

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

IN

ORIGINAL APPLICATION No. 785 of 2023

IN THE MATTER OF:

**NEWS ITEM APPEARING IN TRIBUNE DATED 15.12.2023
TITLED "KASALI DISTILLERY DUMPS EFFLUENT
INTO WATER SOURCE, SUPPLY AFFECTED"**

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Filed by:-


(NARENDER PAL SINGH)

Advocate for MoEF&CC

(Respondent no.6

Tel-9311010090

Dated: 1st.04.2026

Place- New Delhi

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**ADDITIONAL AFFIDAVIT ON BEHALF OF THE MINISTRY OF
ENVIRONMENT, FOREST AND CLIMATE CHANGE, RESPONDENT
No. 6.**

I, V.Pazhaniyandi, S/o Shri Velayudhan Pillai, aged about 46 years, presently working as Director in the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India, do hereby solemnly affirm and declare as under:

1. That I am duly authorized by the Ministry of Environment, Forest and Climate Change, respondent no. 6 to swear this affidavit and I am conversant with the facts and circumstances of the present case and am thereby competent to depose as under:
2. That the present affidavit is being filed in compliance with the order dated 08.12.2025, passed by the Hon'ble Tribunal, wherein the Hon'ble Tribunal was pleased to, inter alia, direct as under:



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“.....Such a stand of MoEF&CC excludes all the issues concerning the surface water from the jurisdiction of MoEF&CC. Hence, the Secretary MoEF&CC may look into this issue and file the response affidavit.....”

A copy of order dated 08.12.2025 is marked and annexed herewith as **Annexure- I.**

3. That in this regard, it is submitted that the Central Water Commission (CWC), functioning as an attached office of the Ministry of Jal Shakti, is the premier technical organization in India entrusted with the responsibility of initiating, coordinating, and furthering schemes for the control, conservation, and utilization of the country's water resources. The primary objectives of the CWC include flood control, irrigation, navigation, drinking water supply, and hydropower development. The CWC also renders technical advice on inter-State water disputes and oversees activities relating to the overall planning and development of surface water resources in the country.

4. Further, it is respectfully submitted that the Central Ground Water Authority (CGWA) has been constituted under Section 3(3) of the Environment (Protection) Act, 1986, to regulate and control the development and management of groundwater resources in the country. The mandate of CGWA flows from the directions of the Hon'ble Supreme Court of India, empowering it to issue No Objection Certificates (NOCs)



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and to enforce regulatory measures to prevent depletion of groundwater resources.

5. As per Government of India (Allocation of Business) Rules, 1961, "General policy, technical assistance, research and development training and all matters relating to irrigation, including multi-purpose, major, medium, minor and emergency irrigation works; hydraulic structures for navigation and hydro-power; tube wells and groundwater exploration and exploitation; protection and preservation of ground water resources; conjunctive use of surface and ground water, irrigation for agricultural purposes, water management, command area development; management of reservoirs and reservoir sedimentation; flood (control) management, drainage, drought proofing, water logging and sea erosion problems; dam safety" has been allocated to the Ministry of Jal Shakti.

6. That it is further submitted that the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR), Ministry of Jal Shakti, published a framework document on *Spring Rejuvenation*. A true copy of framework document is marked and annexed herewith as **Annexure-II**.

7. That vide Notification S.O. 3289(E) dated 24.09.2020, the Ministry of Jal Shakti notified guidelines empowering the Central Ground Water Authority to regulate and control groundwater extraction in India. The core



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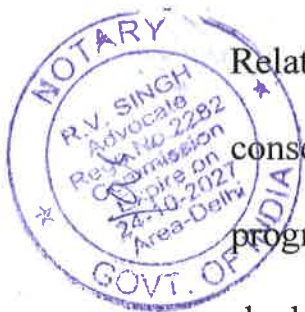
objective of the said guidelines is sustainable groundwater management through mandatory No Objection Certificates (NOCs), imposition of water conservation fees, and restrictions in over-exploited areas. A copy of the said guidelines is marked and annexed herewith as **Annexure-III**.

8. That the glossary of technical terms appended to the aforesaid guidelines defines "*Groundwater*" as:

"Water which exists below the surface in the zone of saturation and can be extracted through wells or any other means or emerges as springs and base flows in streams and rivers."

9. That it is humbly submitted that for extraction of groundwater, the Central Ground Water Authority (CGWA) or the respective State-level authorities grant permissions. As far as surface water is concerned, the concerned Water Resources Departments, Irrigation Authorities, or River Basin Authorities, as per the applicable laws and policies, generally accord approvals.

10. Further, it is also submitted that under the National Hydrology Project and Related Programmes, the Ministry has undertaken initiatives for mapping, conserving, and reviving springs across the country. The objective of program is to ensure sustainable water security through scientific spring shed management, recharge augmentation, and active community participation.



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11. That it is respectfully submitted that there is no rule, regulation, guideline, or circular in force under the answering Respondent Ministry regulating the drawl of groundwater, spring water, or surface water for commercial purposes.

12. In view of the foregoing submissions, it is most respectfully prayed that this Hon'ble Tribunal may be pleased to pass such order(s) as it may deem fit and proper in the facts and circumstances of the present case.

I identified the deponent/executionant who has signed in my presence

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DEPONENT
(PAZHANIYANDI, V.)
निदेशक (सी.पी.)/Director (CP)
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
M/o Environment, Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

VERIFICATION:

Verified at New Delhi on this the 10th day of APR 2026 that the contents of this reply affidavit based on official record(s) maintained and information available in the office are correct to my knowledge and belief. No part of it is false and nothing has been concealed there from.



[Handwritten signature]
DEPONENT
(PAZHANIYANDI, V.)
निदेशक (सी.पी.)/Director (CP)
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
M/o Environment, Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

solemnly affirmed before me, read over & explained to the deponent.

[Handwritten signature]

Notary Public, DELHI

10 APR 2026

STATE OF TEXAS
COUNTY OF [illegible]
[illegible text]

[illegible text]

[illegible text]



[illegible text]

[illegible text]

STATE OF TEXAS

Item No. 11

Court No. 1

4

**BEFORE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 785/2023

News Item titled "Kasauli Distillery dumps effluents into water source supply affected" appearing in Tribune dated 15.12.2023

Date of hearing: 08.12.2025

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER**

Respondents: Mr. Aaditya Vijaykumar & Mr. Naman Garg, Advs. for Respondent No. 1 - HP SPCB (Through VC)
Mr. Vikrant Pachnanda, Adv. for Respondent No. 2 - CPCB
Mr. Anubhav Sharma, Adv. for Respondent No. 3
Mr. A.D.N. Rao, Senior Advocate with Mr. Vipul Wadhwa, Ms. Kashika Gera & Mr. Shreyash Choudhary, Advs. for Respondent No. 5.
Mr. Narender Pal Singh, Adv. for Respondent No. 6-MoEF & CC

ORDER

1. The Tribunal in the earlier proceedings had considered the report of the joint Committee dated 20.08.2024 disclosing that the Respondent - project proponent was using spring water without any permission and a stand was taken by the project proponent that no permission for using the spring water of the Ground Water Authority was required and no regulation exists for obtaining such permission from the Authority. In such circumstances, by the order dated 12.08.2025, the Tribunal after impleading the MoEF&CC had directed it to file affidavit disclosing if any rule, regulation and circular exists regulating the drawl of spring water for commercial purposes.

2. The response affidavit dated 30.09.2025 has been filed by the Director, MoEF&CC taking the following stand:-

"xxx

xxx

xxx

5. It is respectfully submitted that issue regarding extraction/drawl of surface/ground water does not fall within

the purview of this Ministry. Therefore, the answering respondent humbly prays for leave to make additional submissions, if required during the course of the proceedings and Central Ground Water Authority (CGWA) may be impleaded as party respondent in this matter.”

3. Such a stand of MoEF&CC excludes all the issues concerning the surface water from the jurisdiction of MoEF&CC. Hence, we Secretary MoEF&CC may look into this issue and file the response affidavit within four weeks.

4. On the request of learned counsel for MoEF&CC following additional Respondent is impleaded:-

1. Ministry of Jal Shakti
Through the Secretary
Shram Shakti Bhawan, Rafi Marg,
New Delhi – 110001

5. Let the steps be taken for service of notice to the newly added Respondent.

6. List on 16.02.2026.

Prakash Shrivastava, CP

Dr. A. Senthil Vel, EM

December 08, 2025
Original Application No. 785/2023
A



Government of India
Ministry of Jal Shakti
Department of WR, RD & GR

Annexure 1
6



SPRING REJUVENATION

A FRAMEWORK DOCUMENT



NATIONAL HYDROLOGY PROJECT

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1. BACKGROUND

Springs are the primary source of water for the rural households in the hilly region. Despite the key role that they play, springs have not received their due attention and are today facing the threat of drying up. Spring discharge is reported to be declining due to increased water demand, changing land use patterns, ecological degradation and erratic trends in precipitation. These springs are known as *dhara*, *mool*, *kuan* in the central and eastern Himalayas and *chashma* and *naula* in the western Himalayas.

There is, hence, an urgent need to restore, revive and sustain springs. Lack of knowledge, understanding and awareness on springs has further compounded the problem while also inducing elements of conflicts and haphazard development. Land-use changes, rapid urban expansion and growing commercial consumption are affecting forests and impacting spring water availability.

The water from the Himalayan rivers is not readily accessible to the densely populated villages and towns in the mid-hills (900 – 2000m). These fast flowing rivers cut deep gorges and flow several hundred meters below, while the glaciers are far above this critical eco-zone of the mid-hills. In mid-hills of the Himalayas, communities depend on rain-fed springs and streams for meeting their water requirements.

2. MAGNITUDE OF THE PROBLEM

A large section of the population of the Himalayan Region depends on natural spring water for fulfilling their domestic and livelihood needs such as drinking water, sanitation and irrigation. The dependency of majority of the population on spring water implies that with changing climatic conditions and rainfall pattern, a large number of villages, hamlets and settlements are facing potential drinking water shortage. In fact, half of the perennial springs have already dried up or have become seasonal and thousands of villages were currently facing acute water shortage for drinking purposes about 8-10 years ago, a figure that may be relevant even more so today.

What is even more important to note is the fact that while glaciers are easily considered to be the source of the mighty Himalayan rivers, most of them are fed by springs. The non-glacial rivers clearly show how hundreds of springs provide the flows in stream and river channels even during the dry season. Any significant depletion in such spring flows at river origins' will surely impact the flow of rivers. Hence, a high dependency on one hand and an increasing sensitivity to depletion on the other, make Himalayan springs a source that has become greatly vulnerable in the current context, despite their being part of a strong heritage, tradition and culture in the region. It becomes important to recognise spring water depletion as a nationally pertinent problem and to address it straightaway through preventive and corrective measures.

It is estimated that springs and underground seepages provide about 90 per cent of the hilly states domestic water needs besides being used for irrigation, livestock and cultural purposes. Hence, there is an urgent need to revive or regenerate springs and underground flows and to ensure sustainable and equitable use of the augmented groundwater resources in these mountainous regions.

At a larger national scale, a gross estimate of nearly 200 million Indians depending upon spring water across the Himalayas, Western Ghats, Eastern Ghats, Aravallis and other such mountain ranges - implies that more than 15% of India's population depends on spring water.

