

**BEFORE THE NATIONAL GREEN TRIBUNAL,
EASTERN ZONE BENCH, KOLKATA
O.A. No. 137/2024/EZ
(Earlier O.A. No. 608 /2024/PB)**

IN THE MATTER OF:

IN REPLY - NEWS ITEM PUBLISHED IN THE INDIA.COM DATED 22.04.2024 TITLED "AFTER BENGALURU, WATER CRISIS HITS KOLKATA CITY AS GROUNDWATER LEVEL DEPLETES IN MANY AREAS, RESIDENTS EXPRESS CONCERN"

...APPLICANT

VERSUS-

WEST BENGAL STATE POLLUTION CONTROL BOARD & ORS

...RESPONDENT(S)

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Filed through:-

Ashok Prasad
ASHOK PRASAD,
ADVOCATE
For U.O.P



SL. NO. 34 DT. 25.08.2024

BEFORE THE NATIONAL GREEN TRIBUNAL,
EASTERN ZONE BENCH, KOLKATA

O.A. No. 608/2024

IN THE MATTER OF:IN REPLY - NEWS ITEM PUBLISHED IN THE
INDIA.COM DATED 22.04.2024 TITLED "AFTER
BENGALURU, WATER CRISIS HITS KOLKATA
CITY AS GROUNDWATER LEVEL DEPLETES IN
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WEST BENGAL STATE POLLUTION CONTROL BOARD & ORS

...RESPONDENT

**COUNTER AFFIDAVIT/REPLY FOR AND ON BEHALF OF THE
CENTRAL GROUND WATER BOARD (CGWB), KOLKATA****MOST RESPECTFULLY SHOWETH:**

I, Dr. Anadi Gayen, aged about 55 years, employed / appointed as the Regional Director, Central Ground Water Board, Kolkata, functioning / officiating at Kolkata, do hereby solemnly affirm and declare as under:-

1. That I am the authorised signatory in the aforementioned matter. On the basis of records, I am well conversant with the facts of the case and hence, competent to swear this affidavit.
2. That I have read and understood the order dated 22.04.2024 of Hon'ble NGT, Principal Bench, New Delhi and filed this Counter Affidavit in compliance of directions under Para 7 (iii) and Para 8 of the order.
3. That I have read and understood the contents of the present Affidavit and state that the contents mentioned in the Affidavit are true and correct to the best of my knowledge.



डॉ. अनादि गायन
24/08/2024

डॉ. अनादि गायन / Dr. Anadi Gayen
क्षेत्रीय निदेशक / Regional Director
भारत सरकार / Government of India
जल शक्ति मंत्रालय / Ministry of Jal Shakti
जन संसाधन, जल विकास और संधि संरक्षण विभाग
Department of Water Resources, RD & GR
केंद्रीय भूमि जल बोर्ड / Central Ground Water Board
पूर्वी क्षेत्र, कोलकाता / Eastern Region, Kolkata

BRIEF SUBMISSIONS

4. That the O.A. No. 608/2024 is a Suo Moto case filed by the Hon'ble National Green Tribunal, Principal Bench, New Delhi in the matter of news item published in the India.com dated 22.04.2024 titled "After Bengaluru, water crisis hits Kolkata city as groundwater level depletes in many areas, residents express concern".
5. That the Hon'ble Tribunal under its order dated 22.04.2024 noted that:
 - a) The matter relates to the rising water crisis in Kolkata (West Bengal). As per the article, Kolkata is facing acute water shortage as ground water level has depleted significantly. Moreover, the demand for the supplied water tankers has gone up with the rising in the temperature in the area. It states that increase in demand for water and the resultant scarcity is being felt in pockets across the city as the residents struggle to grapple with the heat.
 - b) The article alleges that the areas that are extremely dependent on underground water are the worst affected this summer as the water level has gone down in the absence of rain. It states that the areas of east and southeast Kolkata are dependent on groundwater and the areas in the city where the pressure of water in the supply line is low are also reeling from a crisis.
6. That the Hon'ble Tribunal under its order dated 22.04.2024 also observed that:
 - a) The above news item indicates violation of the Water (Prevention and Control of Pollution) Act, 1974 and the provisions of The Environment (Protection) Act, 1986.
 - b) The news item raises substantial issue relating to compliance of the environmental norms, specially the issue of depleting groundwater level and implementation of the provisions of scheduled enactment.
7. That in this connection, the respectful submission is that in the mentioned area *i.e.* **Kolkata city**, water is mostly supplied by Kolkata Municipal Corporation.



