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# BANGLADESH WATER DEVELOPMENT BOARD



## Design Data for

Construction of Inlet & Outlet at Parshemari km 9.536 in polder no-15 under “Rehabilitation of polder 15 at satkhira district” project under satkhira O&M Division-1, BWDB, Satkhira during the year 2021-22.

NAME OF DIVISION	: SATKHIRA O&M DIVISION-1, BWDB, SATHKIRA.
NAME OF CIRCLE	: KHULNA O & M CIRCLE, BWDB, KHULNA.
NAME OF ZONE	: SOUTH-WESTERN ZONE, BWDB, KHULNA.

## কারিগরী প্রতিবেদন

二〇〇〇年

১০ ২০২১-২০২২ ইং অর্থ বৎসরে সাতক্ষীরা পওর বিভাগ-১, বাপাউবো, সাতক্ষীরার আওতাধীন  
পোল্ডার নং ১৫ এর পার্শ্বেমারী নামক ছানের বাঁধের কিংমিঃ ৯.৫৩৬ তে ইনলেট এবং আউটলেট  
নির্মাণ কাজ।

প্রকল্পের নাম

“সাতক্ষীরা জেলার পোল্ডার নং-১৫ পুনর্বাসন” প্রকল্প।

### কাজের প্রয়োজনীয়তা

প্রকল্পের অঙ্গসমূহ

ঁ বাঁধ পুনবাসন ২৯.৫০০ কিঃমিৎ, নদী তীর সংরক্ষণমূলক কাজ ৭.৮১৯ কিঃমিৎ, বাঁধের ঢাল সংরক্ষণমূলক কাজ ২১.০৮১ কিঃমিৎ, রেগুলেটর নির্মাণ ৫ টি, ইনলেট/আউটলেট স্ট্রাকচার ১১ টি ও খাল পনঃখনন ৮ টি (২২.৫০০ কিঃমিৎ)।

উক্ত প্রকল্পের আওতায় ইনলেট এবং আউটলেট নির্মাণ কাজের ডিজাইন ডাটা প্রস্তুত করা হয়েছে।  
ইনলেট এবং আউটলেট নির্মাণ কাজের নিমিত্তে নকশা প্রয়োজনের লক্ষ্যে নকশা উপাত্ত অত্রাসথ  
সংযোজন করা হলো।

  
১৫. ১) - ১৭  
( মোঃ আবুল খায়ের )  
নির্বাহী প্রকোশলী  
সাতক্ষীরা পওর বিভাগ - ১  
বাপাউরো, সাতক্ষীরা ।

ପ୍ରକାଶନ ମେସିନ  
' 25/11/21  
( ମୋହ ଜାକିର ହୋଟେଲ )  
ଉପ-ବିଭାଗୀୟ ପ୍ରକୋଷଳୀ  
ଶ୍ୟାମନଗର ପତ୍ର ଉପ-ବିଭାଗ  
ବାପାଟୁବୋ, ଶ୍ୟାମନଗର, ସାତକ୍ଷିରା ।


  
 (মোঃ সাজিদুল হক)

## **Annexure – A**

## **DATA CHECKLIST FOR THE DESIGN OF DRAINAGE INLET & OUTLET STRUCTURE**

While submitting proposal for the design of Sluice, Regulator or Water Control Structure, this Data Checklist Shall be filled up and sent to the design office along with other requisites mentioned herein.



## 1. PURPOSE OF THE STRUCTURE

**I. PURPOSE OF THE STRUCTURE**  
Identify the purpose(s) that has to be served by the structure and put tick mark accordingly :

- |     |  |   |   |
|-----|--|---|---|
| 1.1 | Pre-monsoon Drainage                           | : | ✓ |
| 1.2 | Monsoon Drainage                               | : | ✓ |
| 1.3 | Post monsoon Drainage                          | : | ✓ |
| 1.4 | Prevention of pre-monsoon flood                | : | ✓ |
| 1.5 | Prevention of flood                            | : | ✓ |
| 1.6 | Flushing of irrigation water                   | : | ✓ |
| 1.7 | Retention of post monsoon water for irrigation | : |   |

## 2. MAPS

- MAPS  
2.1 Project Index Map : Attached  
2.2 Basin Map : Attached  
2.3 Site Plan : Attached

### 3. HYDROLOGICAL DATA

### 3.1 Rainfall Data :

3.1.1 Is there any rainfall station within the catchments area? If so, specify the name(s) and length of records available :

Yes

No  ✓

Station No.	Name of Station	Length of records available	Remarks

3.1.2 Specify the name and length of records of the rainfall station close to the catchments od the proposed structure :

Station No.	Name of Station	Length of records available	Remarks
CL- 506	Kaikhali	1989-2017	

**3.2 Water Level Data :**

3.2.1 Is there any water level station on the outfall river at or near the structure site? If so, mention the name of the station(s) :

Yes

No

Station No.	Name of Station	Length of records available	Distance (u/s or d/s) from structure	Remarks
SW 165	Kobadak Forest Office	1990-2020	2.270 Km (D/S)	

3.2.2 Specify the name of at least one station U/S and one station D/S of the structure site with distance :

U/S Station : Pratobnagar

U/S distance : 18.800 km

D/S Station : Kobadak Forest Office

D/S distance : 2.270 Km

3.2.3 Is there any water level station on the drainage channel corresponding the proposed structure? If so, specify the name.