3. INITIATIVES FOR SPRING REJUVENATION

3.1 Recently, efforts have been made to preserve and save springs from drying up; consequently, efforts to recharge them are also gaining momentum. Initiatives have been taken by a few State governments, Civil Society Organizations / NGOs who are actively contributing towards programmes to promote awareness of the importance of springs, and to build capacities to protect, develop and manage "springsheds" across the country.

3.2 The first systematic initiative was undertaken through the Dhara Vikas Programme by the Rural Management & Development Department (RM&DD), Government of Sikkim. This initiative was geographically targeted in the drought-prone rain-shadow areas of South and West districts of Sikkim. With funding support from MGNREGS, a spring revival initiative (*Dhara Vikas*) was launched in the State, an initiative that was built on the foundations of building capacity, implementing the concept of recharge and conservation through a scientific process and through a community participation model. The programme involved multiple partnerships and collaborations and was perhaps the first collaborative programme on water of its kind. Supplementing the natural groundwater recharge, by first identifying the recharge area of the aquifers feeding the springs and then taking up artificial recharge works like digging trenches and ponds to catch the surface flow and enhance the infiltration formed the core component of this programme. This has resulted in recharging 1035 million litres of groundwater annually covering 637 ha and revival of 60 springs and 4 lakes in 20 drought-prone Gram Panchayats.

3.3 Other Initiatives

3.3.1 People's Science Institute - Springs and Participatory Groundwater Management in Sirmour District of Himachal Pradesh: used the concept of Participatory Groundwater Management (PGWM) to manage spring water in the Thanakasoga – Luhali Panchayat area in Himachal Pradesh through a comprehensive spring shed management approach. Both, the discharge and quality of spring water have improved significantly. The net water augmented through a combination of recharge and demand management is estimated to be of the order of 30,000 m³ per year.

3.3.2 Central Himalayan Action Research Group (CHIRAG) - Springs Revival through Para – Hydrogeologists: developed a team of para-hydrogeologists who mapped springsheds, monitored spring discharge and quality and identified a spring typology for the region of work that led to piloting recharge and demand management measures that helped impact more than 100 springs in three districts of Kumaon region. CHIRAG collaborated with ACWADAM to develop capacity of their spring team and facilitate the team of para-hydrogeologists in mapping springs, catchments and aquifers to develop a systematic approach to spring-water management in the Kumaon region.

3.3.3 HIMMOTTHAN - Mission Spring Revival: have taken the concept of spring shed management largely in Uttarakhand and also in Nagaland. Improved water security through systematic springshed management measures and distribution of spring water under the concept of WASH have been made under this initiative.

3.3.4 Himalaya Seva Sangh - Campaign For Springs: has used socio-cultural tools to create awareness and sensitization of communities for spring water conservation and restoration in Uttarakhand. HSS also works closely with NGOs in Jammu and Kashmir.

3.3.5 Govt. of Meghalaya - Capacity Building for Spring Revival: initiated work to map 60,000 springs and create a first-cut plan for spring water management on 5,000 springs in 11 districts over the next four years. This initiative is also supported through capacity building and hand-holding under the Springs Initiative, involving Arghyam, PSI and ACWADAM.

3.3.6 Rural Development Department, Government of West Bengal - Springshed Management in the Hill Districts of West Bengal: initiated a pilot on 631 springs in four hill districts of Northern Bengal. This programme is supported by Prasari and BRLF, with technical assistance from ACWADAM.

3.3.7 Vishaka Jila Nav Nirman Samiti (VJNNS): initiated work on Gravity Fed Water Supply Systems (GFWSS) in the Eastern Ghats for providing water security to tribal population in these regions as the existing water sources had water contamination issues leading to poor health. VJNNS also created filter tanks at natural spring sources and channeled the water to tribal villages using pipelines.

3.3.8 Grampari - Springbox model for water security: The spring based water security approach in Western Ghats of Maharashtra ensured protection through springboxes, rejuvenation based on springs hydrogeology, and resource - aquifers based governance through community participation. This approach in 19 springs provided water security to equal number of villages, while larger outreach has been to 60 villages through the springshed management work. It also helped to address the issues of quantity, quality, conflicts and enabled coordination and governance at local scales.

3.3.9 Keystone Foundation: An eco-hydrological model with interdependent and interconnected components of springs, forest, groundwater, wetlands and biodiversity in the Nilgiri's. In this location, implementation has been taken up in 20 springs locations which provided immediate water security to 20 villages, while also restoring forest, wetlands and groundwater systems which support larger bio-diverse habitats and downstream communities.

3.3.10 Government of Nagaland: pilots, supported by PSI and ACWADAM, have been initiated with Department of Land Resources (DoLR) and ECS. A rejuvenation plan for 100 springs has been drawn up in partnership with Rural Development Department, NEIDA with support from other NGOs.

3.3.11 Government of Mizoram: - A pilot has been initiated with Forest Department as the nodal agency for rejuvenation of 100 springs, with WSPs of 20 springs. It is supported by GIZ with PSI and ACWADAM as technical support agencies.

3.3.12 Other Interventions:

- **NABARD:** NABARD has also developed a programme on springshed management that is similar to watershed management. The regional offices at Karnataka, Maharashtra and North East have initiated some project on springs with local NGO partners.
- **Ministry of Tribal Affairs (MoTA):** Ministry of Tribal Affairs (MoTA), with the support of UNDP and other CSOs had designed a programme called the 1000 springs initiative for the tribal belt following a pilot in Orissa.
- **National Mission on Himalayan Studies:** Water security through community based springshed development in the Indian Himalayan Region under the National Mission on Himalayan Studies (NMHS) includes inventorization of 300 springs. As a pilot, rejuvenation of springs will be carried out for 50 springs in each of the 6 selected districts (2 each in Nagaland, Uttarakhand and Arunachal Pradesh). The initiative will be led by People's Science Institute (PSI) Dehradun, in partnership with the Land Resources Department, Government of Nagaland, IIT Roorkee, WWF-India and Arghyam.
- **NITI-Aayog Report on Springs in the Indian Himalayan Region –** NITI Aayog published the report of the Working Group on Inventory and Revival of Springs in the Himalayas for Water Security in 2018. The report was part of the larger deliberations on sustainable development in the Indian Himalayan Region and was a result of a continuous process of dialogue and discussions involving all the lead institutions working on spring-water management in the Indian Himalayan Region. The report provides short, medium and long term proposals for a National Programme for Springshed Management for the Indian Himalayan Region.

4. ROAD MAP FOR SPRING REJUVENATION

4.1 Though the task of revival of Himalayan springs is gigantic, it can be achieved through a systematically coordinated, combined national, state and local level initiatives involving all possible stakeholders and partners including governments, community and people at large.

4.2 Studies conducted by RM&DD, Government of Sikkim have showed that revival of springs is possible by taking up artificial ground water recharge works in the recharge area (springshed) of the aquifer. Based on the experiments, an eight-step action plan was designed which provides a step-by-step procedure for reviving Himalayan springs. These eight steps are as follows:

- i Comprehensive mapping of springs and springsheds.
- ii Setting up of a data monitoring system.
- iii Understanding socio-economic and governance systems of springs.
- iv Hydrogeological mapping.
- v Creating a conceptual hydrogeological layout of the springshed.
- vi Classification of spring type, identifying mountain aquifer and demarcating recharge area.
- vii Developing springshed management and governance protocols and
- viii Impact assessment.

4.3 Springs being groundwater, the principles of groundwater management and Common Pool Resources (CPR) applies to them as well. A strong infusion of hydrogeology was introduced through some of the early pilots stated in sections above. A hydrogeological approach to spring-revival and springshed management, complimented by socio-ecological inputs, engineering surveys and a strong decentralised governance in mountain water security makes springs resilient to climate variability and helps communities access water throughout the year and manage it better. Demystification of knowledge, embedding the understanding of water as a common pool resource and management of the resource by local communities and community resource persons through appropriate institutional levels, forms the core aspects of this approach. Water security plans which include recharge augmentation, demand management and resource governance are developed through a consultative process with all stakeholders and the community. A community that understands the scientific and governance aspects of springshed management can take responsibility over its resource and plan long-term management protocols to ensure safe and adequate water for both lifeline and livelihood activities.

4.4 In addition, there is also a need to address the demand side challenge in times of limited resource availability, by augmenting the efficiency of water use. At a local scale, this implies the involvement of the community, educating various stakeholders, especially the communities depending on spring water as well as those located in the recharge zone about resource protection, preventing contamination of the aquifer that supplies water to springs and land use management and control. Hence, social, economic and ecological sciences must also compliment hydrology and hydrogeology in the management of the precious spring water resource in the mountains.



4.5 Spring rejuvenation/development may broadly involve the following sets of activities:

- *Assessment of the hydrogeological controls on the springs (at micro level)* - conduct hydrogeological assessments to identify spring types and determine their connectivity with surface water and shallow or deep groundwater aquifers.
- *Recharge potential of the spring through spring-shed development measures (at micro level)* - In the Himalayan sub region, recharge does not necessarily follow a ridge-to-valley approach, but a valley-to-valley pattern. This suggests that investments in recharge without understanding the recharge-discharge areas could be misguided and are unlikely to deliver a full return on investment. It is also a possibility that only a part of the catchment area contributes to recharge, thereby obviating the need to consider the entire catchment area for recharge.
- *Maintenance and protection of springs* – are to protect the catchment of the spring and the spring head from pollution. An inspection of the ground upstream (catchment) of the spring is essential to ascertain that there is no danger of pollution or, if there is, what measures can be taken to prevent it.
- *Effective monitoring of the spring discharge and water quality during planning, implementation and impact assessment stages* – essential for knowing the impact of the interventions undertaken. Active participation of the community at all stages, including during the stage of knowledge generation, is critical for the success of any spring rejuvenation programme.



Spring Water Collection



Staggered Contour Trenches



Measurement of Spring Discharge

5. LEARNING FROM PAST EXPERIENCES

Some of the common challenges in programmes are the following:

- Community participation is key for long term sustainability of the program.
- Only supply side interventions are executed which may increase the water discharge for a short term but does not solve for water security in the long term.
- The convergence of schemes, efforts and funds remains a challenge.
- The knowledge remains in the hands of the experts and is not adequately transferred to the local community making the community dependent on the govt/experts.
- Availability of dedicated water resource personnel at the Panchayat or the village level will significantly improve the long term efficacy of the interventions.
- The existing programmes should have adequate funding for HR and capacity building of all the stakeholders in the programme.
- The programmes do not have adequate emphasis on the data collection. In absence of data, it is difficult to measure the impact of the interventions and learn from what worked and what did not work and learn from those experiences.

6. ROLE OF DIFFERENT STAKEHOLDERS

6.1 Ministry of Jal Shakti is the coordinating agency for spring rejuvenation. A pilot project has been proposed for spring inventory and rejuvenation in Tehri Garhwal district of Uttarakhand. It is envisaged that a scheme for spring rejuvenation in the Country would be taken up based on the experiences of the pilot project. In fact, many other ministries such as Ministries of Rural Development, Tribal Affairs, Urban Development, DoNER etc. could also adopt regions for implementing programmes on spring-water management.

6.2 Comprehensive mapping of springs and data monitoring and research: Central organisations (Central Ground Water Board, Geological Survey of India, Survey of India, National Remote Sensing Centre, National Institute of Hydrology, Wadia Institute of Himalayan Geology etc.) along with State Governments, Academic / Research Institutes, Civil Society Organisations (CSOs) having proven ability of mapping.