डॉ. आनंदि गायन 24/07/2024

डॉ. आनंदि गायन / Dr. Anadi Gayen
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8. This is also to mention that an Act titled 'The West Bengal Ground Water Resources (Management, Control & Regulation) Act, 2005 (West Bengal Act XVIII of 2005) was enacted and The West Bengal Ground Water Resources (Management, Control & Regulation) Rules, 2006' thereof was finalized and came into force with effect from 1st August, 2006 for proper utilization of ground water resources through effective management and regulation in West Bengal. Two tier Authority system has been set up by the State Government for implementation of this Act.

- a) District Level Groundwater Resources Development Authority (DLA)
- b) State Level Groundwater Resources Development Authority (SLA)
- c) Corporation Level Groundwater Resources Development Authority (CLA)
- d) High Level Groundwater Resources Development Authority (HLA). Only for Industrial Purpose.

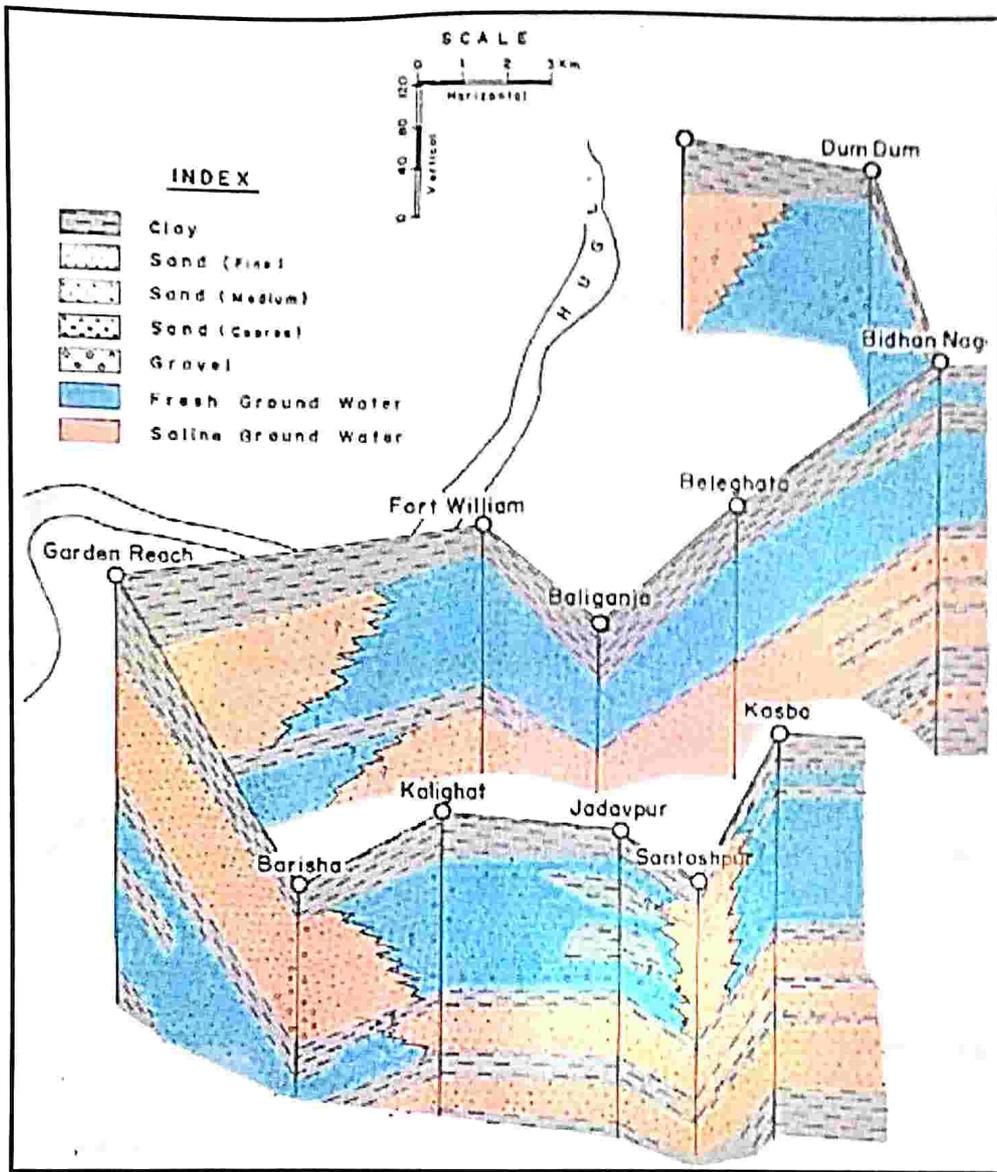
Private bore-wells in various housing complexes and industrial units are to obtain permit from Corporation Level Groundwater Resources Development Authority (CLA). Entire process and database is maintained by State Water Investigation Directorate, Govt. of West Bengal. **KMC water supply bore wells are also registered.**