Yes

No

3.2.4 Mention the highest flood level (H.F.L) ever experienced in the basin indicating the source of the record

H.F.L (ever experienced) = 3.95 m(PWD) from gauge level at 4.16m(PWD) May 2021 station/  
From average public information.

**3.3 Discharge Data :**

3.3.1 Is ther any record of discharge in the drainage channel? If so, enclose the data as available:

S  
One

Yes

No

Enclose discharge data for the year of ..... at station .....

#### 4. MORPHOLOGICAL DATA

4.1 (a) Are the banks of the out fall river and drainage channel at or near the structure site stable?

Yes

No

(b) If not, show the movement of the bank in each year in a map.

Enclosed ..... No. of Map.

(c) What is the average rate of erosion in each year?

Average rate of erosion ..... m /year (approx.).

4.2 Cross-section of the drainage channel for at least 0 km u/s and 0 km d/s of the structure site at an interval of 0 m.

Enclosed 0 (Zero) No(s) of cross section.

4.3 Long section of the drainage channel for at least 0 Km u/s from the structure site and up to the outfall river in the d/s

Enclosed 0(Zero) No(s) of long section.

4.4 Cross-section of the outfall river from length of 250m u/s and 250m d/s from the confluence point of drainage channel and the outfall river.

Enclosed 03 (Three) No(s) of cross section.

#### 5. MISCELLANEOUS DATA

##### 5.1 Data related with Embankment / Road connecting the structure

5.1.1 Existig or proposed road / embankment profile for at least 150m on each side of the proposed structure :

New Embankment Design Data Submited

5.1.2 Existing or proposed top eleation, top width and side slopes of embankment / road at the structure site :

- i) Top Elevation : 5.00 m
- ii) Top Width : 5.00 m
- iii) C/S Slope : 1 : 2.5
- iv) R/S Slope : 1 : 3

5.1.3 Type of expected traffic loading on road/embankment.

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### H 20 Tones Loading

#### 5.2 Data Related with Drainage Aspects :

5.2.1 Are the existing section and bed slope of the drainage channel adequate for complete or desired level of drainage?

Yes

No

5.2.2 If not, does the scheme include excavation of the drainage channel? If so, the design cross section and long section may be furnished as requirement indicated in Para 4.2 and 4.3

Yes

No

Enclosed ..... cross sections in 2 Sheet(s) & one long-section of the proposed drainage channel has to be prepared.

5.2.3 (a) Is the complete drainage of the basin necessary?

Yes

No

(b) If not, mention the drainage level required & distance of such level from the proposed structure site.

Drainage Elevation Requirement 1.00 m(PWD)

Distance from the structure site: Approx. 0.500 Km

5.2.4 From the field condition propose the invert level of the structure which can allow desired level of drainage from field condition.

(a) Proposed invert level 0.20 m(PWD)

(b) Invert level nearby existing structure(s)..... m(PWD)

5.2.5 From the field condition, what is the maximum level of acceptable flooding on the basin during the drainage period?

Acceptable flooding level 1.60 m(PWD).

5.2.6 Desired Post Monsoon Drainage level :

Date: October 31

Level 1.50 m(PWD)

Date: December 31

Level 1.30 m(PWD)

Date: March 31

Level 1.40 m(PWD)

#### 5.3 Data Related with irrigation Aspects :

5.3.1 Specify the total cultivable and irrigable area within the project.

Cultivable Area 3441 Ha.

Irrigable Area 3441 Ha.

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5.3.2 Principal crops with acreage in the basin with present and future cropping pattern.

Enclosed in Shrimp farming, Fisheries & Paddy cultivation number of sheet(s)

5.3.3 Proposed retention level of water in the u/s of the drainage channel of the structure for irrigation.

Retention Level : (+) 0.80 m(PWD)

