

BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI
Original Application No. 13 of 2021 (SZ)

IN THE MATTER OF

Tribunal on its own motion-SUO MOTU Based on the
News item in Deccan Chronicle English Newspaper, Dated
10.12.2020, "Kurnool shocked by quality of KMC water."

...Applicant(s)

Versus

Union of India, Rep. by its Secretary and Others.

...Respondent(s)

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Place: Kurnool.

Date: 14/12/2021

For A.P. Pollution Control Board
Joint Chief Environmental Engineer (Fac)
A.P. Pollution Control Board,
Zonal Office, KURNOOL.

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Further Report of A. P. Pollution Control Board submitted in compliance to Hon'ble NGT (SZ) order dated 26.10.2021 in O.A. No. 13 of 2021

The matters are pertaining to the news item in Deccan Chronicle English newspaper, dated: 10.12.2020 on the incident of "Kurnool shocked by quality of KMC water". The A.P. Pollution Control Board earlier filed action taken reports on 26.02.2021 in O.A. No.13 of 2021.

The Hon'ble National Green Tribunal in its order dt. 26.10.2021 directed the District Collector, Kurnool Municipal Authority, Kurnool and the A.P. Pollution Control Board, Kurnool to file a further report as directed by the tribunal in the earlier orders, on issues such as i) on Temporary methods to avoid discharge of untreated sewage water into the Tungabhadra River, ii) To mention about the source of sewage being mixed with the drains which ultimately reaches the Tungabhadra River, to ascertain the source and remedial measures taken to prevent the same to save Tungabhadra River from pollution, iii) To duly report the sample locations and results of the tests done earlier and iv) To take water samples from the areas shown in the newspaper report and ascertain as to whether there is any improvement in the water quality on account of steps, if any, taken by the authorities in this regard as mentioned in the Tribunal order.

In compliance to the above order the further report of A.P. Pollution Control Board is submitted below:

- a) Temporary methods to avoid discharge of untreated sewage water into the Tungabhadra River;
1. The Municipal authorities have to provide sewage screeners at the drains which are leading to the River Tungabhadra wherever possible to remove the floating materials, organic matter, etc., on regular basis, in addition to that regular dosing of bleaching powder/disinfectants for destruction of pathogenic micro organisms and dosing of Bio-enzymes for Bio-remediation may be done as a primary treatment of sewage to reduce the levels of faecal coliform (FC) and Biochemical Oxygen Demand (BOD) upto some extent before letting out the sewage into the River.
 2. The Municipal authorities have to divert the sewage of Kurnool City by laying the new pipelines along the River and utilize the existing pipelines laid during Pushkarams as a temporary measure to avoid the entry of untreated sewage into River Tungabhadra due to diversion the water quality at Pushakaram Ghats will attain the CPCB standards of outdoor bathing i.e., BOD<3 mg/L, FC < 500 MPN/100 ml, as the water quality of River Tungabhadra in the upstream i.e., Bhavapuram and in the down streams of Kurnool city i.e. Gondiperla and Padidempadu are well within the CPCB standards for outdoor bathing i.e., BOD<3 mg/L, FC < 500 MPN/100 ml (Source: as per the APPCB analysis reports, under National Water Monitoring Program on monthly basis to assess the water quality of River Tungabhadra).
 3. The Municipal authorities have to construct Bio-toilets for those not having access to toilets and practising open defecation on banks of River Tungabhadra depending upon the density of the population which may lead to the improvement of the water quality of River Tungabhadra so as to achieve the CPCB standards for outdoor bathing i.e., FC < 500 MPN/100 ml.
 4. The Municipal authorities may be directed to ensure the continuous operation and maintenance of the existing STPs with the reputed agencies for the

treatment of sewage and treated water will be tested periodically and then will be utilized for gardening and other industrial purposes to avoid the entry of some portion of sewage into River Tungabhadra.

5. The Department of Water resources and Municipal Authorities may be recommended to monitor the measurement of flows of drains leading to River Tungabhadra to find out the drains if any receiving fresh water from escape channel and should be explored for its diversion rather than mixing with the Sewage.
6. The concerned authorities may be recommended to issue directions to the Hotels/Restaurants/apartments/establishments/Hospitals/Service stations, etc., located on the catchment of River Tungabhadra not to dispose/discharge untreated sewage and dumping of solid waste/organic matter into nearby public drains or Rivers duly insisting the above to construct septic tanks/Treatment Plants depending upon the generation of waste water.
7. The Municipal authorities may be directed to conduct awareness programs on regular basis to the residents of towns and villages duly involving youth/students and community members to create awareness in the water quality management in a simple & easy way to understand the necessity to improve the water quality by minimizing the discharge of sullage into water bodies and explore the possibilities to reuse the waste water generated from the households upto the maximum extent possible for onland application (in house gardening) and other washing purposes.

b) To mention about the source of sewage being mixed with the drains which ultimately reaches the Tungabhadra River and to ascertain the source and remedial measures taken to prevent the same to save Tungabhadra River from pollution.

1. The Kurnool Municipal Corporation has provided three Sewage Treatment Plants (STPs) of capacity 0.8 MLD each i.e., 2.4 MLD near Pump House, Sankal Bhag and Jammi chettu and operating the existing STPs & the treated sewage is being utilized for gardening and other purposes to avoid the entry of waste water into River Tungabhadra, after periodical testing of the quality of treated water.
2. The Commissioner, Kurnool Municipal Corporation vide letter dt.12.02.2021 informed that 11 Nos of STPs were proposed along Hundri River with a total capacity of 40 MLD designed for prospective population with regard to year 2038. Further, 10 Nos of STPs with total capacity of 38 MLD along Tungabhadra river were proposed for the prospective population of 2038 with a total project cost of Rs. 348.29 Crores and the detailed Project Report has been submitted to Government vide Lr. No. 93273/2018/E3/STPs, dt: 25.08.2020 for according administrative sanction and for release of funds. Also informed that the Government of A.P., vide GO.Rt.No.442, Dated: 11.08.2021 has accorded Administrative sanction for an amount of Rs.79.78 crores for Diversion of sullage water and Construction of STPs for abating pollution of river Tungabhadra and the same was technically sanctioned by the Engineer In - Chief, Public Health, Tadepalle vide technical sanction No.61/2021-22, dt.03.09.2021. Subsequently, the tender process is initiated by obtaining necessary approvals in committee - I and recently Notice inviting Tenders (NIT) has been issued vide Tender Notice No.1/Grants-in-Aid/E. E&SE/Knl/21-22, dated: 18.10.2021.
3. At present 2 STP's of 2 MLD and 10 MLD capacity on Hundri River are under construction stage by Public Health Department, Government of Andhra Pradesh, which will be completed by March 2022 and March 2023 respectively and will be commissioned in a month after Completion.

4. To meet the CPCB designated water quality criteria for designated outdoor bathing(Class-B), the Kurnool Municipal Corporation has to expedite the construction of sewage treatment plants for the remaining quantity of sewage.

c) To duly report the sample locations and results of the tests done earlier.

1. The APPCB has collected water samples during Pushkaram, 2020 and as per the analysis reports (copies enclosed as Annexure-V), the parameters "Bio-Chemical Oxygen Demand (BOD)" and "Total coliform" were exceeding the CPCB standards in and around Kurnool city i.e., Pumphouse, Sankal bhag, Naga Sai temple, Rambotla temple, Raghavendra mutt, Sri Sai baba temple, Munagalapadu and Nagareswara swami temple from 20.11.2020 to 27.11.2020 and the same was communicated to Kurnool Municipal Corporation (copy enclosed as Annexure-III). Immediately the Corporation has taken appropriate measures, to improve the water quality at Pushkar Ghats/showers and submitted reply to the Board (copy enclosed as Annexure-IV) and also has given rejoinder to the adverse news item (copy enclosed as Annexure-I).
2. In February, 2021, to assess the water quality of River Tungabhadra at Pushkar Ghats, in Kurnool city i.e., Pumphouse, Sankal bhag, Naga Sai temple, Rambotla temple, Raghavendra mutt, Sri Sai baba temple, Munagalapadu and Nagareswara swami temple, the Board has collected water samples and as per the analysis reports (copies enclosed as Annexure-II), the parameters "Bio-Chemical Oxygen Demand (BOD)" and "Total coliform" were exceeding the CPCB water quality criteria for designated outdoor bathing norms due to meager flows in the River Tungabhadra and stagnated water in gorge portion of Tungabhadra River from Sankal bhag to Raghavendra mutt. However the parameter faecal coliform was recorded in the range of 130 – 430 MPN/100 ml which is meeting the CPCB water quality criteria for designated outdoor bathing norm of <500 MPN/100 ml.
3. To assess the water quality of River Tungabhadra, the APPCB has been regularly collecting the water samples at Bavapuram, Pedidampadu, Gondiperla, Mantralayam of River Tungabhadra under National Water Monitoring Program on monthly basis.

The average values from January, 2021 to November, 2021 is tabulated below:					
NWMP Sampling Station Location:		River Tungabhadra, 2021			
		Bavapuram	Pedidampadu	Gondiperla	Mantralayam
Dissolved Oxygen	mg/l	5.6	5.14	5.13	5.48
pH		7.6	7.3	7.35	7.58
Conductivity	µs/cm	1185.4	1245.5	1451.81	918.27
Biochemical Oxygen Demand	mg/l	2.2	2.31	2.35	2.3
Nitrate as NO ₃ -N	mg/l	0.7	2.14	2.20	0.85
Nitrite as NO ₂ -N	mg/l	0.2	0.355	0.24	0.13
Total Coliform	MPN/100 ml	696.5	799.7	769.27	611.54
Fecal Coliform	MPN/100 ml	233.5	292	292.09	242.09
Turbidity (NTU)	mg/l	17.5	12.93	14.8	19.5
Total Alk.	mg/l	168.7	193.8	178.72	175
Chloride	mg/l	167.9	181.2	235.81	116.54
Chemical Oxygen Demand	mg/l	15.5	17.4	17.27	16.63
Total Kjeldal Nitrogen	mg/l	4.2	3.79	3.79	3.5
Ammonia-N	mg/l	2.5	2.32	2.19	1.85
Hardness	mg/l	198.0	238.5	246.72	189.27
Calcium Hardness	mg/l	92.6	134.2	122.54	105.54
Magnesium Hardness	mg/l	105.4	104.3	124.18	83.72
Sulphate	mg/l	160.2	139.9	172.63	106.54
Sodium	mg/l	172.8	166.4	207.09	120.72

Total Dissolved Solids	mg/l	704.8	736.3	860.18	544.09
Total Fixed Solids	mg/l	563.6	586.8	688.36	434.63
Total Suspended Solids	mg/l	29.8	32.66	26.6	32.55
Ortho Phosphate	mg/l	0.2	0.55	0.21	0.24
Boron	mg/l	1.2	1.71	1.63	1.46
Potassium	mg/l	4.6	7.55	8.17	4.26
Fluoride	mg/l	0.8	0.90	0.91	0.53
%Sodium	mg/l	62.3	58.39	61.24	56
SAR	mg/l	5.1	4.57	5.49	3.71
Cadmium	mg/l	0.02	BDL	BDL	0.01
Lead	mg/l	0.09	0.046	BDL	0.043

4. From the Analysis reports, pertaining to four locations mentioned above it may be noted, the values of pH, DO, Faecal coliform (as per Hon'ble NGT order dated. 20.09.2018) & BOD are meeting the quality criteria for Class-B (Outdoor bathing- organized) and the parameters Lead and Cadmium are within the inland surface water standards except the concentrations of Total Coliform count with regard to the quality criteria for Class-B (Outdoor bathing-organized), due to mixing of sewage into the River. Hence, the allegation made by the Deccan Chronicle English Newspaper, dated: 10.12.2020 that, the river water also contains metals like Lead and Cadmium is not true.

d) To take water samples from the areas shown in the newspaper report and ascertain as to whether there is any improvement in the water quality on account of steps, if any, taken by the authorities in this regard as mentioned in the Tribunal order.

1. As per the directions of the Hon'ble NGT, the Board has collected the samples in the month of November, 2021 at the locations mentioned in the news papers i.e., Water sample (RWS) Agasanuru village in Kosigi Mandal, Mantralayam at Santa market & Vinayaka Ghat, Pumphouse, Sankal bhag, Naga Sai temple, Rambotla temple, Raghavendra mutt, Sri Sai baba temple, Munagalapadu, Nagareswara swami temple, Water sample (RWS) Agasanuru village in Kosigi Mandal, Mantralayam at Santa market & Vinayaka Ghat. As per the analysis reports (copies enclosed as **Annexure-VII**), the parameters "Bio-Chemical Oxygen Demand (BOD)", "Faecal coliform" and "Total coliform" were exceeding the CPCB water quality criteria for designated outdoor bathing norms due to entry of sewage in the River and stagnated water in gorge portion of Tungabhadra River from Agasanuru Village to Rambotla temple except the values at Sri Sai baba temple (BOD - 2.8 mg/l) and Agasanuru Village (Faecal Coliform - 30 MPN/100 ml). The water quality is meeting the CPCB water quality criteria (Class – C) for designated use, only after conventional treatment and disinfection may use for drinking water source.
2. The Google maps showing the water sampling locations of River Tungabhadra are enclosed for kind perusal.

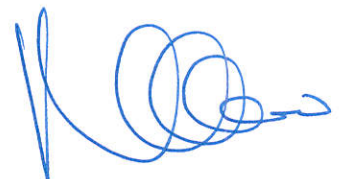
Action taken by APCCB:

- The A.P.Pollution Control Board had issued notices to the Kurnool Municipal Corporation on regular intervals i.e., on 20.01.2014, 17.01.2015, 07.09.2015 and 19.10.2015, 18.10.2019, 23.05.2020, 23.09.2020, 12.10.2020, 31.10.2020 & 06.11.2021 for discharging untreated sewage effluents into River Tungabhadra and Hundri river and for not meeting the STP outlet standards and for causing water pollution to Rivers and other water bodies.

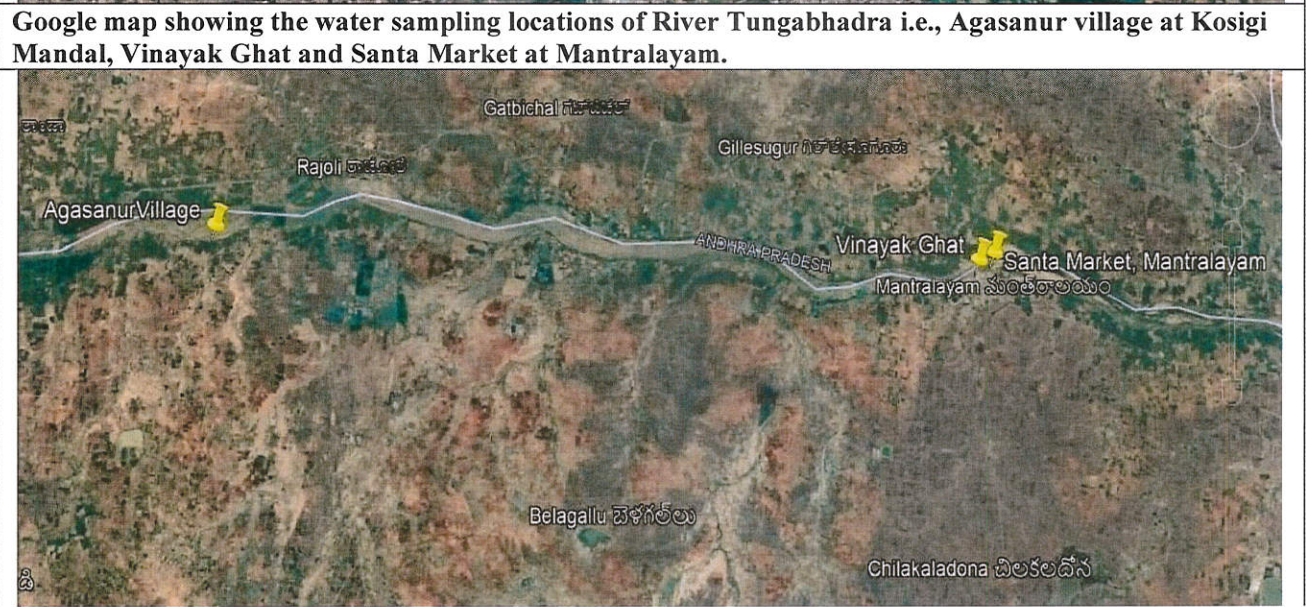
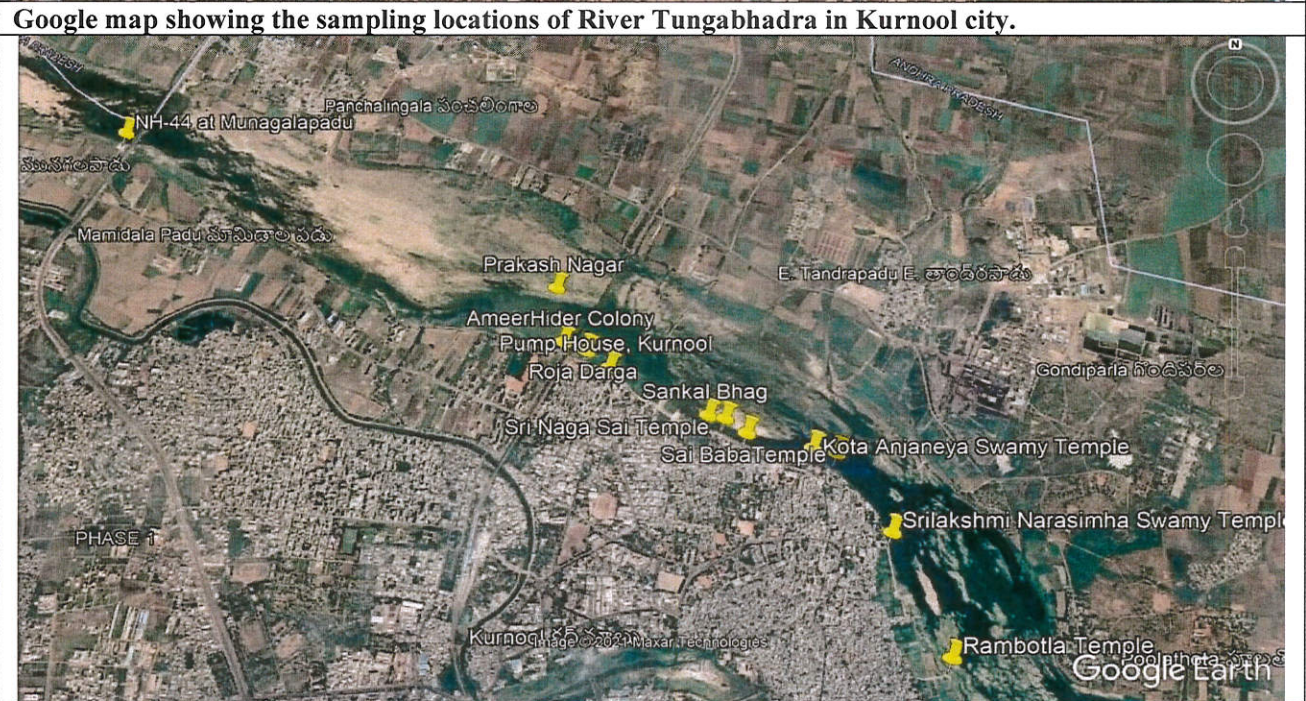
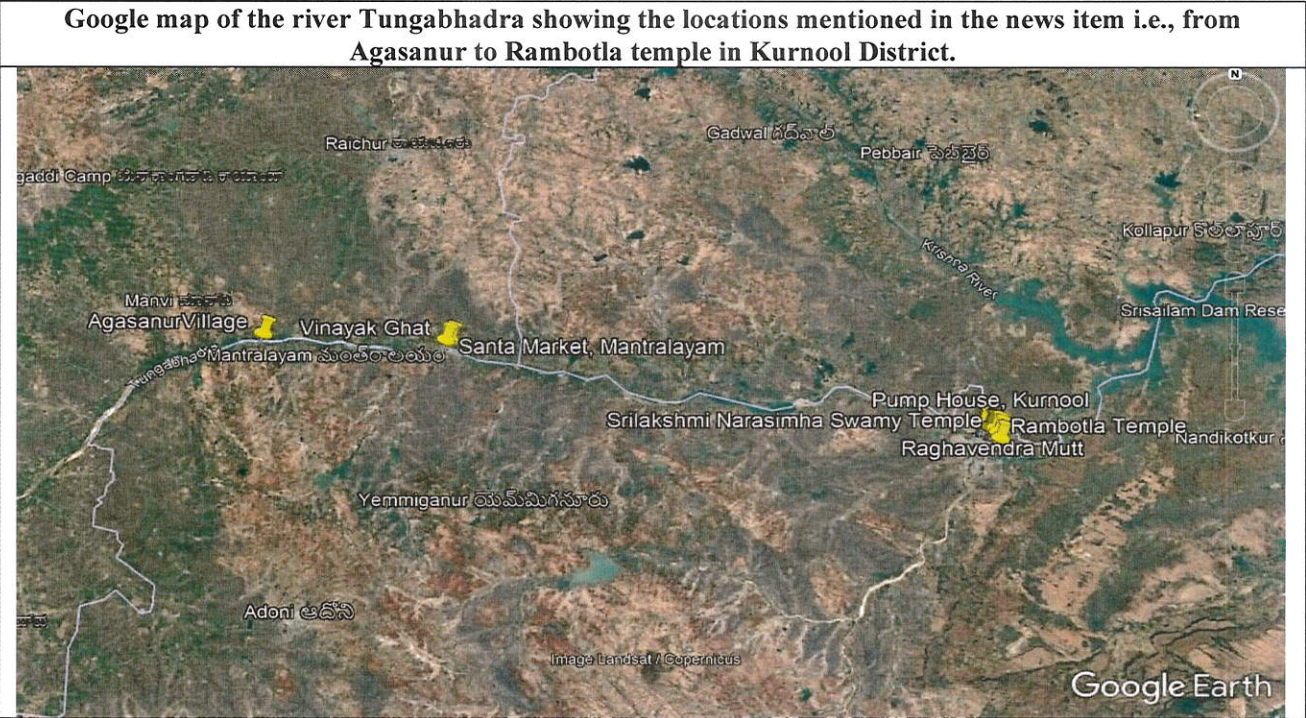
- On 23.12.2020, for setting up of STPs for 100% treatment of sewage, the Board issued a show cause notice to Kurnool Municipal Corporation referring the Hon'ble NGT orders, and directed to show cause as to why the Board shall not levy environmental compensation for Rs.520 lakhs (Rupees Five hundred and Twenty lakhs) on the Commissioner, Kurnool Municipal Corporation, Kurnool for not constructing proper treatment facilities to treat the domestic sewage generated and discharged into the river Tungabhadra which ultimately joins river Krishna. Also directed the Kurnool Municipal Corporation to file proper action plan through their department in Hon'ble NGT (SZ) duly keeping in mind the action plan submitted in Hon'ble NGT, New Delhi in OA No.673/2018 in the matter of Polluted River Stretches.
- The Board has issued directions to the Kurnool Municipal Corporation on 31.03.2021 in the matter of Hon'ble NGT order dt.26.08.2020 in OA No.27 of 2016, for Discharge of treated/ untreated sewage into Krishna river and Tungabhadra river & Levy of Environmental Compensation of Rs.520.0 Lakhs to the Kurnool Municipal Corporation to be paid within a period of one month. In compliance of the Hon'ble NGT orders noted and in exercise of the powers vested under section 33(A) water (prevention & control of pollution) Amendment act 1988 and Environmental (Protection) Act, 1986

This further report is submitted to the Hon'ble NGT in due compliance of the directions issued by this Hon'ble Tribunal. APPCB will abide by all such directions as this Hon'ble Tribunal may deem fit and appropriate.

Dated at Kurnool, A.P. on this the day of December, 2021.



A.P. Pollution Control Board
Joint Chief Environmental Engineer
A.P. Pollution Control Board, (FAC)
Zonal Office, KURNOOL.



Kurnool Municipal Corporation,
Dt. 10.12.2020

REJOINDER


Sub:- Kurnool Municipal Corporation – Engineering Section – Kurnool shocked by Quality of KMC water – Rejoinder – Submitted – Regarding.

Ref:- Adverse news published in Deccan Chronicle on 10.12.2020.

<<<>>>

In response to the news published with caption of "Kurnool shocked by quality of water" in Deccan Chronicle daily news is not correct and genuine as per the Residual report chlorine reports daily taking by the Kurnool Municipal Corporation staff. The Kurnool Municipal Corporation is not directly drawing raw water from Tungabhadra River for drinking purpose as published in the news item and you are well aware that. Main source of raw water for drinking needs of Kurnool Municipal Corporation is K.C Canal from sunkesula barrage. The raw water from K.C canal is being drawn near Munagala padu off-take point and pumping in to SS Tank daily. Required quantity of raw water is drawn from SS Tank to Head water works at Ashok Nagar and treated as per standards and clear water with residual chlorine of 2 ppm is maintained and supplied to entire city. During treatment process required quantity of alum as per turbidity level (minimum dosage of 7 ppm) is added for sedimentation of solids. Pre-chlorination of water is also done to remove any alge, odour and colour. Finally clear water is being supplied to various parts of town after post chlorination. Every hour residual chlorine is tested and recorded in the register at head water works. During distribution of treated water it is also ensured that, residual chlorine of 0.20 ppm is maintaining and checked and registered in the entire city with the Corporation staff. The presence of residual chlorine in water is indication of free from E-Coli bacteria.

