL INDICES								
HAR_Ca								
HAR_Total								
Na%								
RSC								
SAR								
PESTICIDES								
PHYSICAL								
EC_FLD								70
EC_GEN						70.6	177.4	70
Secchi								
TDS						50.1	129.5	52
Temp						13	14	11
Turb						0.3		
pH_GEN						7.4	7.6	6.72
TRACE & TOXIC								
Al								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: TEESTA BAZAR(014-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Teesta

Sub Division: Upper Teesta Upper Mahananda Sub-Division, Sili

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	446	236	274	338	320								304	374	119
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27													0.9	1.1	0.4
COD													14.3	6	4
DO													6.7	6.8	
DO_SAT%													72.23	76.28	8
CHEMICAL															
ALK-TOT	36	28	34	52	34								85.25	62.02	49.18
Alk-Phen	0	0	0	0	0								0	1.49	0
B			0												
CO3	0	0	0	0	0								0	1.8	0
Ca	13.8	5.2	12	8.6	13.8								41.7	28.87	4
Cl	6.03	6.03	8.16	6.03	4.97								4.6	3.2	2.1
F			0												
Fe	0.09	0.13	0.13	0.11	0.11										
HCO3	43.92	34.16	41.48	63.44	41.48								104	72	60
K	1.02	1.02	0.9	1.02	3.13								3.3	1.8	
Mg	1.09	10.45	7.29	16.77	2.07								2.85	1.9	11.2
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na			2.07	4.99	5.98								3.6	2.6	
SO4	0.34	0.86	0.72	0.77	0.86								23.4	15.2	1.4
o-PO4-P	0.2	0.24	0.4	0.51	0.59										
CHEMICAL INDICES															
HAR_Ca															111.67
HAR_Total	39.06	56.54	60.38	91.36	43.11								116.12	80.09	44.67
Na%			6.86	10.58	21.7								6.13	6.44	
RSC	0	0	0	0	0								0	0	
SAR			0.12	0.23	0.4								0.15	0.13	
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	51.2	65.49	76	61.9	70								179.4	65.6	82
Secchi	34.5	13	30	21.5	34.5								104.25	72.17	
TDS	34		48	40	51								136.34	52.3	52
Temp			19	11	13								19	21	
Turb	0.5	0.5	1	0.4	2								16.7	6.8	
pH_GEN	6.82	7.5	7.5	6.7	6.9								7.6	6.3	6.89
TRACE & TOXIC															
Al	0.06	0	0												

HISTORY SHEET (WATER QUALITY)			
		Water Year	: 2017 - 2018
Site	: Mekhliganj	Code	: 023-LBDJPG
State	: West Bengal	District	: Koch Bihar
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: Teesta	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Teesta
Division	: Lower Brahmaputra Division (LBD), Jalpaiguri	Sub-Division	: Jaldhaka Lower Teesta Sub-Division,
Drainage Area	: 10205.0 Sq. Km.	Bank	:
Latitude	: 26°19'41"	Longitude	: 88°51'30"
Current Zero of Gauge (m)	: 0		
CATEGORY	Opening Date	Closing Date	
Gauge	:		
Discharge	:		
Sediment	:		
Water Quality	:		
Reduced Level	Opening Date	Closing Date	
60.0	31/05/2005	06/05/2014	
59.56	01/06/1973	31/05/2005	
60.0	06/05/2014	30/04/2015	
0.0	07/12/2017	-	

Water Quality Datasheet (River Water Analysis) for the period : 2017 - 2018

Station Name: Mekhliganj(023-LBDJPG)
Local River: Teesta

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS

	01/06/2017	01-07-17	01-08-17	01/09/2017	03-10-17	01/11/2017	01/12/2017	01/01/2018	01-02-18	01-03-18	02-04-18	01/05/2018
CHEMICAL												
Na(mg/L)	1.6	2.45	2.4	2.8	3.1		2.7					
K(mg/L)	1	3.15	2.5	2.3	2.7		3.2					
Cl(mg/L)	3.5	4.7	6.04	4.3	5.2	6.8	6	3.9	3.9	3.4	4	16.7
Mg(mg/L)											10.7	
Alk-Phen(mgCaCO3/L)											0	
HCO3(mg/L)											60	
NH3-N(mgN/L)												
ALK-TOT(mgCaCO3/L)											49.18	
SO4(mg/L)											0.95	
F(mg/L)												
NO2-N(mgN/L)												
SiO2(mg/L)												
CO3(mg/L)											0	
B(mg/L)												
P-Tot(mgP/L)												
Ca(mg/L)											9.6	
TRACE & TOXIC												
PESTICIDES												
BIOLOGICAL/BACTEROLOGICAL												
BOD3-27(mg/L)	0.9	1.2	1.7	1.6	1.6	1.4	1.2	0.8	0.8	1	0.8	0.6
DO_SAT%(Percentage)	100.4	96.14	11.4	10.4	8.9	8.6	8	8.9	8.9	8.1	9.2	7.9
COD(mg/L)	8	9	12	11	11	12	11	8	8	6	7	7.9
DO(mg/L)	8	7.8										
Tcol-MPN(MPN/100mL)												
Fcol-MPN(MPN/100mL)												
Chl-a(µg/L)												
PHYSICAL												
EC_GEN(µmho/cm)	100	83	92	80	171	130	125	157	157	110	104	83.6
Colour_Cod(-)	Clear	Clear										
Turb(NTU)	3.5	2										
Odour_Code(-)	odour free	odour free										
Temp(Degrees Celsius (°C))	27	26	25	28	26	24	20	18	18	21	23	24
TDS(mg/L)	65	50	52	50	107	85	91	104	104	74	65	54
pH_GEN(pH unit)	6.9	6.6	6.9	6.4	6.8	6.6	6.5	7.86	7.86	7.4	9.4	6.92
pH_FLD(pH unit)							6.5					
EC_FLD(µmho/cm)							125	91	157			
SS(mg/L)												
CHEMICAL INDICES												
HAR_Ca(mgCaCO3/L)											166.88	
HAR_Total(mgCaCO3/L)											66.75	

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Mekhliganj(023-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Teesta