5.3.4 For Irrigation by flushing of water, specify the period of such irrigation.

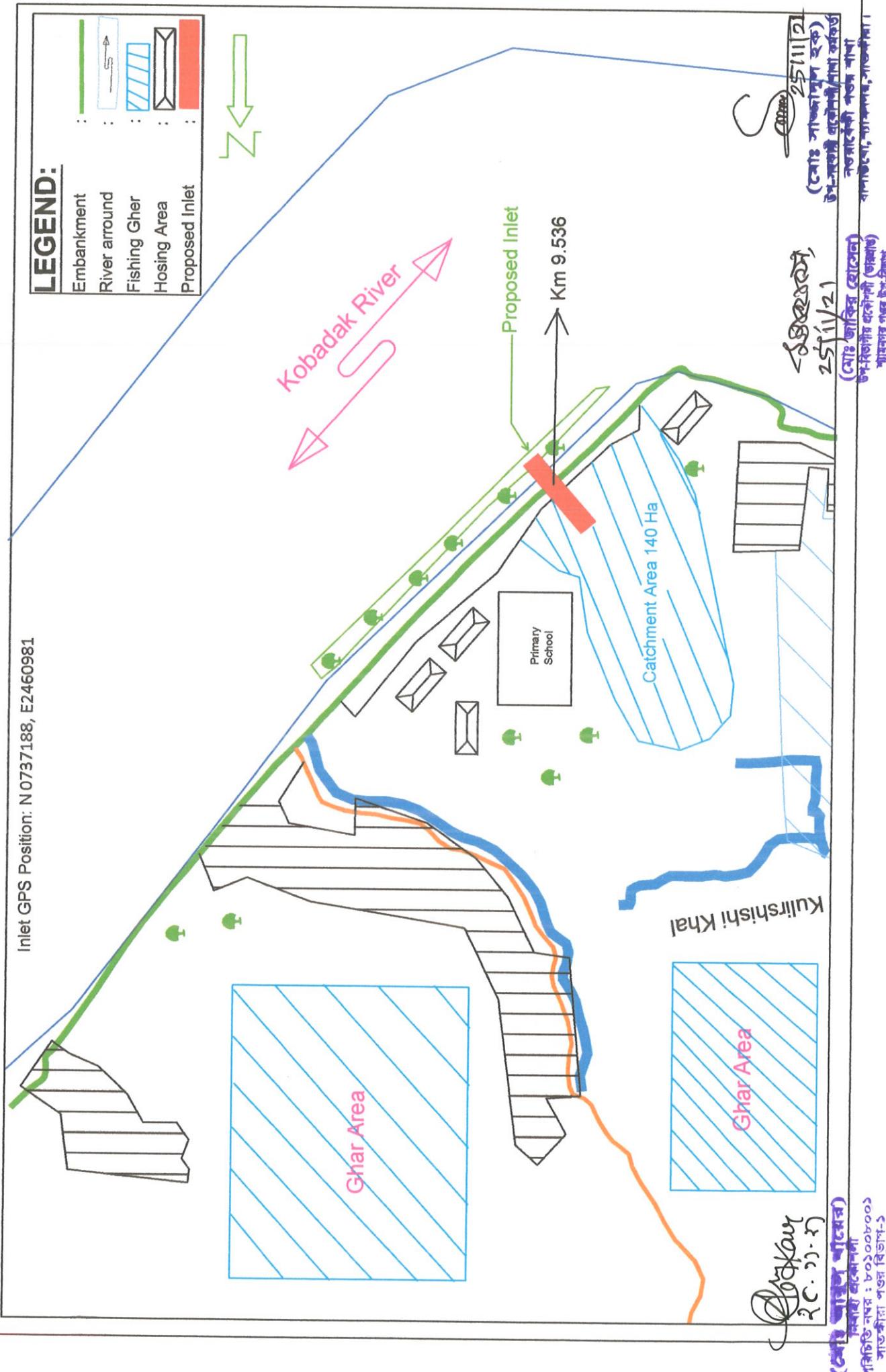
Period from December to 31<sup>st</sup> March.

*S. K. Hossain*  
৭০. ১১. ৩০  
(মোঃ আবুল আয়ের)  
মির্জাপুর পৌরসভা  
পরিচিত নম্বর : ৮০১০০৮০০  
সাতক্ষীরা পওর বিভাগ-১  
বাগাটবো, সাতক্ষীরা।