Hence, this may kindly be published as rejoinder to the news item published on 10.12.2020 in the interest of public.


Commissioner,

Kurnool Municipal Corporation,
Kurnool.

10/12/20
EK-11

Copy to District Public Relation Officer, Kurnool with instructions to publish the rejoinder in daily news paper.



**ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL**

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

Accredited by NABL as per ISO/IEC: 17025:2005



TC-7305

Y. ATCHUTA RAMAYYA
Senior Environmental Scientist (FAC)

ULR-TC730521000000068F

FORMAT No.APPCB/ZL/KNL/FM/66

ANALYSIS REPORT

Report No.: KNL2102044 to 047

Sample source : Pushkaraghats samples collected in river Tungabhadra river, in Kurnool town after 3 months.

Sample code & Location :

KNL2102044: Water sample collected in Pushkaraghat in Tungabhadra River right side at Pump house near Masamasid Village, Kurnool town.

KNL2102045: Water sample collected in Pushkaraghat in Tungabhadra River right side at Sankalbagh, Kurnool town.

KNL2102046: Water sample collected in Pushkaraghat near Naga sai temple, Kothapeta, Kurnool town

KNL2102047: Water sample collected in Pushkaraghat in Tungabhadra River right side near Rambotla temple, one town in Kurnool town.

Sample collected by : E.E, R.O, Kurnool.

Sample collected on : 09.02.2021

Sample received on : 09.02.2021

Report issued on : 17.02.2021

It is to certify that the above samples were analysed from 10/02/2021 to 15/02/2021 and declared the analysis results are as follows:

Sl. No	Parameter	SAMPLE CODES				Test Method -
		Analysis Results				
		044	045	046	047	
1.	pH @ 27°C	7.8	7.7	7.5	8.0	APHA (23rd Edition) 4500-H+B: 2017, Page. 4-95 to 4-99
2.	Total Suspended Solids (TSS)	<5	<5	<5	5	APHA (23rd Edition) 2540-D: 2017, Page. 2-70 to 2-71
3.	Total Dissolved Solids (TDS)	1240	1160	1240	1230	APHA (23rd Edition) 2540-C: 2017 Page. 2-69 to 2-70
4.	Chemical Oxygen Demand (COD)	12	14	8	10	APHA (23rd Edition) 5220-B: 2017, Page. 5-18 to 5-19
5.	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	3.5	3.5	2.7	3.2	IS 3025 (Part 44): 1993 (Reaffirmed 2014)
6.	Chlorides (as Cl ⁻)	246	236	238	258	APHA (23rd Edition) 4500-Cl B: 2017, Page. 4-75 to 4-76
7.	Sulphates (as So ₄ ²⁻)	292	259	275	244	APHA (23rd Edition) 4500-SO ₄ E: 2017Page. 4-199 to 4-200
8.	Ortho Phosphate-(as PO ₄)	0.02	0.03	0.04	0.03	APHA (23rd Edition) 4500-P D: 2017, Page. 4-163 to 4-164

Remarks:

- All values are expressed in mg/l except pH.
- Results are related to sample(s) as received.
- This report shall not be reproduced except in full without approval of the lab.

Signed this: 17th day of February, 2021

STATE BOARD ANALYST
(Y.ATCHUTA RAMAYYA)
 Sr. Environmental Scientist (FAC)



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**ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL**

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

Accredited by NABL as per ISO/IEC: 17025:2005

Y. ATCHUTA RAMAYYA
Senior Environmental Scientist (FAC)

ANALYSIS REPORT

Report No.: KNL2102044 to 047

Sample source : Pushkaraghats samples collected in river Tungabhadra river, in Kurnool town after 3 months.

Sample code & Location :

KNL2102044: Water sample collected in Pushkaraghat in Tungabhadra River right side at Pump house near Masamasid Village, Kurnool town.

KNL2102045: Water sample collected in Pushkaraghat in Tungabhadra River right side at Sankalbagh, Kurnool town.

KNL2102046: Water sample collected in Pushkaraghat near Naga sai temple, Kothapeta, Kurnool town

KNL2102047: Water sample collected in Pushkaraghat in Tungabhadra River right side near Rambotla temple, one town in Kurnool town.

Sample collected by : E.E, R.O, Kurnool.

Sample collected on : 09.02.2021

Sample received on : 09.02.2021

Report issued on : 17.02.2021

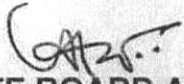
It is to certify that the above samples were analysed from 10/02/2021 to 15/02/2021 and declared the analysis results are as follows:

Sl. No	Parameter	SAMPLE CODES				Test Method
		Analysis Results				
		044	045	046	047	
1.	Dissolved oxygen (DO)	5.7	5.9	5.6	5.9	APHA (23 rd Edition) 4500-O C : 2017, Page. 4 - 146 to 4 -148
2.	Faecal coliform	210	170	350	220	MPN Method by using colitag sample kit
3.	Total coliform	920	540	>1600	920	MPN Method by using colitag sample kit

Remarks:

1. All values are expressed in mg/l and Faecal Coliform & Total coliform are expressed in MPN/100 ml
2. Results are related to sample(s) as received.
3. This report shall not be reproduced except in full without approval of the lab.

Signed this: 17th day of February, 2021


**STATE BOARD ANALYST
(Y.ATCHUTA RAMAYYA)**
Sr. Environmental Scientist (FAC)

++ END OF THE REPORT ++



10

ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

Accredited by NABL as per ISO/IEC: 17025:2005



TC-7305

Y. ATCHUTA RAMAYYA
Senior Environmental Scientist (FAC)

ULR-TC73052100000069F

FORMAT No. APPCB/ZL/KNL/FM/66

ANALYSIS REPORT

Report No.: KNL2102048 to 051

Sample source : Pushkaraghats samples collected in river Tungabhadra river, in Kurnool town after 3 months.

Sample code & Location :

KNL2102048: Water sample collected in Pushkaraghat in Tungabhadra River right side near Raghavendra Mutt in Kurnool town.

KNL2102049: Water sample collected in Pushkaraghat in Tungabhadra River right side near Sri Saibaba temple in Kurnool town.

KNL2102050: Water sample collected in Pushkaraghat at Nagareswara swamy temple, in Kurnool town

KNL2102051: Water sample collected in Pushkaraghat in Tungabhadra River right side near road bridge downstream at NH-44 near Munagalapadu (V), in Kurnool town.

Sample collected by : E.E, R.O, Kurnool.

Sample collected on : 09.02.2021

Sample received on : 09.02.2021

Report issued on : 17.02.2021

It is to certify that the above samples were analysed from 10/02/2021 to 15/02/2021 and declared the analysis results are as follows:

Sl. No	Parameter	SAMPLE CODES				Test Method
		Analysis Results				
		048	049	050	051	
1.	pH @ 27°C	8.2	7.6	7.5	7.9	APHA (23rd Edition) 4500-H+B: 2017, Page. 4-95 to 4-99
2.	Total Suspended Solids (TSS)	6	<5	5	<5	APHA (23rd Edition) 2540-D: 2017, Page. 2-70 to 2-71
3.	Total Dissolved Solids (TDS)	1220	1204	1224	1245	APHA (23rd Edition) 2540-C: 2017 Page. 2-69 to 2-70
4.	Chemical Oxygen Demand (COD)	12	10	8	12	APHA (23rd Edition) 5220-B: 2017, Page. 5-18 to 5-19
5.	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	2.8	3.3	3.2	3.0	IS 3025 (Part 44): 1993 (Reaffirmed 2014)
6.	Chlorides (as Cl ⁻)	256	242	244	252	APHA (23rd Edition) 4500-Cl B: 2017, Page. 4-75 to 4-76
7.	Sulphates (as So ₄ ²⁻)	254	249	237	285	APHA (23rd Edition) 4500-SO ₄ E: 2017Page. 4-199 to 4-200
8.	Ortho Phosphate-(as PO ₄)	0.04	0.06	0.04	0.03	APHA (23rd Edition) 4500-P D: 2017, Page. 4-163 to 4-164

Remarks:

- All values are expressed in mg/l except pH.
- Results are related to sample(s) as received.
- This report shall not be reproduced except in full without approval of the lab.

Signed this: 17th day of February, 2021

STATE BOARD ANALYST
(Y.ATCHUTA RAMAYYA)
Sr. Environmental Scientist (FAC)



ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

Accredited by NABL as per ISO/IEC: 17025:2005

Y. ATCHUTA RAMAYYA
Senior Environmental Scientist (FAC)

ANALYSIS REPORT

Report No.: KNL2102048 to 051

Sample source : Pushkaraghats samples collected in river Tungabhadra river, in Kurnool town after 3 months.

Sample code & Location :

KNL2102048: Water sample collected in Pushkaraghat in Tungabhadra River right side near Raghavendra Mutt in Kurnool town.

KNL2102049: Water sample collected in Pushkaraghat in Tungabhadra River right side near Sri Saibaba temple in Kurnool town.

KNL2102050: Water sample collected in Pushkaraghat at Nagareswara swamy temple, in Kurnool town

KNL2102051: Water sample collected in Pushkaraghat in Tungabhadra River right side near road bridge down stream at NH-44 near Munagalapadu (V), in Kurnool town.

Sample collected by : E.E, R.O, Kurnool.

Sample collected on : 09.02.2021

Sample received on : 09.02.2021

Report issued on : 17.02.2021

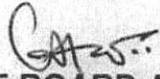
It is to certify that the above samples were analysed from 10/02/2021 to 15/02/2021 and declared the analysis results are as follows:

Sl. No	Parameter	SAMPLE CODES				Test Method
		Analysis Results				
		048	049	050	051	
1.	Dissolved oxygen (DO)	6.1	5.7	5.8	6.2	APHA (23 rd Edition) 4500-O C : 2017, Page. 4 - 146 to 4 -148
2.	Faecal coliform	350	180	430	130	MPN Method by using colitag sample kit
3.	Total coliform	>1600	920	>1600	540	MPN Method by using colitag sample kit

Remarks:

1. All values are expressed in mg/l and Faecal Coliform & Total coliform are expressed in MPN/100 ml
2. Results are related to sample(s) as received.
3. This report shall not be reproduced except in full without approval of the lab.

Signed this: 17th day of February, 2021


STATE BOARD ANALYST
(Y.ATCHUTA RAMAYYA)
Sr. Environmental Scientist (FAC)

++ END OF THE REPORT ++



ANNEXURE - III
ANDHRA PRADESH POLLUTION CONTROL BOARD 12
REGIONAL OFFICE, KURNOOL

1st Floor, Shankar Shopping Complex, Krishna Nagar Main Road, Kurnool – 518 002

B.Y. Muni Prasad.,
Environmental Engineer

Tele : 08518 235800
Email : roknl-ee1@appcb.gov.in

NOTICE NO:KMC/PCB/RO/KRNL/Notice-2020 - 491

Dated:28 .11.2020

NOTICE

Sub:- APPCB-RO-KNL- M/s. Kurnool Municipal Corporation, Kurnool- Communication of analysis reports for the water samples collected from 20.11.2020 to 27.11.2020 during the River Tungabhadra, Pushkaralu, 2020 – Not maintaining the CPCB water quality criteria for designated outdoor bathing - Not taken adequate steps for control of total coliform and BOD - Adverse news item published in EENADU daily news paper on 23.11.2020 and Adverse video clipping telecasted in TV5 on 25.11.2020 - Notice issued - Reg.

- Ref:-
1. Instructions received from Board office, Vijayawada on 18.11.2020.
 2. Mail received from APPCB, Zonal office, Kurnool on 18.11.2020.
 3. Board officials along with field staff are collecting the water samples from various Ghats in Kurnool city during the River Tungabhadra Pushkaralu, 2020.
 4. Adverse news item published in EENADU daily news paper on 23.11.2020.
 5. Adverse video clipping telecasted in TV5 on 25.11.2020.
 6. On 28.11.2020 D.Pande forwarded a mail to Collector and district Magistrate with a copy to JC and this Office duly attached adverse video clipping telecasted in TV5 on 25.11.2020.
 7. Instructions received from Chairman, APPCB, Vijayawada, and JCEE, Zonal Office, Kurnool on 28.11.2020.

WHEREAS, vide reference 1st cited above, Board office, Vijayawada directed the Zonal Office, Kurnool, Regional Office, Kurnool and Zonal Laboratory, Kurnool to collect and analyse water samples from 21Nos. of Ghats during Tungabhadra Pushkaralu, 2020. As per the instructions, the APPCB, Zonal office, Kurnool has assigned duties to collect and analyse water samples from 21Nos. of Ghats for Tungabhadra Pushkaralu, 2020 vide reference 2nd cited above, so as to assess the water quality at Pushkar Ghats and same will be communicated to Municipal Authorities for further course of action.

WHEREAS, the Board officials along with field staff collected the water samples from various Ghats in Kurnool city during the River Tungabhadra Pushkaralu, 2020 from 20.11.2020 to 27.11.2020 to assess the water quality at Pushkar Ghats.

WHEREAS, vide reference 4th cited above, an adverse news item published in EENADU daily news paper on 23.11.2020, stating that though the Government announced that, they will take care of sanitation measures during the River Tungabhadra Pushkaralu, 2020 but the situation at the field level is quite different and the sewage is joining the river near the Pump House area of Kurnool city and causing water pollution, as a result the devotees are facing problems with the sewage water, and the same was brought to the notice of Kurnool Municipal Corporation to take necessary measures to avoid contamination of Tungabhadra river.

WHEREAS, vide reference 5th cited above, Adverse video clipping telecasted in TV5 on 25.11.2020, stating that though the Municipal authorities announced that, they will divert the all the sewage drains to the downstream of designated Pushkar Ghat to avoid contamination of the River but the situation at the field level is quite different and the sewage is joining the river near the Pump House area of Kurnool city and causing water pollution, as a result the devotees are

facing health problems after taking bath with the water mixed with sewage, and the same was brought to the notice of Kurnool Municipal Corporation to take necessary measures to avoid contamination of Tungabhadra river.

WHEREAS, vide reference 7th cited above, instructions were received from Chairman, APPCB, Vijayawada, and JCEE, Zonal Office, Kurnool to submit a report on the adverse news and video clippings appeared in EENADU and TV5 with regard to sanitation measures taken by the Municipal authorities to avoid water contamination during the River Tungabhadra Pushkaralu, 2020 as the print and electronic media claimed that, the sewage is joining the river near the Pump House area of Kurnool city and causing water pollution.

WHEREAS, as per the analysis reports of the samples collected at Pushkar Ghats, in Kurnool city i.e., Pumphouse, Sankal bhag, Naga Sai temple, Rambotla temple, Raghavendra mutt, Sri Sai baba temple, Munagalapadu and Nagareswara swami temple from 20.11.2020 to 27.11.2020 it is observed that, the parameters "Bio-Chemical Oxygen Demand (BOD)" and "Total coilform" were exceeding the Board's stipulated standards. The location and date wise exceedance is tabulated below:

1. Sampling location: Pushkaraghat in Tungabhadra River right side at Pump house near Masamasid Village Kurnool Town.

S.No	Date	Total coliform (MPN/100 ml) (CPCB class -B, Standard.500 MPN/100ml or less)		BOD(mg/l) (CPCB class -B, Standard. 3.0 mg/l or less)	
		Morning	Evening	Morning	Evening
1.	20.11.2020	540	540	4.2	4.5
2.	21.11.2020	220	350	4.2	4.3
3.	22.11.2020	430	540	3.7	3.8
4.	23.11.2020	920	920	4.7	4.3
5.	24.11.2020	94	120	3.2	3.3
6.	25.11.2020	250	280	-	-
7.	26.11.2020	81	95	-	-
8.	27.11.2020	120	180	-	-

2. Sampling location: Pushkaraghat in Tungabhadra River right side Sankalbagh, Kurnool Town.

S.No	Date	Total coliform (MPN/100 ml) (CPCB class -B, Standard.500 MPN/100ml or less)		BOD(mg/l) (CPCB class -B, Standard. 3.0 mg/l or less)	
		Morning	Evening	Morning	Evening
1.	20.11.2020	350	430	3	3.3
2.	21.11.2020	180	280	2.5	2.7
3.	22.11.2020	350	430	3.3	2.5
4.	23.11.2020	76	95	3.5	3.8
5.	24.11.2020	350	280	3.5	3.7
6.	25.11.2020	180	210	-	-
7.	26.11.2020	150	220	-	-
8.	27.11.2020	110	140	-	-

3. Sampling location: Pushkaraghat in Tungabhadra River right side Nagasai temple, Kothapeta, Kurnool Town.

S.No	Date	Total coliform (MPN/100 ml) (CPCB class -B, Standard.500 MPN/100ml or less)		BOD(mg/l) (CPCB class -B, Standard. 3.0 mg/l or less)	
		Morning	Evening	Morning	Evening
1.	20.11.2020	540	540	4.3	4.5
2.	21.11.2020	210	250	3.7	3.8
3.	22.11.2020	430	540	2.3	2.5
4.	23.11.2020	150	180	2.5	2.5
5.	24.11.2020	110	130	2.8	3.0
6.	25.11.2020	170	180	-	-
7.	26.11.2020	250	240	-	-
8.	27.11.2020	150	180	-	-

4. Sampling location: Pushkaraghat in Tungabhadra River right side near Rambotla temple, One Town in Kurnool Town.

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S.No	Date	Total coliform (MPN/100 ml) (CPCB class -B, Standard.500 MPN/100ml or less)		BOD(mg/l) (CPCB class -B, Standard. 3.0 mg/l or less)	
		Morning	Evening	Morning	Evening
1.	20.11.2020	920	920	5.3	5.8
2.	21.11.2020	540	540	4.7	4.5
3.	22.11.2020	170	180	4.2	4.3
4.	23.11.2020	110	140	3.2	3.3
5.	24.11.2020	140	180	3	3.2
6.	25.11.2020	540	920	-	-
7.	26.11.2020	170	220	-	-
8.	27.11.2020	210	280	-	-

5. Sampling location: Pushkaraghat in Tungabhadra River right side near Raghavendra Mutt in Kurnool Town

S.No	Date	Total coliform (MPN/100 ml) (CPCB class -B, Standard.500 MPN/100ml or less)		BOD(mg/l) (CPCB class -B, Standard. 3.0 mg/l or less)	
		Morning	Evening	Morning	Evening
1.	20.11.2020	920	920	3.2	3.3
2.	21.11.2020	350	430	1	1.3
3.	22.11.2020	94	110	2.5	2.7
4.	23.11.2020	33	46	4.2	4.3
5.	24.11.2020	79	110	3.5	3.7
6.	25.11.2020	430	430	-	-
7.	26.11.2020	280	240	-	-
8.	27.11.2020	170	220	-	-

6. Sampling location: Pushkaraghat near in Tungabhadra River right side at Sri Sai Baba Temple, Kurnool Town.

S.No	Date	Total coliform (MPN/100 ml) (CPCB class -B, Standard.500 MPN/100ml or less)		BOD(mg/l) (CPCB class -B, Standard. 3.0 mg/l or less)	
		Morning	Evening	Morning	Evening
1.	20.11.2020	430	540	2.7	2.8
2.	21.11.2020	110	180	2.5	2.7
3.	22.11.2020	350	430	3	3.2
4.	23.11.2020	130	170	3.5	3.3
5.	24.11.2020	250	280	3.5	3.5
6.	25.11.2020	350	540	-	-
7.	26.11.2020	350	430	-	-
8.	27.11.2020	280	250	-	-

7. Sampling location: Pushkaraghat at Nagreshwara Swamy Temple in, Kurnool District.

S.No	Date	Total coliform (MPN/100 ml) (CPCB class -B, Standard.500 MPN/100ml or less)		BOD(mg/l) (CPCB class -B, Standard. 3.0 mg/l or less)	
		Morning	Evening	Morning	Evening
1.	20.11.2020	430	540	2.3	2.5
2.	21.11.2020	110	140	2.2	2.3
3.	22.11.2020	220	250	3.3	3.3
4.	23.11.2020	430	540	3.7	3.8
5.	24.11.2020	920	>1600	3.3	3.5
6.	25.11.2020	180	430	-	-
7.	26.11.2020	920	>1600	-	-
8.	27.11.2020	430	540	-	-

8. Sampling location: Pushkaraghat in Tungabhadra River Right side (Road Bridge Downstream) at N.H -44 near Munagalapadu (V) Kurnool town.

S.No	Date	Total coliform (MPN/100 ml) (CPCB class -B, Standard.500 MPN/100ml or less)		BOD(mg/l) (CPCB class -B, Standard. 3.0 mg/l or less)	
		Morning	Evening	Morning	Evening
1.	20.11.2020	280	430	2.8	3.0
2.	21.11.2020	430	540	2.7	2.8
3.	22.11.2020	350	540	3.2	3.3
4.	23.11.2020	94	120	3.2	3.3
5.	24.11.2020	350	540	3.3	3.3
6.	25.11.2020	210	280	-	-
7.	26.11.2020	170	280	-	-
8.	27.11.2020	130	220	-	-

In view of the above, it is hereby requested that, **appropriate measures may be taken, so that the water quality at Pushkar Ghats/showers shall comply with the standards stipulated by the CPCB water quality criteria for designated outdoor bathing**, failing which action will be initiated for non-compliance of the standards and for causing surface water pollution in River Tungabhadra as a result the devotees are facing problems with the sewage water, though the issue was brought to the notice of Kurnool Municipal Corporation to take necessary measures to avoid contamination of Tungabhadra river under **section 33(A) of the Water (Prevention & Control of Pollution) Amendment Act, 1988 in the interest of protecting surrounding environment & the public health**. Your reply shall reach to this office immediately, specifically mentioning the action taken for complying with the standards.


ENVIRONMENTAL ENGINEER

To
The Commissioner,
Kurnool Municipal Corporation,
Kurnool, Kurnool District.

Copy submitted to the Chairman, A.P. Pollution Control Board, Head Office, Vijayawada for favour of kind information and taking necessary action.

Copy submitted to the Joint Chief Environmental Engineer, A.P. Pollution Control Board, Zonal Office, Kurnool for favour of kind information and taking necessary action.



KURNOOL MUNICIPAL CORPORATION

From,
Sri.D.K.Balaji, I.A.S.,
Commissioner,
Kurnool Municipal Corporation,
Kurnool.

To,
The Environmental Engineer,
Andhra Pradesh Pollution Control Board,
Regional Office,
Kurnool.

Lr.Roc.No.3547/2008/E3, dt. 11.2020.

Sir,

Sub:-Kurnool Municipal Corporation – Tungabhadra Pushkaram – 2020 – Appropriate measures taken to improve water quality at pushkar Ghats- Detailed report - Submitted – Regarding.

Ref: - 1) Notice No.KMC/PCB/RO/KRNL/Notice-2020, dt.28.11.2020 of Environmental Engineer, APPCB, Kurnool.
2) Adverse news item published in EENADU daily news paper on 23.11.2020
3) Adverse video clipping telecasted in TV5 on 25.11.2020.

<<<>>>

I am to state that, the Government of Andhra Pradesh vide G.O.RT.No.456 MA&UD(Budget) Department, dt.14.10.2020 have accorded administrative sanction for Rs.30.00 Crores for providing amenities at proposed Ghats and temporary diversion of sullage water to avoid mixing with river water for conducting Tungabhadra Pushkarams – 2020 from 20.11.2020 to 01.12.2020.

Accordingly, the Kurnool Municipal Corporation has called three tenders for temporary diversion of sullage water on 14.10.2020 and 2 tenders were finalized on 23.10.2020 and one tender was finalized after 2nd call on 29.10.2020. The following components were proposed for temporary diversion of sullage water beyond the proposed last ghat i.e., Rambotla temple ghat.

S. No.	Location of the Sump well	Sump well dia	Capacity of pump sets	Laying of HDPE Pipe lines (Mtrs)
1	Ameen Hyder Colony	3.00	7.5 – 2 Nos	400.00
2	Roza Dargha Back side	4.00	15 – 2 Nos	300.00
3	Chaitanya EM School	8.00	15 – 4 Nos	6200.00
4	Sankal bagh	7.00	15 – 4 Nos	5400.00
5	Nagasai Temple	3.00	7.5 – 2 Nos	450.00
6	Saibaba Temple - 1	5.00	20 – 2 Nos	2200.00
7	Nagareswari swamy temple	5.00	20 – 2 Nos	1800.00
8	Raghavendra Mattam	7.00	10 – 4 Nos	1800.00
9	Saibaba Temple - 2	3.00	7.50 – 2 Nos	100.00
	Total		24 Nos	18650.00

The Kurnool Municipal Corporation with great difficulty completed all the above components i.e., construction of sump wells of various diameters - 9 Nos, erection of sewage pump sets and its accessories- 24 Nos and laying of different dia of HDPE pipe lines of 18.65 KM within 18 days in all aspects including laying of 12.6KM through stagnated water in TB river with the help of swimmers and started diversion of sullage water from above said sumps to downstream side of last ghat from 18-11-2020 onwards to till to date and completely avoiding mixing of sullage water from Ameer Hyder colony to Rambotal temple Ghat duly deploying staff in three shifts to monitor sewage pump sets including arranging generators to run the sewage pump sets in case of power interruption period.