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)							
CHEMICAL							
Cl	12	16.7	3.4	5.7	4.75	5.15	8.03
K	6	3.2	1	2.48	2.33	3.2	
CO3	1	0	0	0			0
Mg	1	10.7	10.7	10.7			10.7
Na	6	3.1	1.6	2.51	2.47	2.7	
SO4	1	0.95	0.95	0.95			0.95
Alk-Phen	1	0	0	0			0
ALK-TOT	1	49.18	49.18	49.18			49.18
HCO3	1	60	60	60			60
Ca	1	9.6	9.6	9.6			9.6
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	12	12	6	9.24	10.2	9.75	6.97
BOD3-27	12	1.7	0.6	1.13	1.4	1.05	0.8
DO	2	8	7.8	7.9	7.9		
DO_SAT%	12	100.4	7.9	23.9	45.45	8.6	8.4
PHYSICAL							
TDS	12	107	50	75.08	64.8	96	64.33
Temp	12	28	18	23.33	26.4	20	22.67
pH_GEN	12	9.4	6.4	7.18	6.72	7.21	7.91
EC_GEN	12	171	80	116.05	105.2	142.25	99.2
EC_FLD	3	157	91	124.33		124.33	
Turb	2	3.5	2	2.75	2.75		
pH_FLD	1	6.5	6.5	6.5		6.5	
CHEMICAL INDICES							
HAR_Total	1	66.75	66.75	66.75			66.75
HAR_Ca	1	166.88	166.88	166.88			166.88

Station Name: Mekhliganj(023-LBDJPG)

Local River: Teesta

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)															
BIOLOGICAL/BACTEOROLOGICAL															
BOD3-27								0.57		1	1.3	1	1.22	1.1	1.45
COD										15.81	7.14	6.11	10.6	10	10.46
DO										6.24			6.94		7.9
DO_SAT%										65.26			86.89		37.32
CHEMICAL															
ALK-TOT	46	43.37	29.6	36.85	35.6	34.24									
Alk-Phen	0	0	0	1.88	0.8	1.03									
B															
CO3	0	0	0	2.26	0.96	1.24									
Ca	12.74	30	10.64	9.42	7.24	9.5									
Cl	32.4	8.5	6.67	7.54	8.59	4.11	5.6	2.52	2.49	4.56	1.89	5.2	2.58	3.58	5.06
F															
Fe	0.23	0.14	0.07	0.15	0.07										
HCO3	56.12	52.91	36.11	40.35	41.48	39.26									
K	1.52	1.53	1.27	0.9	1.74	1.8	1.87	2.45	6.16	6.06	1.98	3.28	1.64	1.86	2.45
Mg	7.29	10.93	6.9	5.95	7.51	6.21									
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na	2.3	2.3	1.85	1.79	5.1	3.4	1.82	2.18	5.7	2.58	1.55	4.6	1.88	2.32	2.68
SO4	0.99	5.47	0.73	0.64	0.63										
o-PO4-P	0.54	1.01	0.55	0.59	0.6										
CHEMICAL INDICES															
HAR_Ca															
HAR_Total	60.83	106.08	55.3	48.21	49.39	51.19									
Na%	7.89	7.05	6.82	7.5	18.57	11.7									
RSC	0.05	0	0	0.01	0.1	0									
SAR	0.13	0.12	0.11	0.11	0.33	0.2									
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	72	93	61.28	68.69	62.8	63.05	76.6	80.85	99.2	82.2	126.93	106.91	126.14	83.68	106.54
Secchi	31.5	77.26	26.63	23.23	18.14	23.62									
TDS	56.67	61.69	44.36	47.14	43.99	46.31	37.78	40.75	54.5	37.65	106.6	79.36	94.88	62.8	65.51
Temp	23.8	27	20	18.5	25	25.23	26			27	24.5	25.2	26.8		26.39
Turb	10.67	8.52	12.87	47.67	22.45	43.26	6.43	7.43	6.3	13.75	2.7	0.96	13.84	7.78	2.75
pH_FLD															
pH_GEN	7.22	7.29	7.31	7.54	7.47	6.83	7.24	7.4	7.25	6.99	7.88	6.8	7.04	7.2	6.72
TRACE & TOXIC															
AI	0.6	0.05	0		0										

Station Name: Mekhliganj(023-LBDJPG)

Local River: Teesta

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	128.9	50.68	89.03	145	99.98	103.1	221.8
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27							
COD							
DO							
DO_SAT%							
CHEMICAL							
ALK-TOT	100	45	50.09	43.5	45.5		
Alk-Phen	1.66	0	2.17	0	0		
B			0				
CO3	2	0	2.62	0	0		
Ca	33.87	6.85	14.27	9.45	15.9		
Cl	18.22	7.63	23.75	9.76	5.25	5.24	2.1
F			0				
Fe	0.09	0.08	0.07	0.1			
HCO3	117.93	54.9	55.79	53.07	55.51		
K	1.43	1.06	1.05	2.29	1.71	2	1.72
Mg	21.26	9.9	21.01	14.09	4.16		
NH3-N			0				
NO2+NO3			0				
NO2-N			0				
NO3-N			0				
Na			1.82	4.25	4.5	3.75	2.77
SO4	2.98	3.44	0.43	0.67			
o-PO4-P	0.24	0.52	0.61	0.69			
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	173.26	58.38	121.44	82.35	57.09		
Na%			3.64	10.41	14.43		
RSC	0	0.04	0	0	0		
SAR			0.08	0.21	0.26		
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	78	104.75	124.81	84.92	110.43	92.1	91.96
Secchi	84.67	17.12	34.74	23.62	39.75		
TDS	46.33	62.25	70.28	52.05	64.7	56.5	50.17
Temp	17.33	20.25	19.45	16	17.25	17.5	19
Turb	1	1.05	3	1.18	2.25	2.12	1
pH_FLD							
pH_GEN	7.2	7.65	7.77	7.15	7.28	7	7.58
TRACE & TOXIC							
Al	0	0.04	0				