9. That in this connection, the respectful submission is that in the mentioned area *i.e. Kolkata city*, in sub-surface, multiple water bearing zones (aquifers) exists. These water bearing zones are mostly composed of sand and they are separated by layers of clay. The given sub-surface aquifer map of KMC area represents sub-surface disposition of such zones in KMC area. The top clay zone is 10-60m thick. Within this top clay zone, there are some pockets of sand, which locally hold water in limited quantity. These small sand zones are called **Perched aquifers** and the deeper zones are called **Confined Aquifers**. These perched aquifer zones support Dug-wells. On the other hand the deeper Confined Aquifer horizons are exploited through tube-wells.

डॉ. अनादि गायेन
24/03/2024

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Sub-surface aquifer disposition map of KMC area

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10. Central Ground Water Board (CGWB) conducts **monthly monitoring for Kolkata city as part of its Ground Water regime monitoring programme**. Depth-to-water levels are collected from both dug wells and tube wells (hand pumps). Dug-well data represents the Water-table of perched aquifers of the area. While tube-well represents the data of confined aquifers depending on the depth of groundwater measuring station. These field measured data sets are compiled and reflected in the **Annual Ground water Yearbook** of the regions as monitored. These annual ground water yearbooks for West Bengal are available through CGWB Website (<https://cgwb.gov.in/cgwbpm/>). At present, CGWB, ER measures the following number of observation wells.

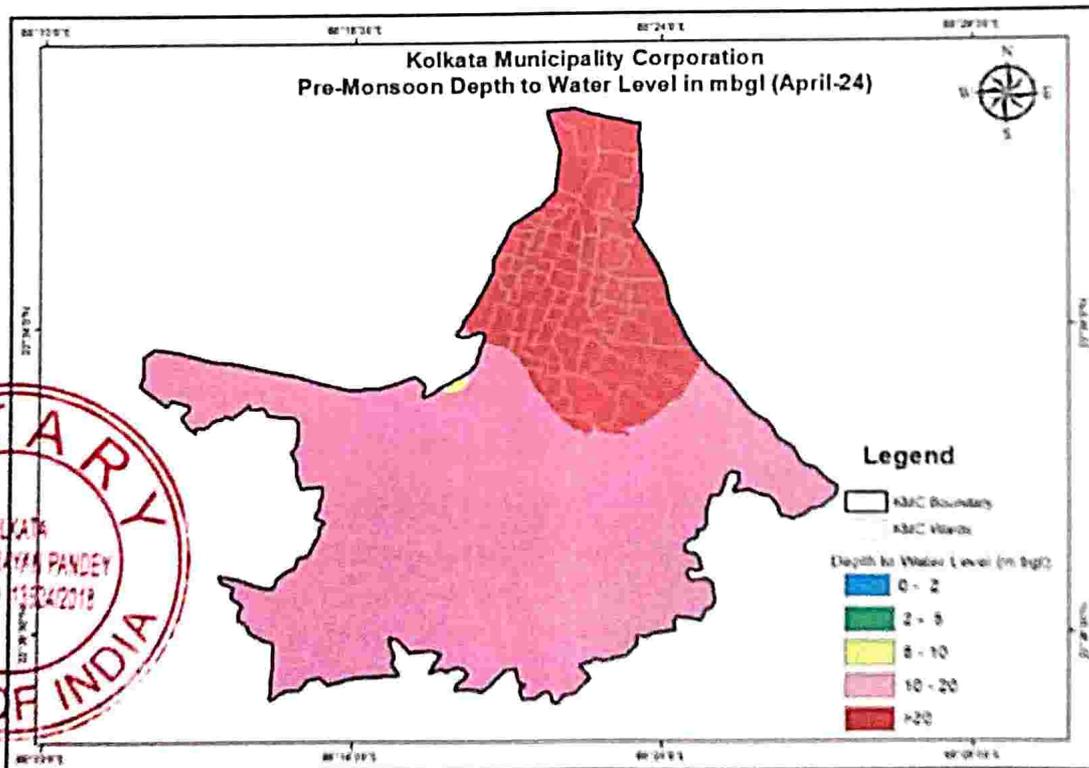
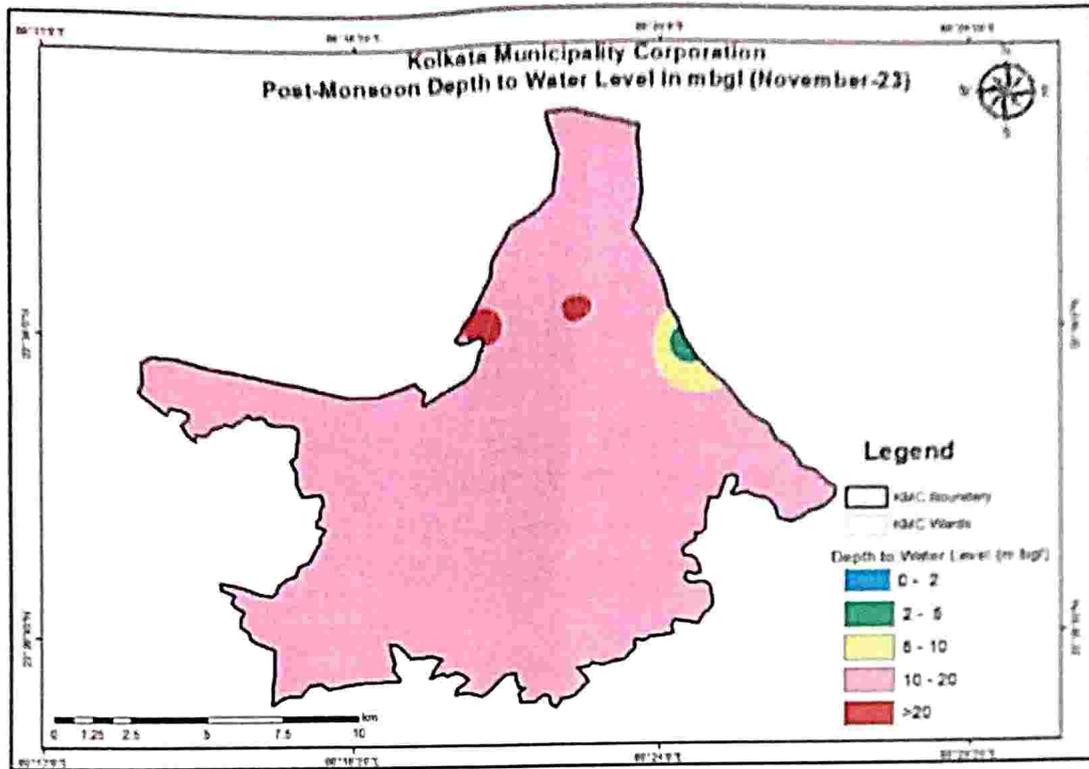
District	No.
KMC	34