6.3 Social and Governance aspects: State Governments and CSOs.

6.4 Model for springshed recharge: CGWB, State Governments and CSOs.

6.5 Developing springshed management plans and governance protocols: State Governments, CSOs, CGWB.

6.6 Measuring hydrogeological and social impacts: CGWB, CSOs and State Governments.

6.7 Capacity Building: CGWB, State Governments and CSOs

7. SPRING REJUVENATION DESIGN PRINCIPLES

7.1 Spring rejuvenation should allow for design and execution autonomy but converge on the outcomes. Several states have already initiated programmes/initiatives in their respective states. While there are commonalities, the solutions and methodologies are unique to the local hydrogeological, social, cultural and capabilities of the respective states. Basically, spring rejuvenation calls for mapping of the springshed, identification of recharge areas, pinpointing sites for appropriate recharge structures, construction of recharge structures through convergence of activities under MGNREGS, PMKSY-WDC and related Schemes of State Governments. Experience from Sikkim and Nagaland shows that leveraging of MGNREGS funds is sufficient for construction of recharge structures.

7.2 Sustainability should be the core focus in the programme design to solve for water security for a long term. This means:

- **Participation:** To consciously and actively engage the community during the entire programme by reducing the threshold to participation and make the interactions smooth and seamless.
- **Long Term Assets:** The programme should leave long term assets (institutional and physical) across the ecosystem that would last beyond the program.
- **Leverage local knowledge:** The design should leverage both science and local knowledge.

8. EXPECTED OUTCOME

- Rejuvenation / regeneration of springs leading to adequate quantity and quality of water for drinking and irrigation purposes.
- Maintaining e-flow in mountain rivers.
- Empowering communities to manage their water resources.



**GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI
DEPARTMENT OF WR, RD & GR**

NATIONAL HYDROLOGY PROJECT

2nd Floor, Rear Wing, MDSS (MTNL) Building,
9, CGO Complex, Lodhi Colony, New Delhi, 110003
e-mail: nhp-mowr@nic.in | Website: nhp.mowr.gov.in



14

MINISTRY OF JAL SHAKTI
(Department Of Water Resources, River Development And Ganga Rejuvenation)
(CENTRAL GROUND WATER AUTHORITY)

NOTIFICATION

New Delhi, the 24th September, 2020

S.O. 3289(E).—WHEREAS, on the directions of Hon'ble Supreme Court vide its order dated the 10th December, 1996 passed in Civil writ Petition No 4677 of 1985, MC Mehta Vs Union of India, the Central Government constituted the Central Ground Water Authority (hereafter referred to as the 'Authority') vide notification number S.O. 38 (E), dated the 14th January, 1997 to exercise powers under Section 5 of the Environment (Protection) act, 1986 (29 of 1986) for the purposes of regulation and control of Ground Water management and development and to exercise certain powers and perform certain functions relating thereto;

AND WHEREAS, the Authority has been regulating ground water development and management by way of issuing 'No Objection Certificates' for ground water extraction to industries or infrastructure projects or Mining Projects etc., and framed guidelines in this connection from time to time in twenty two States and two Union territories, where ground water development is not being regulated by the State Government Union Territory administration concerned;

AND WHEREAS, some of the State Governments or, Union territories enacted legislations and issued regulatory directions or orders for regulating ground water development and management;

AND WHEREAS, the Hon'ble National Green Tribunal, New Delhi vide order dated the 15th April 2015 in OA Nos. 204/205/206 of 2014 has issued directions to the Authority to ensure that any person operating tube-well, or any means to extract ground water shall obtain permission from the Authority and shall operate the same subject to the law in force, even if such unit is existing unit or the unit is yet to be established;

AND WHEREAS, the said Hon'ble Tribunal vide its order dated the 09th July, 2015 in OA Nos. 34 and 37 of 2014 directed all industrial units which are members of the Common Effluent Treatment Plants (CETPs) to approach the Authority through State Pollution Control Board for obtaining 'No Objection Certificate' in accordance with the law;

AND WHEREAS, the aforesaid Hon'ble Tribunal vide order dated the 13th July, 2017 in OA No 200- of 2014 directed that every industry should be directed to pay for extraction of such water, that too, subject to the conditions stated in the order permitting such extraction;

AND WHEREAS, the said Hon'ble Tribunal vide its order dated the 28th August, 2018 in O.A. Nos. 176 of 2015 and 59 of 2012 respectively directed the Ministry of Water Resources, River Development and Ganga Rejuvenation to forthwith review the existing mechanism so as to ensure effective steps for conserving the groundwater resources;

AND WHEREAS, in pursuance of the directions of the Hon'ble National Green Tribunal and powers conferred by sub-section (3) of section 3 and section 5 of the Environment (Protection) Act, 1986 the Authority, with a view to protect the ground water resources had circulated the draft guidelines for grant of 'No Objection Certificate' on the 11th October, 2017 inviting comments and suggestions from all the stakeholders;

AND WHEREAS, all objections and suggestions received in response to the said draft guideline have been duly considered by the Central Government, the Authority notified the guidelines to regulate groundwater over-exploitation and to conserve the groundwater resources in the country vide notification number S.O. 6140 (E), dated the 12th December, 2018;

AND WHEREAS, the aforesaid Hon'ble Tribunal vide order dated the 03rd January 2019 in the OA No. 176 of 2015 directed that the above mentioned notification dated the 12th December, 2018 may not be given effect to as it is unsustainable if tested on 'Precautionary Principle, Sustainable development as well as Inter-generational Equity Principles' and if implemented, will result in fast depletion of groundwater and damage to water bodies and will be destructive of the fundamental right to life under Article 21 of the Constitution of India;

AND WHEREAS, the said Hon'ble Tribunal vide order dated the 11th September, 2019 constituted a committee to deliberate on steps for preventing depletion of groundwater, robust monitoring mechanism

against unauthorised extractions and fulfillment of 'No Objection Certificate' conditions, environment compensation etc and to submit a report;

AND WHEREAS, the aforesaid committee submitted the report along-with draft guidelines to regulate groundwater extraction and groundwater conservation in Hon'ble Tribunal on the 16th March, 2020;

AND WHEREAS, the above said Hon'ble Tribunal vide order dated the 20th July, 2020 directed to comply with certain points for sustainable groundwater management while issuing 'No Objection Certificates' to commercial establishments by the Authority;

Now therefore, in pursuance of the directions of Hon'ble National Green Tribunal and the powers conferred by sub-section (3) of Section 3 read with Section 5 of the Environment (Protection) Act, 1986 (29 of 1986), the Department of Water Resources, River Development & Ganga Rejuvenation, hereby notifies the guidelines to regulate and control groundwater extraction in the country in supersession to this Ministry notification vide S.O. 6140 (E), dated the 12th December, 2018 as per the Schedule below:

SCHEDULE

Guidelines to regulate and control ground water extraction in India **(with immediate effect)**

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[F. No. CGWA-21/4/2020-CGWA]

ASHISH KUMAR, Director

ANNEXURES

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- Annexure III: Measures to be adopted to ensure prevention from pollution in the plant premises of polluting industries/ projects.
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- Annexure IX: Glossary of technical terms used
- Annexure X : Annual water audits by the industries

Guidelines to regulate and control groundwater extraction in India**Preamble and Background:**

On the directions of Hon'ble Supreme Court vide its order dated 10th December, 1996 passed in Civil writ Petition No 4677 of 1985, MC Mehta Vs Union of India, the Central Government had constituted the Central Ground Water Board as Authority vide notification number S.O. 38 (E), dated the 14th January, 1997 to exercise powers under sub section (3) of section 3 of the Environment (Protection) act, 1986 (29 of 1986) for the purposes of regulation and control of Ground Water Management and Development and to exercise certain powers and perform certain functions as per the said Act.

The Authority has been regulating ground water development and management by way of issuing 'No Objection Certificates' for ground water extraction to industries or infrastructure projects or Mining Projects etc., and framed guidelines in this connection from time to time applicable in twenty two States and two Union territories, where ground water development is not being regulated by the State Government and Union territory administration concerned.

To have sustainable management of water resources in the country groundwater abstraction guidelines have been prepared to regulate groundwater extraction and conserve the scarce groundwater resources in the country.

These guidelines will come into force with immediate effect from the date of Gazette Notification and will supersede all earlier guidelines issued by the Central Ground Water Authority (CGWA).

These guidelines will have pan India applicability. Ground water abstraction in States/ Uts (which are not regulating ground water abstraction) shall continue to be regulated by Central Ground Water Authority.

Further, wherever States/ Uts have come out with their own groundwater abstraction guidelines, which are inconsistent with the CGWA guidelines, the provisions of CGWA guidelines will prevail. However, in case the guidelines followed by such States/ Uts contain some more stringent provisions than CGWA guidelines, such provisions may also be given effect to by the States/ Uts Authorities in addition to those contained in the CGWA guidelines. States may be at liberty to suggest additional conditions/ criteria based on the local hydro-geological situations which shall be reviewed by CGWA/Ministry of Jal Shakti, Government of India before acceptance.

All new/existing industries, industries seeking expansion, infrastructure projects and mining projects abstracting ground water, unless specifically exempted under Para 1.0 below, will be required to seek No Objection Certificate from Central Ground Water Authority or, the concerned State/ UT Ground Water

Authority as the case may be. The entire process of grant of No Objection Certificate shall be online through a web based application system.

Water management plans shall be prepared by all the State Ground Water Authorities/ Organizations for all Over-exploited, Critical and Semi-critical assessment units starting with Over-exploited units. Water management plans shall be reviewed and updated periodically. Water management plans, data on water availability and scarcity and policy framed in this regard shall be placed on the websites of Central Ground Water Authority/ State Ground Water Authority.

1.0 Exemptions from seeking No Objection Certificate:

Following categories of consumers shall be exempted from seeking No Objection Certificate for ground water extraction:

- (i) Individual domestic consumers in both rural and urban areas for drinking water and domestic uses.
- (ii) Rural drinking water supply schemes.
- (iii) Armed Forces Establishments and Central Armed Police Forces establishments in both rural and urban areas.
- (iv) Agricultural activities.
- (v) Micro and small Enterprises drawing ground water less than 10 cum/day.

1.1 Registration of Drilling Rigs

State / Ut Governments shall be responsible for registering drilling rigs operating within their jurisdiction and for maintaining the database of wells drilled by them. Appropriate link shall be provided in CGWA portal for making the data available to CGWA.

2.0 Drinking & Domestic use for Residential apartments/ Group Housing Societies/ Government water supply agencies in urban areas

For grant of No Objection Certificate for ground water extraction, the project proponent has to furnish the details as per the guidelines issued by the CGWA in proper format as available in CGWA website. No Objection Certificate for new /existing wells shall be granted only in such cases where the local Government water supply agency is unable to supply requisite amount of water in the area.

No Objection Certificate shall be granted subject to the following specific conditions:

- i) Installation of Sewage Treatment Plants shall be mandatory for all residential apartments/ Group Housing Societies where ground water requirement is more than 20 m³/day. The water from Sewage Treatment Plants shall be utilized for toilet flushing, car washing, gardening etc.
- ii) The No Objection Certificate shall be valid for a period of five years from the date of issue or till such time local Government water supply is provided to the project area, whichever is earlier. In case the project proponent receives water supply from the concerned local Government Water Supply Agency during the validity of the No Objection Certificate, intimation regarding availability of public water supply shall be sent by the project proponent to CGWA and No Objection Certificate will be cancelled by the Authority. In other cases, the project proponent will apply for renewal of No Objection Certificate, ninety days before the expiry of No Objection Certificate.
- iii) Proponents shall be liable to pay ground water abstraction charges for the quantum of ground water proposed to be extracted, as per rates mentioned in Table 5.1.