Further, with regard to the reference 2nd and 3rd cited, I am to state that, Rendu vagulu is the only one drain joins TB River near old Tungabhadra pump house. It mixes up with KC canal leakage water (around 100 cusecs from escape gates near Karl marx nagar) before joining TB River. To divert such huge quantity of 100 cusecs, there is no space available to construct of larger dia meter sump to collect water, procurement of larger dia of pipes of 6.50KM, **crossing of railway track** for which permission needs to be taken from Railyws, which is unlikely in the short span of available time and laying of pipes through water in TB River not possible with in short period.

Further I am to state that to improve water quality parameters of Rendu vagulu which is mixes with KC canal water, Kurnool Municipal Corporation has made arrangements to disinfect Rendu Vagulu water by erecting two sets of chlorination plants and adding **20 kg per hour Vaporized Liquid Chlorine gas(2 ppm)** to water to kill organisms. And also **Sodium Hypochlorite with 12% concentration** of Chlorine added @ 600 litres per day (i.e 2 ppm). Bio remediation process was also taken up which involves dozing of **Bio-Enzymes daily @ 4000 Ltrs per day** which helps in reducing BOD and COD by producing amylase and protease. Besides that **alum solution** is also added to settle the solids.

Further, it is also to state holy dip was prohibited and hence, shower arrangements were made for bathing. Kurnool Municipal Corporation also made arrangements such as dozing pumps at each ghat to main residual chlorine dosage of 1 ppm to 2 ppm by adding required quantity of sodium hypo chloride in water which is used for bathing through showers erected by the irrigation department and it is measured every hour, recorded and displayed at each ghat. (Photos enclosed).

Even though necessary measures were taken, but due to meager flows in TB River and due to stagnated water in gorge portion of Tungabhadra River from Sankalbagh ghat to Raghavendra swamy Mutt Ghat, water quality parameters are slightly above the CPCB water quality criteria for designated outdoor bathing norms.

Further it is assured that, appropriate measures will be taken to maintain the water quality at Pushkara Ghats/showers as per the CPCB standards.

Encl : Photos

Yours Faithfully,



Commissioner,
Kurnool Municipal Corporation,
Kurnool.

M/L
30/11/2020
DGR



**ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL**

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

Accredited by NABL as per ISO/IEC: 17025:2005



ANNEXURE - II

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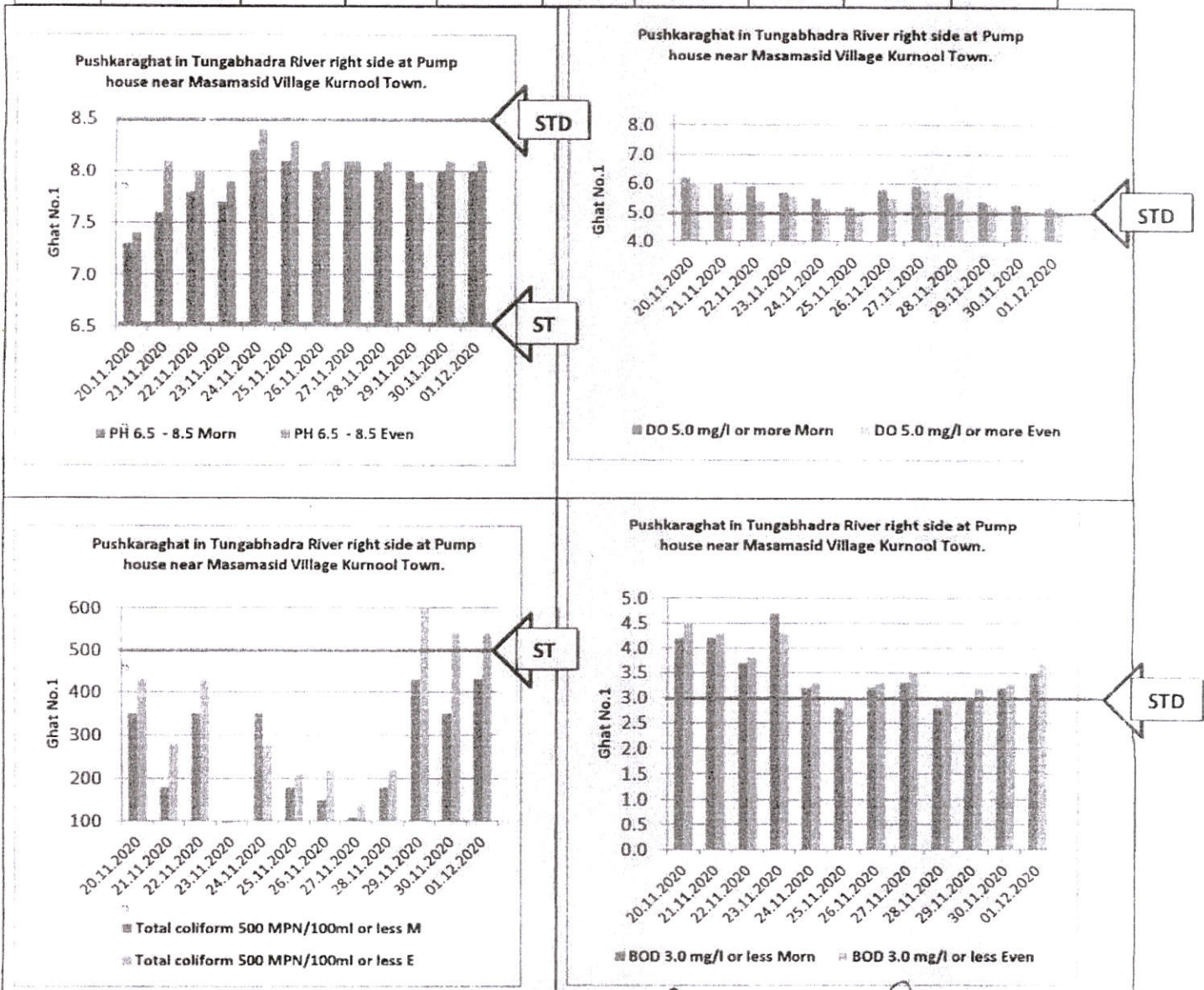
Certificate No.TC.7305

ANNEXURE - II

KURNOOL ASSEMBLY CONSTITUENCY

Tungabhadra Pushakaralu, 2020 - Consolidated Analysis Report

Ghat No. 1		Pushkaraghat in Tungabhadra River right side at Pump house near Masamasid Village Kurnool Town.							
Parameters →		PH		DO		Total coliform		BOD	
B class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.3	7.4	6.2	6.0	540	540	4.2	4.5
2	21.11.2020	7.6	8.1	6.0	5.7	220	350	4.2	4.3
3	22.11.2020	7.8	8.0	5.9	5.4	430	540	3.7	3.8
4	23.11.2020	7.7	7.9	5.7	5.6	920	920	4.7	4.3
5	24.11.2020	8.2	8.4	5.5	5.2	94	120	3.2	3.3
6	25.11.2020	8.1	8.3	5.2	5.0	250	280	2.8	3.0
7	26.11.2020	8.0	8.1	5.8	5.5	81	95	3.2	3.3
8	27.11.2020	8.1	8.1	5.9	5.8	120	180	3.3	3.5
9	28.11.2020	8.0	8.1	5.7	5.5	250	430	2.8	3.0
10	29.11.2020	8.0	7.9	5.4	5.3	350	540	3.0	3.2
11	30.11.2020	8.0	8.1	5.3	5.1	540	540	3.2	3.3
12	01.12.2020	8.0	8.1	5.2	5.1	540	920	3.5	3.7



[Signature]
Analyst Gr-I

[Signature]
Junior Scientific Officer

[Signature]
Sr. Environmental Scientist (FAC)



**ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL**

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

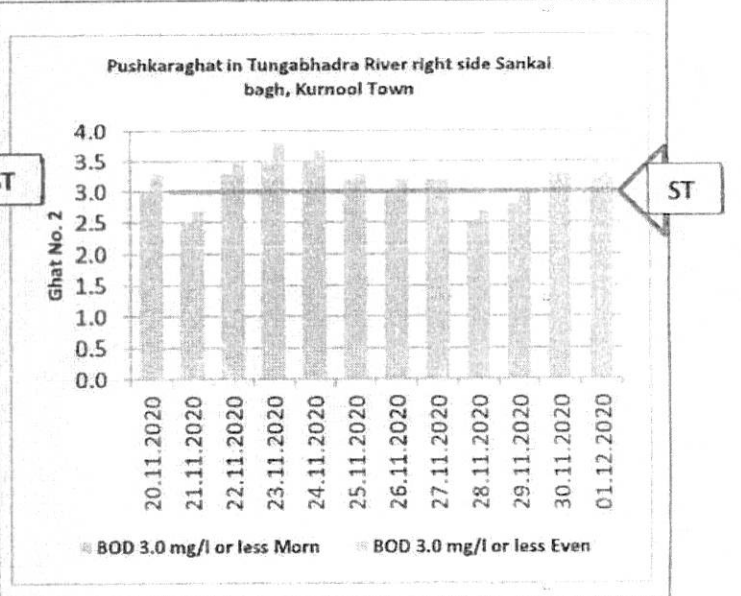
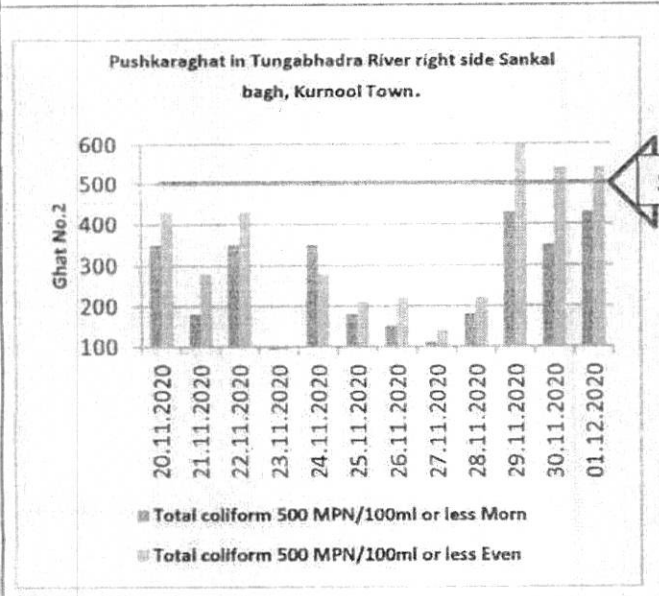
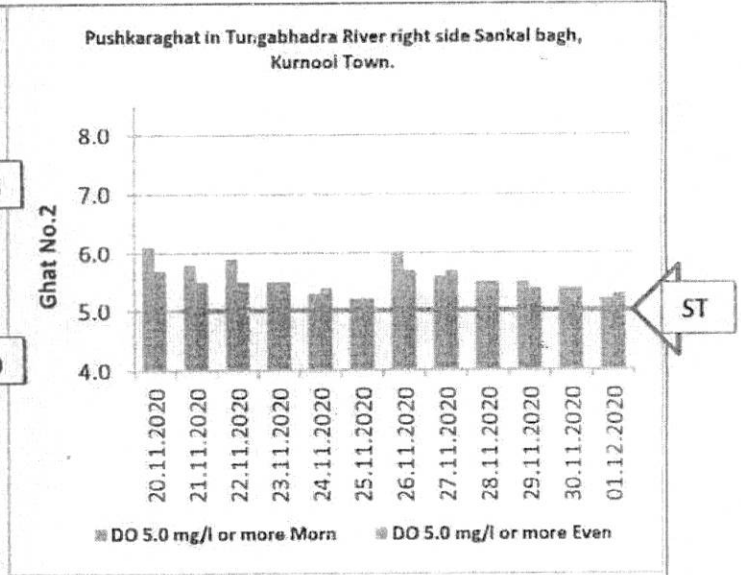
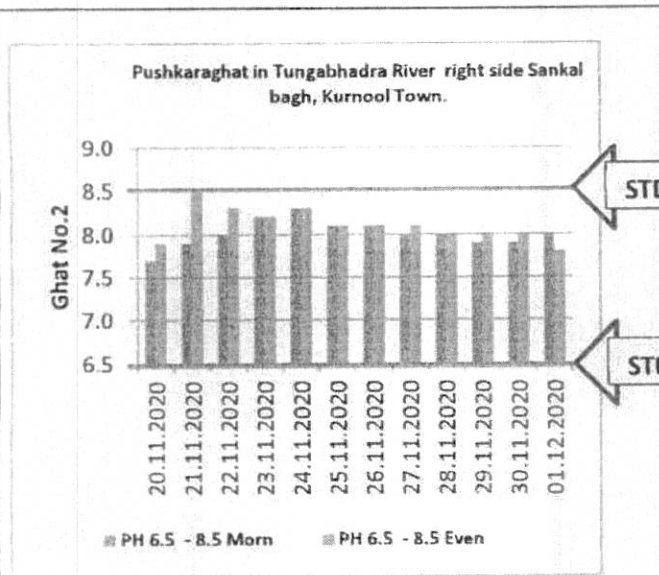
Accredited by NABL as per ISO/IEC: 17025:2005



Certificate No.TC.2305

**KURNOOL ASSEMBLY CONSTITUENCY
Tungabhadra Pushakaralu, 2020 - Consolidated Analysis Report**

Ghat No. 2		Pushkaraghat in Tungabhadra River right side Sankal bagh, Kurnool Town.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.7	7.9	6.1	5.7	350	430	3.0	3.3
2	21.11.2020	7.9	8.5	5.8	5.5	180	280	2.5	2.7
3	22.11.2020	8.0	8.3	5.9	5.5	350	430	3.3	3.5
4	23.11.2020	8.2	8.2	5.5	5.5	76	95	3.5	3.8
5	24.11.2020	8.3	8.3	5.3	5.4	350	280	3.5	3.7
6	25.11.2020	8.1	8.1	5.2	5.2	180	210	3.2	3.3
7	26.11.2020	8.1	8.1	6.0	5.7	150	220	3.0	3.2
8	27.11.2020	8.0	8.1	5.6	5.7	110	140	3.2	3.2
9	28.11.2020	8.0	8.0	5.5	5.5	180	220	2.5	2.7
10	29.11.2020	7.9	8.0	5.5	5.4	430	920	2.8	3.0
11	30.11.2020	7.9	8.0	5.4	5.4	350	540	3.3	3.3
12	01.12.2020	8.0	7.8	5.2	5.3	430	540	3.2	3.3



Analyst Gr-I

Junior Scientific Officer

Sr. Environmental Scientist (FAC)



**ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL**

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

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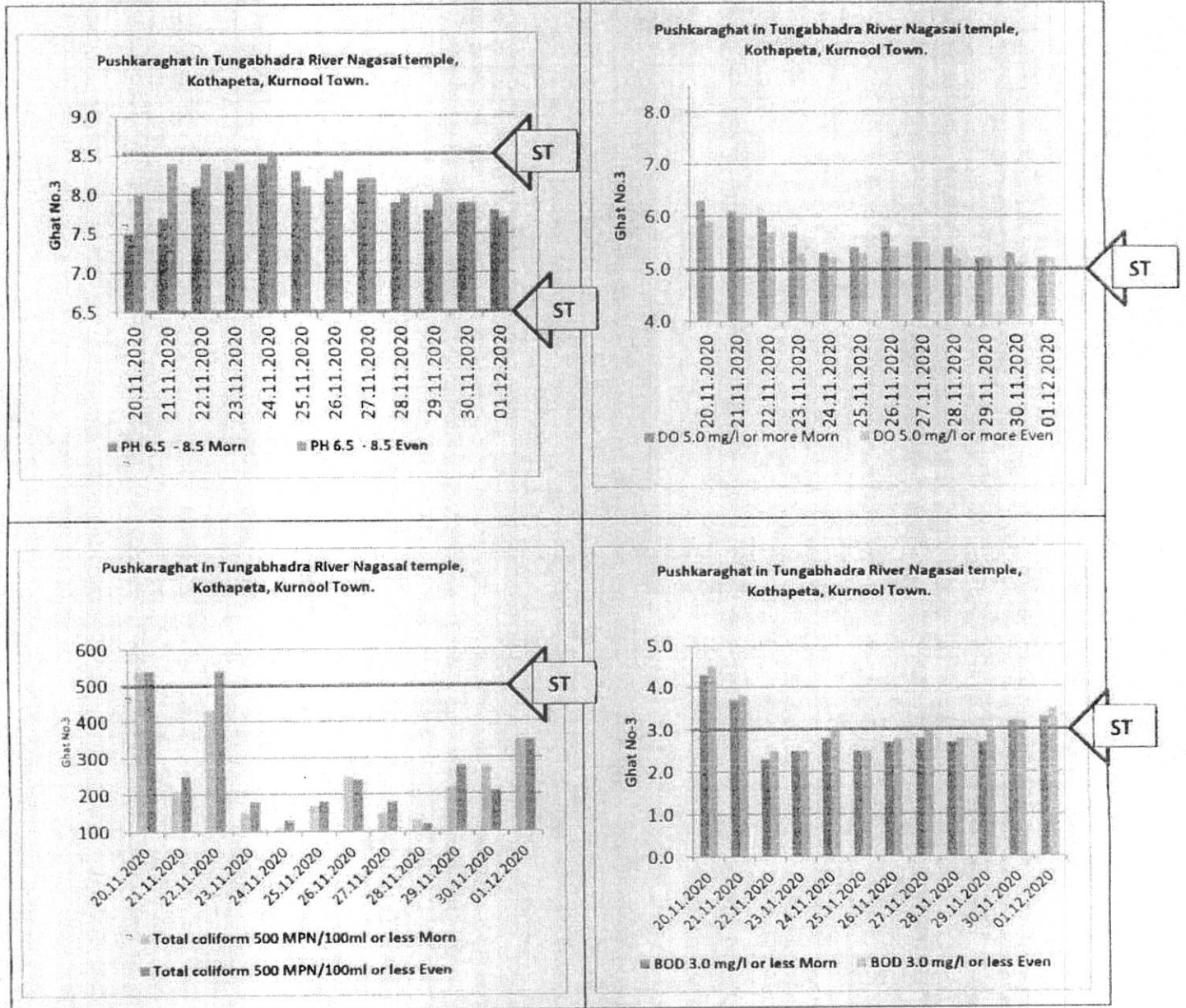
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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 3		Pushkaraghat in Tungabhadra River Nagasai temple, Kothapeta, Kurnool Town.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.5	8.0	6.3	5.9	540	540	4.3	4.5
2	21.11.2020	7.7	8.4	6.1	6.0	210	250	3.7	3.8
3	22.11.2020	8.1	8.4	6.0	5.7	430	540	2.3	2.5
4	23.11.2020	8.3	8.4	5.7	5.3	150	180	2.5	2.5
5	24.11.2020	8.4	8.5	5.3	5.2	110	130	2.8	3.0
6	25.11.2020	8.3	8.1	5.4	5.3	170	180	2.5	2.5
7	26.11.2020	8.2	8.3	5.7	5.4	250	240	2.7	2.8
8	27.11.2020	8.2	8.2	5.5	5.5	150	180	2.8	3.0
9	28.11.2020	7.9	8.0	5.4	5.2	130	120	2.7	2.8
10	29.11.2020	7.8	8.0	5.2	5.2	220	280	2.7	3.0
11	30.11.2020	7.9	7.9	5.3	5.1	280	210	3.2	3.2
12	01.12.2020	7.8	7.7	5.2	5.2	350	350	3.3	3.5



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Analyst Gr-I

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Junior Scientific Officer

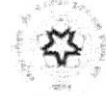
[Signature]
Sr. Environmental Scientist (FAC)



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ZONAL LABORATORY : KURNOOL**

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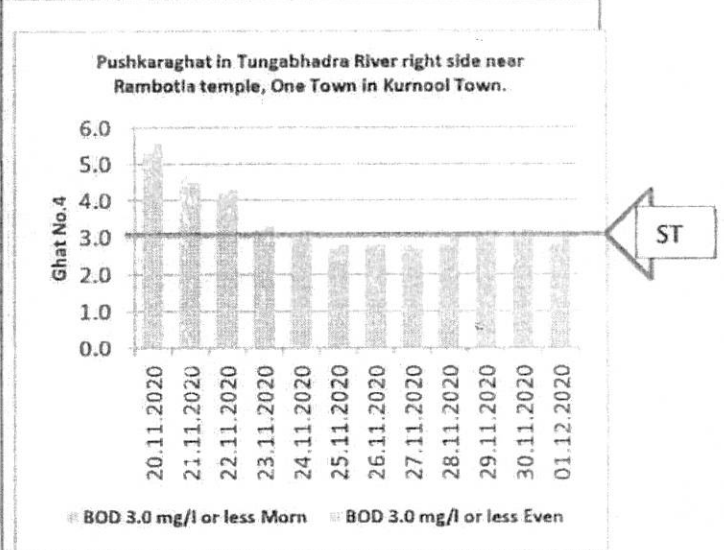
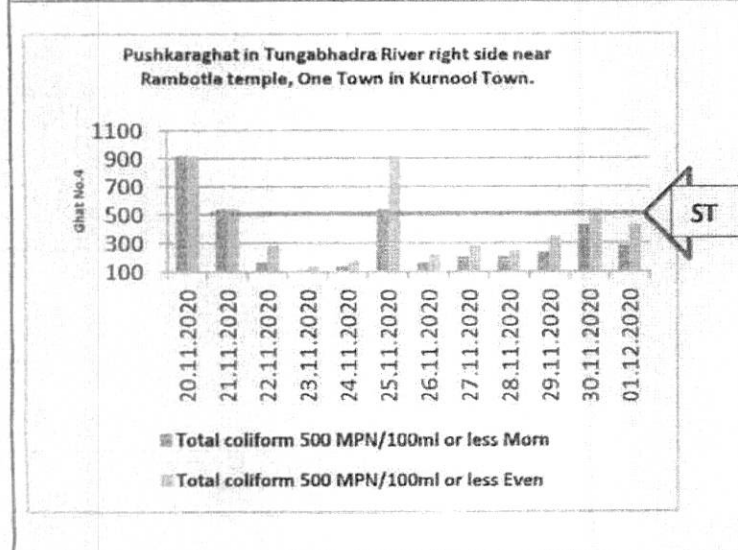
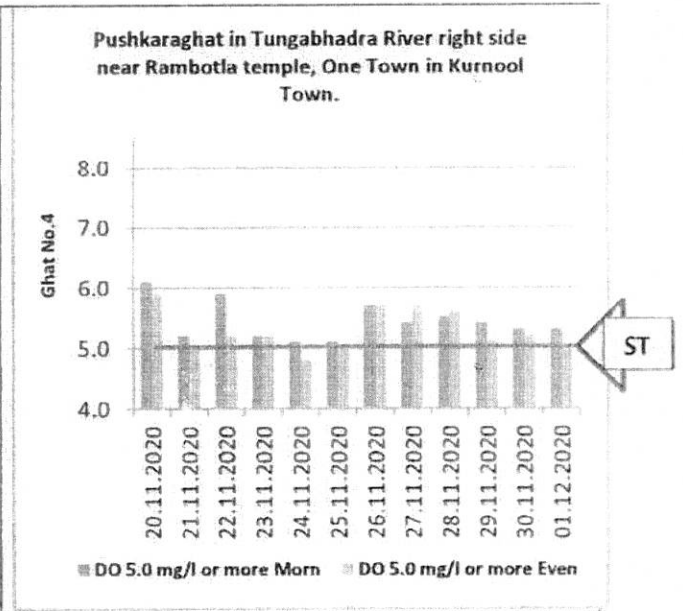
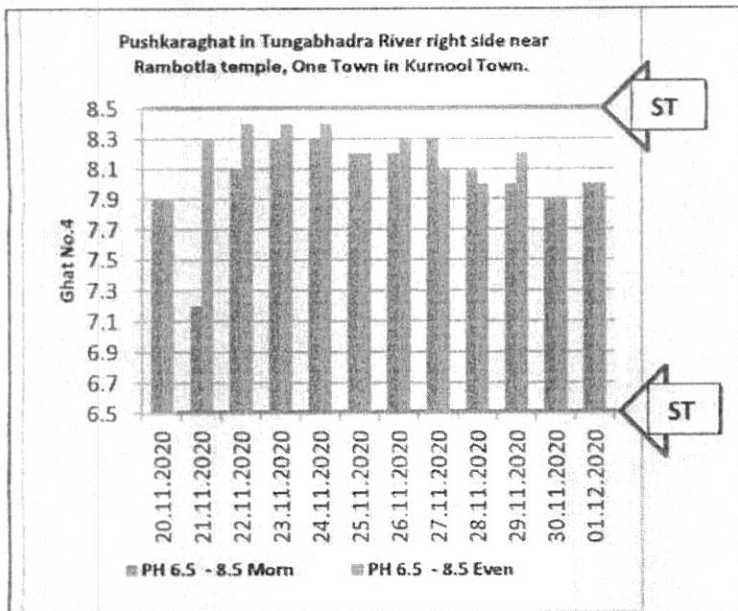