11. Field data are tabulated and validated to arrive at representative water level for particular observation well at a particular point of time. Moreover, apart from water level data, water level trend is much more specific to the observation point. As the Water Level is mathematically a surface, a single Water level Trend can never represent a large area. **Hence water level contour maps and water level hydrographs are prepared for specific aquifer selecting observation points representing that aquifer only.** For **Kolkata city** such contour maps are prepared mainly **for Top Confined Aquifer**. Prepared maps are available in CGWB Website (<https://cgwb.gov.in/GW-Year-Book-State.html>). The perched aquifer zones are isolated and of limited extent and not used for drinking purposes today. Hence, data from them are collected mainly for reference purposes.
12. Water levels are also season specific, which **decline in Summer time** (pre-monsoon season) and **rise after Rainy period** (post-monsoon season). Water level of **Kolkata city** is no exception. The prepared depth-to-water level maps of KMC area for the year 2023-24 are given here. The maps clearly show fluctuations are taking place only in certain parts.



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दि. मार्च 24/03/2018

Depth to Water level Map of Kolkata city

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Frequency Table for Water levels in KMC Area
for the year 2018 and 2023 (Pre- and Post-monsoon seasons)

District	Period	No.	0-2 m		2-5 m		5-10 m		10-20 m		> 20 m	
			No	%	No	%	No	%	No	%	No	%
KMC	Apr -18	33	2	6.1	1	3.0	1	3.0	27	81.8	2	6.1
KMC	Nov-18	32	2	6.3	1	3.1	0	0.0	28	87.5	1	3.1
KMC	Apr -23	32	5	15.6	1	3.1	0	0.0	17	53.1	9	28.1
KMC	Nov-23	28	4	14.3	3	10.7	0	0.0	18	64.3	3	10.7

