

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI

E.A. No.04/2023

In

Original Application No. 147/2021

IN THE MATTER OF:

Sh. Mahesh Chandra Saxena

... Applicant

VERSUS

The Chief Secretary, Govt. of
NCT of Delhi and Ors.

.... Respondents

NDOH:-22.05.2023

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Filed by

(Government of NCT Delhi)

Date: 17.05.2023

Place: Delhi

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI

E.A. No.04/2023

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IN THE MATTER OF:

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... Applicant

VERSUS

The Chief Secretary, Govt. of

NCT of Delhi and Ors.

.... Respondents

**COMPLIANCE REPORT ON BEHALF OF GOVERNMENT OF
NCT OF DELHI IN TERMS OF THE ORDER DATED
09.02.2023.**

IT IS MOST RESPECTFULLY SHOWETH:

1. That this Hon'ble Tribunal took up the above referred matter related to Rain Water harvesting System in NCT of Delhi on 09.02.2023 and was pleased to direct the Chief Secretary, Govt. of NCT of Delhi to file an action taken report in this matter.
2. That the Chief secretary, Delhi had taken a meeting with all stake holder departments on 09.05.2023 to review the status of the compliance of the Hon'ble Tribunal order dated 10.12.2021 and 09.02.2023 in this matter.

3. That there are 354 Societies in Dwarka and all have been inspected by the joint team of Delhi Jal Board, DPCC and applicant herein. During the inspection carried out in Dwarka Societies, printed leaflets of guidelines for implementation of RWHs were distributed for awareness and benefits of conservation/ RWH by Delhi Jal Board.
4. The brief status of the inspection are as under:
- | | |
|--|-----|
| (a) Total societies in the Dwarka: | 354 |
| (b) societies refused the inspecting team to enter the premises: | 08 |
| (c) sample of water lifted: | 235 |
| (d) contaminations found primarily on account of presence of Ammonical Nitrogen and Total Dissolved Solid in sample water: | 180 |

The RWHS system were apparently found as per design of the Delhi Jal Board/ CGWA; but common pipelines for roof top rain water harvesting structure and other waste water including washing area and floor washing area were found connected. As a result the common pipeline may be contaminating the ground water in the form of "Ammonical Nitrogen" and "Total Dissolves Solids (TDS)".

5. That as per policy of DJB, it is mandated that in case, any society or institution have failed to install RWH System and if such institutions or societies or residential complexes are situated on a plot size of more than 100 sq mts then DJB imposes a penalty of inflated 50% of the monthly bill amount on the owner/occupier.

6. That as per the policy of Delhi Jal Board, instructions have been issued to concerned Zonal Revenue Officers of DJB to withdraw the rebate from such societies or institutions whose RWH Systems are found non-functional. A true copy of the one such instructional order dated 08.10.2021 issued for Dwarka Sub City is being annexed herewith and marked as **Annexure-A.**

7. That, Delhi Jal Board has issued Public Notice for public at large on 14-02-2023 whereby the Societies in which non-functional or partially functional RWHS were found were directed to take remedial steps by 31-03-2023 and furnish compliance report to DJB. A true copy of the public Notice dated 14-02-2023 is being annexed herewith and marked as **Annexure B.**

8. That, in the public notice, DJB issued directions to all the stake holders for taking following remedial measures to avoid contamination of Ground Water through RWH System:
 - i. Paved, balcony and washing area runoff to be diverted into municipal drain.
 - ii. Only roof top rain water to be harvested.
 - iii. Ensure the capacity of RWH system as per roof top runoff.
 - iv. Filter media to be replaced at regular interval as per norms.
 - v. Recharge bore well to be end capped and to be cleaned at regular interval as per norms.

9. That, compliance reports from individual societies was not received therefore, DJB has issued individual notice to all the societies in which contamination was found. In the notice it was

directed the Societies to furnish compliance report to DJB with regard to directions contained in the public notice wherein it was directed to all to divert the waste from washing area, paved area and kitchen which was found to be source of contamination. The said compliance report has to be submitted by 31-05-2023 by all the individual societies. A true copies of Notices issued to individual Societies is being annexed herewith and marked as Annexure C.

10. That the Chief Secretary, Delhi directed to Delhi Jal Board to take stringent actions against the societies, which fail to submit their respective compliance reports by 31-05-2023.
11. That the Delhi Jal Board on 28.04.2023 has written to the Federation of Dwarka CGHS, requesting the Federation to ensure that no contamination of ground water takes place through RWHs. Copy of the letter dated 28.04.2023 is annexed herewith and marked as Annexure-D.
12. That for creating mass awareness about creation and maintenance of Rain Water harvesting System, Jal Shakti Kendras have been established in each 11 Revenue District manned with technical persons of DJB. The list of which is also available on DJB website. Copy of the list of 11 Nos. Jal Shakti Kendras is annexed herewith and marked as Annexure-E.
13. That the matter of rain harvesting is covered under the notification issued by Ministry of Housing and Urban Affairs, Government of India dated 28.07.2001, which makes water harvesting through

Storing of water runoff including rain mandatory in all new buildings on plots of 100 sq. meters and above.

14. That even though, provisions of the Water(Prevention and Control of Pollution) Act-1974 are not applicable upon the residential societies, as upheld by the Division Bench of the Hon`ble High Court of Delhi vide judgment dated 23.01.2012 in “DPCC vs Splendor land Base Matter”, DPCC in compliance of the orders passed by this Hon`ble Tribunal dated 10.12.2021 in the OA 147/2021, issued directions on 06.01.2023, to the District Magistrate(South West) and Delhi Jal Board to issue necessary instruction to all group housing societies in Dwarka giving suitable time line to make arrangement for separate pipeline for rooftop rain water reaching to RWH structure and separate disposal of sewage/ other waste water, including waste water arising out from the washing area and floor washing area, in the sewage system of Delhi Jal Board. Copy of the direction dated 06.01.2023 are being annexed herewith and marked as **Annexure F (Colly)**. Delhi Jal Board while issuing Public Notice on 14-02-2023, incorporated the direction of DPCC.

15. That DJB has empanelled 41 executors for the purposes of facilitation of public for installation and maintenance of RWH System. The list of service providers and consultants is available at DJB website. List of empanelled Service Providers is being annexed herewith and marked as **Annexure G**.

16. That DJB is in process of framing a policy wherein annual self certifications from all institution/societies/schools/residential complexes etc. is required where installation of RWH System is mandatory. The self certification shall specify whether the RWHS system is as per guidelines of DJB/CGWA, and whether the same is working efficiently or not. In the event of failure in providing the Annual Certificate, the benefits extended by DJB for installation of RWH System would be withdrawn and the rebate given in preceding years shall also be recovered. This policy is based on the premise that, the faulty/ non- operational RWHS system is as good as not having one at all.