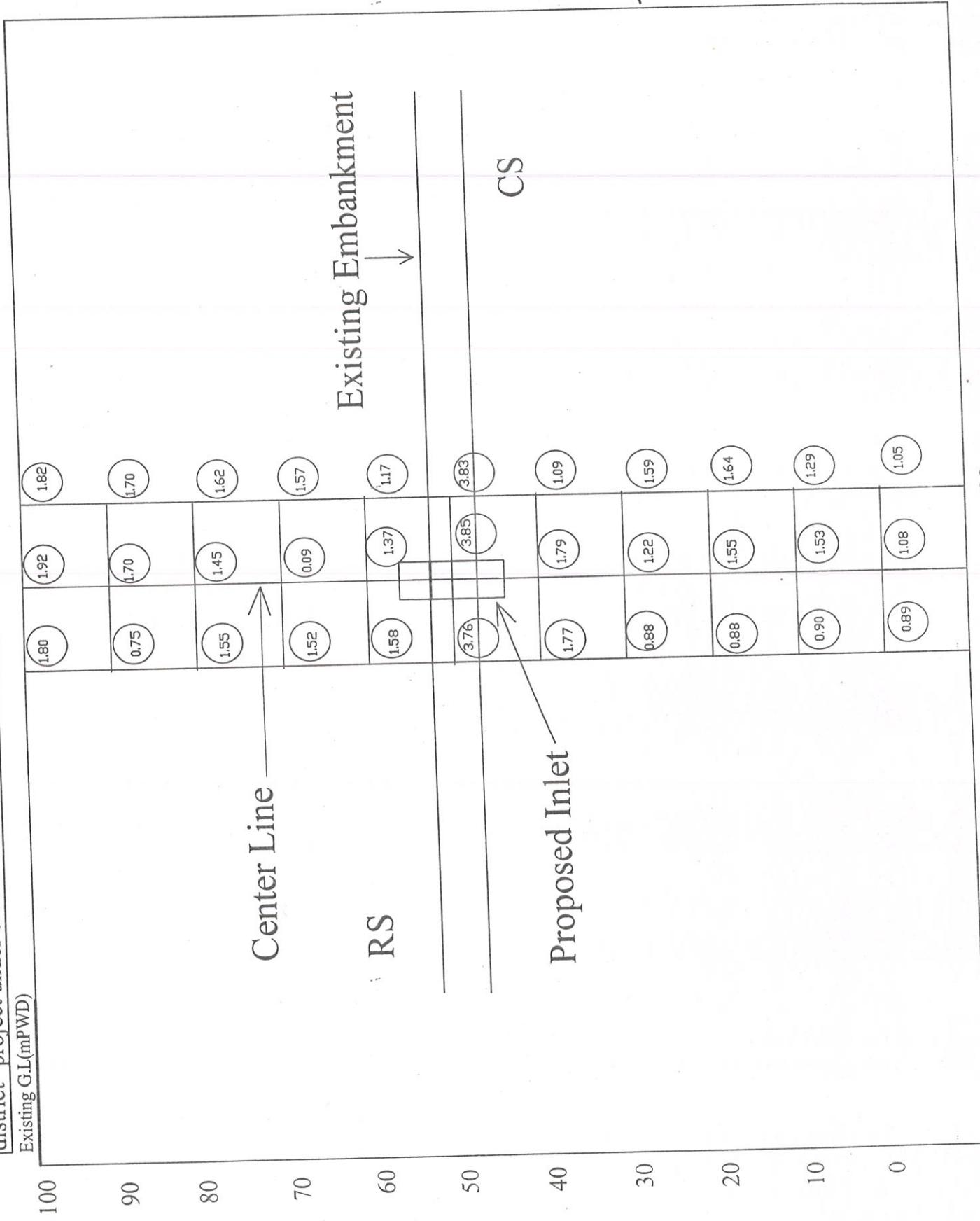
*S. K. Hossain*  
২৫/১/২১  
(মোঃ জাকির হোসেন)  
উপ-বিড়াল পৌরসভা (অরণ্য)  
শ্যামদগুর পওর উপ-বিভাগ  
বাগাটবো, শ্যামদগুর, সাতক্ষীরা।

*S. K. Hossain*  
২৫/১/২১  
(মোঃ সাজিদুল হক)  
উপ-সহকারী পরিচালনা/পাথা বর্কচা  
নশুয়ারেকী পত্তন পাথা  
বাগাটবো, শ্যামদগুর, সাতক্ষীরা।

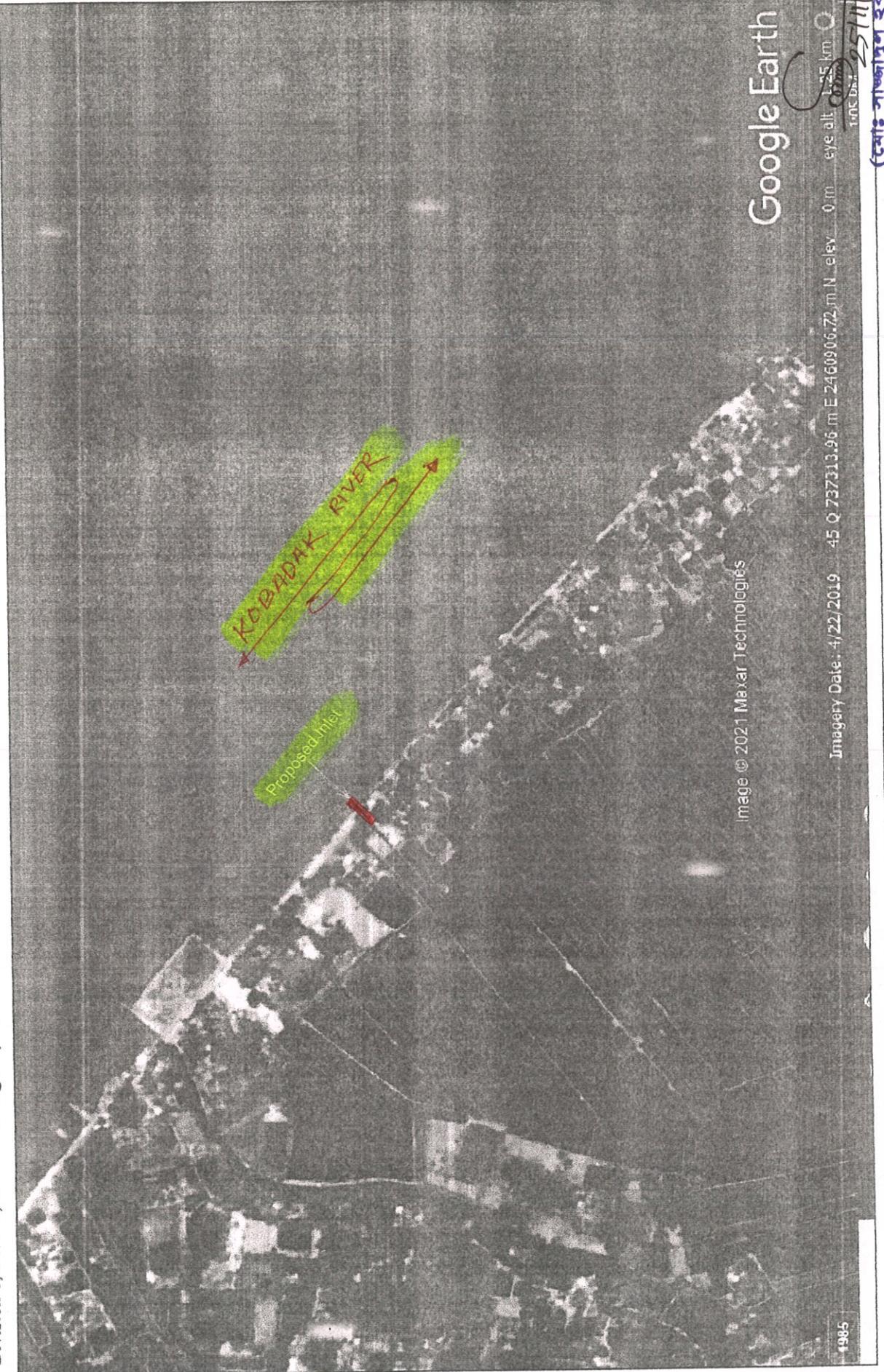
Site Plan For Construction of Inlet & Outlet at Parsuemari km 9.536 in polder no-15 under “Rehabilitation of polder 15 at satkhira district” project under satkhira O&M Division-1, BWDB, Satkhira during the year 2021-22.