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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 4		Pushkaraghat in Tungabhadra River right side near Rambotla temple, One Town in Kurnool Town.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.9	7.9	6.1	5.9	920	920	5.3	5.6
2	21.11.2020	7.2	8.3	5.2	5.0	540	540	4.7	4.5
3	22.11.2020	8.1	8.4	5.9	5.2	170	280	4.2	4.3
4	23.11.2020	8.3	8.4	5.2	5.2	110	140	3.2	3.3
5	24.11.2020	8.3	8.4	5.1	4.8	140	180	3.0	3.2
6	25.11.2020	8.2	8.2	5.1	5.0	540	920	2.7	2.8
7	26.11.2020	8.2	8.3	5.7	5.7	170	220	2.8	2.8
8	27.11.2020	8.3	8.1	5.4	5.7	210	280	2.8	2.7
9	28.11.2020	8.1	8.0	5.5	5.6	210	250	2.8	3.0
10	29.11.2020	8.0	8.2	5.4	5.1	240	350	3.0	3.2
11	30.11.2020	7.9	7.9	5.3	5.2	430	540	3.0	3.2
12	01.12.2020	8.0	8.0	5.3	5.0	280	430	2.8	3.0



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Dr. B. J. N. Sharma
Junior Scientific Officer

Chaitanya
Sr. Environmental Scientist (FAC)



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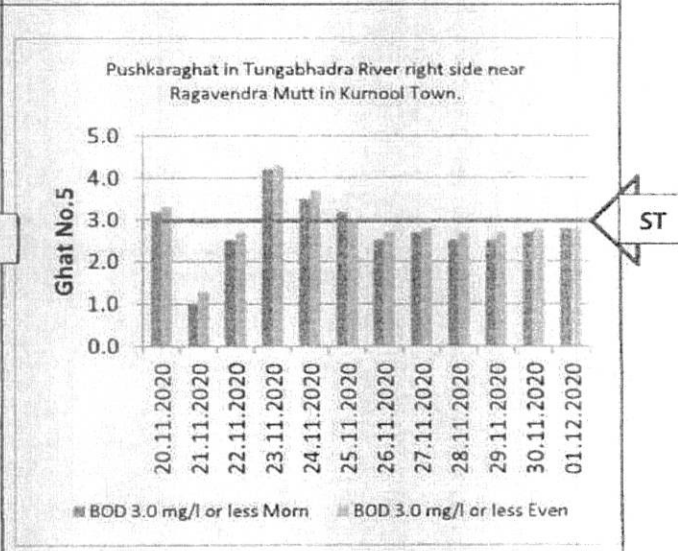
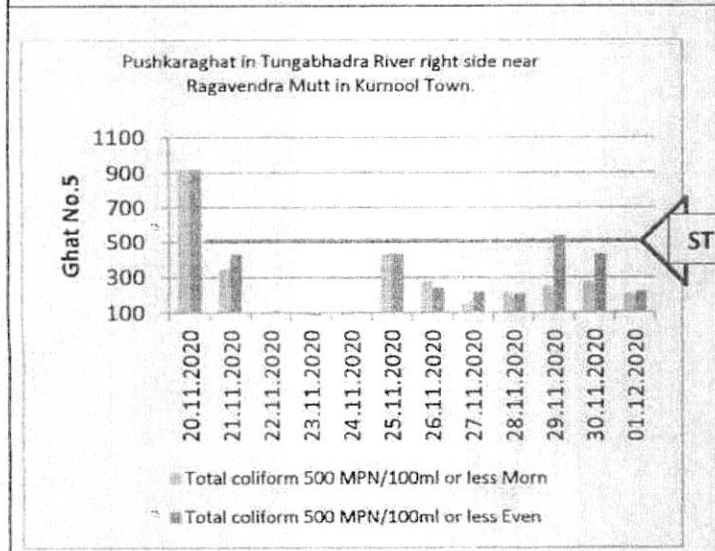
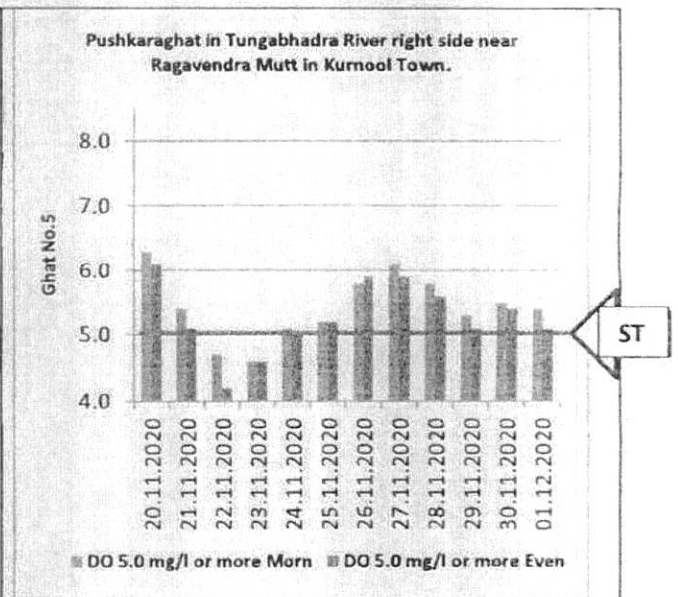
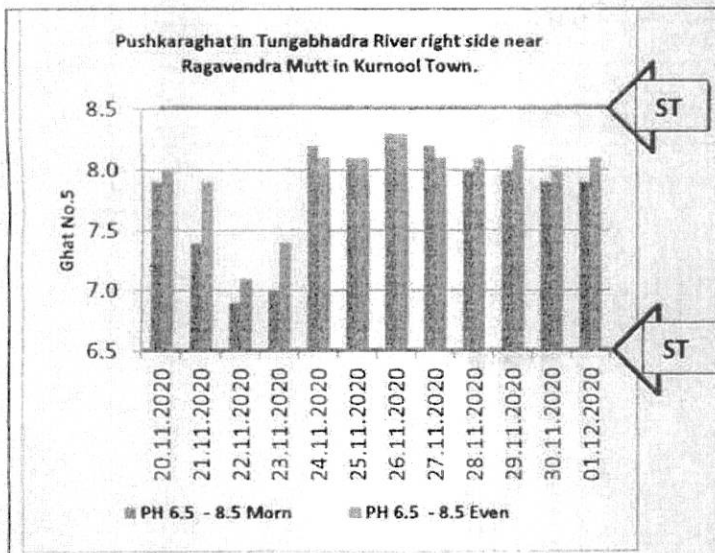


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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 5		Pushkaraghat in Tungabhadra River right side near Ragavendra Mutt in Kurnool Town.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.9	8.0	6.3	6.1	920	920	3.2	3.3
2	21.11.2020	7.4	7.9	5.4	5.1	350	430	1.0	1.3
3	22.11.2020	6.9	7.1	4.7	4.2	94	110	2.5	2.7
4	23.11.2020	7.0	7.4	4.6	4.6	33	46	4.2	4.3
5	24.11.2020	8.2	8.1	5.1	5.0	79	110	3.5	3.7
6	25.11.2020	8.1	8.1	5.2	5.2	430	430	3.2	3.0
7	26.11.2020	8.3	8.3	5.8	5.9	280	240	2.5	2.7
8	27.11.2020	8.2	8.1	6.1	5.9	170	220	2.7	2.8
9	28.11.2020	8.0	8.1	5.8	5.6	220	210	2.5	2.7
10	29.11.2020	8.0	8.2	5.3	5.1	250	540	2.5	2.7
11	30.11.2020	7.9	8.0	5.5	5.4	280	430	2.7	2.8
12	01.12.2020	7.9	8.1	5.4	5.1	210	220	2.8	2.8



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Mr. B. S. Sharma
Junior Scientific Officer

CAJ
Sr. Environmental Scientist (FAC)



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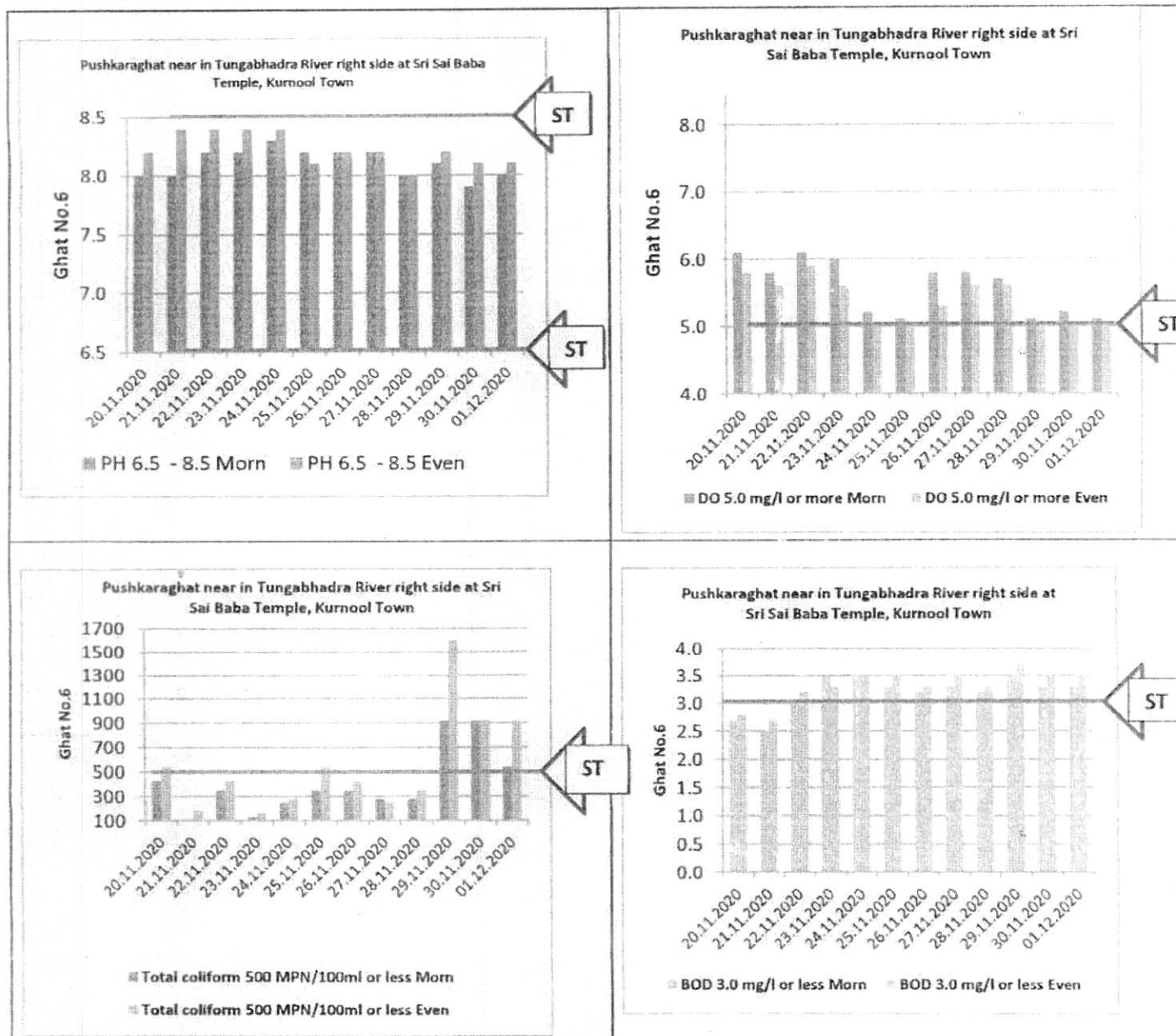


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Ghat No. 6		Pushkaraghat near in Tungabhadra River right side at Sri Sai Baba Temple, Kurnool Town							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	8.0	8.2	6.1	5.8	430	540	2.7	2.8
2	21.11.2020	8.0	8.4	5.8	5.6	110	180	2.5	2.7
3	22.11.2020	8.2	8.4	6.1	5.9	350	430	3.0	3.2
4	23.11.2020	8.2	8.4	6.0	5.6	130	170	3.5	3.3
5	24.11.2020	8.3	8.4	5.2	5.0	250	280	3.5	3.5
6	25.11.2020	8.2	8.1	5.1	5.0	350	540	3.3	3.5
7	26.11.2020	8.2	8.2	5.8	5.3	350	430	3.2	3.3
8	27.11.2020	8.2	8.2	5.8	5.6	280	250	3.3	3.5
9	28.11.2020	8.0	8.0	5.7	5.6	280	350	3.2	3.3
10	29.11.2020	8.1	8.2	5.1	5.0	920	1600	3.5	3.7
11	30.11.2020	7.9	8.1	5.2	5.0	920	920	3.3	3.5
12	01.12.2020	8.0	8.1	5.1	5.0	540	920	3.3	3.5



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Analyst Gr-I

Dr. B. V. N. N. N.
Junior Scientific Officer

R. J. S.
Sr. Environmental Scientist (FAC)



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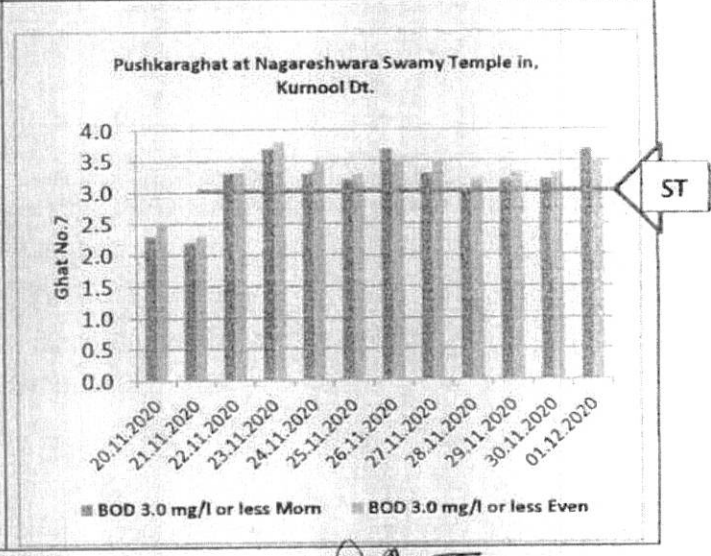
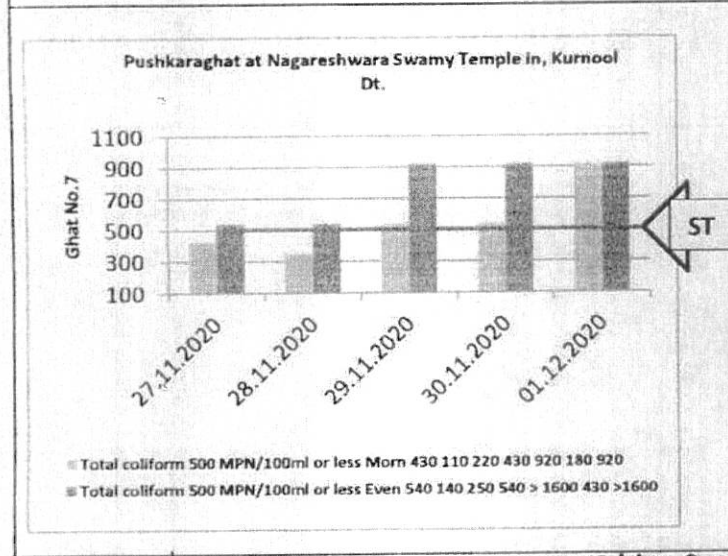
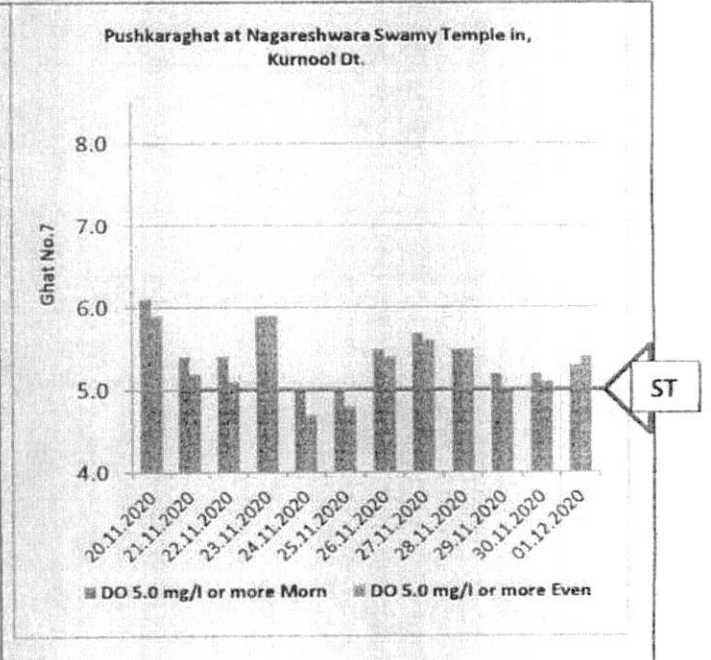
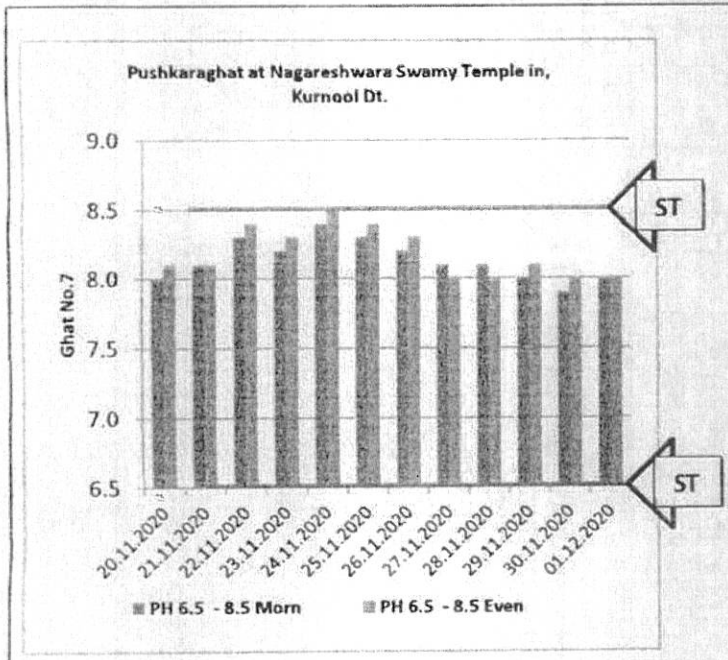


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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 7		Pushkaraghat at Nagareshwara Swamy Temple in, Kurnool Dt.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	8.0	8.1	6.1	5.9	430	540	2.3	2.5
2	21.11.2020	8.1	8.1	5.4	5.2	110	140	2.2	2.3
3	22.11.2020	8.3	8.4	5.4	5.1	220	250	3.3	3.3
4	23.11.2020	8.2	8.3	5.9	5.9	430	540	3.7	3.8
5	24.11.2020	8.4	8.5	5.0	4.7	920	> 1600	3.3	3.5
6	25.11.2020	8.3	8.4	5.0	4.8	180	430	3.2	3.3
7	26.11.2020	8.2	8.3	5.5	5.4	920	>1600	3.7	3.5
8	27.11.2020	8.1	8.0	5.7	5.6	430	540	3.3	3.5
9	28.11.2020	8.1	8.0	5.5	5.5	350	540	3.0	3.2
10	29.11.2020	8.0	8.1	5.2	5.0	540	920	3.2	3.3
11	30.11.2020	7.9	8.0	5.2	5.1	540	920	3.2	3.3
12	01.12.2020	8.0	8.0	5.3	5.4	920	920	3.7	3.5



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N. B. ...
Junior Scientific Officer

Sr. Environmental Scientist (FAC)



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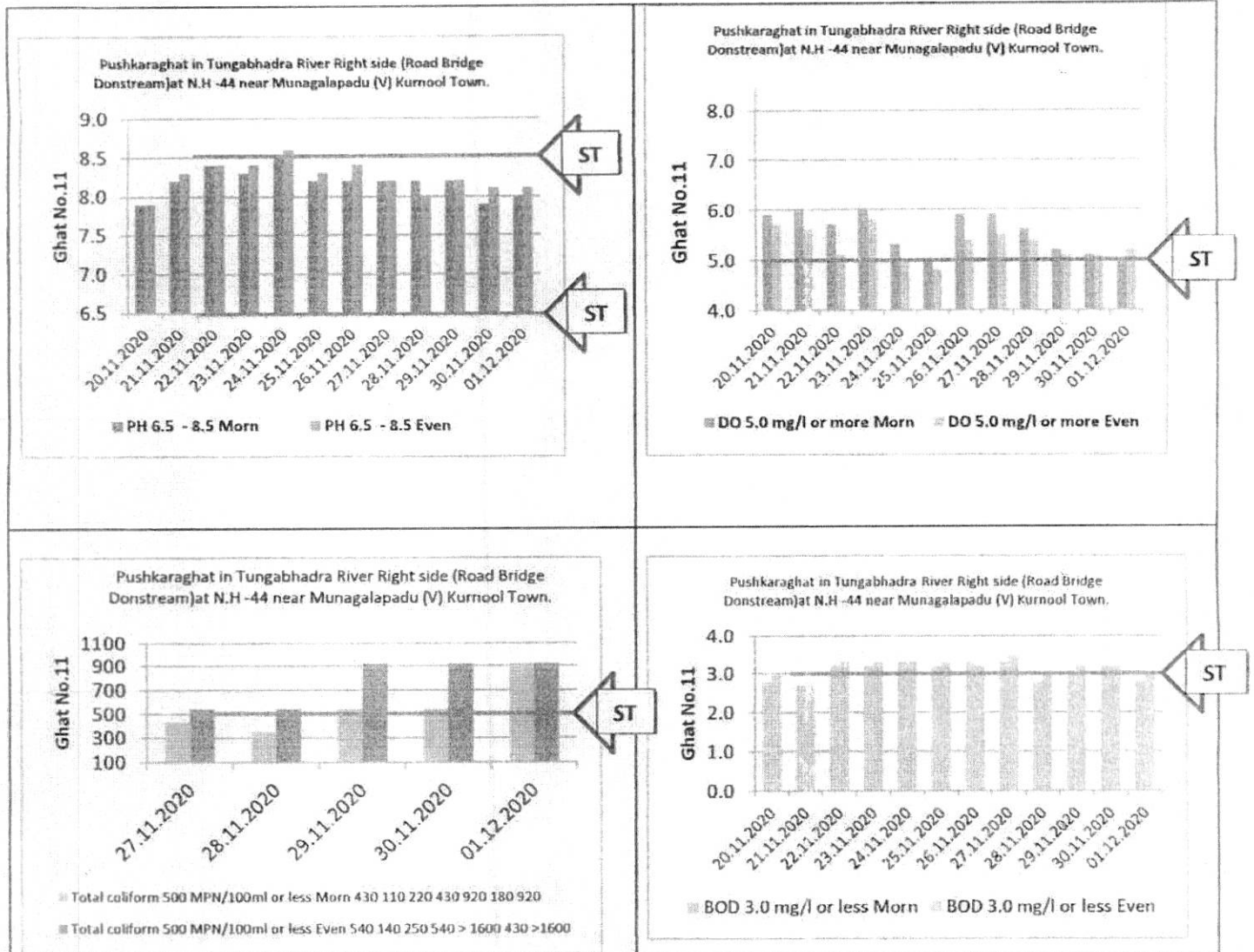


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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 11		Pushkaraghat in Tungabhadra River Right side (Road Bridge Donstream)at N.H - 44 near Munagalapadu (V) Kurnool Town.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.9	7.9	5.9	5.7	280	430	2.8	3.0
2	21.11.2020	8.2	8.3	6.0	5.6	430	540	2.7	2.8
3	22.11.2020	8.4	8.4	5.7	5.1	350	540	3.2	3.3
4	23.11.2020	8.3	8.4	6.0	5.8	94	120	3.2	3.3
5	24.11.2020	8.5	8.6	5.3	5.0	350	540	3.3	3.3
6	25.11.2020	8.2	8.3	5.0	4.8	210	280	3.2	3.3
7	26.11.2020	8.2	8.4	5.9	5.4	170	280	3.3	3.2
8	27.11.2020	8.2	8.2	5.9	5.5	130	220	3.3	3.5
9	28.11.2020	8.2	8.0	5.6	5.4	180	150	2.8	3.0
10	29.11.2020	8.2	8.2	5.2	5.1	920	920	3.0	3.2
11	30.11.2020	7.9	8.1	5.1	5.1	430	540	3.2	3.2
12	01.12.2020	8.0	8.1	5.0	5.2	540	920	2.8	3.0