17. That the Rain Water Harvesting System started to be constructed in the societies of Dwarka from the year 2000. Till the year 2013 C.G.W.B. made available design of Rain Water Harvesting System. From the year 2013 till now the design of Rain Water Harvesting System is being made available by Delhi Jal Board. In Delhi Dwarka is such an area where 100% Rain Water Harvesting System are constructed due to which water level in Dwarka is quite up. At present in Dwarka water level is about the depth of 20-25 meters, whereas in the Airport area, which is adjacent to Dwarka, the water level has reached to the depth of 40-50 meters.

18. It is requested to this Hon`ble Tribunal to issue suitable directions so that Environmental Compensation may be imposed on faulty / non- installation/ non-operational RWHS, where it is mandatory to install, as per Building By-Laws, as per following slab with respect to residential purposes:

Plot size	Amount of Environmental Compensation
100-500 Mts	50,000/-
501-2000 Mts	1,00,000/-
2000-5000Mts	2,00,000/-
5000 Mts and above	5,00,000/-

For non residential purpose fine may be enhanced by 50%. The above proposed EC shall be imposed by Delhi Jal Board/ DPCC/ District Magistrate/ Municipal Zonal Deputy Commissioner in their territorial jurisdictions and deposited in the separate account (which will be operated by DPCC) and the amount so collected will be utilized for the purpose of promoting the RWHS in Delhi. In case of non-deposition of EC by the defaulter, the same shall be recovered by Revenue Department as arrears of land revenue on emergent basis.

19. That it is further relevant to submit here that in view of the directions passed by this Hon'ble Tribunal vide order dated 10.12.2021, the Ministry of Jal Shakti has issued a guidelines/advisory regarding prevention of contamination in RWH system vide its Circular dated 31.03.2023. It is submitted that the aforementioned guidelines shall be adopted and implemented by Govt. of NCT of Delhi, which is annexed herewith as **Annexure H.**

20. That it is most respectfully submitted that the present status report may kindly be taken on record.



(Dr. KS Jayachandran)

Special Secretary (Environment),

Govt. of NCT of Delhi

Date: 17/5/23

Place: Delhi



DELHI JAL BOARD
GOVT. OF NCT OF DELHI
OFFICE OF THE DIRECTOR (REVENUE)
VARUNALAYA PHASE-II, KAROL BAGH, NEW DELHI

EE (RWH) (DWC) I
DELHI BOARD
DIARY NO. 1710
DATE 21/10/2021



"STOP CORONA: Wear Mask, Follow Physical Distancing, Maintain Hand Hygiene"

No.DJB/DOR/10/RWH/2021/ 8036

Dated: 08.10.2021

KEI

21/10

INSTRUCTIONAL ORDER

Subject:- Rebate on water bills subject to availability of functional RWH structure in the premises - reg.

A team of RWH Cell carried out inspection of Rain Water Harvesting Structure in the Societies of Dwarka on 06.09.2021, 09.09.2021 and 14.09.2021 and found that in 12 cases either RWH structure was partially functional or totally non-functional (Shree Niketan Apartment, The Young Aheria CGHS Ltd, Rashi Apartment, The True Friends CGHS Ltd, Veg Sanchar Apartment, Pragya CHGH Ltd, Celestial Heights, Sahara Apartments, New Ashiana apartment, Management Apartments, Jaimaa Apartments and Dhualadhar Apartments). As per rule rebate in water bill is given only subject to functional RWH structure and adequacy certificate provided by the concerned Engineering Wing.

Therefore, ZRO(Dwarka) is hereby directed to serve notice to above societies for making their RWH Structure functional and RWH rebate being given to them may be stopped immediately. Further, rebate in respect of these societies may be restarted only after receipt of functional certificate and adequacy certificate issued by RWH Cell. Further, other ZROs are also directed to ensure that RWH rebate may also be allowed only subject to functional RWH structure and adequacy certificate provided by the concerned Engineering Wing.

This issues with the approval of the Competent Authority.

(Naresh Kumar)
Joint Director Revenue (HQ)

All ZROs/AddlZROs/PPPs

Copy for information to:

1. Member(Finance)
2. DOR
3. All JDRs/DDRs/EE(RWH) ✓
4. Guard file

Joint Director Revenue (HQ) 21/10/21

Annexure-B

No. DJB/DY. SE (RWH)/2023/M/084-10/088

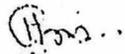
Date: 14/2/2023

PUBLIC NOTICE

Ground water resources in many parts of the city are over exploited. The extent of replenishment of ground water is much less than what the city as a whole is withdrawing due to its rapid urbanization. There is need to preserve ground water resources and to take effective measures for its sustainable availability. Rain Water Harvesting is considered as a simple, viable and eco-friendly method of conservation of water and a simple solution for ground water recharge.

Hon'ble NGT constituted a Joint Committee of DJB, DPCC and CPCB in the matter of O.A. No.147/2021 to ascertain the technical efficacy of installed systems, changes, if any required and the issue of contamination of ground water. Accordingly DPCC has directed DJB under section 33 (A) to issue necessary instructions to all the Group Housing Societies giving suitable timeline to make the arrangements for separate pipelines for roof top rain water for reaching to the Rain Water Harvesting Structures and separate disposal of Sewage/other waste water including the waste water arising from washing area and floor washing water.

It is here by informed to the Public that only Roof Top Rain Water should be connected to Rain Water Harvesting System and all other waste water from Balcony, Washing and Paved/Parking area should be separated from Rain Water Harvesting System. All concerned are directed to implement the above provision by 31.03.2023 positively failing which action shall be taken as per DJB norms.


Dy. SE (RWH)
(Delhi Jal Board)

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Scanned with CamScanner



DELHI JAL BOARD: GOVT. OF NCT DELHI
OFFICE OF THE DY. SE (RWH)
ROOM NO-208, VARUNALAYA PH-I,
KAROL BAGH, NEW DELHI-110005
Email: rainwaterharvesting2013@gmail.com

No.DJB/O.A. 147(Notice)/DY.SE (RWH)/2023/1274

Dated:- 04/05/2023

To,

The President/ General Secretary/Administrator,
 The Young Aheria CGHS Ltd.,
 Plot No.02, Sector-07, Dwarka,
 New Delhi-110075

Subject: Notice in the matter of Hon'ble NGT in E.A. No. 04/2023 in O.A. No. 147/2021 titled as "Mahesh Chandra Saxena Vs. The Chief Secretary, GNCTD & Ors".