13. Perusal of the last seven years CGWB collected data (2018-2024) of Groundwater level show location specific rise or fall in depth to water level. Station specific trends shows that **more number of stations shows fall than rise in KMC area in both Pre- and post-monsoon season.** Data analysis is given below:

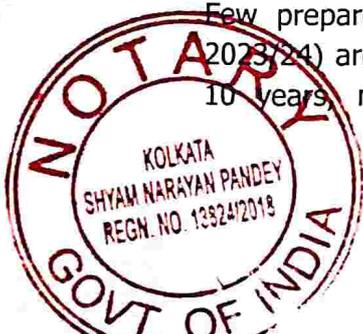
A. Frequency of Stations Observing Rise/Fall for the period 2018-2024

District	Period	Pre-monsoon				Post-monsoon			
		Rise		Fall		Rise		Fall	
		Nos.	%	Nos.	%	Nos.	%	Nos.	%
KMC	2018-24	7	20.6	27	79.4	10	28.6	25	71.4

B. Quantum of Observed Rise/Fall for the period 2018-2024 in m/year

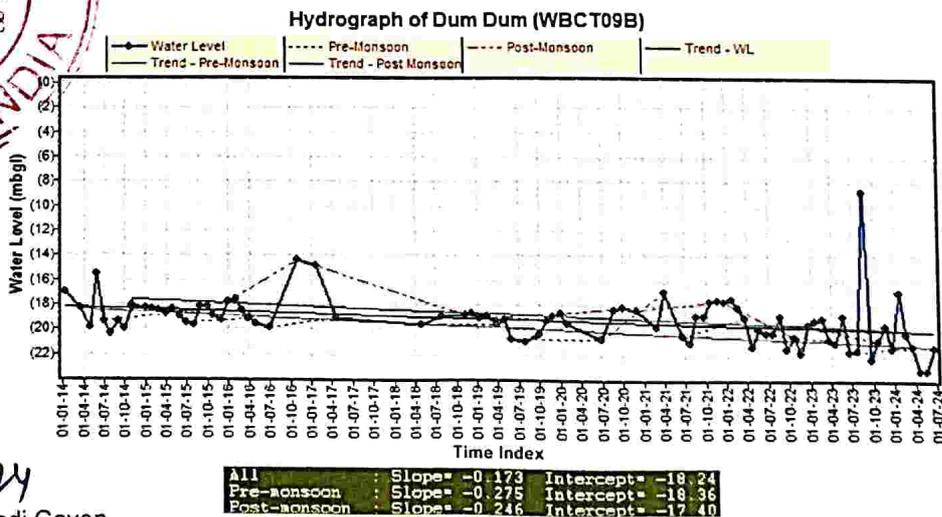
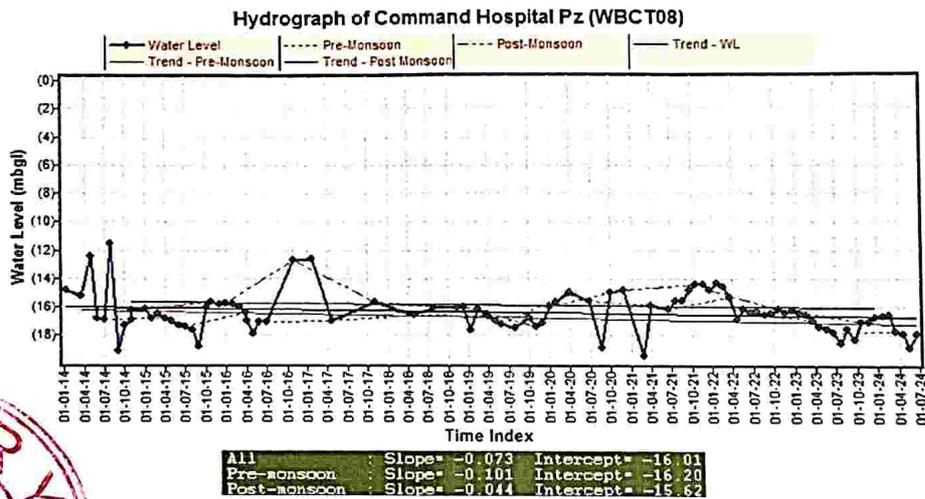
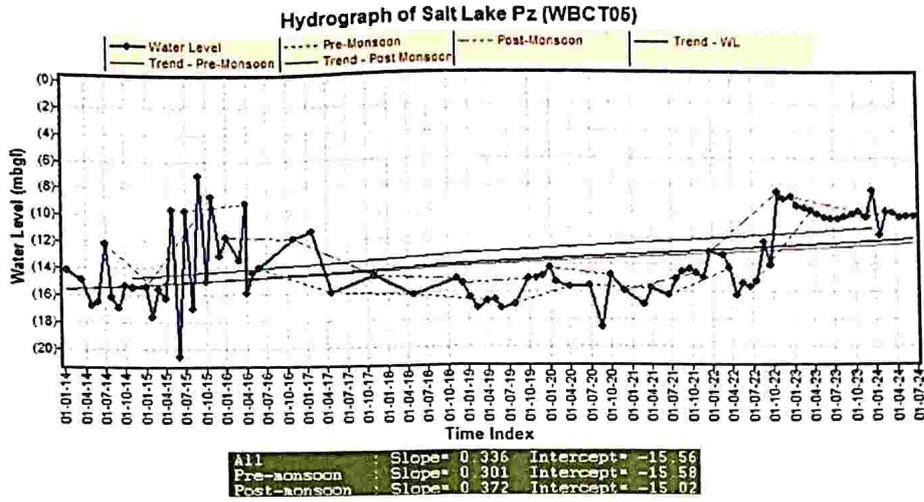
District	Period	Pre-monsoon				Post-monsoon			
		Rise		Fall		Rise		Fall	
		Max	Min	Max	Min	Max	Min	Max	Min
KMC	2018-24	7.95	0.03	4.47	0.04	3.45	0.03	5.15	0.02