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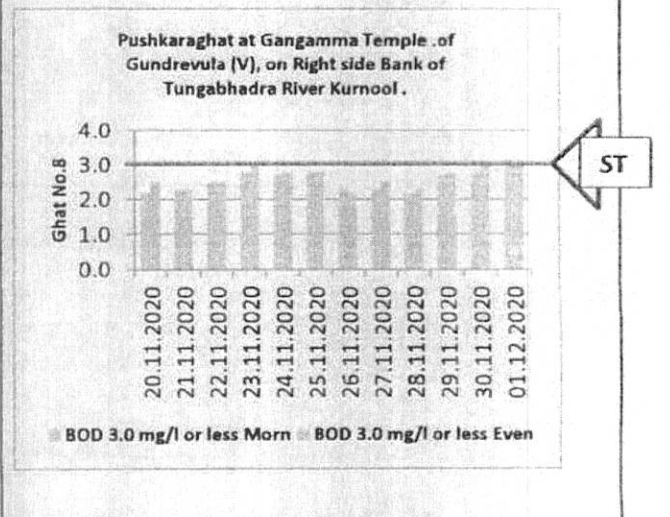
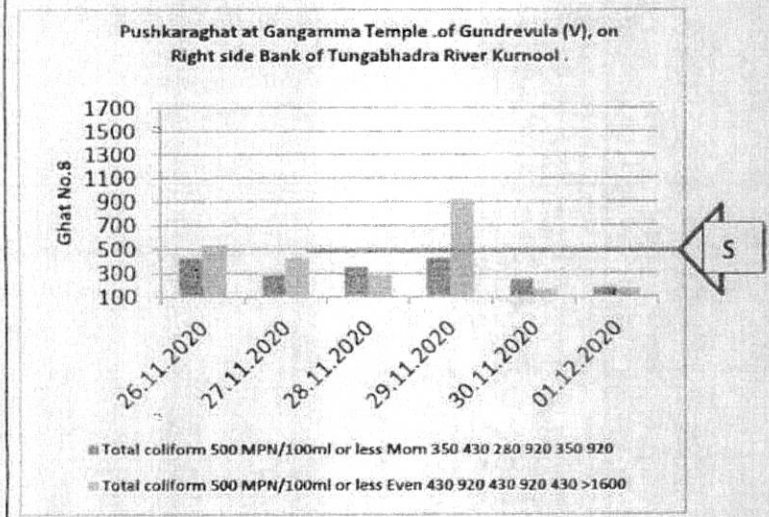
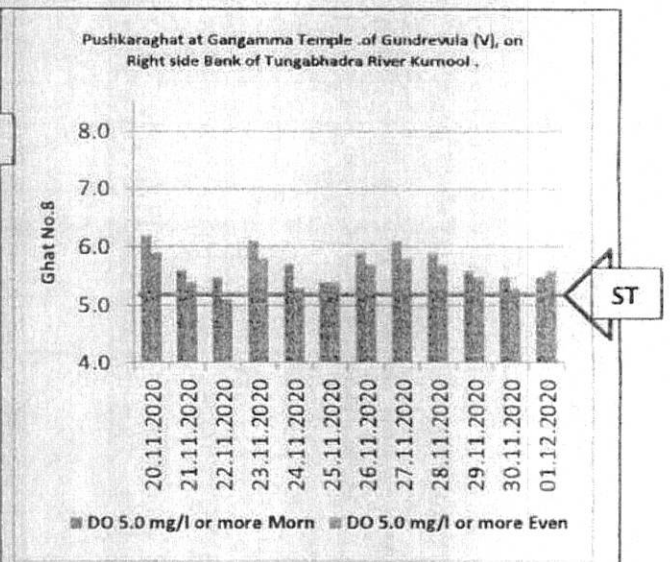
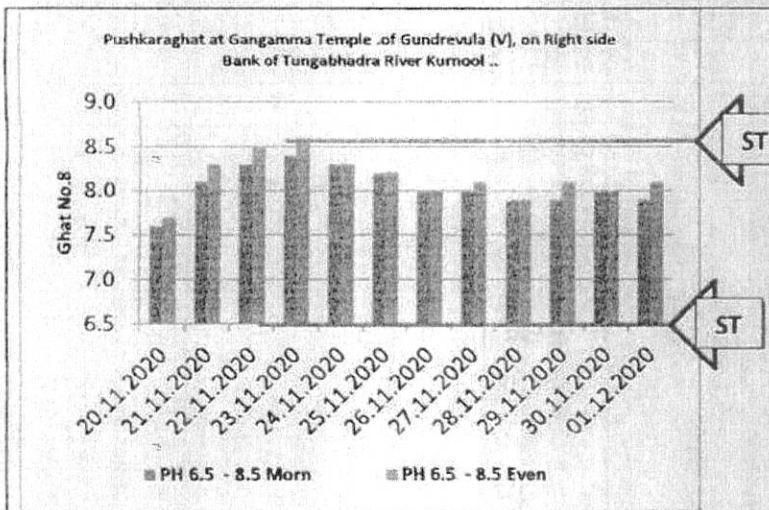


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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 8		Pushkaraghat at Gangamma Temple .of Gundrevula (V), on Right side Bank of Tungabhadra River Kurnool .							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.6	7.7	6.2	5.9	350	430	2.2	2.5
2	21.11.2020	8.1	8.3	5.6	5.4	430	920	2.3	2.3
3	22.11.2020	8.3	8.5	5.5	5.1	280	430	2.5	2.5
4	23.11.2020	8.4	8.6	6.1	5.8	920	920	2.8	3.0
5	24.11.2020	8.3	8.3	5.7	5.3	350	430	2.7	2.8
6	25.11.2020	8.2	8.2	5.4	5.4	920	>1600	2.8	2.8
7	26.11.2020	8.0	8.0	5.9	5.7	430	540	2.3	2.2
8	27.11.2020	8.0	8.1	6.1	5.8	280	430	2.3	2.5
9	28.11.2020	7.9	7.9	5.9	5.7	350	280	2.2	2.3
10	29.11.2020	7.9	8.1	5.6	5.5	430	920	2.7	2.8
11	30.11.2020	8.0	8.0	5.5	5.3	250	170	2.8	3.0
12	01.12.2020	7.9	8.1	5.5	5.6	180	170	3.0	3.0



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Analyst Gr-I

Dr. B. J. N. N. N.
Junior Scientific Officer

G. R. S.
Sr. Environmental Scientist (FAC)



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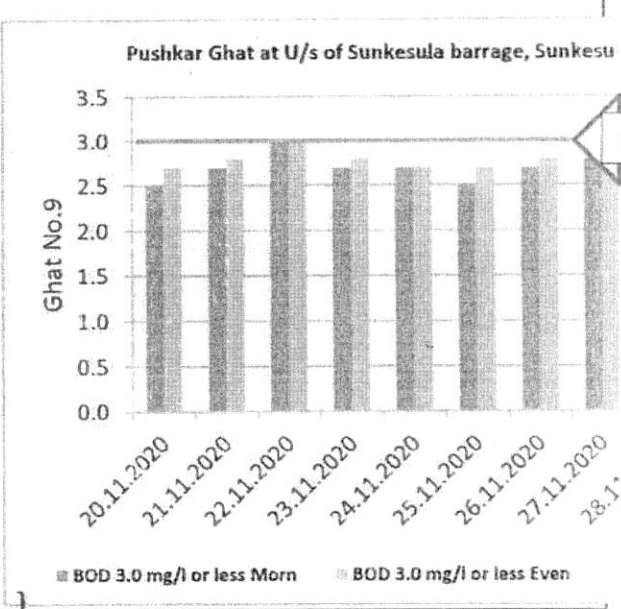
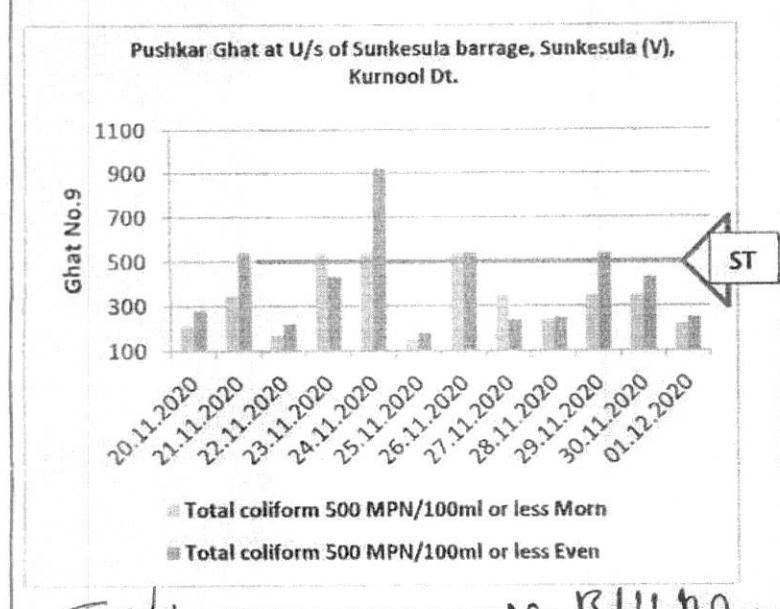
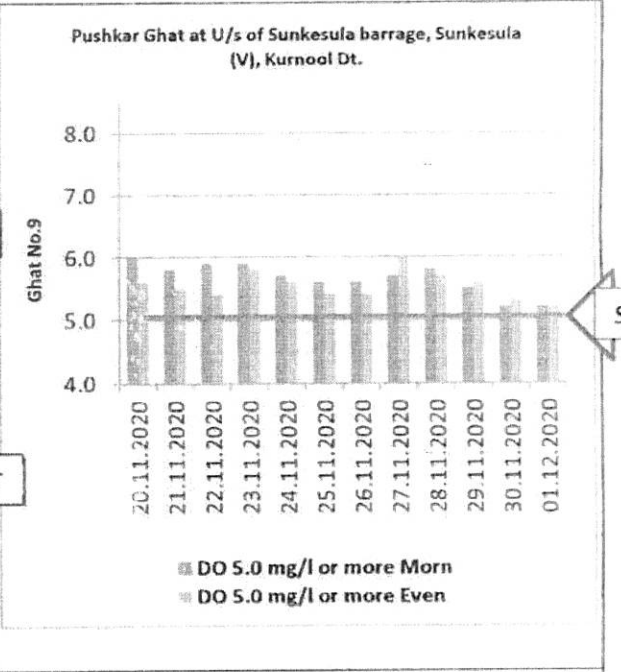
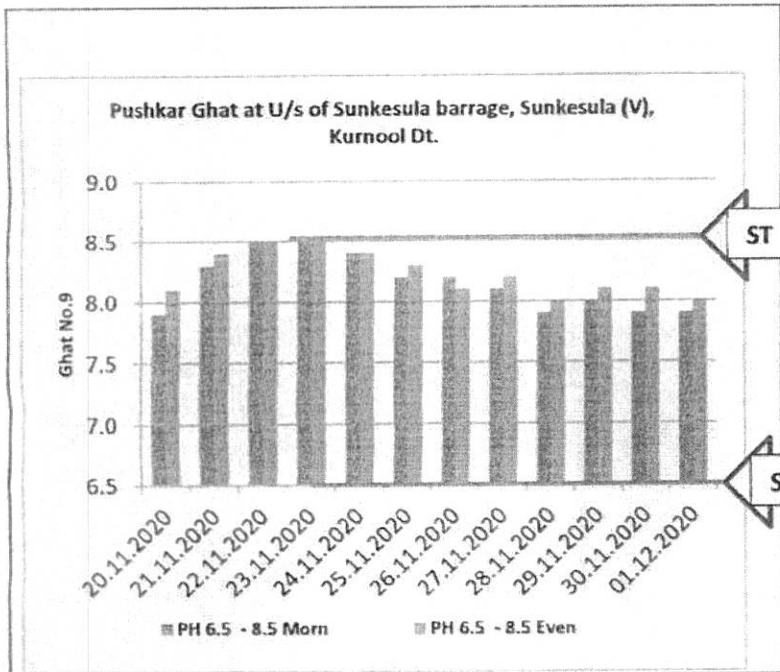


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Tungabhadra Pushakkaralu, 2020 - Consolidated Analysis Report

Ghat No. 9		Pushkar Ghat at U/s of Sunkesula barrage, Sunkesula (V), Kurnool Dt.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.9	8.1	6.0	5.6	210	280	2.5	2.7
2	21.11.2020	8.3	8.4	5.8	5.5	350	540	2.7	2.8
3	22.11.2020	8.5	8.5	5.9	5.4	170	220	3.0	3.0
4	23.11.2020	8.5	8.5	5.9	5.8	540	430	2.7	2.8
5	24.11.2020	8.4	8.4	5.7	5.6	540	920	2.7	2.7
6	25.11.2020	8.2	8.3	5.6	5.4	150	180	2.5	2.7
7	26.11.2020	8.2	8.1	5.6	5.4	540	540	2.7	2.8
8	27.11.2020	8.1	8.2	5.7	6.0	350	240	2.8	2.8
9	28.11.2020	7.9	8.0	5.8	5.7	240	250	2.7	2.8
10	29.11.2020	8.0	8.1	5.5	5.6	350	540	3.0	3.2
11	30.11.2020	7.9	8.1	5.2	5.3	350	430	3.2	3.2
12	01.12.2020	7.9	8.0	5.2	5.2	220	250	2.5	2.7



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Junior Scientific Officer

Sr. Environmental Scientist (FAC)



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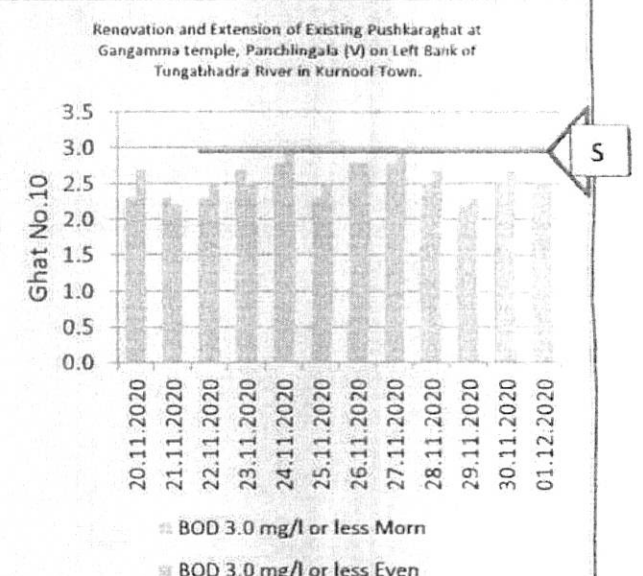
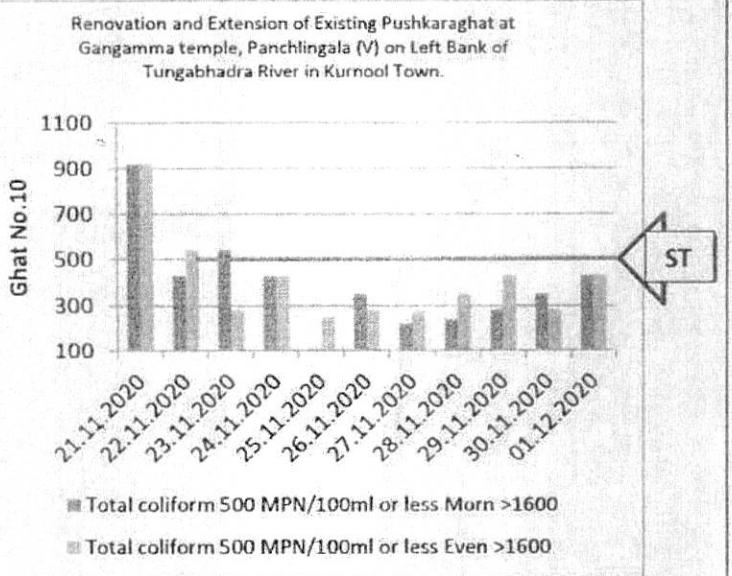
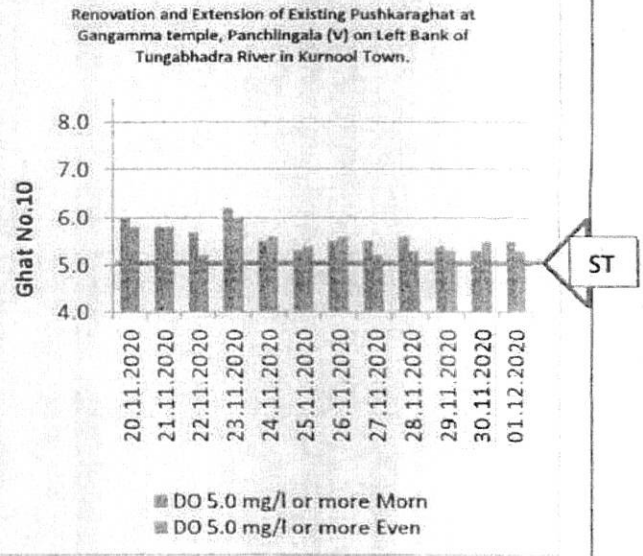
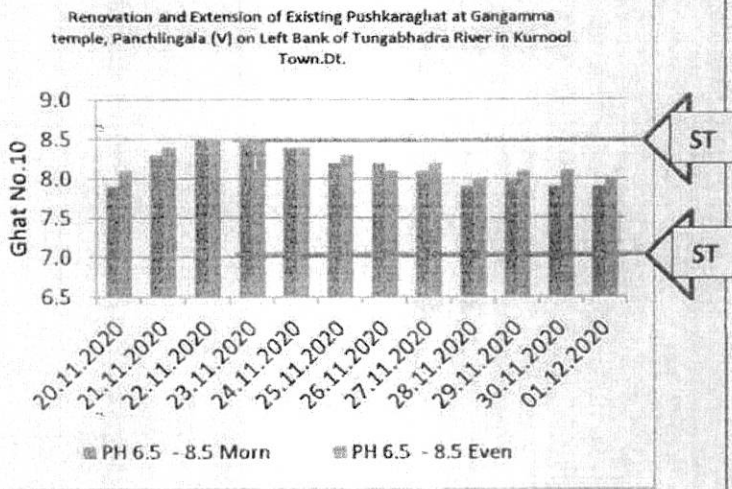
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KODUMUR ASSEMBLY CONSTITUENCY

Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 10		Renovation and Extension of Existing Pushkaraghat at Gangamma temple, Panchlingala (V) on Left Bank of Tungabhadra River in Kurnool Town.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.8	8.0	6.0	5.8	>1600	>1600	2.3	2.7
2	21.11.2020	8.1	8.3	5.8	5.8	920	920	2.3	2.2
3	22.11.2020	8.3	8.5	5.7	5.2	430	540	2.3	2.5
4	23.11.2020	8.3	8.3	6.2	6.0	540	280	2.7	2.5
5	24.11.2020	8.2	8.3	5.5	5.6	430	430	2.8	3.0
6	25.11.2020	8.0	8.0	5.3	5.4	110	250	2.3	2.5
7	26.11.2020	8.1	7.9	5.5	5.6	350	280	2.8	2.8
8	27.11.2020	8.0	8.0	5.5	5.2	220	280	2.8	3.0
9	28.11.2020	7.9	7.9	5.6	5.3	240	350	2.5	2.7
10	29.11.2020	8.0	8.0	5.4	5.3	280	430	2.2	2.3
11	30.11.2020	7.9	8.0	5.3	5.5	350	280	2.5	2.7
12	01.12.2020	7.9	8.0	5.5	5.3	430	430	2.5	2.5



Smd
Analyst Gr-I

N. B. ...
Junior Scientific Officer

...
Sr. Environmental Scientist (FAC)



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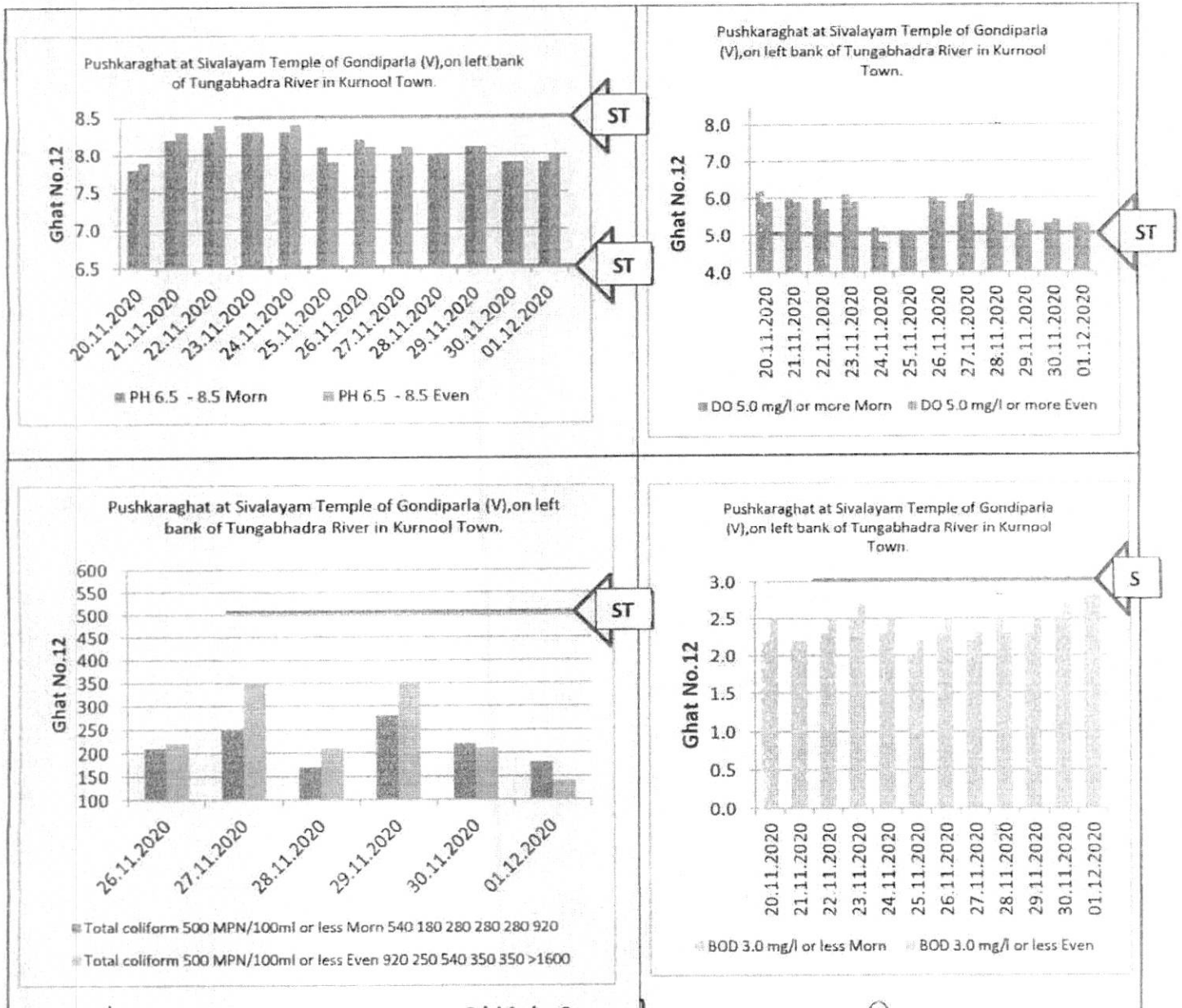


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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 12		Pushkaraghat at Sivalayam Temple of Gondiparla (V), on left bank of Tungabhadra River in Kurnool Town.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.8	7.9	6.2	5.9	540	920	2.2	2.5
2	21.11.2020	8.2	8.3	6.0	5.9	180	250	2.2	2.2
3	22.11.2020	8.3	8.4	6.0	5.7	280	540	2.3	2.5
4	23.11.2020	8.3	8.3	6.1	5.9	280	350	2.5	2.7
5	24.11.2020	8.3	8.4	5.2	4.8	280	350	2.3	2.5
6	25.11.2020	8.1	7.9	5.1	5.1	920	>1600	2.0	2.2
7	26.11.2020	8.2	8.1	6.0	5.9	210	220	2.3	2.5
8	27.11.2020	8.0	8.1	5.9	6.1	250	350	2.2	2.3
9	28.11.2020	8.0	8.0	5.7	5.6	170	210	2.5	2.3
10	29.11.2020	8.1	8.1	5.4	5.4	280	350	2.3	2.5
11	30.11.2020	7.9	7.9	5.3	5.4	220	210	2.5	2.7
12	01.12.2020	7.9	8.0	5.3	5.3	180	140	2.8	2.8