As per the directions of Hon'ble NGT in the matter of O.A No. 147/2021 titled Mahesh Chandra Saxena Vs the Chief Secretary, Govt. of NCT of Delhi & Ors. Inspection of RWH System has been made in the societies by the Joint Committee of DJB, DPCC along with applicant. A public notice was notified/ published in various newspapers on 14.02.2023 with the advisory that only roof top RWH should be connected to RWH system and all other waste water from balcony, washing and paved/ parking area should be separated from the RWH system. All concerned were directed to implement the above provision by 31.03.2023 positively falling which action shall be taken as per DJB norms.

But during inspection of your premises, the sample lifted has/ have been found contaminating the ground water which is highly objectionable and against the norms. In the matter you are hereby directed to submit your compliance report to the undersigned within 15 days time i.e. 21.05.2023, failing which the action deemed fit will be initiated against the society under the provisions of relevant Environment protection act and DJB norms.

With Regards

SA

Dy.SE (RWH)-I

Copy to:-

1. PS to CEO, DJB : for kind information please.
2. Member (WS) : -do-
3. CE(GW) : -do-
4. ACE(C-8) : -do-
5. AE(RWH)-I
6. O/c

SA

Dy.SE (RWH)-I

291

DELHI JAL BOARD: GOVT. OF NCT DELHI
OFFICE OF THE DY. SE (RWH)
ROOM NO-208, VARUNALAYA PH-I,
KAROL BAGH, NEW DELHI-110005
Email: rainwaterharvesting2013@gmail.com

13

Annexure-D

No. DJB/F-4/DY. SE (RWH)/2022/1255 to 1260.
To,

Dated:- 28/04/2023

The President
Federation of CGHS Ltd, Dwarka,
Flat No.74, DDA Flats, Pkt-6,
Sector-12, Dwarka,
New Delhi-110075
Email id:- dwarkacity5@gmail.com
Mob. No.9810442903

Subject:- Regarding inspection of Cooperative Group Housing Societies in Dwarka in the matter of O.A No. 147/2021 in Hon'ble NGT.

As per the direction of Hon'ble NGT in the matter of O.A No. 147/2021, Mahesh Chandra Saxena Vs the Chief Secretary, Govt. of NCT of Delhi & Ors, inspection of Cooperative Group Housing Societies in Dwarka has been carried out by the Joint Committee of DJB, DPCC along with applicant regarding contamination through Rain Water Harvesting.

During the inspection following instruction have been issued to the inspected societies to rectify their RWH System as per Public Notice dated 14.02.2023 (available at DJB website i.e. delhijalboard.nic.in) to avoid contamination of ground water:

- 1) Paved, balcony and washing area runoff to be diverted in to municipal drain.
- 2) Only roof top rain water to be harvested.
- 3) Ensure the capacity of RWH system as per roof top runoff.
- 4) Filter media to be replaced at regular interval as per norms.
- 5) Recharge bore well to be end capped and to be cleaned at regular interval as per norms.

You are requested to direct the societies to ensure the above to avoid contamination of ground water.

With Regards

- Sd/-
Dy. SE (RWH)-I

Copy to:-

- 1) PS to CEO, DJB : for kind information please.
- 2) Member (WS) : -do-
- 3) CE(GW) : -do-
- 4) ACE(C-8) : -do-
- 5) AE(RWH)-I
- 6) O/c

Hpn
Dy. SE (RWH)-I
28.04.2023

Annexure-E

List of Jal Shakti Kendras

S.No.	Distriet	Name of Nodal Officer.	Location	Phone No.	
1.	North	Sh. P.K. Gupta, ACE(M)-3	ZE DJB Office, Shakti Nagar, near Shakit Nangar Chowk	9650682809 011-23841606 9650291505	Acem3.djb @gmail.co m
2.	West	Sh. Dalbir Singh, ACE(M)-8	O/o ACE(M)-8, G- 17 OHT, Paschim Vihar, Outer Ring Road, New Delhi (Near Shubham Enclave)	9811249246 011-20850446 9650290773	Acem8.djb @gmail.co m
3.	North- East	Sh. Pankaj Gupta ACE(M)-2	O/o SE(East), 2142, Janta Flats, GTB Enclave, Delhi- 110093	7065645039 011-35553014 9650291494	Acem2djb @gmail.co m
4.	Shahdara	Sh. Pankaj Gupta ACE(M)-2	O/o EE(NE)-1, Janta Flats, GTB Enclave, Delhi-110093	8881724991 9650291494	Acem2djb @gmail.co m
5.	East	Sh. BP Saraswat ACE(M)-1	O/o ACE(M)-1, Chitra Vihar, BPS. Delhi-110092	9650894421	Acem1.djb @gmail.co m
6.	North- West	Sh. Mukesh Jindal, ACE(M)-6 Sh. Ram Swarup AEE	DJB Office, Room No-26, FF, MU Block, Pitampura Near Hotel City Park	9650291531 (AEE) 9650291130 (ACE M-6)	Ramswaru p.djb.4u@ mail.com Acem6.djb @gmail.co m
7.	South East	Sh. Bhupesh Kumar ACE(M)- 10	Room No 02, Andrewsganj Building Complex, adjacent to efence Colony Polive Station, Ring Road, New Delhi	+91-9319770138 9650291577	Acem10.dj b@gmail,c om
8.	South	Sh. B C Patel, ACE(M)-11	Djb Office, E-Block, Opp PVR Cinema, Saket, ND-110017	+91-9599942466 9650291177	Ace.m11.dj b@gmail.c om
9.	New Delhi	Sh. Bhupesh Kumar ACE(M)-10	Sector 7, RK Puram Water Emergency Complex New Delhi	+91-9599794407 9650291577	Acem10.dj b@gmail.c om

			110022		
10.	South West	Sh. Anil Kumar Sharma ACE(M)-9 S.K Olhan, EE	DDA Booster Pump Stations, Sector-20, Dwarka, New Delhi-110075	+91-9650290844(EE) 9650291103(ACE) 8285162890 (Computer Operator)	<u>Acem9djb@gmail.com</u>
11.	Central	Sh. Preeti Pant, ACE(M)-5	O/o EE(Central), DJB Office, JLN Marg, OPP- Ramlila Ground UGR & BPS, New Delhi	+91-8800995542 011-23280065 9650290830	<u>Acem9djb@gmail.com</u>

Abelami
25/7/22
EE (RWH/GWC)
DELHI JAL BOARD
VARUNALAYA BHAWAN
JHANDEWALAN, N.D.-5

Sham



DELHI POLLUTION CONTROL COMMITTEE
DEPARTMENT OF ENVIRONMENT, GOVT. OF NCT OF DELHI
5th FLOOR, ISBT BUILDING, KASHMERE GATE, DELHI-06

visit us at : <http://dpcc.delhigovt.nic.in>

F.No.DPCC/CMC-II/NGT/OA 147/2021/2022/ 4158- 4159

Dated: 6/1/23

Sub: Directions u/s 33 (A) of the Water (Prevention & Control of Pollution) Act, 1974 as amended to date, in the matter of Hon'ble NGT in OA No. 147/2021 titled as "Mahesh Chandra Saxena Vs The Chief Secretary, GNCTD & Ors."