Construction of Inlet & Outlet at Parsheemari km 9.536 in polder no-13 under Rehabilitation of Polder No-13 "District" project under sathkira O&M Division-1, BWDB, Satkhira during the year 2021-22.



Google Map For Construction of Inlet & Outlet at Parshemari km 9.536 in polder no-15 under "Rehabilitation of polder 15 at satkhira district" project under satkhira O&M Division-1, BWDB, Satkhira during the year 2021-22.



## **POLDER - 15, SHYAMNAGAR, SATKHIRA**



**LEGEND:**

**CS Chainage Line  
Khal in the Polder-15  
Drainage Sluice  
Embankment  
River around Polder-15  
Interior Road Network  
Bazar/School area**

DS-03, Box Sluice  
At Gabura.

Gabura Bazaar

POLDER - 13-14/1-2

Gabura Bazar

## Kholpatuya River

# Kholpatuya River

POLDER - 5

POLDER - 15  
GABURA

DS-04, Box Sluice  
At Chakbara.

POLDER - 14/1

Kholpatuya River

DS-05, Box Sluice  
At Dumuria.

**Box Sluice**

10

## Kholpatuya River

Dristi-Nandan Complex

DS-01, Box Sluice  
At 9 no. Sora.

### Kholpatuya River

S  
Arpangasia  
River

25/11/21  
०४४ सार्वजनिक इक्के)  
एकांकी घटेनवी/वाचा लकड़ा  
उद्यावेकी गतिव वाचा  
वाचा नामसंबंधीयाः