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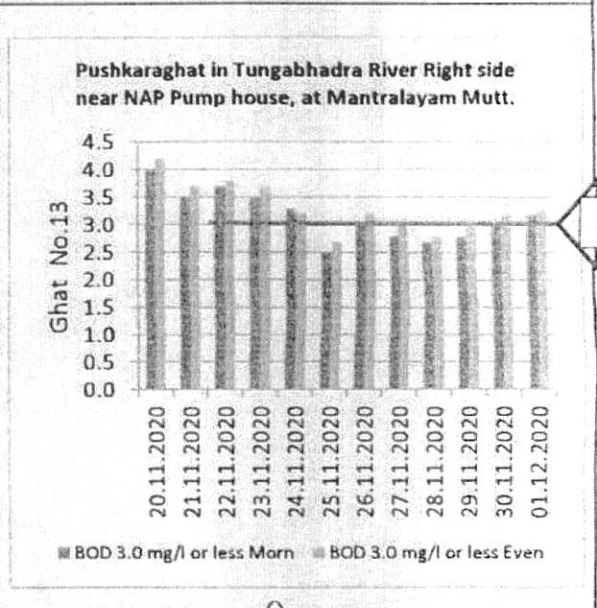
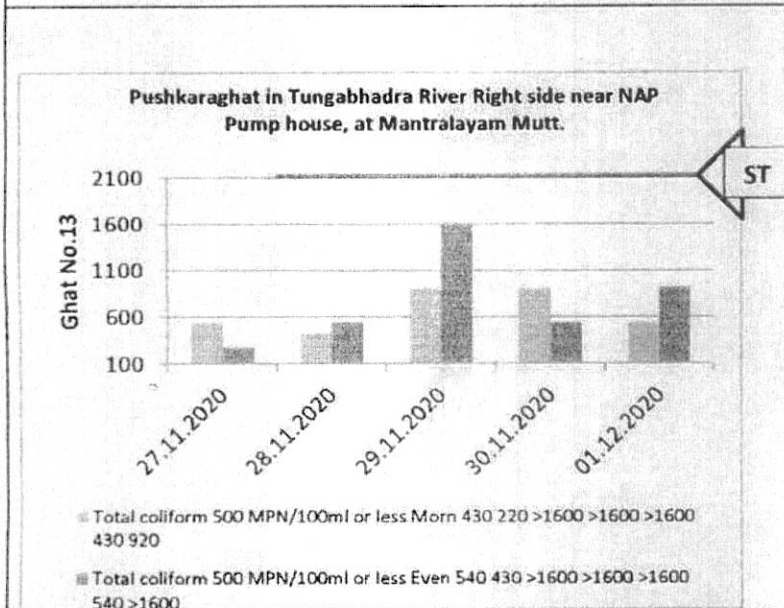
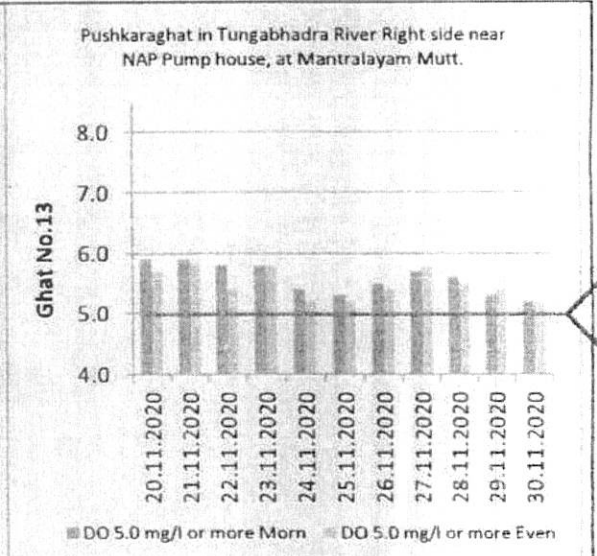
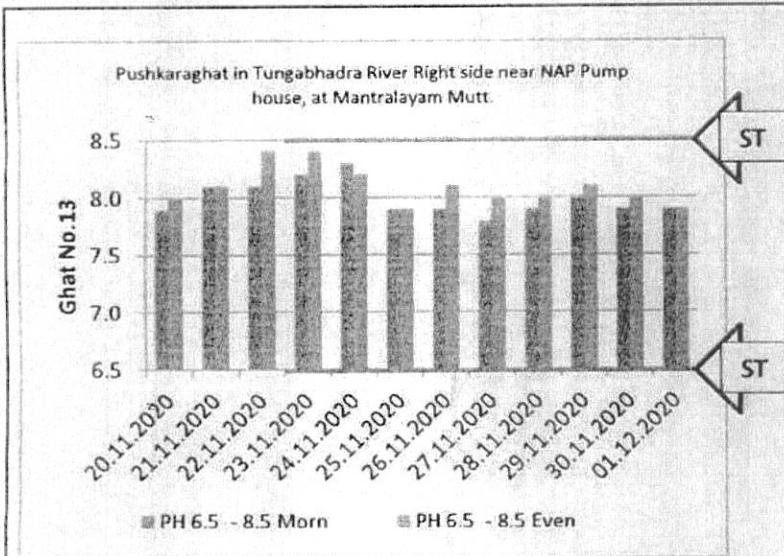


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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 13		Pushkaraghat in Tungabhadra River Right side near NAP Pump house, at Mantralayam Mutt.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.9	8.0	5.9	5.7	430	540	4.0	4.2
2	21.11.2020	8.1	8.1	5.9	5.9	220	430	3.5	3.7
3	22.11.2020	8.1	8.4	5.8	5.4	>1600	>1600	3.7	3.8
4	23.11.2020	8.2	8.4	5.8	5.8	>1600	>1600	3.5	3.7
5	24.11.2020	8.3	8.2	5.4	5.2	>1600	>1600	3.3	3.2
6	25.11.2020	7.9	7.9	5.3	5.2	430	540	2.5	2.7
7	26.11.2020	7.9	8.1	5.5	5.4	920	>1600	3.0	3.2
8	27.11.2020	7.8	8.0	5.7	5.8	540	280	2.8	3.0
9	28.11.2020	7.9	8.0	5.6	5.5	430	540	2.7	2.8
10	29.11.2020	8.0	8.1	5.3	5.4	920	1600	2.8	3.0
11	30.11.2020	7.9	8.0	5.2	5.2	920	540	3.0	3.2
12	01.12.2020	7.9	7.9	5.1	5.2	540	920	3.2	3.3



[Signature]
Analyst Gr-I

[Signature]
Junior Scientific Officer

[Signature]
Sr. Environmental Scientist (FAC)



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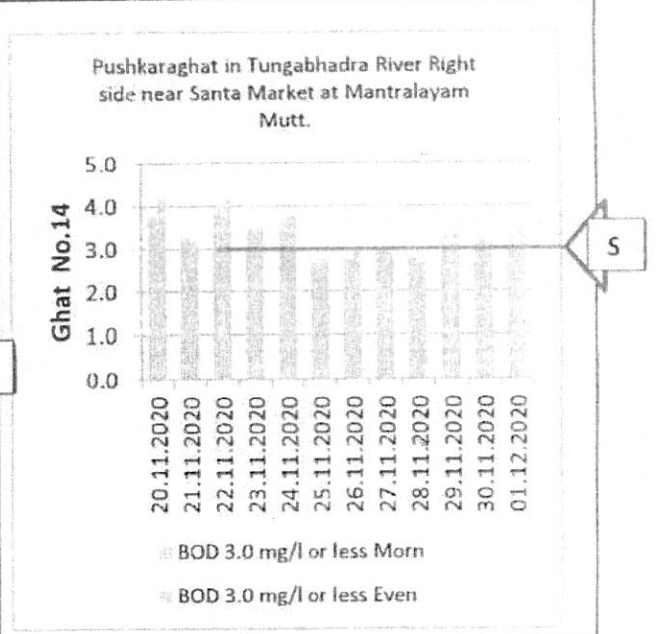
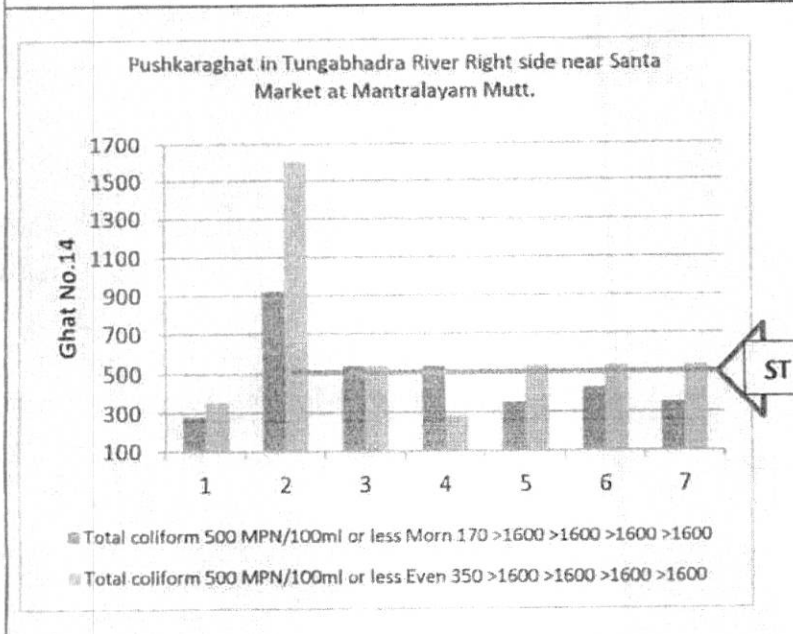
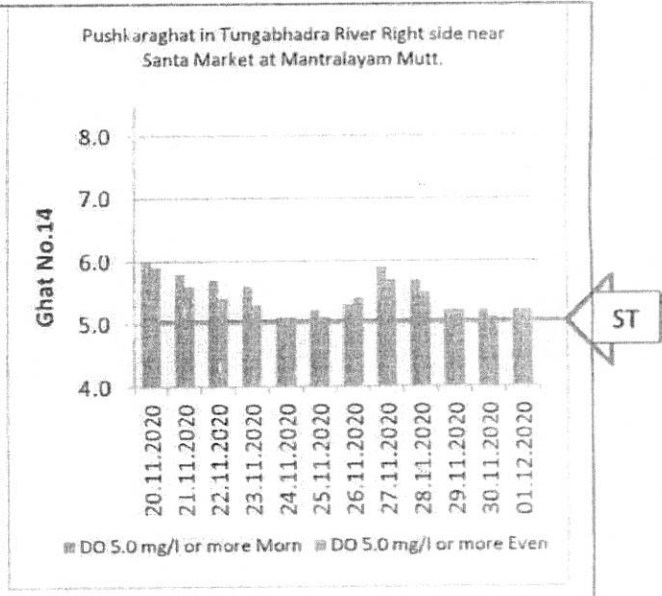
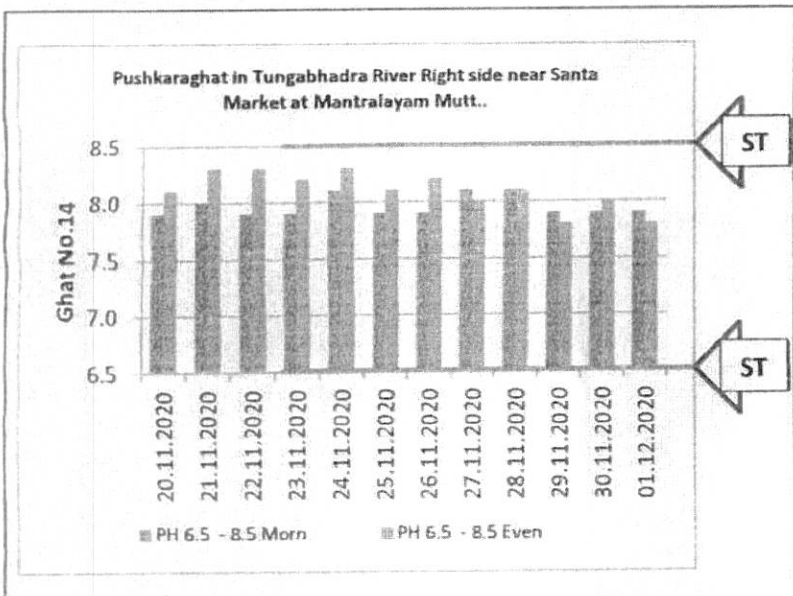


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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 14		Pushkaraghat in Tungabhadra River Right side near Santa Market at Mantralayam Mutt.							
Parameters →		PH		DO		Total coliform		BOD	
* 8-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.9	8.1	6.0	5.9	170	350	3.8	4.2
2	21.11.2020	8.0	8.3	5.8	5.6	>1600	>1600	3.3	3.2
3	22.11.2020	7.9	8.3	5.7	5.4	>1600	>1600	4.0	4.2
4	23.11.2020	7.9	8.2	5.6	5.3	>1600	>1600	3.5	3.5
5	24.11.2020	8.1	8.3	5.1	5.1	>1600	>1600	3.7	3.8
6	25.11.2020	7.9	8.1	5.2	5.1	280	350	2.7	2.8
7	26.11.2020	7.9	8.2	5.3	5.4	920	1600	2.8	3.0
8	27.11.2020	8.1	8.0	5.9	5.7	540	540	3.0	3.0
9	28.11.2020	8.1	8.1	5.7	5.5	540	280	2.8	2.7
10	29.11.2020	7.9	7.8	5.2	5.2	350	540	3.3	3.5
11	30.11.2020	7.9	8.0	5.2	5.1	430	540	3.2	3.2
12	01.12.2020	7.9	7.8	5.2	5.2	350	540	3.3	3.5



Analyst Gr-I

Dr. B. H. ...
Junior Scientific Officer

Sr. Environmental Scientist (FAC)



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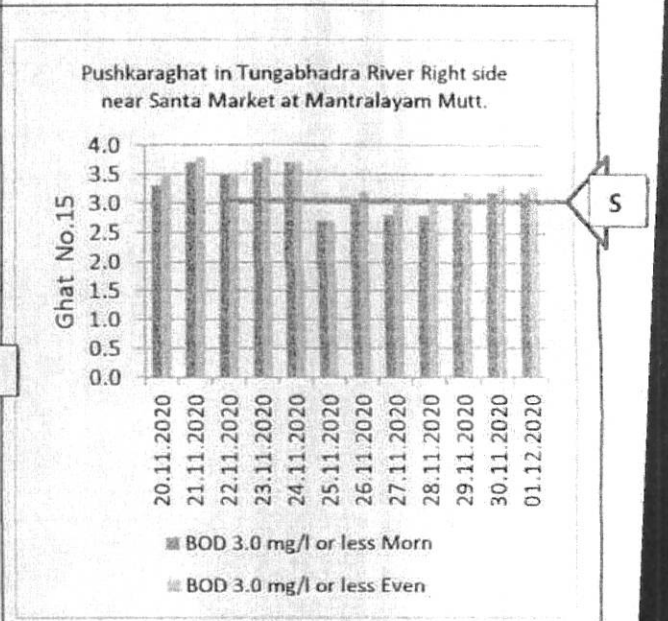
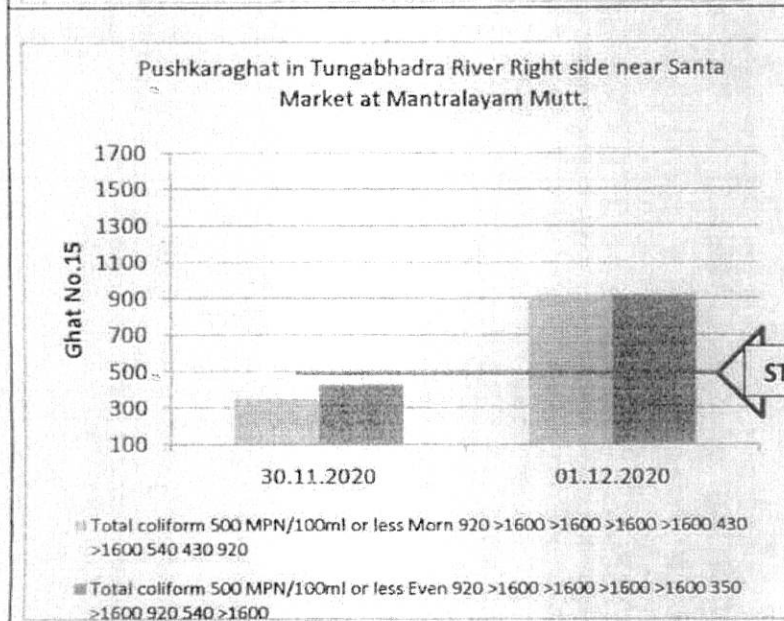
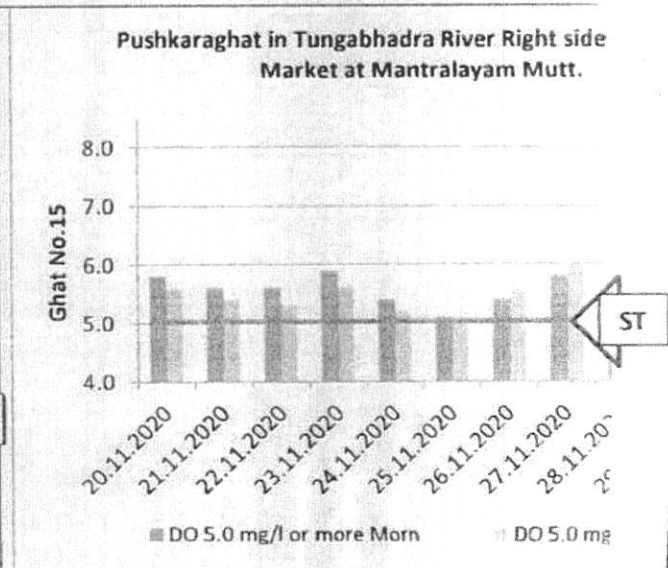
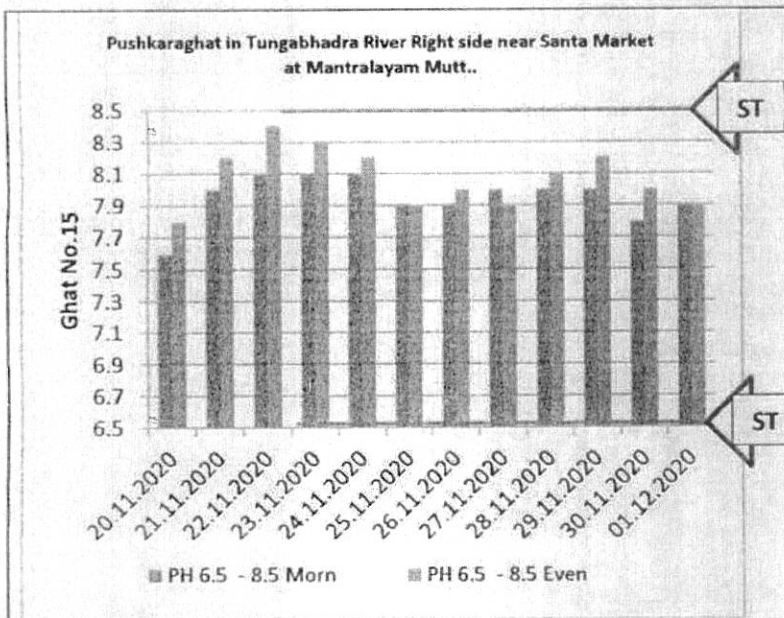


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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 15		Pushkaraghat in Tungabhadra River Right side near Vinayaka ghat at Mantralayam Mutt.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.6	7.8	5.8	5.6	920	920	3.3	3.5
2	21.11.2020	8.0	8.2	5.6	5.4	>1600	>1600	3.7	3.8
3	22.11.2020	8.1	8.4	5.6	5.3	>1600	>1600	3.5	3.5
4	23.11.2020	8.1	8.3	5.9	5.6	>1600	>1600	3.7	3.8
5	24.11.2020	8.1	8.2	5.4	5.2	>1600	>1600	3.7	3.7
6	25.11.2020	7.9	7.9	5.1	5.0	430	350	2.7	2.7
7	26.11.2020	7.9	8.0	5.4	5.6	>1600	>1600	3.0	3.2
8	27.11.2020	8.0	7.9	5.8	6.0	540	920	2.8	3.0
9	28.11.2020	8.0	8.1	5.6	5.4	430	540	2.8	3.0
10	29.11.2020	8.0	8.2	5.4	5.2	920	>1600	3.0	3.2
11	30.11.2020	7.8	8.0	5.1	5.0	350	430	3.2	3.3
12	01.12.2020	7.9	7.9	5.1	5.0	920	920	3.2	3.3



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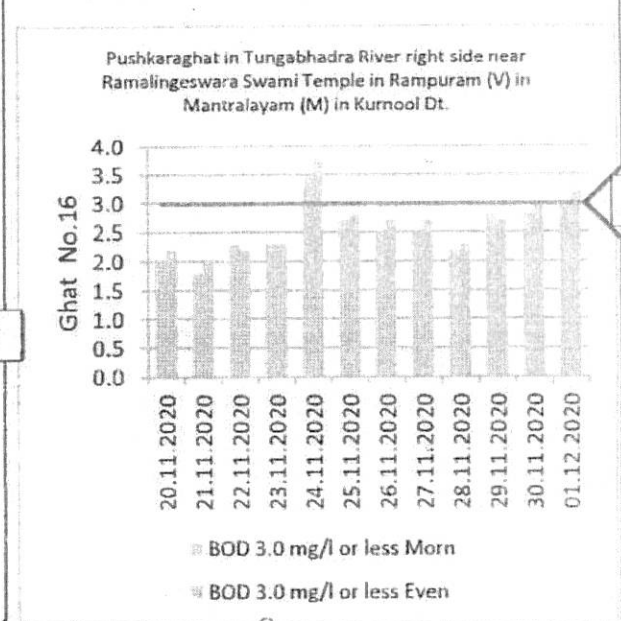
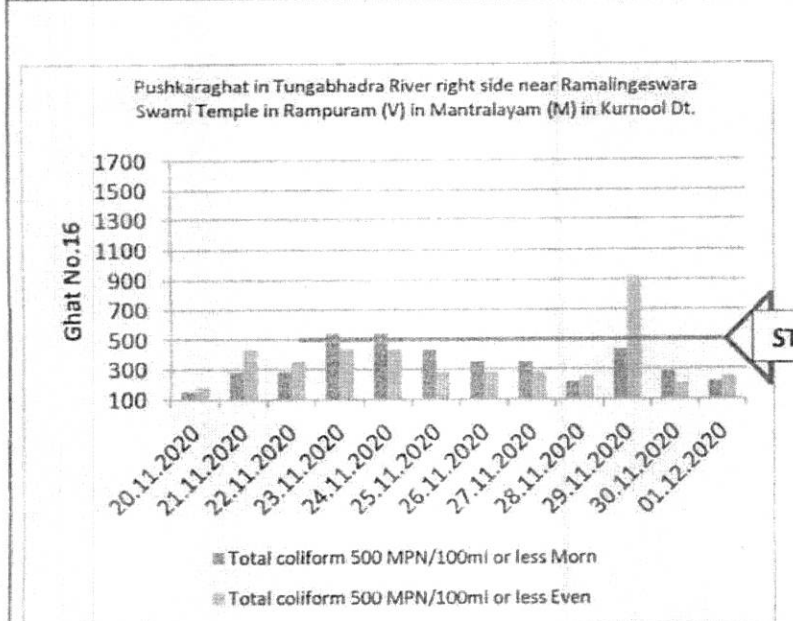
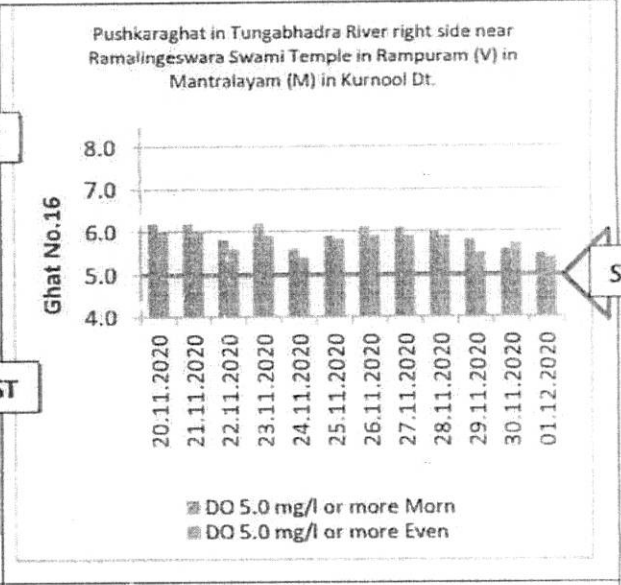
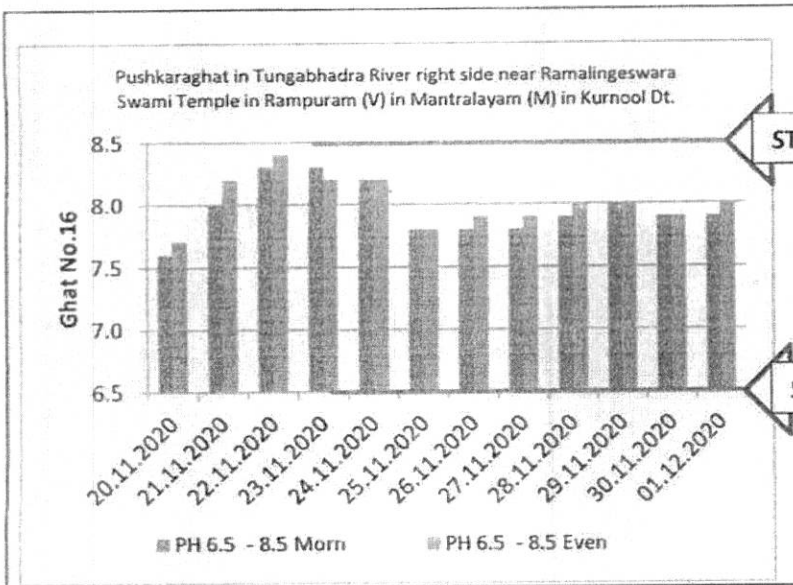