Station Name: Mekhliganj(023-LBDJPG)
Local River: Teesta

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS								
Winter (Nov-Feb)								
	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	117.2	16.43	4.517	11.43	21.04			
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27	0.65		1.23	1.12	1.1	1	1.28	1.05
COD			21.93	11.73	8.15	11.2	9.24	9.75
DO			6.1			7.03	7.25	
DO_SAT%						75.76	68.67	8.6
CHEMICAL								
ALK-TOT								
Alk-Phen								
B								
CO3								
Ca								
Cl	2.01	4.12	9.41	3	5.06	3.2	4.4	5.15
F								
Fe								
HCO3								
K	4.57	6.45	5.75	2.25	2.53	2.4	2.43	3.2
Mg								
NH3-N								
NO2+NO3								
NO2-N								
NO3-N								
Na	5.23	6.6	3.73	2.81	4.02	2.55	3.27	2.7
SO4								
o-PO4-P								
CHEMICAL INDICES								
HAR_Ca								
HAR_Total								
Na%								
RSC								
SAR								
PESTICIDES								
PHYSICAL								
EC_FLD								124.33
EC_GEN	94.5	95.75	138.26	213.88	244	145.08	147.19	142.25
Secchi								
TDS	47.5	52.55	78.61	152.25	192.88	105.6	106	96
Temp				16.78	16.25	19	12.92	20
Turb	0.78	2.05	4.53	2.07	1	8.3	11.4	
pH_FLD								6.5
pH_GEN	7.5	6.98	7.92	7.94	7.72	7.48	7.44	7.2
TRACE & TOXIC								
AI								

Station Name: Mekhliganj(023-LBDJPG)
Local River: Teesta

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	137.9	86.56	71.75	136	55.44	52.97	85.89	64.66	20.88	12.54	1.576	10.52			
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27							0.8	0.8		1.22	1.17	1.22	1.1	1.45	0.8
COD										16.73	8.16	7.78	10	10.46	6.97
DO										7.8		7.8		7.9	
DO_SAT%										102.73		92.68		37.32	8.4
CHEMICAL															
ALK-TOT	44	36.67	42.67	44.67	38	32.79	31.97	39.34	52.46	36.07	52.46	19.67			49.18
Alk-Phen	0	0	1.66	0	0.66	0	0	0	0	0	0	0			0
B			0												
CO3	0	0	2	0	0.8	0	0	0	0	0	0	0			0
Ca	16.07	9.13	11.47	8.6	14.87	14.42	19.1	24.5	22.04	16.03	27.27	32.08			9.6
Cl	8.4	8.28	7.69	6.75	5.01	4.99	2.27	2.52	7.2	5.84	4.96	1.96	3.58	5.06	8.03
F			0												
Fe	0.06	0.07	0.34	0.09	0.09										
HCO3	53.68	44.73	47.99	54.49	44.73	40	39	48	64	44	64	24			60
K	1.46	1.07	0.98	1.94	2.01	1.82	1.42	4.84	4.3	5.88	2.27	1.17	1.86	2.45	
Mg	4.9	9.72	5.91	19.16	3.12	1.95	1.9	2.1	3.16	3.86	1.9	2.87			10.7
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na			1.93	4.4	4.68	2.28	3.3	4.44	3.14	4.02	5.09	1.49	2.32	2.68	
SO4	1.76	0.9	0.45	0.61	0.66			1		23.4	21.6	32.5			0.95
o-PO4-P	0.5	0.55	0.71	0.61	0.58										
CHEMICAL INDICES															
HAR_Ca															166.88
HAR_Total	60.59	63.33	53.3	101.32	50.16	44.17	55.67	70	68.27	56.16	76.09	92.16			66.75
Na%			7.26	8.53	15.55	9.94	7.05	10.97	7.68	10.87	12.53	2.29			
RSC	0.04	0	0	0	0	0	0	0	0	0	0	0			
SAR			0.12	0.19	0.29	0.16	0.12	0.23	0.15	0.21	0.26	0.05			
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	74.67	82.22	78.93	75.13	81.2	86.46	229.63	102	117.97	118.61	181.24	249.93	83.68	106.54	99.2
Secchi	40.17	22.52	28.67	21.5	37.17	36.05	47.75	61.25	55.1	40.08	68.17	80.2			
TDS	46.67	57.35	53.43	49.57	57	47.9	117.45	51.26	55.83	63.3	137.54	200.45	62.8	65.51	64.33
Temp	22	21.25	20	22.67	23.33	20				25.53	20.55	22.64		26.39	22.67
Turb	1.57	3.94	1	0.53	3.67	1.65	1.16	2.35	11.89	3.7	2.15	3.94	7.78	2.75	
pH_FLD															
pH_GEN	7.36	7.71	7.53	7.27	7.07	8.01	7.57	7.45	7.24	7.5	7.3	7.39	7.2	6.72	7.91
TRACE & TOXIC															
AI	0.07	0.01	0												

HISTORY SHEET (WATER QUALITY)			
		Water Year	: 2017 - 2018
Site	: Jaldhaka NH-31	Code	: 027-LBDJPG
State	: West Bengal	District	Jalpaiguri
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: Jaldhaka	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Jaldhaka
Division	: Lower Brahmaputra Division (LBD), Jalpaiguri	Sub-Division	: Jaldhaka Lower Teesta Sub-Division,
Drainage Area	: 1590.0 Sq. Km.	Bank	: Right
Latitude	: 26°34'10"	Longitude	: 88°56'11"
Current Zero of Gauge (m)	: 74		
CATEGORY	Opening Date	Closing Date	
Gauge	: 08/12/1977		
Discharge	: 08/12/1977		
Sediment	: 01/12/1983		
Water Quality	: 01/07/2003		
Reduced Level	Opening Date	Closing Date	
74.0	08/12/1977	31/12/2010	
74.0	01/01/2011	30/12/2015	
74.0	31/12/2015	-	
74.0	01/01/2017	31/07/2017	
74.0	21/04/2014	31/12/2016	
74.0	08/02/1977	21/04/2014	