N-2467500

N-2465000

N-2462500

N-2460000

N-2457500

E-735000

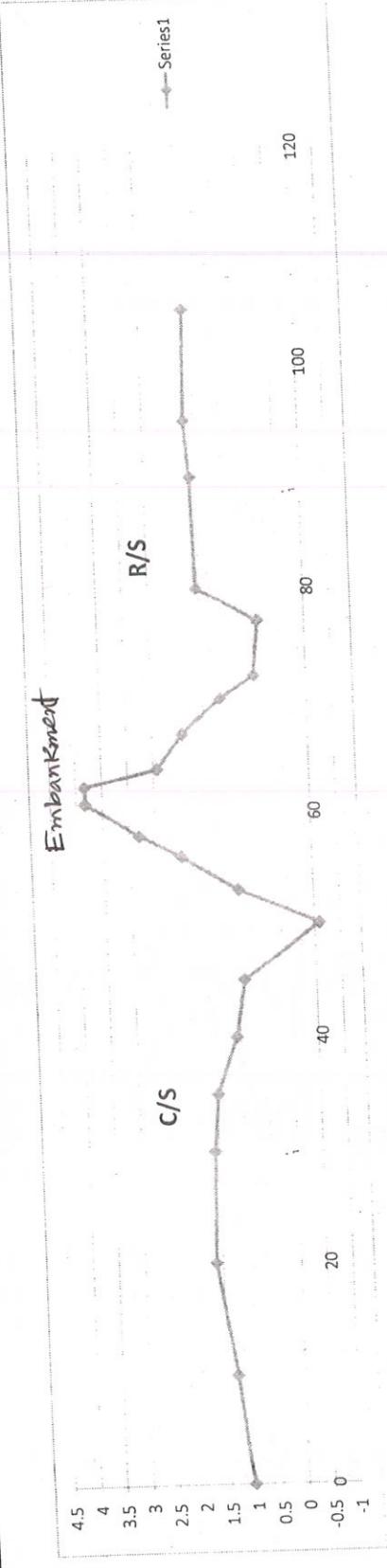
E-737500

S

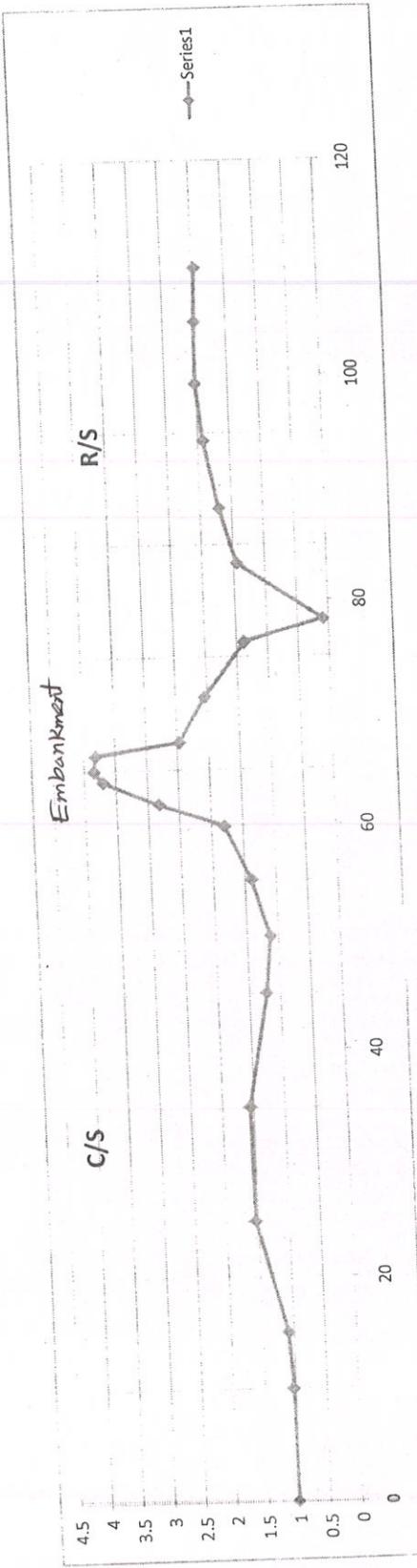
X-section for Construction of Inlet at Parshemari km 9.536 in polder no-15 under "Rehabilitation of polder 15 at satkhira district" project under satkhira O&M Division-1, BWDB,

Satkhira.

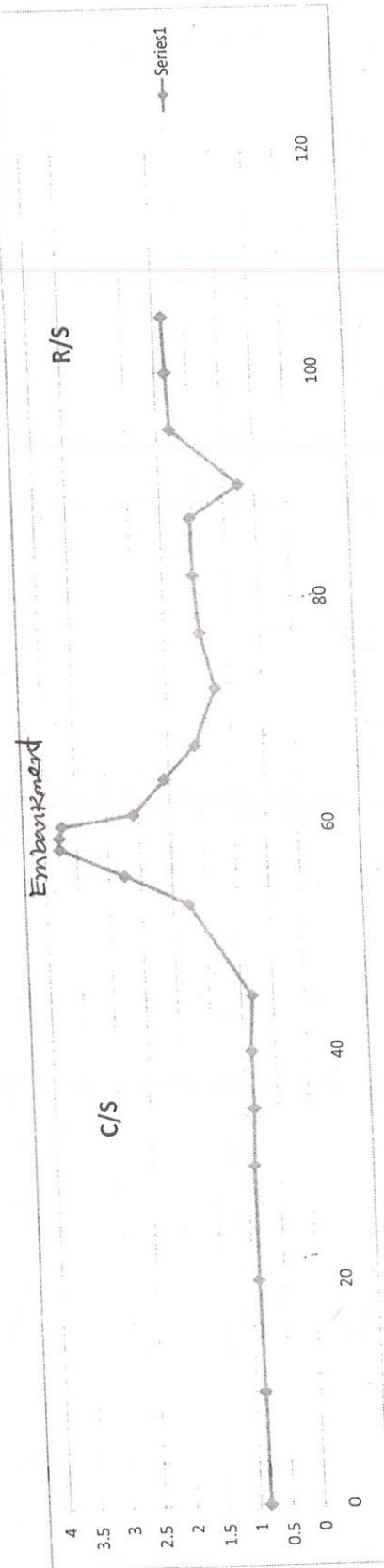
C/S at Km 9.526										
Distance	0	10	20	30	35	40	45	50	53	56
Existing R/L	1.05	1.29	1.64	1.59	1.49	1.09	0.89	-0.6	0.95	2.02



C/S at Km 9.536										
Distance	0	10	15	25	35	45	50	55	60	62
Existing R/L	1.05	1.03	1.08	1.53	1.55	1.22	1.13	1.39	1.79	2.82



C/S at Km 9.546																								
Distance	Existing R/L	0	10	20	30	35	40	45	53	55.5	58	59	60	61	64	67	72	77	82	87	90	95	100	105
0.84	0.86	0.89	0.89	0.9	0.87	0.88	0.83	1.77	2.75	3.77	3.76	3.72	2.59	2.08	1.58	1.23	1.44	1.52	1.55	0.75	1.80	1.84	1.87	



S 25/11/21  
(Md. Sazzadul Haque)  
Sub-Assistant Engineer/SO  
Nowapenki O&M Section  
BWDB, Shyammegar.

