

DELHI POLLUTION CONTROL COMMITTEE
DEPARTMENT OF ENVIRONMENT, GOVT. OF NCT OF DELHI
5th FLOOR, ISBT BUILDING, KASHMERE GATE, DELHI-110006
 visit us at : <http://dpcc.delhigovt.nic.in>

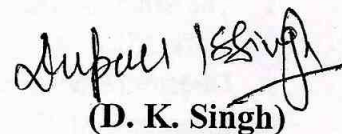
F. No. DPCC/12/(2)/58/Lab/W/2020/4543 - 4576

Dated: 19.11.2020

Subject – Action Plan for Prevention of Froth / Foam Formation in River Yamuna

Sir/ Madam,

As per the decisions taken by “Integrated Drain Management Cell” headed by the Chief Secretary, Govt. of NCT of Delhi and constituted on the directions of Hon’ble National Green Tribunal vide Order dated 05.03.2020 in O.A. No. 06/2012 in the matter of Manoj Mishra Vs. Union of India & Ors., for remediation and management of all drains in Delhi, in its 6th Meeting held on 14.08.2020, Action Plan for Prevention of Froth / Foam Formation in River Yamuna approved by the competent authority in Delhi Pollution Control Committee is enclosed herewith for necessary action by the concerned Departments / Authorities as mentioned in the Action Plan.


 (D. K. Singh)

Sr. Env. Engineer (WMC – II)

Enclosure: As above

To,

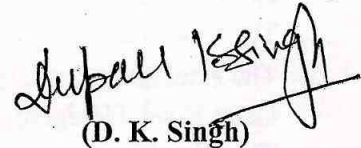
1. The Chairman, Uttar Pradesh Pollution Control Board, UP Building No. TC-12V, Vibhuti Khand, Gomti Nagar Lucknow- 226010
2. The Chairman, Haryana State Pollution Control Board C-11, Sector-6, Panchkula, Haryana – 134109
3. The Principal Secretary, Irrigation and Water Resources Department, Uttar Pradesh, Sinchai Bhawan, Cantt Road, Udaiganj, Lucknow – 226001
4. The Vice Chairman, Delhi Development Authority, Vikas Sadan, INA, Delhi-110023.
5. The Additional Chief Secretary, Urban Development Department, Govt of NCT of Delhi, 9th Level, Delhi Secretariat, I.P. Estate, Delhi - 110002.
6. The Principal Secretary, Public Works Department, 5th Level, Delhi Secretariat, I.P.Estate, Delhi-02
7. The Chairman, New Delhi Municipal Council, Palika Kendra Building, Parliament Street, Delhi-01.
8. The Commissioner, South Delhi Municipal Corporation (SDMC), 9th Floor, Dr. S.P.M Civic Center, JLN Marg, New Delhi – 110002.
9. The Commissioner, North Delhi Municipal Corporation (NDMC), 4th Floor, Dr. S.P.M Civic Center, JLN Marg, New Delhi-110002
10. The Commissioner, East Delhi Municipal Corporation (EDMC), 419, Udyog Sadan, Patparganj Industrial Area, Delhi-110092
11. The Chief Executive Officer, Delhi Cantonment Board (DCB), Delhi Cantt. Sadar Bazaar, New Delhi-110010
12. The Chief Executive Officer, Delhi Jal Board, Varunalaya Ph-II, Jhandewalan, Karol Bagh, New Delhi-110005

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13. The Managing Director, Delhi State Industrial & Infrastructure Development Corporation Ltd. N-36, Bombay Life Building, Connaught Circus, New Delhi – 110001
14. The Commissioner of Industries, GNCTD. 419, Udyog Sadan, FIE Patparganj, Delhi-110092.
15. The Secretary, Irrigation & Flood Control Department (I&FC), GNCTD, L. M. Bundh, Shastri Nagar, Delhi - 110031.
16. The District Magistrate (Central) 14, Darya Ganj, New Delhi- 110002
17. The District Magistrate (East) L.M. Bund, Shastri Nagar, Delhi-31
18. The District Magistrate (New Delhi) 12/1, Jam Nagar House, Sahajahan Road, New Delhi 110011
19. The District Magistrate (North) Alipur, Delhi – 110036
20. The District Magistrate (North East) D.C. Office Complex, Nand Nagri, Opposite Gagan Cinema, Delhi-93
21. The District Magistrate (North West) Kanjhawala, Delhi – 110081
22. The District Magistrate (Shahdara) Nand Nagri, Opposite Gagan Cinema, Delhi-93
23. The District Magistrate (South) M.B. Road, Saket, New Delhi-110068
24. The District Magistrate (South East) Old Gargi College Building, Iajpat Nagar –IV, Delhi -110024
25. The District Magistrate (South West) Old Terminal Tax Building Kapashera, New Delhi-37
26. The District Magistrate (West) Plot No. 3, Shivaji Place, Near West Gate Mall, Raja Garden, Delhi - 110027