Documents to be submitted with the application

- a) Details of water requirement computed as per National Building Code, 2016 (Annexure D), taking into account recycling/ reuse of treated water for flushing etc.
- b) Affidavit on non-judicial stamp paper of Rs. 10/- by the applicant, confirming non/ inadequate availability of public water supply in case of users requiring ground water up to 10 m³/ day for drinking/ domestic use.
- c) Certificate of non-availability of water from local government water supply agency in cases requiring ground water in excess of 10 m³/ day for drinking/ domestic use. Government water supply agencies

applying for No Objection Certificate shall submit copy of government approval of the scheme/project proposed to be implemented.

- d) Ground water quality data of existing bore well/ tube well/ dug well from any National Accreditation Board for Testing and Calibration Laboratories (NABL) accredited laboratory or Govt. approved laboratory (in case of existing projects applying for no objection certificate)
- e) Proposal for rain water harvesting/ recharge within the premises as per Model Building Bye Laws issued by Ministry of Housing & Urban Affairs.

3.0 Agriculture Sector

Agriculture sector is the backbone of the Indian economy. As per Minor Irrigation Census 2013-14, 87.86% of wells are owned by marginal, small and semi-medium farmers having land holding up to 4 hectares (ha). Around 9.18 % of wells are owned by medium farmers having land holding 4 – 10 ha and 2.96% of the wells are owned by big farmers having land holding more than 10 ha.

Considering the number of ground water abstraction structures, regulation of ground water in agriculture sector through a 'command and control' strategy will prove to be an arduous task. Therefore, a participatory approach for sustainable ground water management would be more productive.

States/Uts are advised to review their free/subsidized electricity policy to farmers, bring suitable water pricing policy and may work further towards crop rotation/diversification/other initiatives to reduce over-dependence on groundwater.

Agriculture sector shall be exempted from obtaining No Objection Certificate for ground water extraction.

4.0 Commercial Use

No new major industries shall be granted No Objection Certificate in over-exploited assessment areas except as per the policy guidelines.

Availability of ground water resources shall be given due regard while considering applications for grant of No Objection Certificate for commercial use.

Commercial entities extracting ground water shall be required to submit online annual water audit report including an audit of water use as mentioned in the relevant sections. CGWA/ State Ground Water Authority (SGWA) shall publish all such audit reports online.

CGWA/ SGWAs shall engage independent agencies to verify the compliance of No Objection Certificate conditions periodically.

4.1 Industrial Use

In Over-exploited assessment units, No Objection Certificate shall not be granted for ground water abstraction to any new industry except those falling in the category of Micro, Small and Medium Enterprises (MSME). However, No Objection Certificate for drinking/ domestic use for work force, green belt use by these new industries shall be permitted. Expansion of existing industries involving increase in quantum of ground water abstraction in over-exploited assessment units shall not be permitted. No Objection Certificate shall not be granted to new packaged water industries in Overexploited areas, even if they belong to MSME category.

No Objection Certificate for ground water extraction by industries shall be granted subject to the following specific conditions:

- i) No Objection Certificate shall be granted only in such cases where local government water supply agencies are not able to supply the desired quantity of water.
- ii) All industries shall be required to adopt latest water efficient technologies so as to reduce dependence on ground water resources.
- iii) All industries abstracting ground water in excess of 100 m³/d shall be required to undertake annual water audit through Confederation of Indian Industries (CII)/ Federation Indian Chamber of Commerce and Industry (FICCI)/ National Productivity Council (NPC) certified auditors and submit audit reports within three months of completion of the same to CGWA. All such industries shall be

- required to reduce their ground water use by at least 20% over the next three years through appropriate means.
- iv) Construction of observation well(s) (piezometer)(s) within the premises and installation of appropriate water level monitoring mechanism as mentioned in Section 15 shall be mandatory for industries drawing/ proposing to draw more than 10 m³/day of ground water and. Monitoring of water level shall be done by the project proponent. The piezometer (observation well) shall be constructed at a minimum distance of 15 m from the bore well/production well. Depth and aquifer zone tapped in the piezometer shall be the same as that of the pumping well/ wells. Detailed guidelines for design and construction of piezometers are given in **Annexure II**. Monthly water level data shall be submitted to the CGWA through the web portal.
- v) The proponent shall be required to adopt roof top rain water harvesting/ recharge in the project premises. Industries which are likely to pollute ground water (chemical, pharmaceutical, dyes, pigments, paints, textiles, tannery, pesticides/ insecticides, fertilizers, slaughter house, explosives etc.) shall store the harvested rain water in surface storage tanks for use in the industry.
- vi) Injection of treated/ untreated waste water into aquifer system is strictly prohibited.
- vii) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution (**Annexure III**).
- viii) All industries drawing ground water in safe, semi-critical and critical assessment units shall be required to pay ground water abstraction charges as applicable as per Tables 5.2 A and 5.3 A.
- ix) All existing industries drawing ground water in over-exploited assessment units shall be liable to pay ground water restoration charges as applicable as per Tables 5.2 B and 5.3 B.

Documents to be submitted with the application

- (a) An affidavit on non judicial stamp paper of Rs. 10/- regarding non availability of water supply from local government agencies in cases where ground water requirement is up to 10 m³/day.
- (b) Certificate regarding non/ partial availability of fresh water/ treated waste water supply from the local government water supply agency in cases where requirement of ground water is more than 10 m³/day.
- (c) Ground water quality data of existing bore well/ tube well/ dug well from any NABL accredited laboratory or Govt. approved laboratory (in case of existing projects applying for No Objection Certificate)
- (d) Water quality data of bore well/ tube well/ dug well in respect of existing industries from NABL accredited laboratories/Government approved laboratories.
- (e) Proposal for rain water harvesting/ recharge within the premises as per Model Building Bye Laws issued by Ministry of Housing & Urban Affairs.
- (f) **Impact Assessment report:** All projects extracting/proposing to extract ground water in excess of 100 m³/day in Over-exploited, Critical and Semi-critical areas shall have to mandatorily submit impact assessment report of existing/ proposed ground water withdrawal on the ground water regime and also socio-economic impacts report prepared by accredited consultants. Pro-forma for the report is given in **Annexure IV**.

4.2 Mining Projects

All existing as well as new mining projects will be required to obtain No Objection Certificate for ground water abstraction. Since mining projects are location specific, there will be no ban on grant of No Objection Certificate for abstraction of ground water for such projects in over-exploited assessment units.

No Objection Certificate for mining projects shall be granted subject to the following specific conditions:

- i) It shall be mandatory for all the mining industries to ensure that water available from de-watering operations is properly treated and should be gainfully utilized for supply for irrigation, dust

- suppression, mining process, recharge in downstream and for maintaining e-flows in the river system.
- ii) Construction of observation well(s) (piezometers) along the periphery in the premises, for monthly ground water level monitoring, shall be mandatory for mines drawing/ proposing to draw more than 10 m³/day of ground water. Depth and aquifer zone tapped in the piezometer shall be commensurate with that of pumping well/ wells.
 - iii) In addition, the proponent shall monitor ground water levels by establishing observation wells (piezometers) in the core and buffer zones as specified in the No Objection Certificate.
 - iv) In case of coal and other base metal mining the project proponent shall use the advance dewatering technology (by construction of series of dewatering abstraction structures) to avoid contamination of surface water.
 - v) In addition to this, all mining units shall also monitor the water quality of mine seepage and mine discharge through NABL accredited/ Govt. approved laboratories and the same shall be submitted at the time of self compliance.
 - vi) All mining projects drawing ground water in safe, semi-critical and critical assessment units shall be required to pay ground water abstraction charges as applicable as per Tables 5.4 A.
 - vii) All mining projects drawing ground water in over-exploited assessment units shall be liable to pay ground water restoration charges as per Table 5.4 B.

Documents to be submitted with the application

- (a) Mining plan approved by the concerned Govt. agency/ department.
- (b) Proposal for rain water harvesting/ recharge within the premises as per Model Building Bye Laws issued by Ministry of Housing & Urban Affairs.
- (c) Comprehensive report prepared by accredited consultant on ground water conditions in both core and buffer zones of the mine, depth wise and year wise mine seepage calculations, impact assessment of mining and dewatering on ground water regime and its socio-economic impact, details of recycling, reuse and recharge, reduction of pumping with use of technology for mining and water management to minimize and mitigate the adverse impact on ground water, based on local conditions. Format for report is given in **Annexure V**.

4.3 Infrastructure projects:

Since infrastructure projects are location specific, grant of No Objection Certificate to such projects located in over-exploited assessment units shall not be banned. New infrastructure projects/ residential buildings may require dewatering during construction activity and/ or use ground water for construction. In both cases, applicants shall seek No Objection Certificate from CGWA before commencement of work. However, in over-exploited assessment units, use of ground water for construction activity shall be permitted only if no treated sewage water is available within 10 km radius of the site. New as well as existing Infrastructure projects shall also be required to seek No Objection Certificate for abstraction of ground water.

No 'No Objection Certificate' shall be granted for extraction of groundwater for Water Parks, Theme Parks and Amusement Parks in over-exploited assessment units.

Indicative list of Infrastructure projects is given in Annexure VI.

The No Objection Certificate for ground water abstraction will be granted subject to the following specific conditions:

- i) In case of infrastructure projects that require dewatering, proponent shall be required to carry out regular monitoring of dewatering discharge rate (using a digital water flow meter) and submit the data through the web portal to CGWA/SGWA as applicable. Monitoring records and results should be retained by the proponent for two years, for inspection or reporting as required by CGWA/SGWA.

- ii) Installation of Sewage Treatment Plants (STP) shall be mandatory for new projects, where ground water requirement is more than 20 m³/day. The water from STP shall be utilized for toilet flushing, car washing, gardening etc.
- iii) For infrastructure dewatering/ construction activity, No Objection Certificate shall be valid for specific period as per the detailed proposal submitted by the project proponent.
- iv) All infrastructure projects drawing ground water in safe, semi-critical and critical assessment units shall be required to pay ground water abstraction charges as applicable as per Table 5.3 A.
- v) All infrastructure projects (new/ existing) drawing ground water in over-exploited assessment units shall be liable to pay ground water restoration charges as per Table 5.3 B.

Documents to be submitted with the application

- (a) In cases where dewatering is involved, submission of impact assessment report prepared by an accredited consultant on the ground water situation in the area giving detailed plan of pumping, proposed usage of pumped water and comprehensive impact assessment of the same on the ground water regime shall be mandatory. The report should highlight environmental risks and proposed management strategies to overcome any significant environmental issues such as ground water level decline, land subsidence etc.
- (b) An affidavit on non judicial stamp paper of Rs. 10/- regarding non availability of water from any other source in case water is required for construction in safe and semi critical areas.
- (c) Certificate from a government agency regarding non availability of treated sewage water for construction within 10 km radius of the site in critical and over-exploited areas.
- (d) Certificate of non-availability of water from local government water supply agency in respect of all categories of assessments units for commercial use.
- (e) Proposal for rain water harvesting/ recharge within the premises as per Model Building Bye Laws issued by Ministry of Housing & Urban Affairs.
- (f) Details of water requirement computed as per National Building Code, 2016 (**Annexure I**), taking into account recycling/ reuse of treated water for flushing etc. (in case of completed infrastructure projects for commercial use).
- (g) Completion certificate from the concerned agency for infrastructure projects requiring water for commercial use.