  
Md. Zakir Wossain  
Sub-Divisional Engineer  
Shyamnagar O&M Sub-Division  
BWDB, Shyamnagar

  
(Md. Abul Khaed)  
Executive Engineer  
Satkhira O&M Division  
BWDB, Satkhira.

RiverName	StationID	StationName	Year	MaxOfWL	MinOfWL
Betna-Kholpetua	SW26	Pratobnagar	1990	2.61	-2.46
Betna-Kholpetua	SW26	Pratobnagar	1991	2.88	-2.44
Betna-Kholpetua	SW26	Pratobnagar	1992	3.09	-1.99
Betna-Kholpetua	SW26	Pratobnagar	1993	3.10	-2.08
Betna-Kholpetua	SW26	Pratobnagar	1994	2.89	-2.18
Betna-Kholpetua	SW26	Pratobnagar	1995	3.47	-2.31
Betna-Kholpetua	SW26	Pratobnagar	1996	2.64	-2.40
Betna-Kholpetua	SW26	Pratobnagar	1997	2.92	-2.50
Betna-Kholpetua	SW26	Pratobnagar	1998	3.11	-2.59
Betna-Kholpetua	SW26	Pratobnagar	1999	2.66	-2.89
Betna-Kholpetua	SW26	Pratobnagar	2000	3.22	-2.82
Betna-Kholpetua	SW26	Pratobnagar	2001	2.97	-2.87
Betna-Kholpetua	SW26	Pratobnagar	2002	2.81	-1.77
Betna-Kholpetua	SW26	Pratobnagar	2003	2.62	-1.97
Betna-Kholpetua	SW26	Pratobnagar	2004	2.68	-1.97
Betna-Kholpetua	SW26	Pratobnagar	2008	2.75	-1.99
Betna-Kholpetua	SW26	Pratobnagar	2009	2.96	-1.61
Betna-Kholpetua	SW26	Pratobnagar	2010	3.49	-1.76
Betna-Kholpetua	SW26	Pratobnagar	2011	3.90	-1.87
Betna-Kholpetua	SW26	Pratobnagar	2012	3.76	-1.80
Betna-Kholpetua	SW26	Pratobnagar	2013	3.01	-1.72
Betna-Kholpetua	SW26	Pratobnagar	2014	2.77	-1.81
Betna-Kholpetua	SW26	Pratobnagar	2015	2.69	-1.81
Betna-Kholpetua	SW26	Pratobnagar	2016	2.96	-1.89
Betna-Kholpetua	SW26	Pratobnagar	2017	3.11	-1.85
Betna-Kholpetua	SW26	Pratobnagar	2018	3.23	-1.42
Betna-Kholpetua	SW27	Pratobnagar	2019	3.410	-1.340
Betna-Kholpetua	SW28	Pratobnagar	2020	3.490	-2.300



S  
25/11/21  
(ମୋଟ ସାତାଦୂଷ ହର)  
ଉପ-ଶକ୍ତି ଗୋପନୀ/ପଣ୍ଡା ବରତା  
ନାନାରେକୀ ପତର ଥାଏ  
ବାପାଉବୋ, ଶ୍ୟାମଲାର, ନାନାରେକୀ ।

RiverName	StationID	Station	Year	MaxOfWL	MinOfWL
Kobadak	SW165	Kobadak Forest Office	1990	2.93	-1.78
Kobadak	SW165	Kobadak Forest Office	1991	2.49	-1.84
Kobadak	SW165	Kobadak Forest Office	1992	2.55	-2.25
Kobadak	SW165	Kobadak Forest Office	1993	3.00	-2.30
Kobadak	SW165	Kobadak Forest Office	1994	2.49	-2.16
Kobadak	SW165	Kobadak Forest Office	1995	2.53	-2.32
Kobadak	SW165	Kobadak Forest Office	1996	2.95	-2.45
Kobadak	SW165	Kobadak Forest Office	1997	2.65	-2.35
Kobadak	SW165	Kobadak Forest Office	1998	2.23	-2.65
Kobadak	SW165	Kobadak Forest Office	1999	2.27	-2.74
Kobadak	SW165	Kobadak Forest Office	2000	2.22	-2.44
Kobadak	SW165	Kobadak Forest Office	2001	1.85	-2.87
Kobadak	SW165	Kobadak Forest Office	2008	2.62	-2.08
Kobadak	SW165	Kobadak Forest Office	2009	3.27	-2.28
Kobadak	SW165	Kobadak Forest Office	2010	2.34	-2.58
Kobadak	SW165	Kobadak Forest Office	2011	2.63	-2.58
Kobadak	SW165	Kobadak Forest Office	2012	2.42	-2.80
Kobadak	SW165	Kobadak Forest Office	2013	4.00	-2.58
Kobadak	SW165	Kobadak Forest Office	2014	2.20	-2.57
Kobadak	SW165	Kobadak Forest Office	2015	2.26	-2.86
Kobadak	SW165	Kobadak Forest Office	2016	1.97	-2.73
Kobadak	SW166	Kobadak Forest Office	2020	3.54	-1.32