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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 16		Pushkaraghat in Tungabhadra River right side near Ramalingeswara Swami Temple in Rampuram (V) in Mantralayam (M) in Kurnool Dt.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.6	7.7	6.2	6.0	150	180	2.0	2.2
2	21.11.2020	8.0	8.2	6.2	6.0	280	430	1.8	2.0
3	22.11.2020	8.3	8.4	5.8	5.6	280	350	2.3	2.2
4	23.11.2020	8.3	8.2	6.2	5.9	540	430	2.3	2.3
5	24.11.2020	8.2	8.2	5.6	5.4	540	430	3.5	3.8
6	25.11.2020	7.8	7.8	5.9	5.8	430	280	2.7	2.8
7	26.11.2020	7.8	7.9	6.1	5.9	350	280	2.5	2.7
8	27.11.2020	7.8	7.9	6.1	5.9	350	280	2.5	2.7
9	28.11.2020	7.9	8.0	6.0	5.9	220	250	2.2	2.3
10	29.11.2020	8.0	8.0	5.8	5.5	430	920	2.8	2.7
11	30.11.2020	7.9	7.9	5.6	5.7	280	210	2.8	3.0
12	01.12.2020	7.9	8.0	5.5	5.4	220	250	3.0	3.2



Analyst Gr-I

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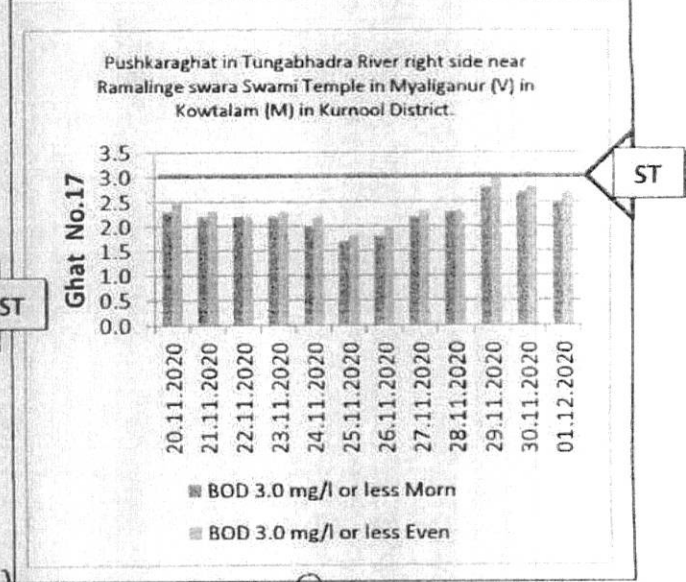
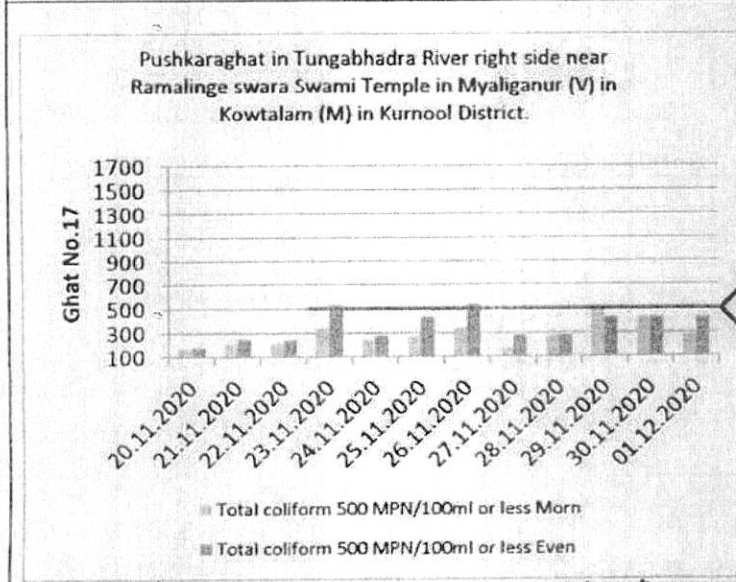
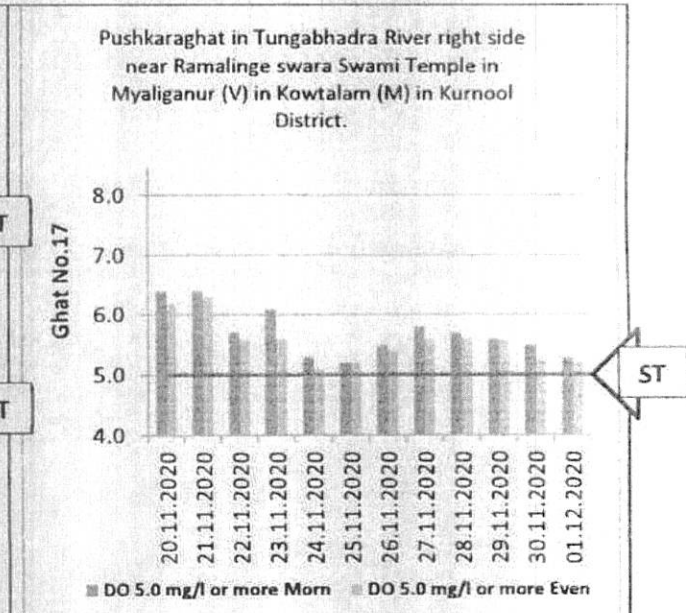
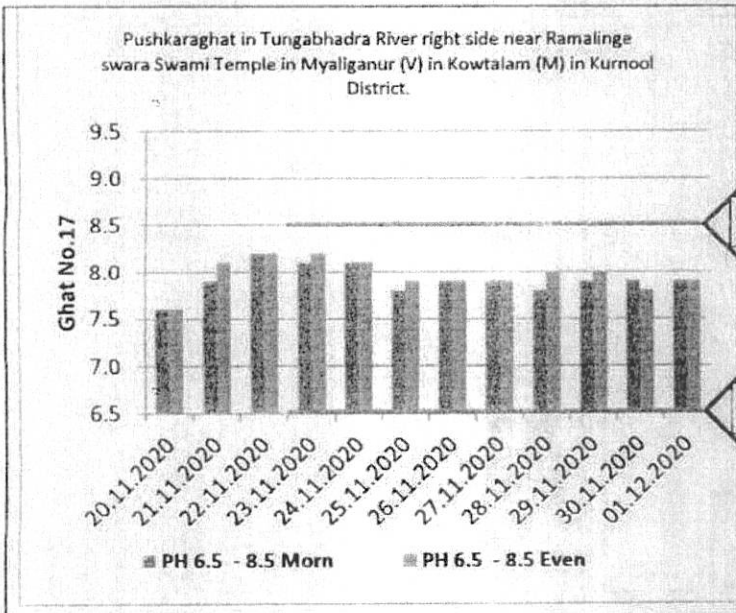


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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 17		Pushkaraghat in Tungabhadra River right side near Ramalinge swara Swami Temple in Myaliganur (V) in Kowtalam (M) in Kurnool District.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.6	7.6	6.4	6.2	170	180	2.3	2.5
2	21.11.2020	7.9	8.1	6.4	6.3	210	250	2.2	2.3
3	22.11.2020	8.2	8.2	5.7	5.6	220	240	2.2	2.2
4	23.11.2020	8.1	8.2	6.1	5.6	350	540	2.2	2.3
5	24.11.2020	8.1	8.1	5.3	5.1	250	280	2.0	2.2
6	25.11.2020	7.8	7.9	5.2	5.2	280	430	1.7	1.8
7	26.11.2020	7.9	7.9	5.5	5.4	350	540	1.8	2.0
8	27.11.2020	7.9	7.9	5.8	5.6	180	280	2.2	2.3
9	28.11.2020	7.8	8.0	5.7	5.6	280	280	2.3	2.3
10	29.11.2020	7.9	8.0	5.6	5.6	540	430	2.8	3.0
11	30.11.2020	7.9	7.8	5.5	5.3	430	430	2.7	2.8
12	01.12.2020	7.9	7.9	5.3	5.2	280	430	2.5	2.7



[Signature]
Analyst Gr-I

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Junior Scientific Officer

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Sr. Environmental Scientist (FAC)



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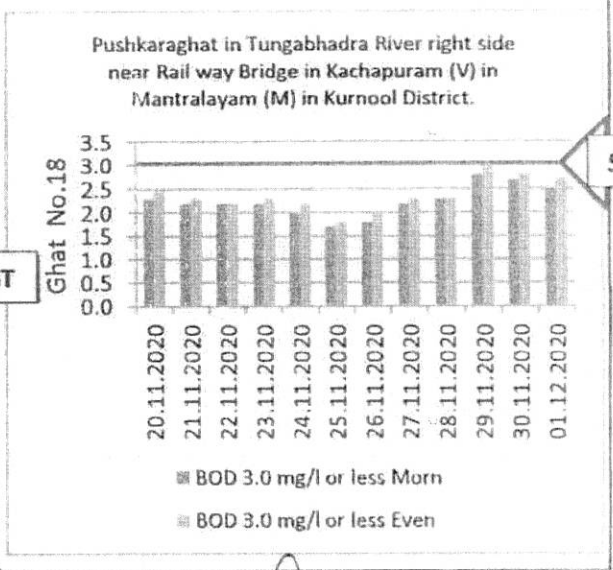
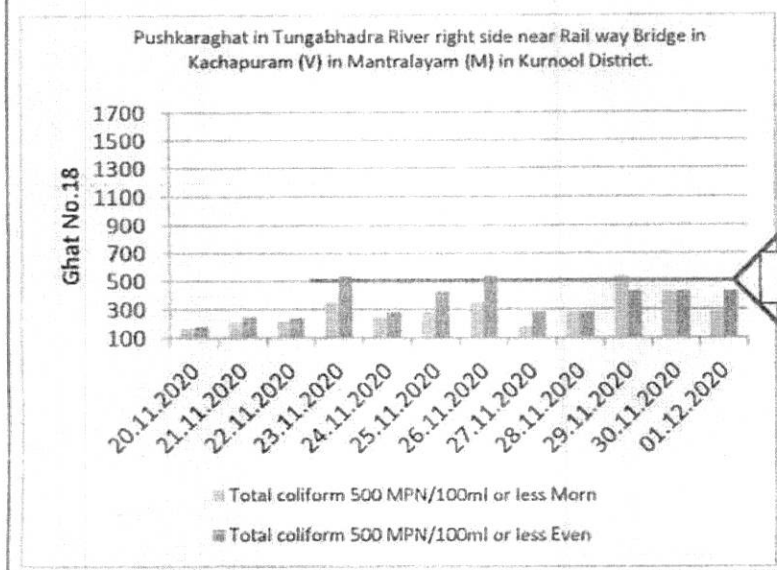
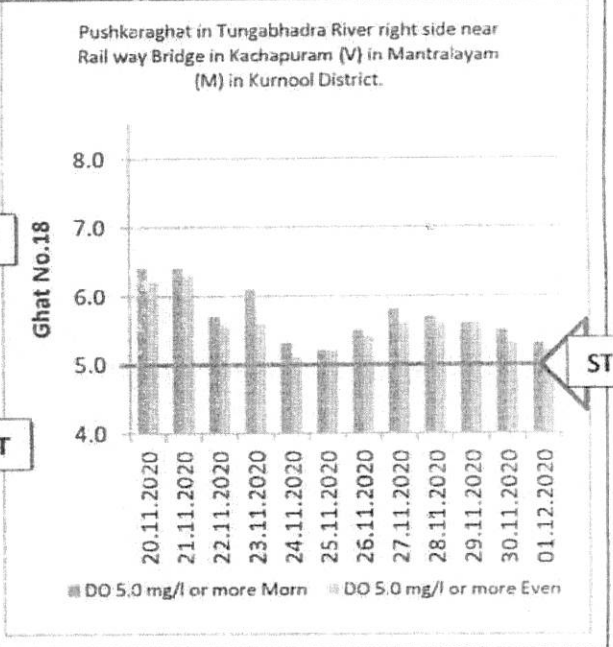
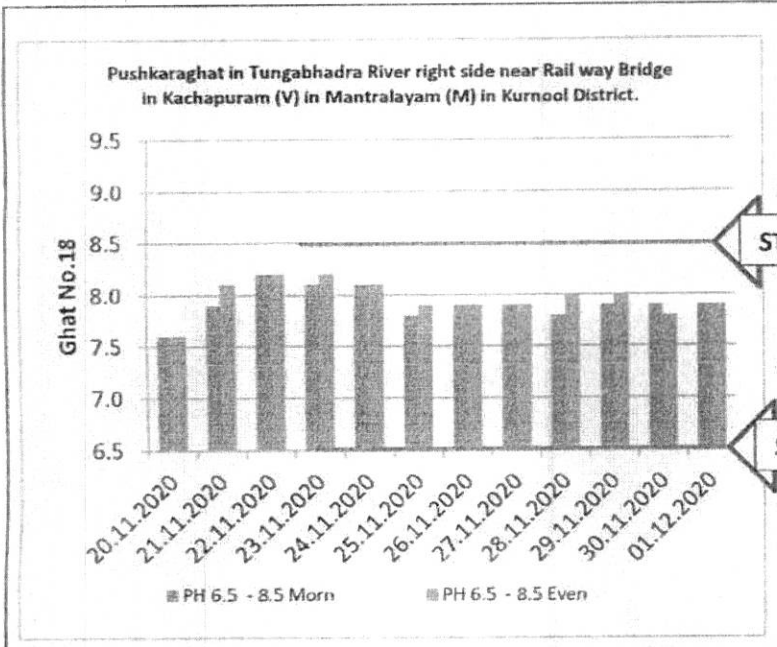


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Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 18		Pushkaraghat in Tungabhadra River right side near Rail way Bridge in Kachapuram (V) in Mantralayam (M) in Kurnool District.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.5	7.6	6.2	6.1	350	430	1.8	2.2
2	21.11.2020	7.9	8.0	6.0	5.8	350	430	1.7	1.8
3	22.11.2020	8.3	8.3	6.0	5.7	250	350	1.7	1.5
4	23.11.2020	8.2	8.2	5.8	5.4	210	280	2.0	2.2
5	24.11.2020	8.1	8.1	5.4	5.3	170	350	2.2	2.3
6	25.11.2020	7.9	7.8	5.4	5.2	240	250	2.2	2.3
7	26.11.2020	7.8	7.9	5.6	5.4	170	280	2.5	2.7
8	27.11.2020	7.8	7.6	6.0	5.9	150	210	2.2	2.3
9	28.11.2020	7.9	7.9	5.9	5.7	140	170	2.5	2.7
10	29.11.2020	8.0	7.9	5.5	5.4	540	540	2.2	2.3
11	30.11.2020	7.9	8.0	5.4	5.1	540	920	2.5	2.7
12	01.12.2020	8.0	7.9	5.3	5.1	430	540	2.5	2.5



Analyst Gr-I

Junior Scientific Officer

Sr. Environmental Scientist (FAC)



**ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL**

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

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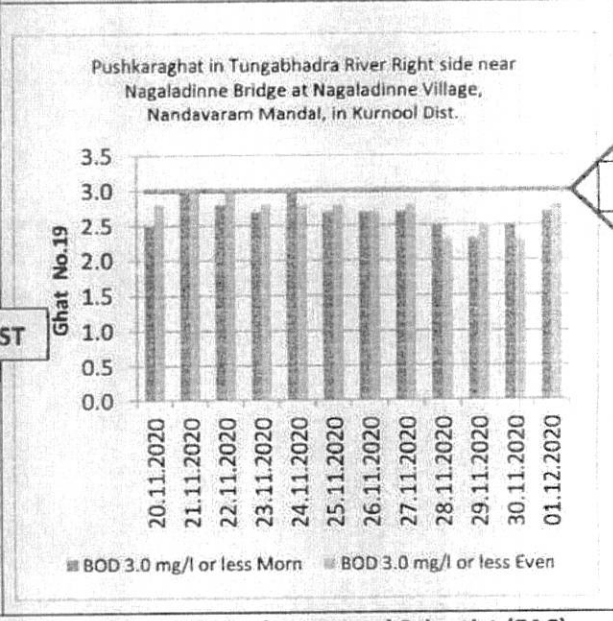
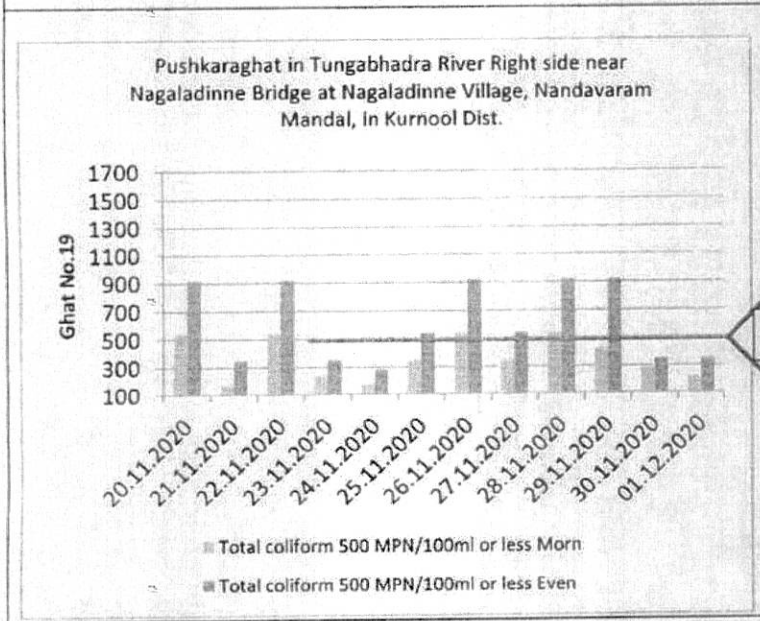
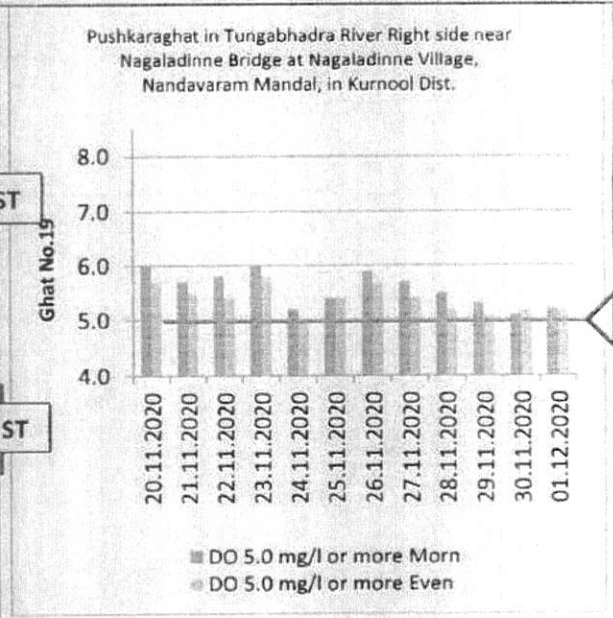
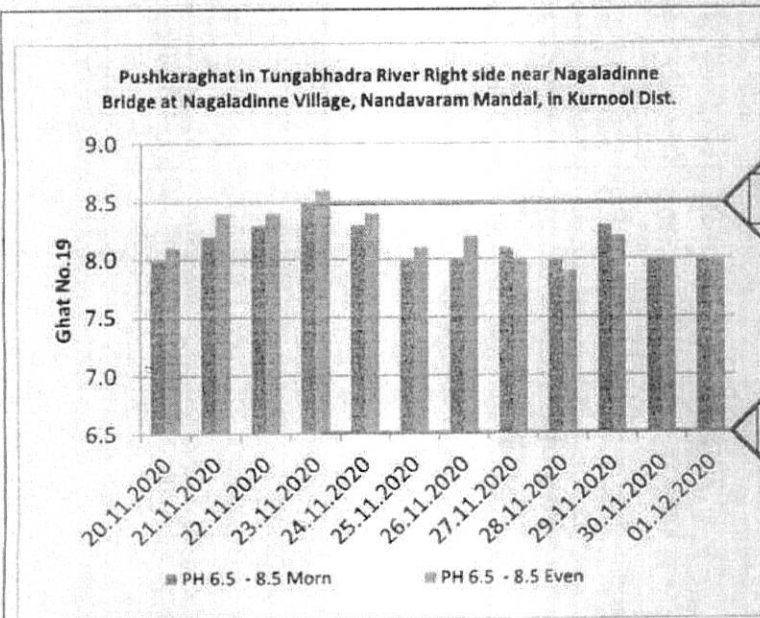


Certificate No.TC-7305

YEMMIGANUR ASSEMBLY CONSTITUENCY

Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 19		Pushkaraghat in Tungabhadra River Right side near Nagaladinne Bridge at Nagaladinne Village, Nandavaram Mandal, in Kurnool Dist.							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	8.0	8.1	6.0	5.7	540	920	2.5	2.8
2	21.11.2020	8.2	8.4	5.7	5.5	170	350	3.0	3.0
3	22.11.2020	8.3	8.4	5.8	5.4	540	920	2.8	3.0
4	23.11.2020	8.5	8.6	6.0	5.8	240	350	2.7	2.8
5	24.11.2020	8.3	8.4	5.2	5.0	180	280	3.0	2.8
6	25.11.2020	8.0	8.1	5.4	5.4	350	540	2.7	2.8
7	26.11.2020	8.0	8.2	5.9	5.7	540	920	2.7	2.7
8	27.11.2020	8.1	8.0	5.7	5.4	350	540	2.7	2.8
9	28.11.2020	8.0	7.9	5.5	5.2	540	920	2.5	2.3
10	29.11.2020	8.3	8.2	5.3	5.1	430	920	2.3	2.5
11	30.11.2020	8.0	8.0	5.1	5.2	280	350	2.5	2.3
12	01.12.2020	8.0	8.0	5.2	5.2	220	350	2.7	2.8



Analyst Gr-I
[Signature]

Junior Scientific Officer
[Signature]

Sr. Environmental Scientist (FAC)
[Signature]



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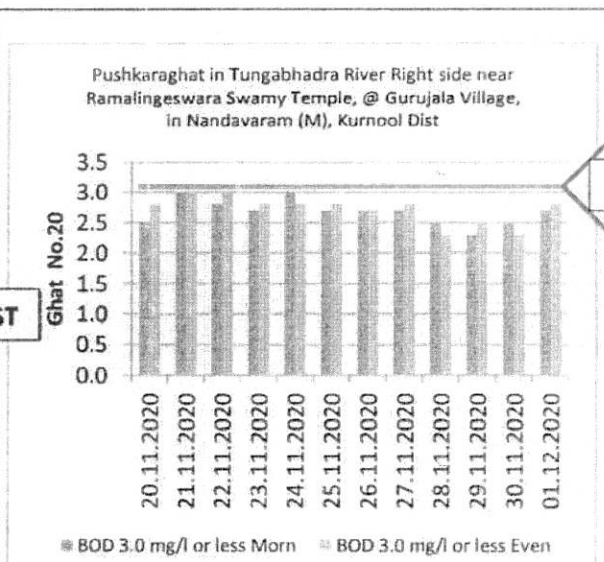
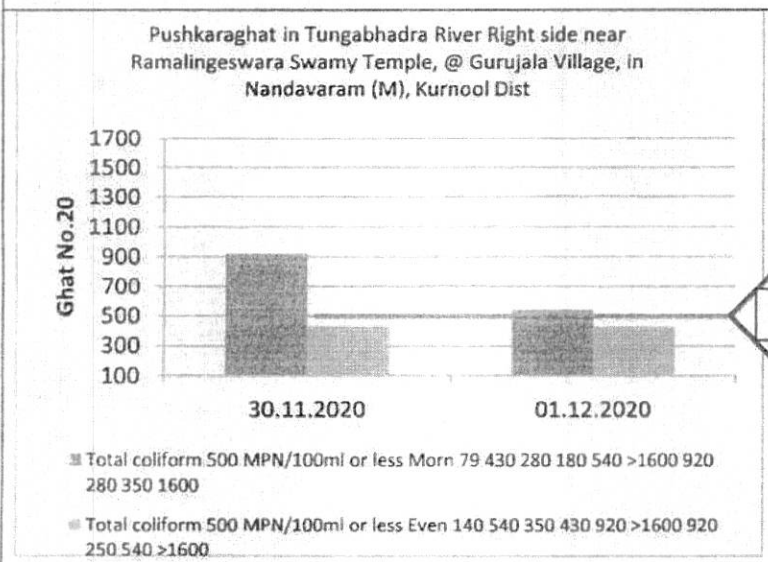
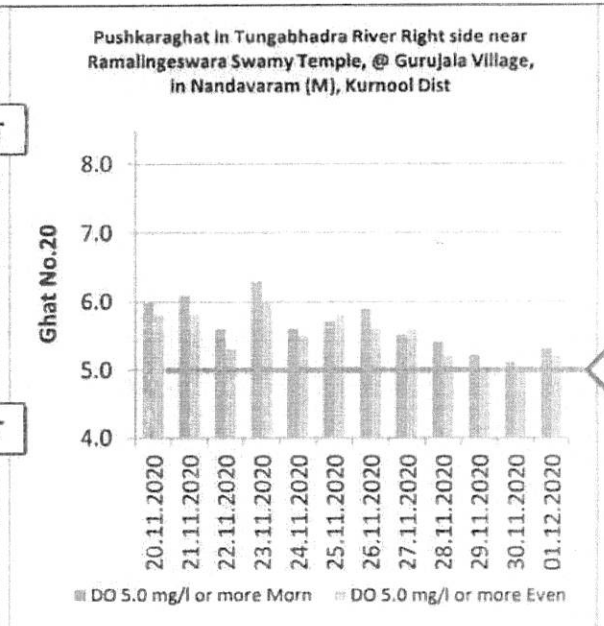
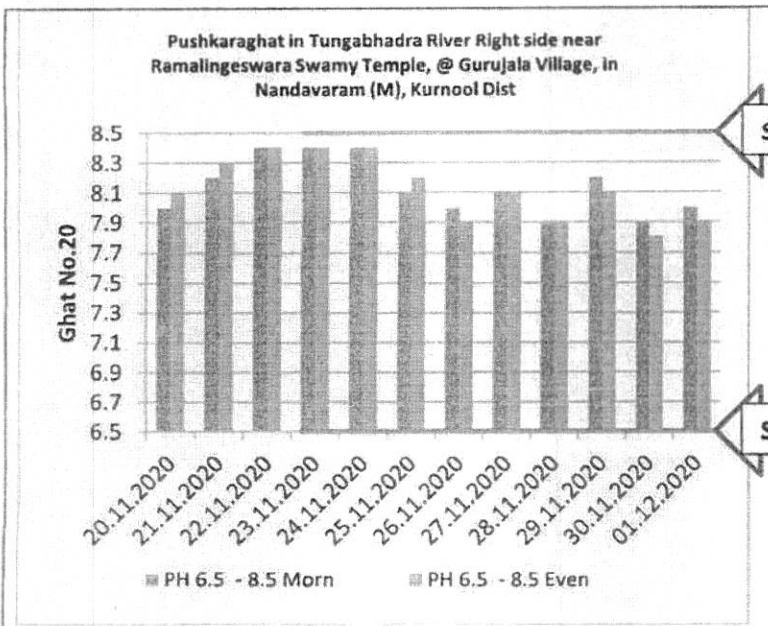