Station Name: Jaldhaka NH-31(027-LBDJPG)
Local River: Jaldhaka

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpa

PARAMETERS												
	01/06/2017	01/07/2017	01/08/2017	01/09/2017	03/10/2017	01/11/2017	01/12/2017	01/01/2018	01/02/2018	01/03/2018	02/04/2018	01/05/2018
Q (cumec)	91.85	625.54	281.57	549.44	278.51	66.22	32.76	21.33	17.08	26.91	21.88	63.59
CHEMICAL												
P-Tot(mgP/L)												
F(mg/L)	0											
NH3-N(mgN/L)	0											
Na(mg/L)	1.7	2.18	3.4	3.1	2.9		2.3					
B(mg/L)												
HCO3(mg/L)	0										48	
SO4(mg/L)											1.15	
Ca(mg/L)											5.6	
CO3(mg/L)	0										0	
Mg(mg/L)											9.25	
SiO2(mg/L)												
Alk-Phen(mgCaCO3/L)	0										0	
Cl(mg/L)	4	6.7	6.04	4.3	4	5.4	5.2	2.4	2.4	2	2.2	13
NO2-N(mgN/L)	0											
K(mg/L)	1.1	1.96	3.3	3	3.1		5.2					
ALK-TOT(mgCaCO3/L)	0										39.34	
TRACE & TOXIC												
PESTICIDES												
BIOLOGICAL/BACTERIOLOGICAL												
COD(mg/L)	7	12	14	11	12	11	10	6	6	6	5.8	7.9
DO SAT%(Percentage)	88.75	98.61	11	11.2	9.7	9.9	9.2	9.3	9.3	7.5	8.8	8.3
Chl-a(µg/L)												
FCol-MPN(MPN/100mL)												
BOD3-27(mg/L)	0.9	1.2	1.7	1.8	1.6	1.3	1.5	0.9	0.9	1	0.8	0.9
Tcol-MPN(MPN/100mL)												
DO(mg/L)	7.2	8										
PHYSICAL												
EC_FLD(µmho/cm)	96							91	91			
SS(mg/L)												
Colour_Cod(-)	Clear	Clear										
Temp(Degrees Celsius (°C))	26	26	25	28	25	22	20	17	17	21	21	21
pH_FLD(pH unit)	6.6							7.56				
pH_GEN(pH unit)	6.9	6.6	7	6.4	6.7	6.8	6.7	7.56	7.56	7.11	7.73	7.22
EC_GEN(µmho/cm)	187	80	108	91	170	108	96	91	91	86	83	64.2
Odour_Code(-)	odour free	odour free										
TDS(mg/L)	122	79	68	62	104	67	64	60	60	58	54	41
Turb(NTU)	2.6	1.8										
CHEMICAL INDICES												
HAR_Ca(mgCaCO3/L)											116.14	
HAR_Total(mgCaCO3/L)											46.46	

Water Quality Summary (River Water Summary) for the period : 2017 - 2018

Station Name: Jaldhaka NH-31(027-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Jaldhaka

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaigu

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	1364	15.03	177.61	360.13	29.8	66.88
CHEMICAL							
Cl	13	13	2	4.78	4.92	3.85	5.73
K	7	5.2	1.1	2.72	2.31	5.2	
HCO3	2	48	0	24	0		48
CO3	2	0	0	0	0		0
Mg	1	9.25	9.25	9.25			9.25
F	1	0	0	0	0		
NO2-N	1	0	0	0	0		
Na	7	3.4	1.7	2.53	2.56	2.3	
SO4	1	1.15	1.15	1.15			1.15
Alk-Phen	2	0	0	0	0		0
ALK-TOT	2	39.34	0	19.67	0		39.34
NH3-N	1	0	0	0	0		
Ca	1	5.6	5.6	5.6			5.6
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTERIOLOGICAL							
COD	13	14	5.8	8.98	10.67	8.25	6.57
BOD3-27	13	1.8	0.8	1.22	1.42	1.15	0.9
DO	2	8	7.2	7.6	7.6		
DO_SAT%	13	98.61	7.4	22.23	37.78	9.42	8.2
PHYSICAL							
TDS	13	122	41	69.31	82.83	62.75	51
Temp	13	28	17	22.46	25.5	19	21
pH_GEN	13	7.73	6.4	6.99	6.7	7.15	7.35
EC_GEN	13	187	64.2	103.94	122	96.5	77.73
EC_FLD	3	96	91	92.67	96	91	
Turb	2	2.6	1.8	2.2	2.2		
pH_FLD	2	7.56	6.6	7.08	6.6	7.56	
CHEMICAL INDICES							
HAR_Total	1	46.46	46.46	46.46			46.46
HAR_Ca	1	116.14	116.14	116.14			116.14

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Jaldhaka NH-31(027-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Jaldhaka

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaig

PARAMETERS	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	257	242	342	497	363	436	317	486	409	745	315	546	433	528	365
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27			0.28	0.38				0.6		0.96	1.15	0.98	1.24	1.14	1.46
COD										14.28	7.14	6.53	11	12.52	10.81
DO			7.78	8.08						6.06			7.26		7.6
DO_SAT%			94.77	99.29						71.11			88.83		30.79
CHEMICAL															
ALK-TOT	43.41	36.49	27.03	30.77	31.2	26.94									0
Alk-Phen	0	0	0.11	0.38	0.6	0									0
B			0												
CO3	0	0	0.14	0.46	0.72	0									0
Ca	12.06	17.91	9.64	8.84	9.64	9.55									
Cl	28.11	8.71	5.84	7.22	7.74	5	4.6	2.62	2.46	4.97	1.89	4.69	2.6	3.2	4.76
F			0												0
Fe	0.21	0.15	0.07	0.1	0.09										
HCO3	52.96	44.52	32.7	36.6	36.6	32.87									0
K	1.46	1.56	1.07	1.21	2.1	2.6	1.34	1.92	4.83	4.56	1.94	2.02	1.82	1.68	2.6
Mg	12.85	11.54	7.1	7.31	11.06	4.32									
NH3-N			0												0
NO2+NO3			0												
NO2-N			0												0
NO3-N			0												
Na	2.99	2.4	1.56	2	5.12	3.3	1.51	2.15	3.89	2.1	1.64	3.9	1.84	2.26	2.79
SO4	5.26	2.6	0.91	0.73	0.76										
o-PO4-P	0.7	0.83	0.53	0.58	0.63										
CHEMICAL INDICES															
HAR_Ca															
HAR_Total	85.31	83.75	53.66	51.88	70.17	43.16									
Na%	6.65	9.28	5.86	8.23	15.21	12.9									
RSC	0	0	0	0	0	0.01									
SAR	0.14	0.15	0.09	0.13	0.29	0.22									
PESTICIDES															
PHYSICAL															
EC_FLD															96
EC_GEN	54	70.4	63.6	59.12	63.46	54.32	56.61	82.22	80.2	80.31	108.22	76.65	51.96	79.9	121.08
SS															
Secchi	30.17	44.6	24.1	22.3	24.1	23.5									
TDS	37.33	46.6	45.6	40.32	44.46	39.85	30.5	43.68	42.3	37.23	89.95	56.46	39.38	60.2	81.42
Temp	28	25.8	25.4	25.8	25.8	24.46	25			23	23	23.6	25.6		25.46
Turb	2.43	14.8	17	19	18.4	13.81	5.24	8.62	4.88	12.56	3.95	1.62	33.68	18.2	2.2
pH_FLD															6.6
pH_GEN	7.41	7.39	7.34	7.44	7.34	6.78	7.42	7.1	7.21	6.89	7.99	7.15	6.82	6.68	6.7
TRACE & TOXIC															
AI	0.16	0.04	0												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Jaldhaka NH-31(027-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Jaldhaka