Whereas, Central Pollution Control Board is the State Board for all the Union Territories to exercise powers and performs functions under the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981, as amended to date.

And whereas, Central Pollution Control Board has delegated all its powers and functions under the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981, in respect of Union Territory of Delhi to Delhi Pollution Control Committee (DPCC) vide notification Dated 15.03.1991.

And whereas, a case has been filed in Hon'ble NGT vide OA No. 147/2021 titled as "Mahesh Chandra Saxena Vs The Chief Secretary, GNCTD & Ors." regarding rain water harvesting system and contamination of ground water in Group Housing Societies in Dwarka area.

And whereas, in the said matter, Hon'ble NGT vide orders dated 07.07.2021 constituted a joint Committee of DJB, CPCB and DPCC to ascertain the technical efficacy of installed systems, changes, if any, required and the issue of contamination of ground water.

And whereas, the said joint committee submitted its report before Hon'ble NGT that the contamination may occur in the societies due to mixing of the rain water with the waste water from different sources like waste washing area water with detergents having chemicals from balconies other than that of roof top rain water and the waste water from paved/parking areas of the societies.

And whereas, based on the joint committee report, the Hon'ble NGT vide orders dated 10.12.2021 directed DPCC to take remedial action in exercise of its statutory powers under the Water (Prevention and Control of Pollution) Act, 1974 to prevent contamination of groundwater, in co-ordination with DJB or any other authority.

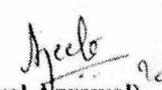
And whereas, the issue of ensuring Rain Water Harvesting in societies as well as discharge of other wastewater in the sewerage system, and its ultimate treatment in terminal STPs, is the subject matter dealt with DJB.

Therefore, in view of above, the following directions u/s 33 (A) of the Water (Prevention and Control of Pollution) Act, 1974 are hereby issued :-

1. That DJB shall issue necessary instructions to all Group Housing Societies in Dwarka giving suitable timeline to make the arrangement for separate pipelines for roof top rain water for reaching to the rain water harvesting structure and separate disposal of sewage/other wastewater including the wastewater arising out from washing area and floor washing water in the sewerage system of DJB.

The ATR may be forwarded to DPCC within 15 days so that same may be submitted before Hon'ble NGT.

These directions are being issued as per the approval of Competent Authority in Delhi Pollution Control Committee.


(Ajeeta Dayal Agrawal)
SEE (CMC II)

To,

The CEO,
Delhi Jal Board, GNCTD,
Varunalya Ph-II, Jhandewalan, Karol Bagh,
New Delhi - 110005.

Copy to:-
Master File



DELHI POLLUTION CONTROL COMMITTEE
DEPARTMENT OF ENVIRONMENT, GOVT. OF NCT OF DELHI
5th FLOOR, ISBT BUILDING, KASHMERE GATE, DELHI-06
visit us at : <http://dpcc.delhigovt.nic.in>

7

F.No.DPCC/CMC-II/NGT/OA 147/2021/2022/ 4160- 4161

Dated: 20/01/23

Sub: Directions u/s 33 (A) of the Water (Prevention & Control of Pollution) Act, 1974 as amended to date, in the matter of Hon'ble NGT in OA No. 147/2021 titled as "Mahesh Chandra Saxena Vs The Chief Secretary, GNCTD & Ors."

Whereas, Central Pollution Control Board is the State Board for all the Union Territories to exercise powers and performs functions under the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981, as amended to date.

And whereas, Central Pollution Control Board has delegated all its powers and functions under the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981, in respect of Union Territory of Delhi to Delhi Pollution Control Committee (DPCC) vide notification Dated 15.03.1991.

And whereas, a case has been filed in Hon'ble NGT vide OA No. 147/2021 titled as "Mahesh Chandra Saxena Vs The Chief Secretary, GNCTD & Ors." regarding rain water harvesting system and contamination of ground water in Group Housing Societies in Dwarka area.

And whereas, in the said matter, Hon'ble NGT vide orders dated 07.07.2021 constituted a joint Committee of DJB, CPCB and DPCC to ascertain the technical efficacy of installed systems, changes, if any, required and the issue of contamination of ground water.

And whereas, the said joint committee submitted its report before Hon'ble NGT that the contamination may occur in the societies due to mixing of the rain water with the waste water from different sources like waste washing area water with detergents having chemicals from balconies other than that of roof top rain water and the waste water from paved/parking areas of the societies.

And whereas, based on the joint committee report, the Hon'ble NGT vide orders dated 10.12.2021 directed DPCC to take remedial action in exercise of its statutory powers under the Water (Prevention and Control of Pollution) Act, 1974 to prevent contamination of groundwater, in co-ordination with DJB or any other authority.

And whereas, the District Magistrates of concerned districts of Delhi are appointed as authorized officers vide order dated 25.05.2010 by CGWA to ensure the implementation of scheme of Ground Water Re-charge and Roof top Rainwater Harvesting w.r.t. the Directions issued by CGWA.

Therefore, in view of above, the following directions u/s 33 (A) of the Water (Prevention and Control of Pollution) Act, 1974 are hereby issued :-

1. That the District Magistrate (South West) shall issue necessary instructions to all Group Housing Societies in Dwarka giving suitable timeline to make the arrangement for separate pipelines for roof top rain water for reaching to the rain water harvesting structure and separate disposal of sewage/other wastewater including the wastewater arising out from washing area and floor washing water in the sewerage system of DJB.

The ATR may be forwarded to DPCC within 15 days so that same may be submitted before Hon'ble NGT.

These directions are being issued as per the approval of Competent Authority in Delhi Pollution Control Committee.


(Ajeta Dayal Agrawal)
SEE (CMC II)

To,
The District Magistrate (South West),
Office of District Magistrate (South West),
Old Terminal Tax Building, Kapashera,
New Delhi - 110037.