Surely with gradual increase of population, groundwater withdrawal has increased in Kolkata City. This process may have impacted groundwater level and resulted in gradual decline in water level over the years. Hydrographs, i.e. time-series plot of water level for a particular well, show temporal change in water level. It also reflects the temporal change in groundwater recharge-draft balance for the area. Few prepared hydrographs for KMC area representing last 10 years (2014-2023/24) are given here. These Hydrographs in KMC area show that, during last 10 years, mostly do not show any decline except Kudghat area (Well ID



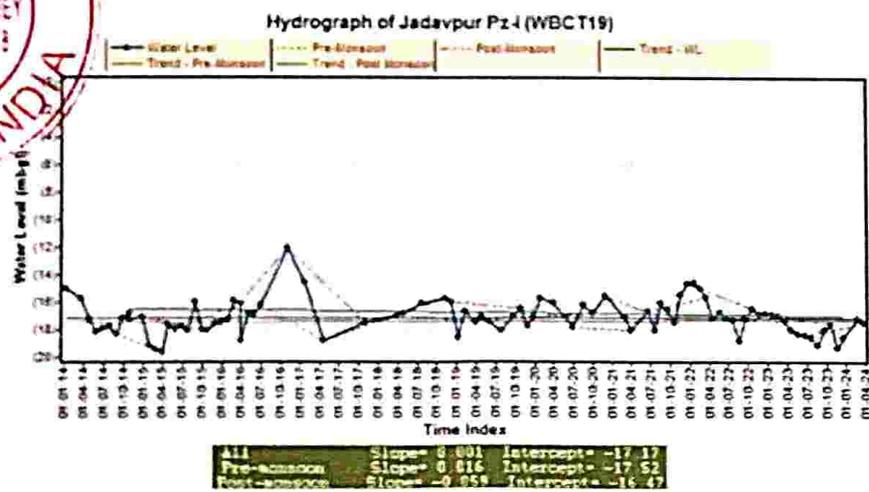
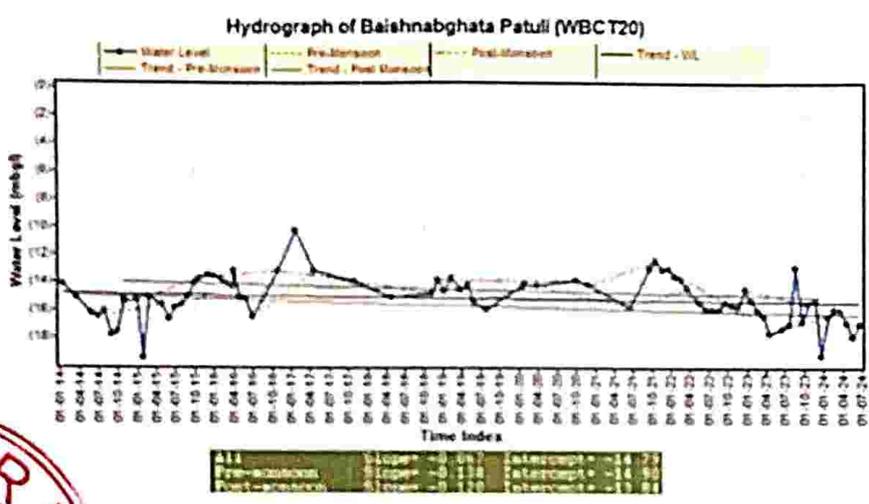
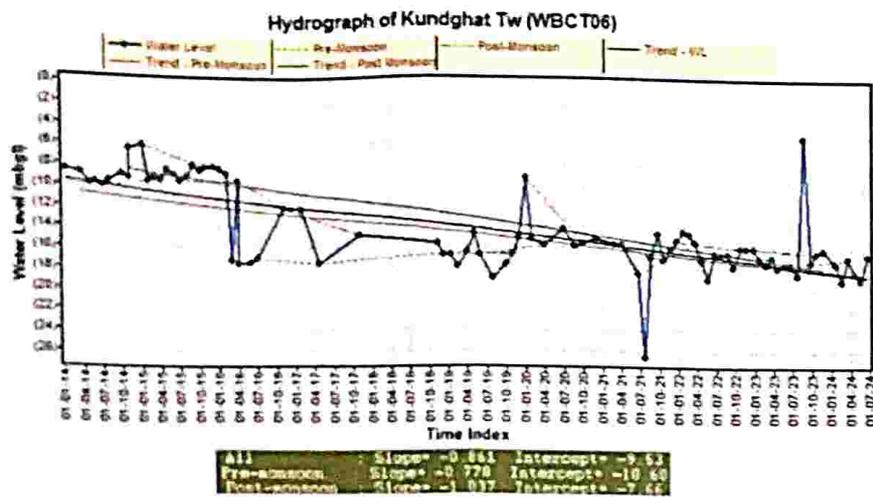
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Department of Water Resources, RD & GR