S  
25/11/21  
(মোঃ সাজ্জাদুল ইক)  
ডপ-সহকারী ধর্মোন্নী/শাখা কর্মকর্তা  
নওয়াবেকী পওর শাখা  
বাগাতোৰো, শ্যামলগঞ্জ, সাতক্ষীরা।

**Yearly Rainfall information of CL506\_Kaikhali & CL515\_Paikgacha nearest of Polder-15**

District	StationName	StationID	Year	Rainfall (mm)
Satkhira	Kaikhali	CL506	1989	1641.70
Satkhira	Kaikhali	CL506	1990	2773.30
Satkhira	Kaikhali	CL506	1991	1709.20
Satkhira	Kaikhali	CL506	1992	1990.10
Satkhira	Kaikhali	CL506	1993	1789.40
Satkhira	Kaikhali	CL506	1994	1788.00
Satkhira	Kaikhali	CL506	1995	1870.10
Satkhira	Kaikhali	CL506	1996	1245.20
Satkhira	Kaikhali	CL506	1997	1771.10
Satkhira	Kaikhali	CL506	1998	2718.10
Satkhira	Kaikhali	CL506	1999	2023.90
Satkhira	Kaikhali	CL506	2000	1648.70
Satkhira	Kaikhali	CL506	2001	1839.90
Satkhira	Kaikhali	CL506	2002	1585.50
Satkhira	Kaikhali	CL506	2003	1474.40
Satkhira	Kaikhali	CL506	2004	2239.20
Satkhira	Kaikhali	CL506	2005	2288.10
Satkhira	Kaikhali	CL506	2006	1743.50
Satkhira	Kaikhali	CL506	2007	2499.20
Satkhira	Kaikhali	CL506	2008	1635.70
Satkhira	Kaikhali	CL506	2009	1264.37
Satkhira	Kaikhali	CL506	2010	1433.50
Satkhira	Kaikhali	CL506	2011	2208.25
Satkhira	Kaikhali	CL506	2012	1557.30
Satkhira	Kaikhali	CL506	2013	1517.90
Satkhira	Kaikhali	CL506	2014	2409.80
Satkhira	Kaikhali	CL506	2015	2230.80
Satkhira	Kaikhali	CL506	2016	1868.90
Satkhira	Kaikhali	CL506	2017	2110.20

District	StationName	StationID	Year	Rainfall (mm)
Khulna	Paikgacha	CL515	1989	1092.00
Khulna	Paikgacha	CL515	1990	2051.10
Khulna	Paikgacha	CL515	1991	2052.00
Khulna	Paikgacha	CL515	1992	1294.00
Khulna	Paikgacha	CL515	1993	1685.70
Khulna	Paikgacha	CL515	1994	1456.60
Khulna	Paikgacha	CL515	1995	1638.80
Khulna	Paikgacha	CL515	1996	1631.40
Khulna	Paikgacha	CL515	1997	2164.20
Khulna	Paikgacha	CL515	1998	1994.10
Khulna	Paikgacha	CL515	1999	1416.10
Khulna	Paikgacha	CL515	2000	1690.00
Khulna	Paikgacha	CL515	2001	1507.40
Khulna	Paikgacha	CL515	2002	
Khulna	Paikgacha	CL515	2003	
Khulna	Paikgacha	CL515	2004	
Khulna	Paikgacha	CL515	2005	
Khulna	Paikgacha	CL515	2006	
Khulna	Paikgacha	CL515	2007	
Khulna	Paikgacha	CL515	2008	
Khulna	Paikgacha	CL515	2009	1011.00
Khulna	Paikgacha	CL515	2010	
Khulna	Paikgacha	CL515	2011	1704.02
Khulna	Paikgacha	CL515	2012	1069.23
Khulna	Paikgacha	CL515	2013	1514.75
Khulna	Paikgacha	CL515	2014	2043.60
Khulna	Paikgacha	CL515	2015	2985.00
Khulna	Paikgacha	CL515	2016	2721.00
Khulna	Paikgacha	CL515	2017	2648.00

Rainfall Station data: CL-515 Paikgacha & CL-506 Kaikhali

Paikgacha\_Station ID: CL515

Babunia

Kallash

Nalianala

Gujakati

Kinukity

Pratapnagar

Nakipur

Atia

Gabura Union গুবুরা ইউনিয়ন

Kaikhali\_Station ID: CL506

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S  
Chowdhury

(মেঝে সাজ্জাদুল হক)  
উপ-সহকারী পর্যবেক্ষণ/পাথো কর্মকর্তা  
নওয়াবেংকী পত্তির শাখা  
বালাইগাঁও, স্বামুনগর, সাতক্ষীরা।  
25/11/21