Copy to:-
Master File

**List of Service Providers/Consultants empanelled with Delhi Jal Board for
implementation of Rain Water Harvesting System in NCT of Delhi**

S. No.	Name of Service Provider/Consultants	Whether agency /Individual	Renewal valid upto
1	Sh. Ravi Shankar Pandey, Vanya Apartment, New Subhash Colony, Bhopal (MP), Pin-462023 7838339995, 7838339996 umapowerservices@gmail.com	M/s Uma Power Service	30.04.2023
2	Ms Renu Bala Gupta, 125, Shubham Apartment, Plot No.37, I.P. Extension, Delhi-92, 8920382969 Guptarenu444@gmail.com	Individual	30.04.2023
3	Sh. Jayprakash Singh E-56/2, Krishna Park, Khanpur, New Delhi-110062 9911101804 pushpaconstech@gmail.com	M/s Pushpa Constech,	30.04.2023
4	Director D-4, Greater Kailash Enclave-I, New Delhi-110048 9891441667, 9818635162 rishabdhawan@gmail.com	M/s S.P. Dhawan & Associates' Pvt. Ltd.,	30.04.2023
5	Rachna Saxena 105, Pocket-2, Sector-19, Dwarka, New Delhi-110075 9811229070 rachnasaxena25@gmail.com	M/s Rachna Water well Engineers	30.04.2023
6	Sh. Amarjeet Singh Flat no.72A, Harsh Apartment, DDA Flats, Sector-10, Pkt-I, Dwarka New Delhi-110075 9310881160,9818576352 amarjeetsingh_teotia@yahoo.co.in	M/s ASA Contractors & Engineers Pvt. Ltd.,	30.04.2023
7	Sh. Gaurav P. Raja, House No.104, Opposite Asharam Ashram, Rajokari, New Delhi-38 9882088049 simlahf@gmail.com	M/s The Ridge Environment Consultants	30.04.2023
8	Sh. Chetan Sharma, House No.1/7018, Shivaji Park, Shadhara, Delhi-32 8700179582 cengvaluers@gmail.com	Individual	30.04.2023

9	Sh. Dinesh Kumar, C-2/186, Vinod puri, Vijay Enclave, New Delhi-45 9953814749 infodkconst@gmail.com	M/s D & K Construction,	30.04.2023
10	Ms Sudha, D-82, First Floor, Malviya Nagar, New Delhi-17 9582216876, 9811102329 nipstec@nipstec.com	M/s Nips Tech Limited	30.04.2023
11	Sh. Sunil Sharma, C-128, Tigri Extension, Dewoli, Delhi-64, 9625295067 sks989999@gmail.com	Individual	30.04.2023
12	Sh. Kamesh Garg, N-56, Naveen Shahdara, Delhi-32 9810372897, 9953335102 garg.kamesh@gmail.com	D.K. Associates,	30.04.2023
13	Sh. Attam Prakash, C-3A/22C, Janakpuri, New Delhi-58 8800565676, 8527548308 attamprakash60@gmail.com	M/s Attam Prakash	30.04.2023
14	Mr. Sunny Aggarwal, B-1/127, Janakpuri, Near Amarlila Hospital, New Delhi-58 9711108153, 9953163103 sunnyaggarwal127@gmail.com	Individual	30.04.2023
15	Ms Laxmi , 2 nd floor, Flat No.312, Block-G, Pkt.05, Sec.16, Rohini, Delhi-85 9958509946 alchem.environs@gmail.com	M/s Alchem Envirotech	30.04.2023
16	Sh. Narender Kumar D-156, Shakurpur Colony, Delhi- 110034 9212791932, 9213791932 star_construction6@yahoo.in starconstructioncompany8@gmail.com	Star Construction Company,	30.04.2023
17	Sh. Shailendra Kumar Tripathi, H-702, Sawarna Desidency, Near Raj bagh Metro Station, Gaziabad, UP-201005 8882444307 erskt@hotmail.com	Individual	30.04.2023
18	Sh. Arun Kumar Sharma, Office No.27, Ist Floor, CSC V, Sec.14, Extension , Rohini, New Delhi-85 9811071219 arun_kcp109@rediffmail.com arunkcp12009@gmail.com	M/s KUNTAL Constructions Pvt. Ltd.	30.04.2023

19	Director Sh. SATTAR ALI F-161-D/1, Third Floor Dilshad Colony Delhi- 110095 9310304565 sattarali123@gmail.com associates.gs21@gmail.com	M/s Al-Noor Construction GS Associates	30.06.2023
20	Director Sh. Karmvir House No. D-55, Pkt-D1, DDA Janta Flats, Kondli Mayur Vihar Ph-III, Delhi-110096 9873937399 Singhkaramvir1985@gmail.com	M/s Vidya Developers and Infrastructure Pvt. Ltd.	30.06.2023
21.	Sh. Upkar Baliyan 8527264232 upkarconst@gmail.com 137-A Pocket-F, Mayur Vihar Ph-II, New Delhi-110091	Individual	30.06.2023
22.	Architect Sh. Vinod Kumar Shop No. 06, Pillar No. 855 B. Garh, H.R.-124507 achitectparadiserinod@gmail.com	The Architectural Paradise	30.06.2023
23.	M/s Prakriti Enterprises Plot No-3, Street No. 23, Sidharthi Enclave, Jain Road, Mohan Garden Extn. Uttam Nagar, New Delhi-59 9313198903, 9871474304 infoprakriti@yahoo.com	M/s Prakriti Enterprises	31.03.2024
24.	Sh. Satyavir Singh Kaushal C-369, Balbir Vihar, Kirari Suleman Nagar, Delhi-86 9893876689, 9873876687 azad.adg006@gmail.com	S.S. Engineers	31.03.2024
25.	Sh. Ravi Kumar F/F, C-2/186, Kh.No. 7/31, Vinod Puri Enclave, New Delhi-110045 9821871588, 8409687153 info@dmrtinfratech.com	M/s DMRT Infratech Pvt. Ltd.	31.03.2024
26.	Sh. Sanjay Sadana AG-1, 152D, Vikas Puri, New Delhi- 110018 9716786642 ishikaenvironinfra@gmail.com	M/s Ishika Enviro infra	31.03.2024
27.	Sh. Ar. Anil Datta E-4/51, Sec-16, Rohini, New Delhi-110085 9810615115, 9811032178	M/s ADA Consultants	31.03.2024