5.0 Ground water abstraction/ restoration charges

All residential apartments/ group housing societies/ Government water supply agencies in urban areas shall be required to pay ground water abstraction charges.

All industries/mining/ infrastructure projects drawing ground water in safe, semi-critical and critical assessment units will have to pay ground water abstraction charges based on quantum of ground water extraction and category of assessment unit as per details given in this guideline.

All existing mining/ infrastructure projects and existing industries including MSME drawing ground water in over-exploited assessment units will have to pay ground water restoration charges based on quantum of ground water extraction. Further, new MSME, new infrastructure and new Mining projects in over exploited areas shall also be required to pay ground water restoration charges.

Existing industries, infrastructure units and mining projects which have installed/constructed artificial recharge structures in compliance of the conditions prescribed in the groundwater guidelines prevailing at the time of grant of No Objection Certificate or its renewal shall be eligible for a rebate of 50% (fifty percent) in the ground water abstraction charges/ground water restoration charges, subject to their satisfactory performance and verification.

The revenue generated from the proposed water abstraction/ restoration charges shall be kept in a separate fund for implementation of site specific suitable demand/ supply side interventions.

5.1 Rates of Ground water abstraction /restoration charges

I. Drinking and domestic use for residential apartments/ group housing societies/ Government water supply agencies in Urban areas

All residential apartments/ Group Housing Societies requiring water only for drinking/domestic use requiring No Objection Certificate would pay ground water abstraction charges as per rates given below in Table 5.1.

Table 5.1 Ground Water Abstraction charges for Drinking & Domestic use.

Quantum of Groundwater withdrawal (m ³ /month)	Rate of ground water abstraction charges (Rs. per m ³)
0-25	No charge
26-50	1.00
>50	2.00

Government water supply agencies and Government infrastructure projects shall pay Ground water abstraction Charges @ Rs. 0.50 per m³.

II. Packaged Drinking Water units

Rates of ground water abstraction charges for packaged drinking water units in safe, semi-critical and critical assessment units are given in Table 5.2 A and those for ground water restoration charges in over-exploited assessment units are given in Table 5.2 B.

Table 5.2 A: Rates of ground water abstraction charges for packaged drinking water units (Rs per m³)

S.No.	Category of area ↓ Ground water use →	Quantum of ground water withdrawal				
		Up to 50m ³ /day	51 to <200 m ³ /day	200 to <1000 m ³ /day	1000 to <5000 m ³ /day	5000 m ³ /day and above
1.	Safe	1.00	3.00	5.00	8.00	10.00
2.	Semi-critical	2.00	5.00	10.00	15.00	20.00
3.	Critical	4.00	10.00	20.00	40.00	60.00

Table 5.2 B: Rates of ground water restoration charges for packaged drinking water units (Rs per m³)

S.No.	Category of area ↓ Ground water use →	Quantum of ground water withdrawal				
		Up to 50 m ³ /day	51 to <200 m ³ /day	200 to <1000 m ³ /day	1000 to <5000 m ³ /day	5000 m ³ /day and above
1.	Over-exploited (existing industries only)	8.00	20.00	40.00	80.00	120.00

III. Other Industries & infrastructure projects

Rates of ground water abstraction charges for other industries and infrastructure projects in safe, semi-critical and critical assessment units are given in Table 5.3 A and those for ground water restoration charges in over-exploited assessment units are given in Table 5.3 B.

Table 5.3 A: Rates of Ground Water abstraction charges for other industries & infrastructure projects (Rs per m³)

S.No.	Category of area ↓ Ground water use →	Quantum of ground water withdrawal			
		< 200 m ³ /day	200 to <1000 m ³ /day	1000 to <5000 m ³ /day	5000 m ³ /day and above
1.	Safe	1.00	2.00	3.00	5.00
2.	Semi-critical	2.00	3.00	5.00	8.00
3.	Critical	4.00	6.00	8.00	10.00

Table 5.3 B: Rates of ground water restoration charges for other industries & infrastructure projects (Rs per m³)

S.No.	Category of area ↓ Ground water use →	Quantum of ground water withdrawal			
		< 200 m ³ /day	200 to <1000 m ³ /day	1000 to <5000 m ³ /day	5000 m ³ /day and above
1.	Over-exploited (existing industries / new Industries as per the present Guidelines)	6.00	10.00	16.00	20.00

IV. Mining projects

Rates of ground water abstraction charges for mining, which are drawing ground water in safe, semi-critical and critical assessment units are given in Table 5.4 A and those for ground water restoration charges in case of projects drawing ground water in over-exploited assessment units are given in Table 5.4 B.

Table 5.4 A: Rates of ground water abstraction charges for mining (Rs. per m³)

S.No.	Category of area ↓ Ground water use →	Quantum of ground water withdrawal			
		< 200 m ³ /day	200 to <1000 m ³ /day	1000 to <5000 m ³ /day	5000 m ³ /day and above
1.	Safe	1.00	2.00	2.50	3.00
2.	Semi-critical	2.00	2.50	3.00	4.00
3.	Critical	3.00	4.00	5.00	6.00

Table 5.4 B: Rates of ground water restoration charges for mining (Rs. per m³)

S.No.	Category of area ↓ Ground water use →	Quantum of ground water withdrawal			
		< 200 m ³ /day	200 to <1000 m ³ /day	1000 to <5000 m ³ /day	5000 m ³ /day and above
1.	Over-exploited	4.00	5.00	6.00	7.00

6.0 Bulk Water Supply

All private tankers abstracting ground water and use it for supply as bulk water suppliers will now mandatorily seek No Objection Certificate for ground water abstraction. The bulk water suppliers through tankers drawing ground water in safe, semi-critical and critical assessment units shall pay groundwater abstraction charges as per the **Table-6.1 A**. The bulk water suppliers drawing ground water in over-exploited assessment units shall pay the groundwater restoration charges as per the **Table-6.1 B**. All tankers will have to install GPS based system for their monitoring of movement/area of operation.

Modalities for issue of No Objection Certificate for bulk/tanker water supplies shall be worked out in consultation with States/Uts and suitable guidelines in this regard will be framed and issued separately for the same.

Table-6.1A: Groundwater abstraction charges for Bulk/Tanker water supplies

Category	Rate per m ³ (in Rs.)
Safe	10
Semi Critical	20
Critical	25

Table-6.1B: Groundwater abstraction charges for Bulk/Tanker water supplies

Category	Rate per m ³ (in Rs.)
Over Exploited	35

7.0 Abstraction of Saline ground water

Abstraction of saline ground water in areas having either saline ground water at all depths or pockets of saline ground water in an otherwise fresh water area for use by industries/ dewatering by infrastructure/ mining projects including those located in over-exploited areas would be encouraged. Such industries shall be exempted from paying ground water abstraction charges.

The list of such assessment units having saline ground water at all depths as per the latest assessment of dynamic ground water resources will be made available by the CGWA in their website. However, due care shall be taken in respect of disposal of effluents by the units so as to protect the water bodies and the aquifers from pollution.

Detailed guidelines in this regard shall be prepared and issued separately.

8.0 Protection of Wetland Areas

The wet land areas in the country are very crucial as they are direct reflection of the presence of ground water in such areas. The protection of the wetland areas is being separately handled by the Wetland Authorities. Since ground water is very crucial for the survival of the wetland area, any excessive ground water development within the zone of wetland area would affect the volume of water in that wetland.

Projects falling within 500 m. from the periphery of demarcated wetland areas shall mandatorily submit a detailed proposal indicating that any ground water abstraction by the project proponent does not affect the protected wetland areas. Furthermore, before seeking permission from CGWA, the projects shall take consent/approval from the appropriate Wetland Authorities to establish their projects in the area.

9.0 General compliance conditions in No Objection Certificate

- i. Installation of digital water flow meter (conforming to BIS/ IS standards) having telemetry system in the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate through the web-portal.
- ii. Proponents shall mandatorily get water flow meter calibrated on from an authorized agency once in a year.
- iii. Proponents shall install roof top rain water harvesting & recharge systems in the project area.
- iv. Proponents shall pay Ground Water Abstraction/ Restoration Charges based on quantum of ground water extraction as applicable as per the rates given in Section 6.
- v. Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 15. Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in **Annexure-II**.
- vi. Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analysed in NABL accredited laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.
- vii. If the existing well becomes defunct due to mechanical failure within the validity period of No Objection Certificate, the user can construct a replacement well under intimation to CGWA on web portal. The defunct well shall be properly sealed (**Refer Annexure VII**). The user will be required to submit documentary proof in this regard. However, if the existing abstraction structures fails to yield water and he proponent desires to drill another tubewell in the same premises, prior permission of the Authority shall be required. If the replacement well is to be drilled in some different place, the proponent shall obtain fresh No Objection Certificate.
- viii. Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water.
- ix. In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 60 days of taking over possession of the premises.

10.0 Monitoring of compliance of No Objection Certificate Conditions

To monitor the compliance of No Objection Certificate conditions, Central Ground Water Authority and State/ UT Ground Water Authorities shall take the following steps:

- a. Suitable MIS will be developed for compliance monitoring.
- b. District Collectors/Deputy Commissioners (DCs) /District Magistrates (DMs) are authorized to take enforcement measures like sealing of unauthorized ground water abstraction structures, disconnection of electricity, launching of prosecution against those violating the No Objection Certificate conditions and taking action for imposition of Environmental Compensation.
- c. Technical officers of CGWB/ CGWA and State groundwater organizations are authorized to take actions with respect to monitoring and periodic inspections with the approval of competent authority.
- d. In case of violation of any of the No Objection Certificate conditions, the proponents shall be liable to pay the penalties as per **Section 16**.

11.0 Renewal of No Objection Certificate

No objection certificate shall be renewed periodically, subject to the compliance of the conditions mentioned therein:

- i. The applicant shall apply for renewal of No Objection Certificate at least ninety days prior to expiry of its validity.
- ii. Application for renewal of No Objection Certificate shall be accompanied by the Compliance Report.
- iii. Before granting renewal, Central Ground Water Authority or State/ Ut Authority shall satisfy itself that the conditions of No Objection Certificate have been complied with.
- iv. In case of change in category of the assessment unit, renewals would be granted with conditions as laid down for new category.
- v. No Objection Certificate will be renewed for the terms specified for various uses as follows:

Category	Use	Term of renewal
Critical, Semi-critical and safe	Infrastructure projects for drinking & domestic use and urban Water Supply Agencies	5 years
	Industries	3 years
	Mines	2 years
Over exploited	All users in 'Over-exploited areas'	2 years

- vi. If the application for renewal is submitted in time and the CGWA/ the respective State/ Ut Authority is unable to process the application in time, No Objection Certificate shall be deemed to be extended till the date of renewal of No Objection Certificate.
- vii. If the proponent fails to apply for renewal within 3 months from the date of expiry of No Objection Certificate, the proponent shall be liable to pay Environmental Compensation for the period starting from the date of expiry of No Objection Certificate till No Objection Certificate is renewed by the competent authority.

12.0 Extension of No Objection Certificate

If the proponent is unable to construct the well(s) during the validity period of No Objection Certificate for genuine reasons, the proponent will have to apply for extension of No Objection Certificate. Application for extension should be supported by documents justifying the reasons for delay. Other conditions for grant of extension of No Objection Certificate will be the same as that for fresh No Objection Certificate.