Copy to:

1. The Member Secretary, DPCC
2. Staff Officer to Chief Secretary, GNCTD, 5th Level, Delhi Secretariat, I.P. Estate, Delhi – 02
3. Director (Environment), Govt. of NCT of Delhi
4. Incharges, All CMCs in DPCC
5. Incharge, Water Lab
- ✓ 6. Incharge, IT Cell – with request to upload the above mentioned Action Plan on the website of DPCC
7. PA to Addl. Chief Secretary (Environment), 7th Level, Delhi Secretariat, I.P. Estate, Delhi – 110002
8. PA to Chairman, DPCC.


(D. K. Singh)

Sr. Env. Engineer (WMC – II)

ACTION PLAN FOR PREVENTION OF FROTH / FOAM FORMATION IN RIVER YAMUNA

1. Background

Froth/ Foam formation in river Yamuna particularly at the downstream of Okhla Barrage near Kalindi Kunj is a major cause of concern and reports were sought by Yamuna Monitoring Committee (YMC) last year in November, 2019 from CPCB and also this year from DPCC in July, 2020.

Newspapers and Social Media also report about the Froth / Foam formation in river Yamuna particularly at the downstream of Okhla Barrage near Kalindi Kunj. "Report on Concern of Piles of Foam in Yamuna River" dated 08.11.2019 was submitted by CPCB to Yamuna Monitoring Committee.

"Report on Form Formation in Yamuna River" of DPCC of August 2020 has been submitted to Yamuna Monitoring Committee on 15.09.2020.

As decided in the 6th Meeting of "Integrated Drain Management Cell" for remediation and drain management of all drains of Delhi, headed by the Chief Secretary, Govt. of NCT of Delhi, on 14.08.2020 future Plan of Action against all persons / agencies polluting industries discharging phosphates or other surfactants in the drains which ultimately finds its way in the River Yamuna is to be prepared.

2. Cause and Sources of Foam/ Froth Formation

Foam formation in river Yamuna is due to presence of Phosphates and Surfactants in river Yamuna. Foam is produced when organic matter decomposes and release fatty acids that act as surfactants or surface active agents. Smaller amounts of dissolved organic matter are also released from living organisms. Organic matter in surface waters comes mostly from decomposing vegetation such as Algae, Water Hyacinth and other Aquatic plants.

Surfactants contain phosphates (Sodium tri-poly-phosphate) generally released from households was observed as 7 mg/l & 15.42 mg/l in Yamuna at Okhla Barrage in the samples collected by DPCC on 25.07.2020 & 04.11.2020 respectively. Natural levels of phosphate usually range from 0.005 to 0.05 mg/l. Organic phosphates are found primarily by biological processes. They are contributed to sewage by body wastes & food residues and also may be formed from orthophosphates in biological treatment processes. Phosphates also occur in bottom sediments and in biological sludges. Surfactants enter waters and wastewaters mainly by discharge of aqueous wastes from households and industrial laundering and other cleansing operations. The phosphoric compounds in normal cases get settled in the sludge / riverbed. On release of water from Barrage / Reservoir at a particular height, the phosphoric compounds present in the settled sludge on the river bed get agitated and surface forming piles of foam arises.

Main sources of Phosphates and Surfactants in river Yamuna are untreated sewage (mainly from the unsewered / unauthorized colonies / settlements in Delhi, untreated sewage/ waste water coming from Haryana (into Najafgarh drain) and Uttar Pradesh (into Hindon cut canal finally discharging into upstream of Okhla Barrage) and Untreated Industrial Effluent mainly from the industries/ units using detergents in their processes (washing of clothes, automobiles servicing including washing etc.).

3. Action Plan for Prevention of Froth / Foam Formation in River Yamuna

For prevention of froth / foam formation in river Yamuna action shall be taken by various Departments/ Organizations as mentioned in following table:

S. No.	Action Point	Timeline	Concerned Department(s) for taking action
1.	<u>Treatment of Sewage generated from Unauthorised Colonies/ Settlements in Delhi</u> (i) Sewage generated from the Unauthorized Colonies / Settlements in Delhi which are not having sewerage system shall be collected by laying down sewerage system in such Colonies / Settlements and shall be treated to meet the prescribed standards of DPCC (BOD:SS<10:10 mg/liter with bio nutrient removal i.e. nitrogen and phosphorous within the prescribed limit). (ii) Till the time of laying down sewerage system in such Unauthorized Colonies/Settlements, sewage/Septic Tank Waste (Septage) shall be collected & transported by the vendors authorised by Delhi Jal Board and disposed only at the locations (Sewage Pumping Stations/ STPs) notified by the Delhi Jal Board for treatment at the STPs. (iii) Local Bodies/Municipal Corporations shall ensure that Households in Unauthorized Colonies / Settlements connect to the sewerage system, if already existing, and discharge their sewage into the sewerage system only. Till the time of laying down sewerage system in such Colonies / unsewered areas, it shall be ensured that Households dispose their Septic Tank Waste (Septage) through the authorised vendors of Delhi Jal Board only and Septic Tank Waste is not discharged into drains etc.. (iv) Concerned District Magistrates shall enforce the provisions of the "Delhi Water Board Septage Management Regulations 2018" notified by the Urban Development Department, GNCTD vide Notification dated 12.11.2018 to prevent unauthorised disposal of Septic Tank Waste (Septage) in drains etc.	31.12.2022 On going exercise to be continued On going exercise to be continued On going exercise to be continued	Delhi Jal Board Delhi Jal Board Local Bodies /Municipal Corporations (SDMC, EDMC, North DMC, NDMC, DCB). Concerned District Magistrates
2.	<u>Upgradation/ Rehabilitation of existing STPs</u> to meet the prescribed standards of DPCC (BOD:SS<10:10 mg/liter with bio nutrient removal i.e. nitrogen and phosphorous within the prescribed limit).	31.12.2022	Delhi Jal Board

S. No.	Action Point	Timeline	Concerned Department(s) for taking action
3.	<u>Construction of New STPs</u> to meet the prescribed standards of DPCC (BOD:SS <10:10 mg/liter with bio nutrient removal i.e. nitrogen and phosphorous within the prescribed limit) at Coronation Pillar (70 MGD capacity) & Okhla (124 MGD capacity)	30.06.2021 for Coronation Pillar STP & 31.12.2022 for Okhla STP	Delhi Jal Board
4.	<u>Prevention of Dumping of Solid Waste & Sewage in Drain</u> Directions issued by Chief Secretary vide order dated 09.01.2019 and Urban Development Department, GNCTD vide order dated 15.01.2019 for prevention of dumping of solid waste and sewage in the drains shall be complied by all the Drain Owning Agencies in Delhi and Environmental Compensation of Rs. 50,000 shall be imposed on Defaulters/ Violators as mentioned in the said order.	On going exercise to be continued.	All the Drain Owning Agencies in Delhi (IFCD, SDMC, EDMC, North DMC, NDMC, DCB, PWD, DDA, DSIIDC, DJB etc.)
5.	<u>Removal of Encroachment</u> (including removal of Dhobi Ghat, if any, etc.) / Prevention of Dumping of Waste/ Protection of Flood Plains of river Yamuna.	31.03.2021	Delhi Development Authority.
6.	<u>Upgradation of STPs and Treatment of Untreated Sewage/ Waste Water coming from Haryana (into Najafgarh Drain) and Uttar Pradesh (into Hindon cut canal</u> finally discharging waste water into the river Yamuna at upstream of Okhla Barrage) to treat the waste water to meet the prescribed standards of BOD:SS <10:10 mg/liter with bio nutrient removal i.e. nitrogen and phosphorous within the prescribed limit.	—	State Govt. of Haryana and Uttar Pradesh (Letter shall be issued by DPCC to SPCBs of Haryana and Uttar Pradesh)
7.	<u>Removal of Water Hyacinth from the Pondage area of Okhla barrage.</u> The Okhla Barrage is being maintained by U.P. Irrigation Department. It has been observed that there is large amount of water hyacinth growth on the pondage of Okhla Barrage which needs to be removed to reduce the release of surfactants from the dying weeds / water hyacinth in the river Yamuna . For immediate relief from the Foaming, Bioculture based foaming treatment may be carried out by U.P. Irrigation Department.	31.03.2021	Uttar Pradesh Irrigation Department (Letter shall be issued by DPCC to U.P. Irrigation Department).
8.	<u>Operation & Maintenance of CETPs</u> Common Effluent Treatment Plants (CETPs) in Delhi shall be properly operated and maintained by the CETP Societies / Operators of CETPs to meet the prescribed standards including Phosphates .	On going exercise to be continued.	Industries Department / DSIIDC / DPCC.

S. No.	Action Point	Timeline	Concerned Department(s) for taking action
9.	<u>Prevention of Discharge of Untreated Industrial Effluent</u> mainly from the Industries/ Units using detergents in their processes (Washing of Clothes, Automobiles Servicing including Washing etc.).		
	(i) Industries/ Units in 28 Approved Industrial Areas	On going exercise to be continued	DPCC (Consent Management Cells)
	(ii) Industries/ Units in 24 Redevelopment Areas	On going exercise to be continued	DPCC (Consent Management Cells)
	(iii) Industries /Units in Non Conforming / Residential Areas	On going exercise to be continued	Local Bodies /Municipal Corporations (SDMC, EDMC, North DMC, NDMC, DCB) & DDA.