28.	Sh. D.K Chakravarty 1 st Floor, Manish Chamber-2, LSC Market, Plot No-5, Sec-12, Dwarka, New Delhi-110078 8800983131,9818840202 sfst.ind@gmail.com	M/s Seniflow Solartech Pvt. Ltd.	31.03.2024
29.	Sh. Jagmohan Gupta C-47, Lane No. 04, Mahendru Enclave, Opp. Modal Town, Delhi- 110009 9811311405, 8287406861 ehsas.hum@gmail.com	M/s EHSAS (Trust)	31.03.2024
30.	Sh. Anil Kumar Bansal C-62, Vivek Vihar, Second Floor, Dehli-110095 9810074705 sliptec95@gmail.com	M/s Slip-Tac	31.03.2024
31.	Sh. Ayush Bansal IInd Floor, C-62, Vivek Vihar-I, Delhi-110095 9953918422 ecoconstruction2855@yahoo.com	M/s ECO Construction	31.03.2024
32.	Sh. Nand Lal Jhamb 110, First Floor, NN Mall, Plot No-15, Manglam Place, Sec-03, Rohini, Delhi-110085 9582244506 nand.jhamb@tcqproject.com	TCQ Project Solution	31.03.2024
33.	Sh. Anil Kumar Singh 710, Technology Apartments, 24, IP Extension, Delhi-110092 9971209995 anil.singh0264@gmail.com	Individual	31.03.2024
34.	Sh. R.S Yadav Chamber No. 6061, Typist Block, Civil Side, Tis Hazari Court, Delhi- 110054 9810725241,9213534555 rsyadavengineer@gmail.com	R.S Yadav & Associates	31.03.2024
35.	Dr. Aman Sharma 76, Institutional Area, Sec-18, Gurgaon-122015 9811487830 environment@wapcos.co.in	M/s WAPCOS Ltd.	31.03.2024
36.	Sh. Dinesh Kumar Flat No. 71. Shrikrishna Apartment, DDA Flats, J-Block, Sec-16, Rohini, Delhi-89 9810856107 dinesh.smc72@gmail.com	M/s Smart City enterprises	31.03.2024

37.	Sh. Sunny Chhikara Plot No-12, Village Qutabgarh Delhi-110039 9953219483 sunnyhr38@gmail.com	M/s Sunny Chhikara	31.03.2024
38.	Sh. Aman Kushwa B-3A/249, Janak Puri, New Delhi-110058 9999289961 ak.associates1998@gmail.com	M/s A.K & Associates	31.03.2024
39.	Ms. Harshita Pant Flat No. 1005, Type-II, DA Flats, Gulabi Bagh, Delhi-110007 8447150483, 9289178951 harshitapant.rwh@gmail.com	Individual	31.03.2024
40.	Sh. Sumit Dabla 971, Sec-07, Bahadurgarh, Jhajjar, Haryana-124507 8950462503 Sumitdabla22@gmail.com	Individual	31.03.2024
41.	Sh. Sanjeev Sharma C8-8035, Vasant Kunj, NewDelhi- 110070 8130071254 force@force.org.in	M/s FORCE (Non profit)	31.03.2024

-sd/-
Dy.SE(RWH)-II



Government of NCT of Delhi
Department of Urban Development
10th Level C-Wing, Delhi Sachivalaya
I.P. Estate, New Delhi
Ph-011-23392343



F.No. 16 (755)/UD/W/2019/Vol.-I/535-539

Dated: 24/04/2023

To

DELHI JAL BOARD
DIARY NO. 582
DATE 23/4/23

The Chairperson,
NDMC,
Palika Kendra, Sansad Marg,
New Delhi

The Divisional Commissioner,
Revenue Department, ACE (C) - 8
5 Sham Nath Marg,
Delhi-110054

Diary No. 359
Date 01-5-2023

The Commissioner,
Municipal Corporation of Delhi,
Dr SPM Civic Center,
J.L. Nehru Marg,
Minto Road, New Delhi

The Chief Executive Officer,
Delhi Jal Board,
Varunlaya, Karol Bagh,
Jhandewalan, New Delhi.

Delhi Jal Board

The Chief Executive Officer,
Delhi Cantonment Board,
Sadar Bazar Delhi Cantonment,
New Delhi-110010.

urgent CE/GW
re put-up note
ACE (C) - 8

May issue necessary
instructional orders
with approval of
Comp. authority

27/4

**Sub: Prevention of potential contamination of ground water from Rain
Water Harvesting systems in Urban Areas.**

Sir,

Please find enclosed herewith a copy of letter dated 31/03/2023 received from Office of CE (Ground Water) DRYSE (YWN) S

through Email from under Secretary to the Govt. of India alongwith copy of guidelines on RWH system and SoP with Do's and Dont's as per Annexure I & II on the subject cited above.

we may include the points in the RWH policy.

In this regard, a Committee as per direction of Hon'ble NGT was constituted by Department of Water Resources, River Development & Ganga Rejuvenation which visited selected RWH sites in 05 States i.e. Delhi, Haryana, Karnataka, Rajasthan and Tamil Nadu and submitted its report. The Committee found that deficiency do exist in implementation of RWH system at certain places and due attention was not given to possibility of contaminants breaching into the RWH system and eventually finding way into groundwater, particularly where the harvested water is directly used for Artificial Recharge (AR). In view of this, a guideline on RWH system and SoP with Do's and Don't as per Annexure- I & Annexure II respectively are enclosed herewith.

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I am directed to request you to kindly direct /instruct concerned officers to strictly follow the guidelines including Do's & Dont's while implementing the RWH systems in Delhi. Further the concerned officer may approach Regional Director Offices of Central Ground Water Board (CGWB) for technical guidance/support, if any.

Yours faithfully,

Encl-As above



(Rajesh Kumar)
Dy. Secretary (Water)

F.No. 16 (755)/UD/W/2019/Vol.-I/535-579

Dated: 24/04/2023

Copy forwarded to the Under Secretary to the Govt. of India, Ministry of Jal Shakti, D/o WR, RD,& GR, Shram Shakti Bhawan, Rafi Marg, New Delhi for information please.