Extension of No Objection Certificate will be granted for a maximum period of two years. No further extension will be granted after the expiry of the extended period. In that case, the applicant will have to apply afresh for grant of No Objection Certificate.

13.0 Delegation of powers against illegal groundwater withdrawal

Central Ground Water Authority has appointed the District Magistrate/ District Collector/ Sub Divisional Magistrates of each Revenue District/Sub division as Authorized Officers, who have been delegated the power to seal illegal wells, disconnect electricity supply to the energised well, launch prosecution against offenders etc. including grievance redressal related to ground water in their respective jurisdictions.

In order to further decentralise and strengthen the monitoring and compliance mechanism as per the guidelines, officials of concerned Departments of Revenue and Industries of the States/Uts shall be appointed as Authorised Officers in consultation with the State/Ut Governments.

A copy of the No Objection Certificate issued by the CGWA in the No Objection Certificate Application Portal (NOCAP) will be forwarded to the respective District Magistrate/ District Collector. In case of any violation of the directions of Central Ground Water Authority and non-fulfilment of the conditions laid

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down in the No Objection Certificate, the Authorised Officers will file appropriate Petition/Original Application etc under sections 15 to 21 of the Environment (Protection) Act, 1986 in appropriate Courts.

14.0 Ground Water Level Monitoring

All the project proponents (drawing ground water more than 10 cum/d) have to mandatorily construct Piezometers (observation wells) within their premises for monitoring of the ground water levels. Such a mechanism of compliance conditions has been made to ensure that every month the ground water level in the project area can be monitored and observed. In this regard the necessary criteria for monitoring of water levels through piezometers by the project proponents is given in Table 14.1.

Table 14.1 No. of Piezometers to be constructed & Type of Water Level Monitoring Mechanism

S.No.	Quantum of Ground water withdrawal (cum/d)	No. of piezometer required	Monitoring mechanism		
			Manual	DWLR	DWLR with Telemetry
1	<10	0	0	0	0
2	11-50	1	1	0	0
3	51-500	1	0	1	0
4	>500	2	0	1	1

The piezometer shall be suitably located to ensure that zone of aquifer tapped in the piezometer is the same as that of the pumping well.

15.0 Environmental Compensation

Extraction of ground water for commercial use by industries, infrastructure units and mining projects without a valid No Objection Certificate from appropriate authority shall be considered illegal and such entities shall be liable to pay Environmental Compensation for the quantum of ground water so extracted. The norms prescribed by Central Pollution Control Board (CPCB) shall be utilized for calculating the Environmental compensation as mentioned below:

$$EC_{GW} = \text{Ground water consumption per day} \times \text{Environmental Compensation rate (ECR}_{GW}) \times \text{No. of days} \times \text{Deterrence factor}$$

where ground water consumption is in m³/day and ECR_{GW} in Rs./ cum

15.1 Rates of Environmental Compensation:

Rates of Environmental Compensation (ECR_{GW}) for various types of users in different categories of assessment units are given in Table 15.1 to 15.3.

Table 15.1 : ECR_{GW} for Packaged Drinking Water units

S.No.	Area Category	Water Consumption (cum/day)			
		<200/	200 to <1000	1000 to <5000	5000 & above
Environmental Compensation Rate (ECR _{GW}) in Rs./m ³					
	Safe	12	18	24	30
2	Semi critical	24	36	48	60
3	Critical	36	48	66	90
4	Over- exploited	48	72	96	120

Note :-Minimum EC_{GW} shall not be less than Rs 1,00,000/-

Table 15.2: ECR_{GW} for Mining/ infrastructure dewatering projects

S.No.	Area Category	Water Consumption (cum/day)			
		<200	200 to <1000	1000 to <5000	5000 & above
		Environmental Compensation Rate (ECR _{GW}) in Rs./m ³			
1	Safe	15	21	30	40
2	Semi critical	30	45	60	75
3	Critical	45	60	85	115
4	Over- exploited	60	90	120	150

Note :-Minimum EC_{GW} shall not be less than Rs 1,00,000/-

Table 15.3: ECR_{GW} for Industrial units

S.No.	Area Category	Water Consumption (cum/day)			
		<200	200 to <1000	1000 to <5000	5000 & above
		Environmental Compensation Rate (ECR _{GW}) in Rs./m ³			
1	Safe	20	30	40	50
2	Semi critical	40	60	80	100
3	Critical	60	80	110	150
4	Over- exploited	80	120	160	200

Note :-Minimum EC_{GW} shall not be less than Rs 1,00,000/-

15.2 Deterrent Factors to compensate losses and environmental damage (for packaged drinking water units, mining, industries and infrastructural dewatering projects)

The following deterrent factors based on the duration of illegal ground water extraction shall be levied to compensate for the losses and environmental damages as detailed in Table 15.4.

Table 15.4: Deterrent factor based on quantum of ground water withdrawal and number of years of illegal withdrawal

S.No.	Water Consumption	Deterrence Factor		
		< 2 years	2-5 years	>5 years
1	<1000 KLD	1.00	1.00	1.25
2	1000-5000 KLD	1.00	1.00	1.50
3	>5000 KLD	1.00	1.25	2.00

Note: KLD – Kilolitre per day

16.0 Provision of Penalty

Penalty shall be imposed on the proponents for non-compliance of No Objection Certificate conditions issued by the appropriate authority. Rates of penalty proposed for non-compliance of various conditions of No Objection Certificate are given in Table 16.1. The rates of the penalty shall be reviewed periodically with the approval of competent authority in Ministry of Jal Shakti.

Table 16.1: Penalty provision for non Compliance of No Objection Certificate conditions

S. No.	Items	Charges in Rs.
1	Non installation/faulty Digital water Flow meter with telemetry system.	200000
2	Non disclosure/ construction of additional groundwater abstraction structures a) Non-functional Structures. b) Defunct/Abandoned Note: Given rates are for unit non-functional/defunct/abandoned structures. This shall be multiplied with total such structures to arrive at consolidated penalty.	200000 100000
3	Reporting of fresh water zones as Brackish / Saline zones in application.	200000
4	Non Installation of Piezometer.	200000
5	Non Installation/faulty DWLR/Telemetry system	100000
6	Non Construction/Inadequate capacity of Recharge / Water conservation structures.	500000
7	Non maintenance of Recharge structures.	200000
8	Injection of treated/untreated water into the aquifer system. Note: In addition to penalty, the proponent shall bear the cost of aquifer remediation as per the provisions of Environment (Protection) Act, 1986.	1000000
9	Non Submission of Water level/Water quality Data.	50000
10	Non-maintenance of log book of daily withdrawal/non submission of Groundwater abstraction data.	50000
11	Non submission of photograph of recharge structure(s).	50000
12	Non Submission of Self Compliance report.	100000
13	Construction of groundwater abstraction structures by un authorized/unregistered Drilling Rigs (per structures).	100000
14	Non registration of water supply tankers.	500000
15	Submission of false information/ undertaking.	100000

Charges shall also be payable for correction/modification in the existing issued No Objection Certificate letter. The details of such charges are given in [Table 16.2](#).

Table 16.2: Proposed Charges for correction/Modification in the existing issued No Objection Certificate

S. No.	Items	Charges in Rs.
1	Change in recharge quantum	10000
2	Change in User ID.	5000
3	Change in firm Name	5000
4	Extension of No Objection Certificate	5000
5	Issuance of duplicate No Objection Certificate	5000
6	Issuance of corrigendum to No Objection Certificate	5000
7	Any other items/corrections etc	5000

17.0 Other important Conditions (Applicable to all):

- i. Sale of ground water by a person/ agency not having valid no objection certificate from CGWA/State Ground Water Authority is not permitted.
- ii. In infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/harvesting.
- iii. In case of Infrastructure projects, the firm/entity shall ensure implementation of dual water supply system in the projects. Compliance of the same shall be submitted through the web portal.
- iv. Non-compliance of conditions mentioned in the No Objection Certificate may be taken as sufficient reason for cancellation of no objection certificate accorded/ non-renewal of No Objection Certificate.
- v. No application shall be entertained without supporting documents as specified in relevant sections.
- vi. Abstraction structure(s) should be located inside the premises of project property.
- vii. Self compliance of conditions laid down in the no objection certificate shall be reported by the users online in the web portal of Central Ground Water Authority/state Ground Water Authority.
- viii. Processing fee prescribed, if any, from time to time shall be charged for various services.

Note:

1. Guidelines are subject to modification from time to time.
2. In case of any discrepancy between Hindi and English versions of this document including the annexures, the English version shall prevail.

Annexure I**Estimation of Water Requirements for drinking and domestic use****(Source: National Building Code 2016, BIS)****a) Residential Buildings:**

Accommodations	Population
1 Bedroom dwelling unit	4
2 Bedroom dwelling unit	5
3 Bedroom dwelling unit	6
4 Bedroom dwelling unit and above	7

Notes:

- 1) The above figures consider a domestic household including support personnel, wherever applicable.
- 2) For plotted development, the population may be arrived at after due consideration of the expected number and type of domestic household units.
- 3) Dwelling unit under EWS category shall have population requirement of 4 and studio apartment shall have population requirement of 2.

As a general rule the following rates per capita per day may be considered for domestic and non-domestic needs:

a) For communities with populations up to 20,000:

1)	Water supply through stand post:	40 lphd (Min)
2)	Water supply through house service: connection	70 to 100 lphd

- b) For communities with: 100 to 135 lphd
population 20,000 to 100,00 together with
full flushing system
- c) For communities with population: 150 to 200 lphd
above 100,000 together with
full flushing system

Note—The value of water supply given as 150 to 200 litre per head per day may be reduced to 135 litre per head per day for houses for Medium Income Group (MIG) and Low Income Groups (LIG) and Economically Weaker Section of Society (EWS), depending upon prevailing conditions and availability of water.

Out of the 150 to 200 litre per head per day, 45 litre per head per day may be taken for flushing requirements and the remaining quantity for other domestic purposes.

A. Water Requirements for Buildings Other than Residences

Sl No.	Type of Building	Domestic litres per head/ day	Flushing Litres per head/ day	Total Consumption Litres per head/ day
1.	Factories including canteen where bath rooms are required to be provided	30	15	45
2.	Factories including canteen where no bath rooms are required to be provided	20	10	30
3.	Hospital (excluding laundry and kitchen):			
	a) Number of beds not exceeding 100	230	110	340
	b) Number of beds exceeding 100	300	150	450
	c) Out Patient Department (OPD)	10	5	15
4.	Nurses' homes and medical quarters	90	45	135
5.	Hostels	90	45	135
6.	Hotels (up to 3 star) excluding laundry, kitchen, staff and water bodies	120	60	180
7.	Hotels (4 star and above) excluding laundry, kitchen, staff and water bodies	260	60	320
8.	Offices (including canteen)	25	20	45
9.	Restaurants and food court including water requirement for kitchen:			
	a) Restaurants	55 per seat	15 per seat	70 per seat
	b) Food Court	25 per seat	10 per seat	35 per seat
10.	Clubhouse	25	20	45
11.	Stadiums	4	6	10

12.	Cinemas, concert halls and theatres and multiplex	5 per seat	10 per seat	15 per seat
13.	Schools/Educational institutions:			
	a) Without boarding facilities	25	20	45
	b) With boarding facilities	90	45	135
14.	Shopping and retail (mall)			
	a) Staff	25	20	45
	b) Visitors	5	10	15
15.	Traffic Terminal stations			
	a) Airports	40	30	70
	b) Railway stations (Junction) with bathing facility	40	30	70
	c) Railway stations (Junction) without bathing facility	30	15	45
	d) Railway stations (Intermediate) with bathing facility	25	20	45
	e) Railway stations (Intermediate) without bathing facility	15	10	25
	f) Interstate bus terminals	25	20	45
	g) Intrastate Bus Terminals/Metro Stations	10	5	15

Notes:

1. For calculating water demand for visitors, consumption of 15 litre per head per day may be taken.
2. The water demand includes requirement of patients, attendants, visitors and staff. Additional water demand for kitchen, laundry and clinical water shall be computed as per actual requirements.
3. The number of persons shall be determined by average number of passengers handled by stations, with due considerations given to the staff and vendors who are using these facilities.
4. Consideration should be given for seasonal average peak requirements.
5. The hospitals may be categorized as Category A (25 to 50 beds), Category B(51 to 100 beds), Category C (101 to 300 beds), Category D (301 to 500) and Category E (501 to 750 beds).