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaig

PARAMETERS							
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Q (cumec)	27.57	29.42	33.9	42.87	66.98	31.86	28.14
BIOLOGICAL/BACTERIOLOGICAL							
BOD3-27		0.67	0.25	0.3			
COD							
DO		8.1	7.77	9.25			
DO_SAT%		80.77	79.17	94.27			
CHEMICAL							
ALK-TOT	46.67	42.5	49.25	40.5	66		
Alk-Phen	0	0	1.12	0	0.33		
B			0				
CO3	0	0	1.35	0	0.4		
Ca	17.2	11.1	16.7	10.25	19.14		
Cl	10.3	7.19	7.72	10.3	5.15	5.77	2.22
F			0				
Fe	0.07	0.08	0.07	0.08			
HCO3	56.93	51.85	57.34	49.41	79.71		
K	1.41	0.98	1.23	2.3	2.6	3	1.77
Mg	13.93	12.79	12.57	21.41	7.53		
NH3-N			0				
NO2+NO3			0				
NO2-N			0				
NO3-N			0				
Na			2.25	2.9	3.94	4	2.98
SO4	1.84	5.29	0.7	0.62			
o-PO4-P	0.26	0.69	0.53	0.58			
CHEMICAL INDICES							
HAR_Ca							
HAR_Total	101.05	81.03	94.11	114.85	78.48		
Na%			6.41	5.71	10.06		
RSC	0	0	0.03	0	0		
SAR			0.11	0.12	0.2		
PESTICIDES							
PHYSICAL							
EC_FLD							
EC_GEN	129.67	100.25	110.63	72.05	98.42	113.75	83.43
SS							
Secchi	43	27.75	41.75	25.62	48.25		
TDS	75.33	59.75	60.25	45.05	61	67.93	52.73
Temp	19	16	16.25	16.25	16.75	17.75	16
Turb	0.73	0.87	1.5	1.35	1.17	2.12	1.15
pH_FLD							
pH_GEN	7.34	7.65	7.53	7.1	7.35	7.04	7.31
TRACE & TOXIC							
AI	0.01	0.03	0				

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Jaldhaka NH-31(027-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Jaldhaka

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaig

PARAMETERS								
Winter (Nov-Feb)								
	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Q (cumec)	36.83	28.01	33.78	38.28	23.47	34.08	35.18	34.34
BIOLOGICAL/BACTERIOLOGICAL								
BOD3-27	0.57		1.23	0.98	1.05	1.02	1.4	1.15
COD			18.36	10.2	6.62	13.17	11.64	8.25
DO			5.55			7.1	8.9	
DO_SAT%						63.93	94.21	9.43
CHEMICAL								
ALK-TOT								
Alk-Phen								
B								
CO3								
Ca								
Cl	2.27	4.47	10.85	2.64	5	3.12	3.8	3.85
F								
Fe								
HCO3								
K	5.17	6.12	4.6	1.56	1.85	2.38	2.33	5.2
Mg								
NH3-N								
NO2+NO3								
NO2-N								
NO3-N								
Na	6.1	5.75	4.04	2.44	3.62	2.4	2.87	2.3
SO4								
o-PO4-P								
CHEMICAL INDICES								
HAR_Ca								
HAR_Total								
Na%								
RSC								
SAR								
PESTICIDES								
PHYSICAL								
EC_FLD								91
EC_GEN	100.25	94.48	87.45	98.62	68.53	74.4	130.65	96.5
SS								
Secchi								
TDS	50.75	50.95	50.05	71	54.4	54.33	94.33	62.75
Temp				16.65	15.75	21.33	18.08	19
Turb	0.73	1.2	1.8	1.77	1.07	5.7	8	
pH_FLD								7.56
pH_GEN	7.4	7.14	7.84	8.1	7.63	7.08	7.27	7.15
TRACE & TOXIC								
AI								

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: Jaldhaka NH-31(027-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Jaldhaka