Dy. Secretary (Water)

email

Prevention of potential contamination of ground water from Rain Water Harvesting systems in Urban Areas

From : Groundwater Desk <gwdesk-mowr@nic.in>

Subject : Prevention of potential contamination of ground water from Rain Water Harvesting systems in Urban Areas

To : Dr K. S. Jawahar Reddy, IAS <cs@ap.gov.in>, arunachal@nic.in, PABAN KUMAR BORTHAKUR, IAS <cs-assam@nic.in>, Chief Secretary Bihar <cs-bihar@nic.in>, csoffice sg <csoffice.sg@gov.in>, Puneet Kumar Goel IAS Chief Secretary <cs-goa@nic.in>, csguj@gujarat.gov.in, cs-haryana@nic.in, Prabodh Saxena <cs-hp@nic.in>, Shri Sukhdev Singh <cs-jharkhand@nic.in>, cs@karnataka.gov.in, Dr.V.P.Joy IAS <chiefsecy@kerala.gov.in>, Iqbal Singh Bains <cs@mp.nic.in>, cs@maharashtra.gov.in, cs-manipur <cs-manipur@nic.in>, cso-meg <cso-meg@nic.in>, cs-mizoram <cs-mizoram@nic.in>, Jan e Alam, Chief Secretary Nagaland <csngl@nic.in>, Shri Pradeep Kumar Jena <csori@nic.in>, Chief Secretary Punjab <cs@punjab.gov.in>, csraj@rajasthan.gov.in, Vijay Bhushan Pathak <cs-skm@hub.nic.in>, cs@tn.gov.in, CS Telangana <cs@telangana.gov.in>, cs-tripura <cs-tripura@nic.in>, CHIEF SECRETARY GoUP <csup@nic.in>, chief secretary <cs-uttaranchal@nic.in>, Shri H K Dwivedi <cs-westbengal@nic.in>, Chief Secretary Andamans <cs-andaman@nic.in>, admn-chandigarh@nic.in, Administrator DNH DD <administrator-dd-dnh@nic.in>, Shri Naresh Kumar <csdelhi@nic.in>, Praful Patel <lk-admin@nic.in>, cs-pondicherry@nic.in, cs-jandk <cs-jandk@nic.in>, Advisor to LG <advisor-lg-ladakh@gov.in>

Cc : ASHISH KUMAR <dirgw-mowr@nic.in>, TS to JS Admin, IC and GW <tsjsgw-dowr@gov.in>

Fri, Mar 31, 2023 06:21 PM

1 attachment

CS/2023/7417

we may circulate guidelines to MCD, NDMC and Delhi Cantt

Handwritten signature and date 1/4

See you

Handwritten notes: SSI, D S (water), 6/4/23

Respected Sir/Madam,

Please find attached the letter dated 31.3.2023 on the issued mentioned in the subject.

Sincerely, Ground Water Section Department of Water Resources, RD&GR Ministry of Jal Shakti Email: gwdesk-mowr@nic.in Phone No: 011-23766907

Stamp: Govt. of NCT of Delhi, 05 APR 2023

Handwritten notes: 10/4/2023, 50/100, 11/4/23

By-Email

F.No. T-81011/77/2021 - GW Section-MOWR

भारत सरकार

Government of India

जल शक्ति मंत्रालय

Ministry of Jal Shakti

जल संसाधन, नदी विकास और गंगा संरक्षण विभाग

D/o WR, RD & GR

(भूजल अनुभाग / Ground Water Section)

Shram Shakti Bhawan, Rafi Marg
New Delhi, Dated: 31/03/2023

To,

The Chief Secretaries/Administrators of all the States/UTs of India. (as per the Standard list)

Subject:- Prevention of potential contamination of ground water from Rain Water Harvesting systems in Urban Areas - reg.

Sir/ Madam,

I am directed to invite your kind attention towards Hon'ble NGT's observations, expressing concern over Rain Water Harvesting (RWH) system being one of the potential source of contamination of ground water in the country. The Principal Bench, Delhi of Hon'ble NGT, while disposing of matter related to societies in Dwarka area, Delhi (OA 147/2021), vide their order dated 10.12.2021 directed that at many places where RWH systems are installed, the same are either not functional or resulting in contamination of ground water which situation needs to be remedied not only in Delhi but pan India. This may be urgently looked into by a joint Committee of CPCB, Ministry of Jal Shakti (MoJS) and Ministry of Urban Development, Government of India. MoJS will be the nodal agency for the purpose.

2. In this regard, a Committee as per directions of Hon'ble NGT was constituted by this Department which visited selected RWH sites in 05 States i.e. Delhi, Haryana, Karnataka, Rajasthan and Tamil Nadu and submitted its report. The committee found that deficiency do exist in implementation of RWH system at certain places and due attention

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1/82355/2023

was not given to possibility of contaminants breaching into the RWH system and eventually finding way into groundwater, particularly where the harvested water is directly used for Artificial Recharge (AR). From the report of the committee and their experience gained during site visits, it is quite likely that similar situations may exist in other States too. In view of this, a **guideline on RWH system and SoP with Do's and Dont's** as per **Annexure-I & Annexure-II** respectively are enclosed herewith.

3. It is requested to kindly direct/ instruct concerned Departments/ agencies to strictly follow the guidelines including Do's & Dont's while implementing the RWH systems in your State. Further, the concerned Department/agency in the State may approach Regional Director Offices of Central Ground Water Board (CGWB) for technical guidance/ support, if any.

4. This issues with the approval of the Competent Authority.

Yours sincerely,

Signed by Rajendra Kumar Sahu

Date: 31-03-2023 18:00:55

Reason: Approved

(Rajendra Kumar Sahu)

Under Secretary to the Govt. of India

Ph: 011-23766907

Email: gwdesk-mowr@nic.in

Copy to:

- i. Sr. PPS to Secretary, DoWR, RD & GR, MoJS
- ii. SPPS to Special Secretary, DoWR, RD & GR, MoJS
- iii. Sr PPS to AS&MD, NWM
- iv. PPS to JS(A,GW & IC), DoWR, RD & GR, MoJS
- v. Sr PPS to Secretary, MoH&UA
- vi. PPS to Chairman, CPCB
- vii. PPS to Chairman, CGWB

Annexure-I

- i. The Committee recommended to give stress on contamination

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- aspect while designing and implementing the RWH systems and suggested for strictly adhering to the **BIS Standard - IS 15797:2008 (for implementation of Roof Top Rain Water Harvesting System in the country)** which is a very comprehensive document (a copy is enclosed for ready reference). Section 6.5 of the document deals with general 'Management and Maintenance' of the system and Section 7.4 specifically tells about 'Management of Catchment Area, Drains and Recharge Structures'. Section 7 provides designs of AR structures suitable at various different situations.
- ii. It has also been suggested to avoid Rain Water Harvesting System for the purpose of Artificial Recharge in certain urban areas especially in congested places in the vicinity of sewerage system components/ landfill sites etc where chances of contamination are high through mingling of untreated sewerage water/domestic wastes.
 - iii. The Committee has further suggested that in case of small households, cluster based RWH system should be promoted in place of individual household schemes.
 - iv. States may promote incentivization for adopting RWH, either in the form of rebate or subsidy in water-stressed areas.
 - v. Large-scale RWH system, such as those in large industrial, residential and commercial complexes, should have piezometer(s) installed at appropriate site(s) for periodic monitoring of water level and water quality. These parameters are the most important and reliable indicators of functioning status and health of RWH system.
 - vi. The design of RWH should by-pass first roof top harvested rainwater. Mixing of drain water with rooftop run off or with runoff from paved areas, where vehicular movement takes place, should be prevented.
 - vii. As water quality may not be strictly checked, the water stored in harvesting structures may be used strictly for non-potable purposes.
 - viii. Concept like RWH Theme Park, Bengaluru may be promoted for proper guidance to general public/ individual households.
 - ix. All RWH sites should be geo-tagged for better visibility for monitoring purpose.
 - x. There should be mechanism to avoid misuse of the recharge tube-wells for pumping purposes.
 - xi. Suitable online filters can be considered in the pipeline to avoid minor contaminants, if any, while harvesting the rooftop rainwater to the recharge tube-wells.
 - xii. District Jal Shakti Kendras may be strengthened and general public may be sensitised to follow correct RWH system through regular awareness generation by means of mass media, print media etc.
 - xiii. District administration may randomly check few RWH sites on monthly basis and suitable directions/corrective action may be suggested to the owner(s) of the RWH system(s) and the same may be followed up for strict implementation post inspection.