Certificate No. TC-7305

YEMMIGANUR ASSEMBLY CONSTITUENCY

Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 20		Pushkaraghat in Tungabhadra River Right side near Ramalingeswara Swamy Temple, @ Gurujala Village, in Nandavaram (M), Kurnool Dist							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	8.0	8.1	6.0	5.8	79	140	3.0	3.2
2	21.11.2020	8.2	8.3	6.1	5.8	430	540	3.2	3.3
3	22.11.2020	8.4	8.4	5.6	5.3	280	350	3.5	3.5
4	23.11.2020	8.4	8.4	6.3	6.0	180	430	3.0	3.0
5	24.11.2020	8.4	8.4	5.6	5.5	540	920	3.2	3.3
6	25.11.2020	8.1	8.2	5.7	5.8	>1600	>1600	3.0	3.2
7	26.11.2020	8.0	7.9	5.9	5.6	920	920	3.3	3.2
8	27.11.2020	8.1	8.1	5.5	5.6	280	250	3.0	3.2
9	28.11.2020	7.9	7.9	5.4	5.2	350	540	2.7	2.8
10	29.11.2020	8.2	8.1	5.2	5.0	1600	>1600	2.7	2.8
11	30.11.2020	7.9	7.8	5.1	5.0	920	430	2.8	2.8
12	01.12.2020	8.0	7.9	5.3	5.2	540	430	3.0	3.2



Analyst Gr-I

Junior Scientific Officer

Sr. Environmental Scientist (FAC)



ANDHRA PRADESH POLLUTION CONTROL BOARD
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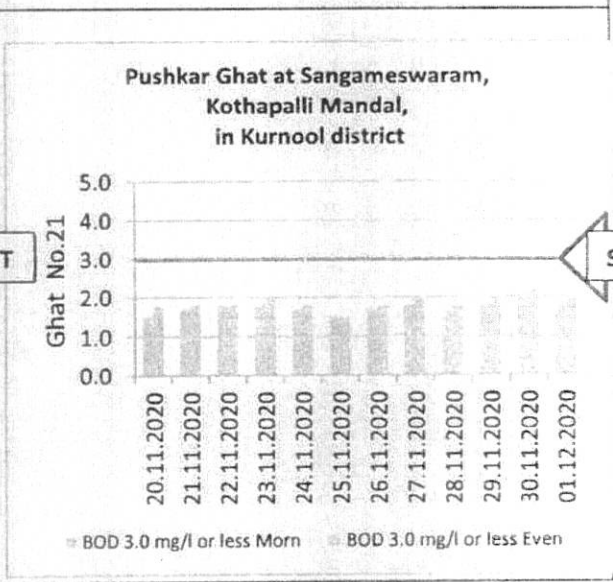
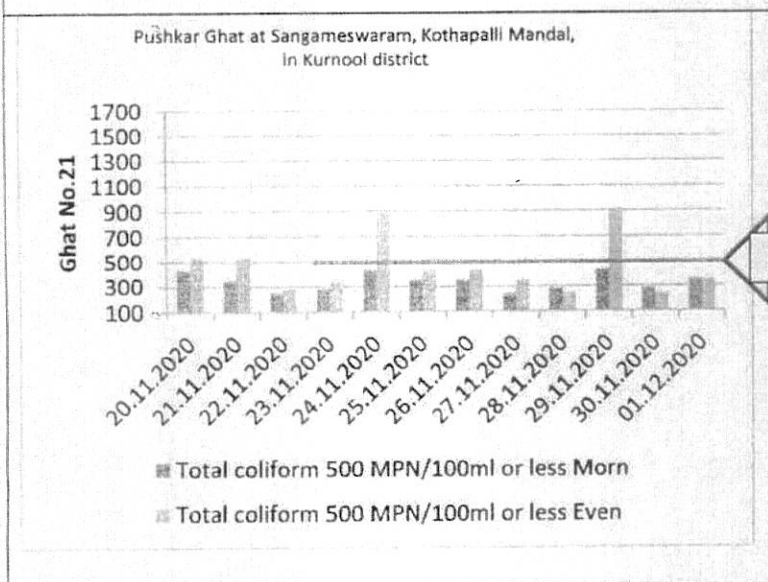
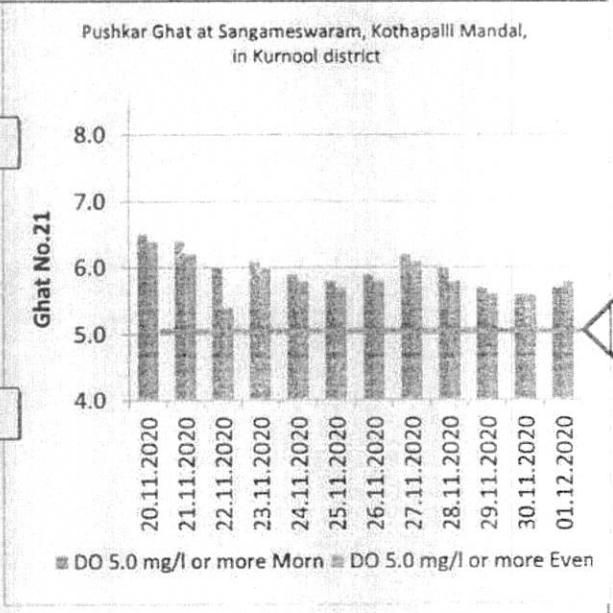
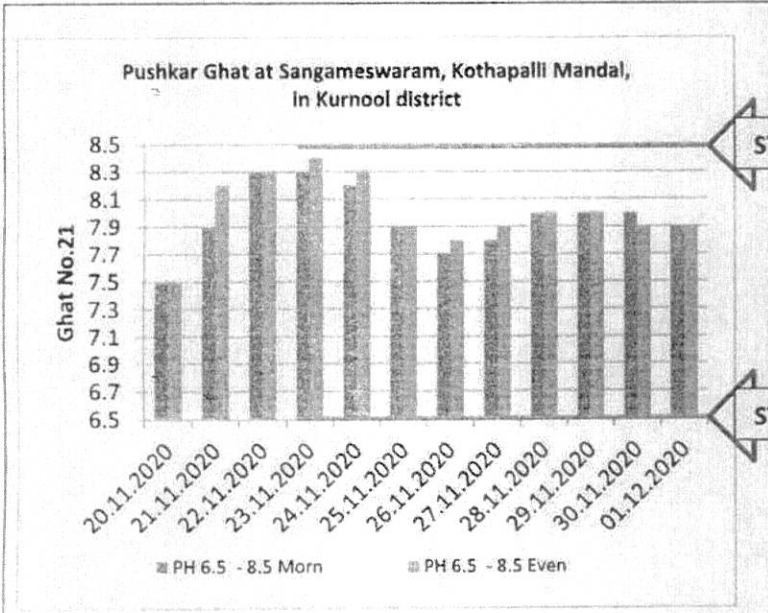
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Certificate No.TC.7305

NANDIKOTKUR ASSEMBLY CONSTITUENCY

Tungabhadra Pushkaralu, 2020 - Consolidated Analysis Report

Ghat No. 21		Pushkar Ghat at Sangameswaram, Kothapalli Mandal, in Kurnool district							
Parameters →		PH		DO		Total coliform		BOD	
* B-class criteria →		6.5 - 8.5		5.0 mg/l or more		500 MPN/100ml or less		3.0 mg/l or less	
Sl. No	Date	Morn	Even	Morn	Even	Morn	Even	Morn	Even
1	20.11.2020	7.5	7.5	6.5	6.4	430	540	1.5	1.8
2	21.11.2020	7.9	8.2	6.4	6.2	350	540	1.7	1.8
3	22.11.2020	8.3	8.3	6.0	5.4	250	280	1.8	1.8
4	23.11.2020	8.3	8.4	6.1	6.0	280	350	1.8	2.0
5	24.11.2020	8.2	8.3	5.9	5.8	430	920	1.7	1.8
6	25.11.2020	7.9	7.9	5.8	5.7	350	430	1.5	1.5
7	26.11.2020	7.7	7.8	5.9	5.8	350	430	1.7	1.8
8	27.11.2020	7.8	7.9	6.2	6.1	240	350	1.8	2.0
9	28.11.2020	8.0	8.0	6.0	5.8	280	250	1.7	1.8
10	29.11.2020	8.0	8.0	5.7	5.6	430	920	1.8	2.0
11	30.11.2020	8.0	7.9	5.6	5.6	280	240	2.0	2.2
12	01.12.2020	7.9	7.9	5.7	5.8	350	350	1.8	2.0



[Signature]
Analyst Gr-I

[Signature]
Junior Scientific Officer

[Signature]
Sr. Environmental Scientist (FAC)

ANNEXURE-VI

Central Pollution Control Board (CPCB) developed Water Quality Criteria by classifying as class-A, B, C, D, E & below E based on Designated-Best-Use as detailed below:

Water Quality Criteria		
Designated-Best-Use	Class of water	Criteria
Drinking Water Source without conventional treatment but after disinfection	A	Total Coliforms Organism MPN/100ml shall be 50 or less pH between 6.5 and 8.5 Dissolved Oxygen 6mg/l or more Biochemical Oxygen Demand 5 days 20°C 2mg/l or less
Outdoor bathing (Organised)	B	Total Coliforms Organism MPN/100ml shall be 500 or less pH between 6.5 and 8.5 Dissolved Oxygen 5mg/l or more Biochemical Oxygen Demand 5 days 20°C 3mg/l or less
Drinking water source after conventional treatment and disinfection	C	Total Coliforms Organism MPN/100ml shall be 5000 or less pH between 6 to 9 Dissolved Oxygen 4mg/l or more Biochemical Oxygen Demand 5 days 20°C 3mg/l or less
Propagation of Wild life and Fisheries	D	pH between 6.5 to 8.5 Dissolved Oxygen 4mg/l or more Free Ammonia (as N) 1.2 mg/l or less
Irrigation, Industrial Cooling, Controlled Waste disposal	E	pH between 6.0 to 8.5 Electrical Conductivity at 25°C micro mhos/cm Max.2250 Sodium absorption Ratio Max. 26 Boron Max. 2mg/l
	Below-E	Not Meeting A, B, C, D & E Criteria



**ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL**

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

Accredited by NABL as per ISO/IEC: 17025:2017



FORMAT No. APPCB/ZL/KNL/FM/66

ANALYSIS REPORT

Report No: KNL2111069 to 071

Dated: 30th day of November 2021

Sample Source : Water Samples collected at Tungabhadra River, Agasanur (V), Kosigi (M) & Mantralayam (M), Kurnool District.

Sample code & Location:

KNL2111069 : Tungabhadra river at Agasanur (V), Kosigi (M)

KNL2111070 : Tungabhadra river at Vinayaka Ghat, Mantralayam

KNL2111071 : Tungabhadra river at Santa market, Mantralayam

Sample collected by : Analyst Gr-I, Regional Office, Kurnool

Sample collected on : 18-11-2021

Sample received on : 19-11-2021

Report issued on : 30-11-2021

It is to certify that the above samples were analyzed from 19-11-2021 to 30-11-2021 and the analysis results are declared as follows:

Sl. No	Parameter	Units	SAMPLE CODES			Test Method
			Analysis Results			
			069	070	071	
1	pH @ 25°C	--	7.3	7.5	7.6	APHA (23 rd Edition) 4500-H ⁺ B: 2017, Page. 4-95 to 4-99
2	Electrical Conductivity (EC)	µs/cm	932	851	908	APHA (23 rd Edition) 2510-B : 2017, Page. 2-58 to 2-59
3	Turbidity	NTU	9.3	4.5	7.9	APHA (23 rd Edition) 2130-B :
4	Total Suspended solids (TSS)	mg/l	14	7	12	APHA (23 rd Edition) 2540-D: 2017, Page. 2-70 to 2-71
5	Total Dissolved Solids (TDS)	mg/l	546	502	526	APHA (23 rd Edition) 2540-C: 2017, Page. 2-69 to 2-70
6	Chemical Oxygen Demand (COD)	mg/l	24	28	30	APHA (23 rd Edition) 5220-B: 2017, Page. 5-18 to 5-19
7	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	mg/l	3.2	3.5	3.7	IS 3025 (Part 44): 1993 (Reaffirmed 2014)
8	Chlorides as Cl ⁻	mg/l	110	105	106	APHA (23 rd Edition) 4500-Cl B: 2017, Page. 4-75 to 4-76
9	Sulphates as So ₄ ²⁻	mg/l	93	83	87	APHA (23 rd Edition) 4500-SO ₄ E: 2017 Page. 4-199 to 4-200
10	Phosphates as Po ₄ ³⁻	mg/l	0.14	0.15	0.12	APHA (23 rd Edition) 4500-P D: 2017, Page. 4-163 to 4-164
11	Fluorides as F ⁻	mg/l	0.8	0.8	0.7	APHA (23 rd Edition) 4500-F- B&D: 2017, Page. 4-87 -4-88, & Page. 4-90 to 4-91
12	Nitrates as NO ₃	mg/l	3.3	2.8	3.2	APHA (23 rd Edition) 4500-NO ₃ -B: 2017, Page. 4-127
13	Total Alkalinity as CaCO ₃	mg/l	200	198	204	APHA (23 rd Edition) 2320-B: 2017, Page. 2-37 to 2-39
14	Total Hardness as CaCO ₃	mg/l	192	196	194	APHA (23 rd Edition) 2340-C: 2017, Page. 2-48 to 2-50
15	Calcium Hardness as CaCO ₃	mg/l	100	80	98	APHA (23 rd Edition) 3500-Ca B: 2017, Page. 3-69 to 3-70
16	Magnesium Hardness as CaCO ₃	mg/l	92	116	96	APHA (23 rd Edition) 3500-Mg B: 2017, Page. 3-86
17	Sodium as Na	mg/l	120	110	116	APHA (23 rd Edition) 3500 Na B: 2017, Page. 3-99 - 3-100
18	Potassium as K	mg/l	10.8	3.2	3.4	APHA (23 rd Edition) 3500-KB: 2017, Page. 3-89 to 3-90
19	*Sodium Adsorption Ratio (SAR)	meq/l	3.8	3.4	3.6	Calculation method
20	*Percent sodium (%Na)	meq/l	57	55	56	Calculation method
21	*Dissolved oxygen (DO)	mg/l	6.0	--	--	APHA (23 rd Edition) 4500-O C: 2017, Page. 4 - 146 to 4 -148
22	*Ammonical Nitrogen as NH ₃ -N	mg/l	0.8	0.8	0.8	APHA (23 rd Edition) 4500-NH ₃ -C: 2017, Page. 4-116
23	*Free Ammonia	mg/l	1.0	1.0	1.0	

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24	*Total Coliform	MPN/ 100 ml	1120	--	--	MPN Method
25	*Faecal Coliform	MPN/ 100 ml	30	--	--	MPN Method

Remarks:

1. Result is related to sample as received.
2. This report shall not be reproduced except in full without approval of the Lab.
3. * Non NABL Parameter

Signed this: 30th Day of November, 2021

Authorized Signatory

Mr. B. J. Babu
STATE BOARD ANALYST
(M. BUJJI BABU)

Jr. Scientific Officer / Quality Manager,
Zonal Laboratory, Kurnool.

Copy submitted to the Environmental Engineer, Regional Office, Kurnool for information and necessary action.

++ END OF THE REPORT ++



ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL

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Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

Accredited by NABL as per ISO/IEC: 17025:2017

FORMAT No. APPCB/ZL/KNL/FM/66

ANALYSIS REPORT

Report No.: KNL2111117 to 120

Dated: 30th day of November, 2021

Sample source : Tungabhadra River Water samples at Pushkar Ghats, Kurnool
Municipal Corporation, Kurnool, Kurnool District

Sample code & Location :

KNL2111117 : Pushkarghat in Tungabhadra River right side at Pump house near Masamasid (V) Kurnool.

KNL2111118 : Pushkarghat in Tungabhadra River right side Sankalbagh, Kurnool Town

KNL2111119 : Pushkarghat in Tungabhadra River Nagasai temple, Kothapeta, Kurnool

KNL2111120 : Pushkarghat in Tungabhadra River right side near Rambotla Temple, One Town in Kurnool

Sample collected by : Analyst Gr-I, R.O, Kurnool.

Sample collected on : 26-11-2021

Sample received on : 27-11-2021

Report issued on : 30-11-2021

It is to certify that the aforementioned sample was analyzed from 27-11-2021 to 30-11-2021 and the analysis results are declared as follows:

Sl. No	Parameter	Units	SAMPLE CODES				Test Method
			Analysis Results				
			117	118	119	120	
1.	pH @ 27°C	---	7.4	6.8	7.4	7.6	APHA (23rd Edition) 4500-H+B: 2017, Page. 4-95 to 4-99
2.	Total Suspended Solids (TSS)	mg/l	47	46	44	37	APHA (23 rd Edition) 2540-D: 2017, Page. 2-70 to 2-71
3.	Total Dissolved Solids (TDS)	mg/l	374	374	392	383	APHA (23 rd Edition) 2540-C: 2017 Page. 2-69 to 2-70
4.	Chemical Oxygen Demand (COD)	mg/l	16	22	17	18	APHA (23 rd Edition) 5220-B: 2017, Page. 5-18 to 5-19
5.	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	mg/l	4.2	4.7	4.3	4.2	IS 3025 (Part 44): 1993 (Reaffirmed 2014)
6.	Chlorides (as Cl ⁻)	mg/l	70	69	68	67	APHA (23 rd Edition) 4500-Cl B: 2017, Page. 4-75 to 4-76
7.	Sulphates (as SO ₄ ²⁻)	mg/l	57	54	59	57	APHA (23 rd Edition) 4500-SO ₄ E: 2017 Page. 4-199 to 4-200
8.	Ortho Phosphate (as PO ₄)	mg/l	<0.1	<0.1	<0.1	<0.1	APHA (23rd Edition) 4500-P D: 2017, Page. 4-163 to 4-164
9.	*Ammonical Nitrogen (as NH ₃ - N)	mg/l	0.8	1.1	0.8	0.8	APHA (23rd Edition) 4500-NH ₃ -C: 2017, Page. 4-116
10.	*Free Ammonia	mg/l	1.0	1.3	1.0	1.0	
11.	*Dissolved oxygen (DO)	mg/l	6.1	6.2	5.8	5.6	APHA (23rd Edition) 4500-O C: 2017, Page. 4 - 146 to 4 - 148
12.	*Total Coliform	MPN/100 ml	>2420	>2420	>2420	>2420	MPN Method
13.	*Faecal Coliform	MPN/100 ml	1120	>2420	>2420	>2420	MPN Method

Remarks:

1. Results are related to samples as received and tested.
2. This report shall not be reproduced except in full without approval of the lab.
3. * Non-NABL Parameters

Signed this: 30th day of November, 2021

Authorized Signatory

M. Bujji Babu
STATE BOARD ANALYST
(M. BUJJI BABU)

Jr. Scientific Officer / Quality Manager,
Zonal Laboratory, Kurnool.

Copy submitted to the Environmental Engineer, Regional Office, Kurnool for information.

++ END OF THE REPORT ++



**ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL**

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

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FORMAT No. APPCB/ZL/KNL/FM/66

ANALYSIS REPORT

Report No.: KNL2111121 to 124

Dated: 30th day of November, 2021

Sample source : Tungabhadra River Water samples at Pushkar Ghats, Kurnool
Municipal Corporation, Kurnool, Kurnool District

Sample code & Location :

KNL2111121 : Pushkarghat in Tungabhadra River right side near Ragavendra Mutt in Kurnool.

KNL2111122 : Pushkarghat near in Tungabhadra River right side at Sri Sai Baba Temple, Kurnool.

KNL2111123 : Pushkarghat at Nagareshwara Swamy Temple, Kurnool.

KNL2111124 : Pushkarghat in Tungabhadra River right side (Road Bridge Downstream) at N.H-44 near
Munagalapadu (V), Kurnool

Sample collected by : Analyst Gr-I, R.O, Kurnool.

Sample collected on : 26-11-2021

Sample received on : 27-11-2021

Report issued on : 30-11-2021

It is to certify that the aforementioned sample was analyzed from 27-11-2021 to 30-11-2021
and the analysis results are declared as follows:

Sl. No	Parameter	Units	SAMPLE CODES				Test Method
			Analysis Results				
			121	122	123	124	
1.	pH @ 27°C	---	7.6	7.6	7.6	7.5	APHA (23rd Edition) 4500-H+B: 2017, Page. 4-95 to 4-99
2.	Total Suspended Solids (TSS)	mg/l	36	34	34	77	APHA (23 rd Edition) 2540-D: 2017, Page. 2-70 to 2-71
3.	Total Dissolved Solids (TDS)	mg/l	374	381	389	402	APHA (23 rd Edition) 2540-C: 2017 Page. 2-69 to 2-70
4.	Chemical Oxygen Demand (COD)	mg/l	20	14	16	20	APHA (23 rd Edition) 5220-B: 2017, Page. 5-18 to 5-19
5.	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	mg/l	4.7	2.8	3.2	4.2	IS 3025 (Part 44): 1993 (Reaffirmed 2014)
6.	Chlorides (as Cl ⁻)	mg/l	67	68	64	70	APHA (23 rd Edition) 4500-Cl B: 2017, Page. 4-75 to 4-76
7.	Sulphates (as SO ₄ ²⁻)	mg/l	54	58	54	61	APHA (23 rd Edition) 4500-SO ₄ E: 2017 Page. 4-199 to 4-200
8.	Ortho Phosphate (as PO ₄)	mg/l	<0.1	<0.1	<0.1	<0.1	APHA (23rd Edition) 4500-P D: 2017, Page. 4-163 to 4-164
9.	*Ammonical Nitrogen (as NH ₃ - N)	mg/l	1.1	0.8	0.8	0.3	APHA (23rd Edition) 4500-NH3-C: 2017, Page. 4-116
10.	*Free Ammonia	mg/l	1.3	1.0	1.0	0.4	
11.	*Dissolved oxygen (DO)	mg/l	5.5	5.9	6.2	6.6	APHA (23rd Edition) 4500-O C: 2017, Page. 4 - 146 to 4 - 148
12.	*Total Coliform	MPN/100 ml	>2420	>2420	>2420	>2420	MPN Method
13.	*Faecal Coliform	MPN/100 ml	>2420	>2420	>2420	1733	MPN Method

Remarks:

1. Results are related to samples as received and tested.
2. This report shall not be reproduced except in full without approval of the lab.
3. * Non-NABL Parameters.

Signed this: 30th day of November, 2021

Authorized Signatory

STATE BOARD ANALYST
(M. BUJJI BABU)

Jr. Scientific Officer / Quality Manager,
Zonal Laboratory, Kurnool.

Copy submitted to the Environmental Engineer, Regional Office, Kurnool for information.