Annexure II**Guidelines for construction of Piezometers and monitoring of Ground Water Levels and Quality**

Piezometer is a borewell/tubewell used only for measuring the water level by lowering a tape/sounder or automatic / digital water level measuring equipment. It is also used to take water sample for water quality testing whenever needed. General guidelines for installation of piezometers are as follows:

- The piezometer is to be installed/constructed at the minimum distance of 50 m from the pumping well through which ground water is being withdrawn. The diameter of the piezometer should be about four inches to six inches.
- The depth of the piezometer should be the same as that of the pumping well from which ground water is being abstracted. If, more than one pumping wells are constructed tapping aquifers at different depths, more than one piezometers shall be required to be constructed tapping different aquifers as in the pumping wells.

- The measurement of water level in piezometer should be taken, only after the pumping from the surrounding tubewells has been stopped for about four to six hours.
- The ground water quality has to be monitored once in a year during pre-monsoon (April/ May) period by industries and mines drawing ground water. Samples of ground water should be analyzed from NABL accredited laboratory.
- A permanent display board should be installed at Piezometer/ Tubewell site for providing the location, piezometer/ tubewell number, depth and zone tapped of piezometer/tubewell for standard referencing and identification.
- Any other site specific requirement regarding safety and access for measurement may be taken care off.

Annexure III

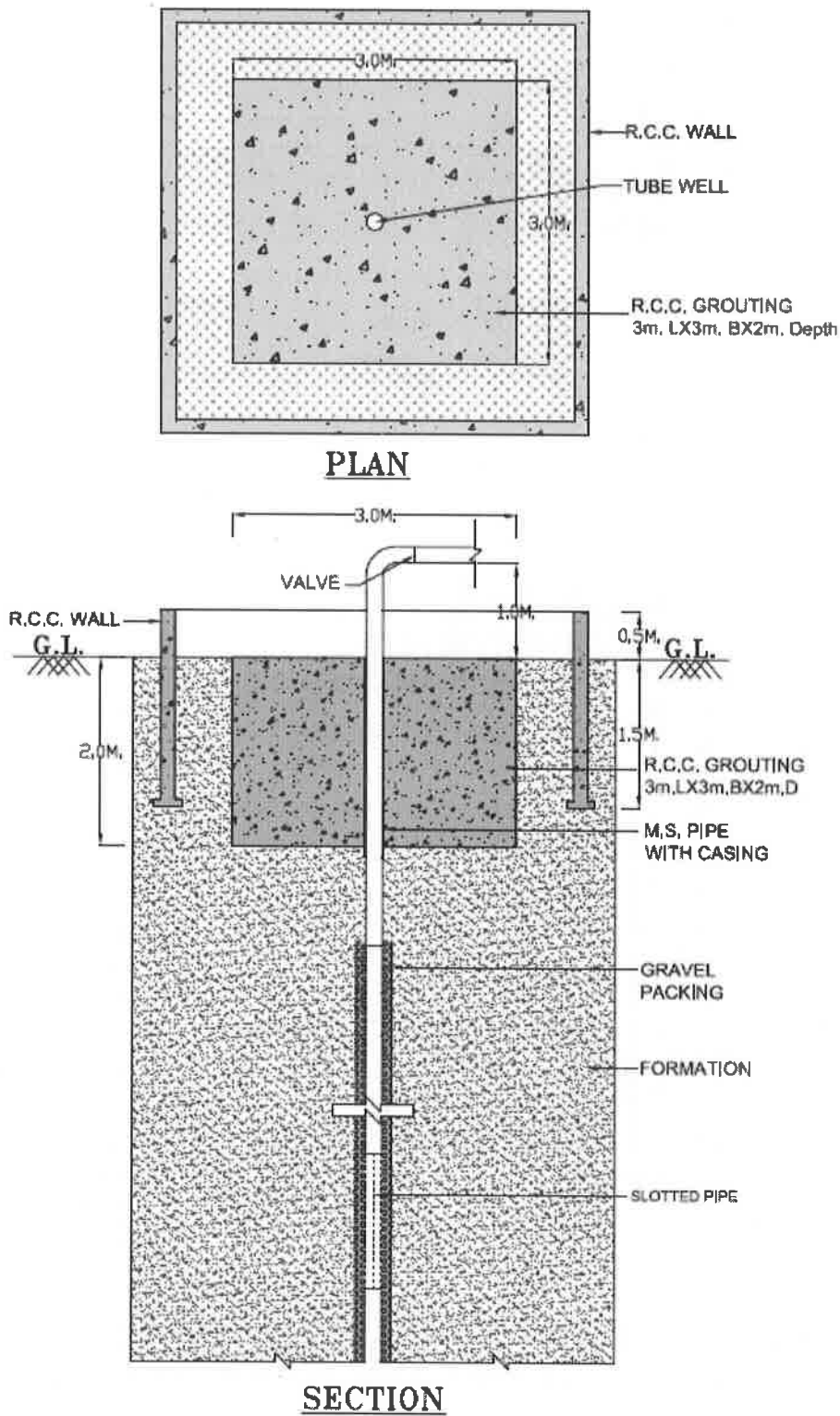
Measures to be adopted to ensure prevention from pollution in the plant premises of polluting industries/ projects

It has been observed that ground water in and around polluting industries like Tannery, Slaughter Houses, Dye, Chemical, Coalwashery, other hazardous units, etc., is polluted. In order to prevent further deterioration of ground water quality, it is essential to take all necessary measures for well head protection. All industries/ projects falling under this category are hereby directed to follow the under mentioned procedure both for existing and new category.

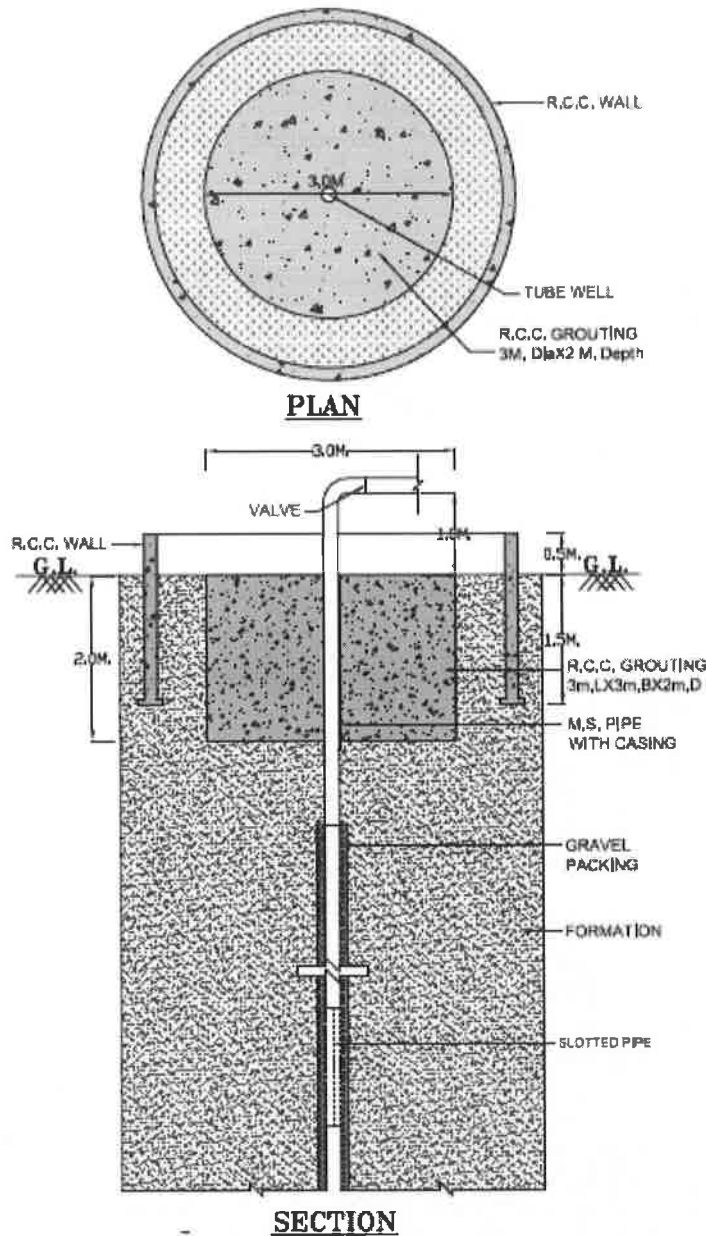
1. No tube well/ bore well / dug well should be constructed in the vicinity of the processing unit. Tube well/ bore well should be constructed at the place which is hygienically maintained.
2. Only Mild Steel pipe should be used for assembly/ casing and PVC (Poly Vinyl Chloride) or similar pipes should not be used. The tube well/ bore well having PVC or similar pipes should be abandoned and filled back.
3. Around the tube well/ bore well, RCC (Reinforced Concrete Cement) grouting of 3 meters (length) x 3 meters (width) x 2 meters (depth) must be provided. The pipe of the tube well/ bore well must be raised 1 meter above ground level (1 magl). The tube well/ bore well must be surrounded by RCC wall of 0.5 meter height and 1.5 meter depth to prevent any surface contamination to enter the constructed tube well/ bore well. Plan/Sectional diagram is enclosed for reference (Appendix 1 and 2).
3. The tube well/ bore well must be fitted with NRV (Non Return Valve) in order to ensure that the constructed tube well/ bore well is exclusively used for abstraction of ground water only.
4. At no point of time there should be any injection of any water or fluid into the constructed tube well/ bore well/ Piezometer.
5. The industries/ projects under this category should not implement any recharge measures within the plant premises.
6. Any tube well/ bore well located/ constructed in the vicinity of STP (Sewage Treatment Plant) or ETP (Effluent Treatment Plant) should be abandoned and filled back.
7. The piezometer to be constructed for monitoring purpose should follow the same procedure as that for tube well/ bore well for such industries/ projects.

Appendix 1

Plan/ Sectional diagram showing well head protection



Plan/ Sectional diagram showing well head protection

**Annexure-IV****Outline of hydro-geological Report for obtaining No Objection Certificate for industries**

1. Brief about the proposed project giving location details, coordinates, google/ toposheet maps, etc. demarcating the project area.
2. Ground water situation in and around the project area including water level and quality data and maps along with quality issues, if any. In case of mines, ground water conditions in both core and buffer zone should be described.
3. Details of the tubewells/ borewells proposed to be constructed. This includes the drilling depth, diameter, tentative lithological log, details of pump to be lowered, H.P. of pump, tentative discharge of tubewells/ borewells, etc. Locations to be marked on the site plan/ map. Location of proposed piezometers.