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaig

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	163	34	37.1	24.5	29.8	22	39.7	27.3	33.2	61.6	33.2	35.8	40	28.7	37.5
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27		0.43	0.3	0.17			0.3	0.9		1.15	1.07	1.2	0.97	1.27	0.9
COD										11.91	8.16	5.7	14.17	7.33	6.57
DO		7.9	7.93	7.7						7.38		6.7	7.23	7.83	
DO_SAT%		95.01	92.83	88.56						88.73		79.53	53.38	88.77	8.2
CHEMICAL															
ALK-TOT	30.18	36.67	36.29	44.67	45.33	39.46	64.75	34.84	55.74	32.79	59.02	19.67	81.97	41.34	39.34
Alk-Phen	0	0	0	0	0	0.06	0	0	0	0	0	0	0	1	0
B			0												
CO3	0	0	0	0	0	0.07	0	0	0	0	0	0	0	1.2	0
Ca	15.36	9.13	13.29	9.13	18.33	15.23	38	27.5	21.64	9.62	20.85	27.27	35.29	17.64	5.6
Cl	6.38	6.51	6.95	6.98	8	6.97	2.06	1.91	8.9	5.66	4.2	2.54	3.29	2.62	5.73
F			0												
Fe	0.22	0.07	0.25	0.12	0.11										
HCO3	36.82	44.73	44.27	54.49	55.31	47.99	79	42.5	68	40	72	24	100	48	48
K	1.61	1	1.27	1.98	6.96	2.22	1.82	5.11	4.24	5	1.32	1.73	2.09	2.52	
Mg	4.58	7.98	4.91	25.43	6.28	2.92	2.1	3.7	2.43	2.9	1.91	2.87	3.83	1.92	9.25
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N	0		0												
Na			2.07	4	6.06	3.1	3.26	4.65	2.72	3.98	4.13	2.02	1.93	2.46	
SO4	1.21	0.94	0.69	0.78	0.74			1.8		22.8	16.5	18.5	26.5	11.7	1.15
o-PO4-P	0.47	0.49	0.46	0.55	0.58										
CHEMICAL INDICES															
HAR_Ca															116.14
HAR_Total	57.4	56.08	53.25	128.81	71.99	50.23	103.75	84.17	64.22	36.13	60.08	80.13	104.18	52.1	46.46
Na%			7.47	6.22	13.65	10.83	5.98	8.79	6.19	12.79	13.98	4.33	3.35	6.63	
RSC	0	0	0	0	0	0.04	0	0	0	0	0	0	0	0	
SAR			0.12	0.15	0.32	0.18	0.13	0.19	0.11	0.21	0.26	0.08	0.07	0.11	
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	76.33	91.33	87.2	86.56	102.57	117.43	191.42	132.92	92.36	96.2	103.14	90.6	103.43	66.32	77.73
SS				72											
Secchi	38.67	22.83	33	22.6	45.83	38.06	95	68.75	54.1	24.05	52.12	68.17	88.23	44.1	
TDS	47.67	63.33	58	36.18	72.33	64.17	100	65.87	43.88	50.4	75.83	72.58	79.3	43.68	51
Temp	24.67	24.83	23.33	22.24	23	18				22.27	20.86	23.41	18.07	21.82	21
Turb	10.9	1.6	0.77	0.78	0.87	1.37	1.71	1.59	5.69	4.47	1.55	3.41	2.81	6.3	
pH_FLD															
pH_GEN	7.4	7.74	7.37	7.16	7.13	7.96	7.19	7.27	7.1	7.62	7.46	7.59	7.44	6.83	7.35
TRACE & TOXIC															
AI	0.06	0.02	0	0											

HISTORY SHEET (WATER QUALITY)			
		Water Year	: 2017 - 2018
Site	: DOMOHANI	Code	: 022-LBDJPG
State	: West Bengal	District	: Jalpaiguri
Basin	: BRAHMAPUTRA	Independent River	: Brahmaputra
Tributary	: Teesta	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Teesta
Division	: Lower Brahmaputra Division (LBD), Jalpaiguri	Sub-Division	: Jaldhaka Lower Teesta Sub-Division,
Drainage Area	: 9432.0 Sq. Km.	Bank	: Left
Latitude	: 26°33'46"	Longitude	: 88°45'42"
Current Zero of Gauge (m)	: 80		
CATEGORY	Opening Date	Closing Date	
Gauge	: 14/01/1972		
Discharge	: 14/01/1972		
Sediment	: 3/1/1973		
Water Quality	: 1/1/1973		
Reduced Level	Opening Date	Closing Date	
80.0	14/01/1972	31/05/2010	

Station Name: DOMOHANI(022-LBDJPG)
Local River: Teesta

Water Quality Data Sheet(River Water Summary) for the period : 2017 - 2018

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS

	01/06/2017	01/07/2017	01/08/2017	01/09/2017	03/10/2017	01/11/2017	12/1/2017	01/01/2018	01/02/2018	3/1/2018	4/2/2018	01/05/2018
Q (cumec)	254.44	2439.98	1557.99	777.29	1278.62	430.01	113.87	59.24	55.6	48.18	28.91	255.08
CHEMICAL												
Na(mg/L)		2.24	2.5	2.3	2.1		2.8					
Cl(mg/L)		4.7	5.03	4.8	4.1	6.3	5.9	3.1	3.1	2.3	3	9.3
K(mg/L)		3.29	2.6	3	2.8		3.5					
Mg(mg/L)											9.72	
NO2-N(mgN/L)												
NH3-N(mgN/L)												
SO4(mg/L)											0.9	
Ca(mg/L)											8	
P-Tot(mgP/L)												
ALK-TOT(mgCaCO3/L)											52.46	
Alk-Phen(mgCaCO3/L)											0	
F(mg/L)												
B(mg/L)												
SiO2(mg/L)												
CO3(mg/L)											0	
HCO3(mg/L)											64	
TRACE & TOXIC												
PESTICIDES												
BIOLOGICAL/BACTERIOLOGICAL												
COD(mg/L)		11	12	10	10	12	11	5.9	5.9	6	7.8	4
DO(mg/L)		7.6										
DO_SAT%(Percentage)		88.6	8.3	7.8	8.3	8.8	8.6	9	9	8.3	8.8	9.4
BOD3-27(mg/L)		1.4	1.4	1	1	1.2	1.2	0.8	0.8	1	1.1	0.9
FCol-MPN(MPN/100mL)												
Chl-f-a(µg/L)												
Tcol-MPN(MPN/100mL)												
PHYSICAL												
Colour_Cod(-)	Clear	Clear										
Odour_Code(-)	odour free	odour free										
EC_GEN(µmho/cm)		102	96	84	178	80	78	70	70	95	92	78.2
Temp(Degrees Celsius (°C))		23	24	20	21	20	19	17	17	20	21	22
pH_GEN(pH unit)		6.3	6.9	6.3	6.9	6.8	6.7	7.18	7.18	7.01	7.2	8.15
TDS(mg/L)		53	52	53	110	48	55	47	47	65	68	48
Turb(NTU)		1.4										
EC_FLD(µmho/cm)							78	70	70			
pH_FLD(pH unit)							6.7	7.18				
SS(mg/L)												
CHEMICAL INDICES												
HAR_Total(mgCaCO3/L)											57.63	
HAR_Ca(mgCaCO3/L)											144.08	