WBCT06). It shows groundwater recharge-draft balance is more or less stabilised in KMC area.



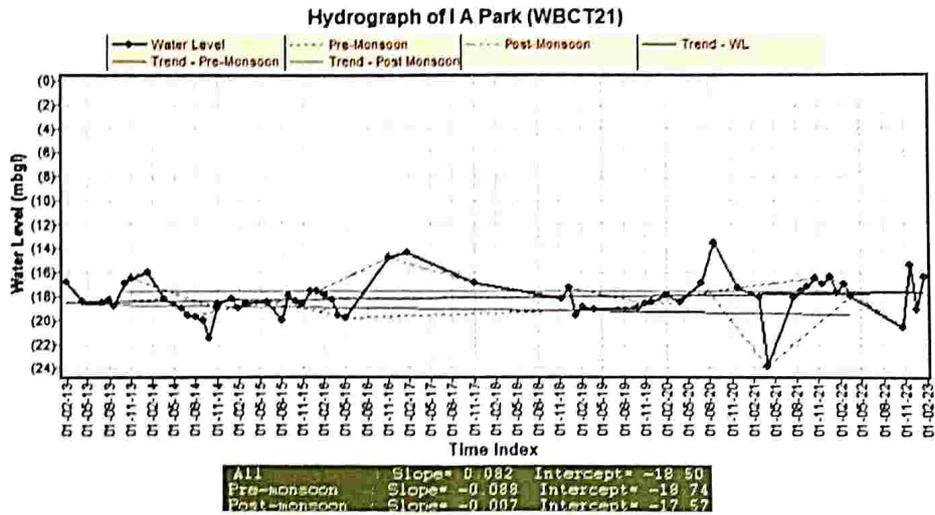
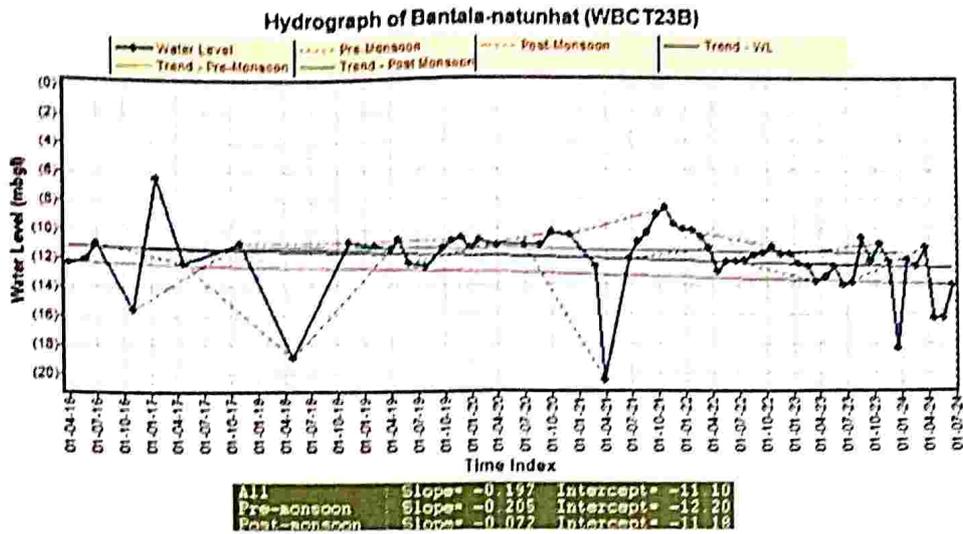
डॉ. अनदि गायन
24/02/2024