Annexure-II

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DOS AND DON'TS WHILE IMPLEMENTING ROOF TOP RAIN WATER HARVESTING AND ARTIFICIAL RECHARGE

A. While Planning Implementation of Scheme/ Construction of Structures

Dos

- **Choose the right recharge technique:** RWH schemes should have Artificial Recharge provisions depending upon local hydrogeological/ site-specific conditions. In this regard, the BIS Standard - IS 15797:2008, for implementation of Roof Top Rain Water Harvesting System may be referred to. Section 7 provides designs of AR structures suitable to different situations.
- **Source Water:** Only non-polluted rainwater from the roof tops and other catchment areas has to be diverted to recharge structure through connection of downpipe.
- **RWH/ AR Sites at Safe Distance:** Depending upon groundwater flow direction, RWH/AR sites should be located at safe distance from possible contaminant source such as sewage drains/ landfill sites/ cesspool/ sewage system having hydrogeological connectivity with the aquifer.
- **Insulation from Possible Contaminant Source:** There should be proper arrangements in place to prevent sewage water or contaminated water from paved area from mixing into run-off/ recharged water.
- **Provision of Filters:** There should be proper mechanism to let the water pass through filter media before entering into recharge system in order to minimize the possibility of aquifer material getting choked. Online filters (filters fitted in pipelines carrying roof top water) can also be used to avoid minor contaminants, if any, for diverting the rooftop rainwater to the recharge tubewells.
- **Provision for By-pass of First Flush:** RWH system should be designed in a way to allow by-pass first flush (first rainwater).
- **Provision for pre-treatment of water:** The Water should be pre-treated to remove suspended solids, organic matter, and other contaminants before recharge. This will help prevent clogging of the recharge structure and protect the groundwater quality.
- **Dual pipe system for utilization of harvested water:** Dual pipe system should be installed for utilization of harvested water for non-potable purposes, i.e other than drinking, cooking and bathing.
- **Cluster-based RWH System:** In the areas of only small households, cluster-based RWH system should be promoted in place of individual household scheme.
- **Installation of Piezometers:** Large-scale RWH system, such as those in large residential and commercial complexes, should have piezometer(s) installed at appropriate site(s) for periodic monitoring of water level and water quality. These parameters are the most important and reliable indicators of functioning status and health of RWH system.
- **Geotagging of RWH/ AR Sites:** All RWH/ AR sites should be geo-tagged for better visibility for monitoring purpose.

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30**Don'ts**

- It is better to avoid RWH/ AR in areas having shallow ground water levels (say shallower than 5 metre below ground level (mbgl)).
- Recharge should be avoided in areas where there is possibility of contamination of groundwater. RTRWH with AR in buildings such as hospital buildings may be avoided. In such cases storage of rainwater for non-potable uses should be encouraged.
- There should be no mixing of drain water with rooftop run off.
- Run-off from paved area having vehicular movement should not be diverted towards RWH system.
- RWH/ AR sites should not be located in the vicinity of possible contaminant source such as sewage drains/ landfill sites/ cesspool/ sewage system having hydrogeological connectivity with the aquifer.
- Contaminated water should not be recharged as it can pollute the groundwater and make it unfit for human consumption.
- Domestic waste water should not be diverted directly to Recharge Pits, particularly in areas where water levels are shallow.
- Recharge wells should not be constructed beyond water level. Direct recharging below water level should not be done.
- Recharge structures should not be constructed in areas prone to flooding as they can be damaged or washed away during heavy rains.
- Recharge should not be unplanned. Unplanned recharge can lead to groundwater contamination, soil erosion, and other environmental problems.

B. Maintenance and Monitoring of RWH/ AR System

Maintenance of recharge structures is important to ensure their long-term effectiveness and sustainability. Here are some key maintenance practices that can help keep recharge structures functioning properly.

- First flush should be by-passed.
- Rooftops should be cleaned regularly.
- Filter material should be regularly cleaned/ replaced.
- Sediment and debris can accumulate in recharge structures over time, which can clog the pores and reduce the infiltration capacity. Regular cleaning can prevent clogging and help maintain the recharge capacity of the structure
- Regular monitoring and inspection of recharge structures can help detect any signs of damage, erosion, or clogging or damage early on, before they become more serious. This can include checking for cracks or damage to the structure, as well as monitoring the inflow and outflow of water.
- Water level and groundwater quality around the recharge structure should be regularly monitored through purpose-built piezometers.
- Monitoring mechanism should be effective through involvement of officials trained to evaluate functioning of installed RWH system as per BIS.
- Any damage or erosion to the recharge structure should be repaired immediately to prevent further damage. For example, if a recharge well has a

crack or a hole, it should be repaired as soon as possible to prevent soil from entering the well and clogging it. Prompt repair and maintenance can help prevent further damage and ensure the long-term effectiveness of the recharge structure.

- Vegetation can grow around recharge structures and block the inflow of water. Regular trimming of vegetation can help maintain the flow of water into the recharge structure.
- Keep a record of maintenance activities and observations for each recharge structure. This can help identify patterns or trends in maintenance needs and guide future maintenance activities.

Don'ts

- Do not dump pollutants or waste near or inside the RWH/ AR structure.
- Never leave the covers of RWH chamber/ AR structures open.
- Do not allow wastewater to flow towards RWH/ AR structures.

C. Other Suggestions

- Underground Storage tank/ sump, made using cross-wave technology or uPVC pipes saves space, besides providing strength to the structure. As it is costly, the technology may be used in large Government Buildings, commercial complexes and industrial premises.
- In the new buildings, the complex is divided in a way to have alternate bays for sewage and RWH channels.