Water Quality Summary (River Water Analysis) for the period : 2017 - 2018

Station Name: DOMOHANI(022-LBDJPG)
Local River: Teesta

Division: Lower Brahmaputra Division (LBD), Jalpaiguri
Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS

	No. of Observations	Maximum	Minimum	Mean	Flood (Jun-Oct)	Winter (Nov-Feb)	Summer (Mar-May)
Q (cumec)	365	4558.53	21.76	680.96	1427.07	109.45	185.59
CHEMICAL							
Cl	11	9.3	2.3	4.69	4.66	4.6	4.87
K	5	3.5	2.6	3.04	2.92	3.5	
CO3	1	0	0	0			0
Mg	1	9.72	9.72	9.72			9.72
Na	5	2.8	2.1	2.39	2.28	2.8	
SO4	1	0.9	0.9	0.9			0.9
Alk-Phen	1	0	0	0			0
ALK-TOT	1	52.46	52.46	52.46			52.46
HCO3	1	64	64	64			64
Ca	1	8	8	8			8
TRACE & TOXIC							
PESTICIDES							
BIOLOGICAL/BACTE							
OROLOGICAL							
COD	11	12	4	8.69	10.75	8.7	5.93
BOD3-27	11	1.4	0.8	1.07	1.2	1	1
DO	1	7.6	7.6	7.6	7.6		
DO_SAT%	11	88.6	7.8	15.9	28.25	8.85	8.83
PHYSICAL							
TDS	11	110	47	58.73	67	49.25	60.33
pH_GEN	11	8.15	6.3	6.97	6.6	6.97	7.45
Temp	11	24	17	20.36	22	18.25	21
EC_GEN	11	178	70	93.02	115	74.5	88.4
EC_FLD	3	78	70	72.67		72.67	
Turb	1	1.4	1.4	1.4	1.4		
pH_FLD	2	7.18	6.7	6.94		6.94	
CHEMICAL INDICES							
HAR_Total	1	57.63	57.63	57.63			57.63
HAR_Ca	1	144.08	144.08	144.08			144.08

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: DOMOHANI(022-LBDJPG)

Local River: Teesta

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS	Flood (Jun-Oct)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Q (cumec)	1404	1158	1062	1590	1555	1495	1166	1094	1107	2341	1339	1582	1418	1773	1262
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27		0.43	0.34	0.42				0.74		0.96	1.15	1.14	1.18	1.2	1.18
COD										15.81	8.16	8.99	9.38	12.52	10.73
DO		7.74	7.78	8.14						6.48			7.5		7.6
DO_SAT%		89.72	93.41	99.22						70.09			94.16		22.76
CHEMICAL															
ALK-TOT	43.41	35.79	30.84	29.18	20.8	29									
Alk-Phen	0	0	1.53	0	0	0									
B			0												
CO3	0	0	1.84	0	0	0									
Ca	12.22	13.73	6.75	8.52	6.92	10.3									
Cl	16.06	6.77	9.77	7.21	10.58	5.38	6.5	2.72	2.63	4.29	1.98	5.03	2.82	3.3	4.65
F			0												
Fe	0.19	0.13	0.09	0.12	0.07										
HCO3	52.96	43.66	33.88	35.6	25.38	35.38									
K	1.45	1.55	1.15	1.7	1.93	2.23	1.71	1.86	5.72	5.28	1.77	2.26	1.8	1.78	2.83
Mg	8.7	13.23	7.75	6.85	10.74	3.92									
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N			0												
Na	3.22	2.6	1.76	2.31	4.95	3.23	1.75	1.86	4.96	2.38	1.98	4.3	2.02	2.3	2.3
SO4	3.05	1.31	0.92	0.77	0.88										
o-PO4-P	0.63	0.92	0.58	0.55	0.58										
CHEMICAL INDICES															
HAR_Ca															
HAR_Total	64.38	79.13	47.84	49.91	62.05	42.08									
Na%	10.85	9.95	8.24	9.46	17.8	13.69									
RSC	0	0	0.06	0	0	0									
SAR	0.19	0.16	0.12	0.15	0.31	0.22									
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	57.47	52.4	58.8	58.83	66.14	58.66	57.03	84.58	99.5	84.65	84.01	74.36	71.2	80.22	115.76
Secchi	30.17	34.4	16.81	21.42	17.3	25.75									
TDS	40.23	34.6	42.4	39.33	43.48	42.74	30.04	41.8	50.9	39.19	68	54.9	53.94	60.6	67.82
Temp	23.67	22.8	24.6	25.67	24.8	23.15	25.33			24	23	24.4	27		21.94
Turb	10	8.6	15.2	38.33	26.76	30.95	11.29	12.46	7.84	15.52	9.1	3.3	39.94	20.54	1.4
pH_FLD															
pH_GEN	7.39	7.36	7.56	7.35	7.18	6.81	7.5	7.55	7.84	7.2	7.84	6.98	6.62	6.98	6.62
TRACE & TOXIC															
Al	0.39	0.08	0												

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: DOMOHANI(022-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Teesta