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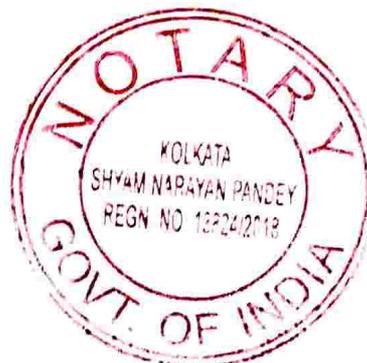
Dr. Anadi Gayen
24/07/2024

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डॉ. गायन 24/07/2018

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Para-wise Reply

1. That the averments under para 1-6 are matter of record.
2. That the averments under para 7-13 are related to the actions of the Respondent No. 1

In view of above submissions, this Hon'ble Tribunal may like to pass appropriate orders as deemed fit and proper in the interest of justice and on the basis of replies of other respondents.



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 DEPENDENT
 Department of Water Resources, RD & GR
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 पूर्वी क्षेत्र, कोलकाता / Eastern Region, Kolkata

VERIFICATION

I, DR. ANADI GAYEN, the above-named deponent, do hereby verify that the contents of above this Counter Affidavit are true and correct on the basis of official record maintained by the answering respondent in the daily course of its business and state that neither any material has been concealed therefrom nor is any part of it false.

Signed and verified on this
 Kolkata.

Day of 24 July, 2024 at

Identified by Me

Ashu Basu
Advocate

**Solemnly Affirm & Declared
 Before Me on Identification
 of Ld. Advocate**

Shyam Narayan Pandey
 SHYAM NARAYAN PANDEY
 NOTARY, GOVT. OF INDIA
 REGN. NO. 13824/2018

25 JUL 2024

25-07-2024

VAKALATNAMA

CGWA/C GWB

BEFORE THE NATIONAL GREEN TRIBUNAL, EZ BENCH, KOLKATA

O.A. No. 137/2024/EZ
(Earlier OA No. 608 of 2024/PB)

News Item titled "After Bengaluru, Water Crisis Hits Kolkata City As Ground Water Level Depletes In Many Areas, Residents Express Concern" appearing in India.com dated 22.04.2024

Plaintiff
Petitioners

Versus-

Central Ground Water Authority & Ors

Defendant
Opposite Party

On behalf of CENTRAL GROUND WATER BOARD, ER, KOLKATA

Know all men by these presents that by Vakalatnama I/We appoint the Advocates noted below or any of them my/our lawful Advocate or Advocates for filing the Memorandum of appeal or petition in the
for entering Appearance

above matter for appearing in conducting and arguing the same, for depositing or withdrawing any money in connection therewith for moving the Court in any matter connected therewith, for preparing the paper book in the case and for putting in papers petitions etc. on my/our behalf for filing taking back any documents for withdrawing suits or appeals or petitions with permission to institute fresh suits etc. For signing and filing petitions of compromise in connections with said matter and for taking copies of paper form the Record and I/We further say that any act, done by my/one said Advocate or Advocates or by any of them after accepting this Vakalatnama, shall be considered as my/our true and lawful act.

And I/we further hereby agree and undertake to pay the said Advocates his or their fees are settled and all others sums that may be necessary to carry out the requisition of the Court and otherwise to enable the said Advocates to conduct property. Falling which the said Advocates after notice to me/us will be liberty to withdraw form the further conduct to the case.

IN WITNESS WHERE OF I/We sign and execute this Vakalatnama on this the 01 day on July 2024

*Vakalatnama
Received and accepted
Ashok Prasad
Advocate
9883069404*

NAME OF ADVOCATES

SH. ASHOK PRASAD

Gayam
Ashok
Dr. Anadi Gayam
Regional Director
Government of India
Ministry of Jal Shakti
Department of Water Resources, Earthquake
Prevention and Reconstruction
Central Ground Water Board
Eastern Region, Kolkata