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS								PARAMETERS
								Winter (Nov-F
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	
Q (cumec)	106.2	80.59	61.8	183.6	169.2	71.94	199.2	Q (cumec)
BIOLOGICAL/BACTERIOLOGICAL								BIOLOGICAL/BACTERIOLOGICAL
BOD3-27		0.43	0.25	0.55				BOD3-27
COD								COD
DO		8.62	7.95	9.05				DO
DO_SAT%		88.66	82.67	92.17				DO_SAT%
CHEMICAL								CHEMICAL
ALK-TOT	42	45.5	43.61	48	45.5			ALK-TOT
Alk-Phen	0	0	0	1.25	0			Alk-Phen
B			0					B
CO3	0	0	0	1.5	0			CO3
Ca	15	13.75	12.62	9.5	12.9			Ca
Cl	8.99	7.99	7.12	10.21	4.97	5	2.38	Cl
F			0					F
Fe	0.12	0.12	0.1	0.13				Fe
HCO3	51.24	55.51	53.2	55.51	55.51			HCO3
K	1.19	1.43	1.36	2.25	1.46	2.5	1.5	K
Mg	29.61	9.14	17.26	20.35	5.74			Mg
NH3-N			0					NH3-N
NO2+NO3			0					NO2+NO3
NO2-N			0					NO2-N
NO3-N			0					NO3-N
Na			2.3	2.97	3.45	4.25	2.94	Na
SO4	1.76	3.24	0.6	2.22				SO4
o-PO4-P	0.29	0.67	0.64	0.56				o-PO4-P
CHEMICAL INDICES								CHEMICAL INDICES
HAR_Ca								HAR_Ca
HAR_Total	160.86	72.47	101.75	108.55	56.17			HAR_Total
Na%			5.76	5.79	11.79			Na%
RSC	0	0.02	0	0	0			RSC
SAR			0.11	0.13	0.21			SAR
PESTICIDES								PESTICIDES
PHYSICAL								PHYSICAL
EC_FLD								EC_FLD
EC_GEN	71.8	93.5	91.03	67.95	70.88	83.03	76.78	EC_GEN
Secchi	37.5	34.38	31.12	23.75	32.25			Secchi
TDS	45	56.25	49.5	43.25	48.88	50.5	44.22	TDS
Temp	17.5	16.88	17.25	16.25	15.5	17.75	17	Temp
Turb	0.93	1.23	1	2.5	1.5	1.25	1.13	Turb
pH_FLD								pH_FLD
pH_GEN	7.37	7.62	7.5	7.2	7.33	7	7.43	pH_GEN
TRACE & TOXIC								TRACE & TOXIC
Al	0.21	0.06	0					Al

Water Quality Seasonal Average (River Water) for the period : 2017 - 2018

Station Name: DOMOHANI(022-LBDJPG)

Division: Lower Brahmaputra Division (LBD), Jalpaiguri

Local River: Teesta

Sub Division: Jaldhaka Lower Teesta Sub-Division, Jalpaiguri

PARAMETERS	Summer (Mar-May)														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q (cumec)	309	148	195	191	198	203	238	124	307	206	99.6	174	444	149	111
BIOLOGICAL/BACTERIOLOGICAL															
BOD3-27		0.53	0.4	0.33			0.6	0.77		1.17	1.07	1.2	0.89	1.33	1
COD										18.91	8.84	7.34	15.29	7.33	5.93
DO	7.9	8	7.83	8.13						7.39		7.9	6.33	8.23	
DO_SAT%	90.33	90.45	91.71	95.36						90.13		93.69	49.06	88.82	8.83
CHEMICAL															
ALK-TOT	27.33	40.12	39.41	70	35.33	32.79	82.79	36.89	55.74	42.62	52.46	32.79	72.13	48.23	52.46
Alk-Phen	0	0	1.21	1.33	0	0	0	0	0	0	0	0	0	1.16	0
B			0												
CO3	0	0	1.45	1.6	0	0	0	0	0	0	0	0	0	1.4	0
Ca	14.93	7.44	12.07	9.8	14.93	12.82	26	11.22	21.24	11.22	27.27	25.66	32.08	20.85	8
Cl	6.98	7.3	7.4	8.4	4.73	6.68	2.5	2.11	10	5.53	4.83	2.41	4.88	2.99	4.87
F			0												
Fe	0.06	0.1	0.45	0.07	0.07										
HCO3	33.35	48.94	45.12	82.15	43.11	40	101	45	68	52	64	40	88	56	64
K	1.39	1.39	1.32	2.44	1.11	2.03	2	5.32	4.66	5.38	1.92	1.38	2.93	2.95	
Mg	5.59	9.36	5.18	24.38	3.81	1.95	2	1.96	3.64	1.93	1.9	2.88	2.87	0.94	9.72
NH3-N			0												
NO2+NO3			0												
NO2-N			0												
NO3-N		0	0												
Na			2.6	3.96	2.14	2.87	3.02	4.98	3.18	3.69	4.75	1.88	3.65	2.38	
SO4	0.94	0.94	0.6	0.88	0.77			1.5		27.6	20.5	25.6	32.1	12.4	0.9
o-PO4-P	0.4	0.48	0.52	0.46	0.78										
CHEMICAL INDICES															
HAR_Ca															144.08
HAR_Total	60.62	57.48	51.89	126.09	53.2	40.19	73.33	36.22	68.27	36.09	76.09	76.15	92.16	56.04	57.63
Na%			9.74	6.24	7.98	12.84	7.41	18.73	7.09	12.45	12.62	4.06	8.5	5.85	
RSC	0	0	0	0	0	0	0.19	0.02	0	0.13	0	0	0	0	
SAR			0.16	0.15	0.13	0.2	0.14	0.33	0.14	0.2	0.26	0.07	0.19	0.1	
PESTICIDES															
PHYSICAL															
EC_FLD															
EC_GEN	66	78.33	79.28	72.57	74.97	87.75	180.74	96.17	102.96	104.34	113.62	114.96	94.95	75.83	88.4
Secchi	37.33	18.5	30.12	24.5	37.33	32.06	65	28.05	53.1	28.05	68.17	64.15	80.2	52.12	
TDS	41.33	54.67	53	50.6	53.67	49.99	90.74	46.45	48.27	54.58	85.12	91.75	71.86	44.84	60.33
Temp	21.33	21.33	22.5	23.33	20.67	20				22.53	21.18	22	20.32	19.05	21
Turb	4.33	5.33	1	1	3	1.47	1.65	4.06	10.53	3.24	2.02	5.65	9.92	8.49	
pH_FLD															
pH_GEN	7.38	7.67	7.47	7.13	7.07	7.73	7.03	7.5	7.29	7.63	7.15	7.43	7.19	6.66	7.45
TRACE & TOXIC															
Al	0.06	0.01	0												