4. Details of Geophysical studies carried out in and around the project area. Ground water resources computation of the block in which the project falls.
5. Approved Mine plan in case of mines and detailed dewatering plan in case of mine/ infrastructure dewatering projects.
6. Proposed usage of pumped water in case of mining/ infrastructure dewatering projects.
7. Comprehensive assessment of the impact on the ground water regime in and around the project area highlighting the risks and proposed management strategies proposed to overcome any significant environmental issues.
8. Proposed measures for disposal of waste water by industries drawing saline water.
9. Measures to be adopted for water conservation which include recycling, reuse, treatment, etc. This includes the water balance chart being adopted by the firm along with details of water conservation methods to be adopted.
 - Brief write up along with capacity and flow chart of Sewage Treatment Plants / Effluent Treatment Plants / Combined Effluent Treatment Plants existing/ proposed within the project.
 - Details of water conservation measures to be adopted to reduce/ save the ground water.
 - Total water balance chart showing the usage of water for various processes.
10. Any other details pertaining to the project.

Annexure V

Format of the Report on ground water conditions (for mining projects)

Introduction

Project description

Background

Objectives and scope

Regional setting

Location

Landuse

Climate

Topography and drainage

Geology –Regional and Local

General Hydrogeology (aquifer types, aquifer depth, zone tapped etc.)

Groundwater condition (In core and buffer zones)

Spatial and temporal variations in water levels Groundwater quality (Shallow and deep aquifer)

Impact of groundwater extraction on local groundwater

Hydrograph of water level/piezometer in monitoring wells

Trend analysis of historical water levels Flow net analysis (groundwater flow direction)

Year wise/ bench wise mine dewatering computation as per approved mine plan

Conclusions

Annexure VI

Indicative list of Infrastructure projects

Residential townships including commercial buildings
Office building
School
College
University
Special Economic Zone
Metro Station
Railway Station
Bus Depot
Airport
Seaport
Highway infrastructure
Fire station
Warehouse
Business Plaza
Malls & Multiplex
Hospitals
Nursing Homes
Resort
Hotel/ Restaurant/ Food Plaza
Holiday home/Guest house/ Hostels
Banquet Hall/ Marriage Gardens
IT Complex
Logistics & Cargo
Clubs
Trade Centre

Annexure -VII

Supreme Court Order in Civil Writ petition 36 of 2009 regarding measures for prevention of fatal accidents of small children due to their falling into abandoned bore wells and tube wells

In Re: Measures for prevention of fatal accidents of small children due to their falling into abandoned bore wells and tube wells

Union of India and Ors.

Respondents(s)

ORDER

With this Court issuing requisite guidelines vide order dated 11th February, 2010, subject to slight modifications, nothing survives in the present writ petition.

That modification is as follows:

- (i) The owner of the land/ premises, before taking any steps for constructing bore well/ tube well must inform in writing to the concerned authorities in the area, i.e., District Collector/ District Magistrate/ Sarpanch of the Gram Panchayat/ any other Statutory Authority/ concerned officers of the Department of Ground Water/ Public Health/ Municipal Corporation, as the case may be, about the construction of bore well/ tube well.
- (ii) Registration of all the drilling agencies, namely, Government/ Semi Government, Private etc. should be mandatory with the district administration/ Statutory Authority wherever applicable.
- (iii) Erection of signboard at the time of construction near the well with the following details:-
 - (a) Complete address of the drilling agency at the time of construction/ rehabilitation of well.
 - (b) Complete address of the user agency/owner of the well.
- (iv) Erection of barbed wire fencing or any other suitable barrier around the well during construction.
- (v) Construction of cement/ concrete platform measuring 0.50x0.50x0.60 meter (0.30 meter above ground level and 0.30 meter below ground level) around the well casing.
- (vi) Capping of well assembly by welding steel plate or by providing a strong cap to be fixed to the casing pipe with bolts & nuts.
- (vii) In case of pump repair, the tube well should not be left uncovered.
- (viii) Filling of mud pits and channels after completion of works.
- (ix) Filling up abandoned bore wells by clay/sand/boulders/pebbles/drill cuttings etc. from bottom to ground level.
- (x) On completion of the drilling operations at a particular location, the ground conditions are to be restored as before the start of drilling.
- (xi) District Collector should be empowered to verify that the above guidelines are being followed and proper monitoring check about the status of bore holes/ tube wells are being taken care through the concerned state/ Central Government agencies.
- (xii) District/ Block/ Village wise status of bore wells/tube wells drilled viz. No. of wells in use, No. of abandoned bore wells/ tube wells found open, No. of abandoned bore wells/ tube wells properly filled up to ground level and balance number of abandoned bore wells/ tube wells to be filled up to ground level is to be maintained at District Level.

In rural areas, the monitoring of the above is to be done through Village Sarpanch and the Executive from the Agriculture Department.

In case of urban areas, the monitoring of the above is to be done through Junior Engineer and the Executive from the concerned Department of Ground Water/Public Health/ Municipal Corporation etc.

- (xiii) If a bore well/ tube well is 'Abandoned' at any stage, a certificate from the concerned department of Ground Water/ Public Health/ Municipal Corporation/ Private Contractor etc. must be obtained by the aforesaid agencies that the 'Abandoned' bore well/tube well is properly filled upto the ground level. Random inspection of the abandoned wells is also to be done by the Executive of the concerned agency/ department. Information on all such data on the above are to be maintained in the District Collector/ Block Development Office of the State.

We are informed that the last paragraph of the earlier order dated 11th February, 2010, concerning publicity has been duly complied with.

Subject to the above, the writ petition is disposed of.

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.....CJI.
[S.H. KAPADIA]

.....J.
[K.S. RADHAKRISHNANA]

.....J.
[SWATANTER KUMAR]

New Delhi,
August 6, 2010

ANNEXURE VIII**List of States/Union territories where ground water extraction is being regulated by Central Ground Water Authority**

1. Andaman and Nicobar Islands
2. Assam
3. Arunachal Pradesh
4. Bihar
5. Chhattisgarh
6. Dadra and Nagar Haveli and Daman and Diu
7. Gujarat
8. Haryana
9. Jharkhand
10. Madhya Pradesh
11. Maharashtra
12. Manipur
13. Meghalaya
14. Mizoram
15. Nagaland
16. Odisha
17. Punjab
18. Rajasthan
19. Sikkim
20. Tripura
21. Uttar Pradesh
22. Uttarakhand
23. Andhra Pradesh (only mining projects)
24. Telangana (only mining projects)

Glossary of technical terms used

1. **Safe area:** Area categorized as SAFE from the ground water resources point of view, based on the latest ground water resources assessment carried out jointly by CGWB and State ground water organizations. Details available on the websites of NOCAP and CGWB.
2. **Semi-critical area:** Area categorized as SEMI-CRITICAL from the ground water resources point of view, based on the latest ground water resources assessment carried out jointly by CGWB and State ground water organizations. Details available on the websites of NOCAP and CGWB.
3. **Critical area:** Area categorized as CRITICAL from the ground water resources point of view, based on the latest ground water resources assessment carried out jointly by CGWB and State ground water organisations. Details available on the websites of NOCAP and CGWB.
4. **Over-exploited area:** Area categorized as OVER-EXPLOITED from the ground water resources point of view, based on the latest ground water resources assessment carried out jointly by CGWB and State ground water organisations. Details available on the websites of NOCAP and CGWB.
5. **Aquifer:** Geological formation capable of storing and transmitting ground water.
6. **Deeper Aquifer:** In areas having multiple aquifer system, the aquifer(s) occurring below the uppermost aquifer.
7. **Well:** Any structure used for the extraction of groundwater, including open wells, dug wells, bore wells, dug-cum-bore wells, tube wells, filter points, collector wells, infiltration galleries, recharge wells, or any of their combinations or variations.
8. **Government Agency:** May be Central or State Government body.
9. **Supplier:** Government/ Government approved Water Supply Agency.
10. **Mine:** Area where mining activity is taking place, or area abandoned after mining.
11. **Illegal Ground Water abstraction Structure:** Any energized abstraction structure viz. dugwell, tubewell, borewell which is being used to withdraw ground water without valid No Objection Certificate from Central Ground Water Authority.
12. **Rainwater Harvesting:** The technique or system of collection and storage of rainwater, at micro watershed scale, including roof-top harvesting, for future use or for recharge of groundwater.
13. **Mining Project:** Project which involves mining activity either open cast or underground or both.
14. **Ground Water Draft:** Quantum of ground water withdrawal.
15. **Saline Water:** Water having salinity in excess of 2500 μ siemens/cm at 25⁰C.
16. **Water Table Intersection:** Intersection of the water table on excavation of the overlying material due to mining or other activities.
17. **Drinking and domestic use:** Besides drinking & domestic use of households, this category will cover drinking requirement of industries not requiring water for industrial process; drinking, washing, cleaning use etc. in case of hospitals, hotels, malls & multiplexes, institutions, offices, banquet halls, fire stations, metro stations, railway stations, airports, sea ports, stadia etc.
18. **Recycle/Reuse:** Using treated waste water for various purposes/ putting water to multiple uses.
19. **Government Department:** Either Central Government or State Government.
20. **Municipality:** Municipality, a Municipal Corporation or similar body of local urban governance by any other name.
21. **Groundwater:** Water, which exists below the surface in the zone of saturation and can be extracted through wells or any other means or emerges as springs and base flows in streams and rivers;
22. **Bgl :** Below Ground Level.
23. **BCM :** Billion cubic metres.

24. **Groundwater Abstraction structure:** Structure used to withdraw groundwater like bore well / tube well / dug well/dug cum bore well/tunnel well.
25. **Observation well or Piezometer:** A bore well/tube well used only for measuring the water level/piezometric head and to take water sample periodically but not used for groundwater abstraction.
26. **Water Audit:** A method of quantifying water use in simple or complex systems, with a view to reducing water usage and often saving money on otherwise unnecessary water use.
27. **Ground water pollution:** If concentration of any parameter in ground water exceeds the maximum permissible limit for drinking water prescribed by the Bureau of Indian Standards.
28. **Cooperative Group Housing Societies/ Builder flats:** A Housing Society is a society formed by house owners within a residential complex. The housing society formed must be formally registered with registrar of co-operatives.
29. **KLD – Kilo Litre per day**
30. **EC_{GW}** - Environmental compensation for drawing illegal ground water.
31. **EC_{GWR}** - Environmental compensation rates for drawing illegal ground water.

ANNEXURE X

Annual water audits by the industries (Source – CII)

Water audit is a systematic process of objectively obtaining a water balance by measuring flow of water from the site of water withdrawal or treatment, through the distribution system, and into areas where it is used and finally discharged. Conducting a water audit involves calculating water balance, water use and identifying ways for saving water.

Water audit involves preliminary water survey and detailed water audit. Preliminary water survey is conducted to collect background information regarding plant activities, water consumption and water discharge pattern and water billing, rates and water cess. After the analysis of the secondary data collected from the industry, detailed water audit is conducted, which involves the following steps:

- On site training and discussion with facility manager and personnel
- Water system analysis
- Quantification of baseline water map
- Monitoring and measurements using pressure and flow meters and various other devices
- Quantification of inefficiencies and leaks
- Quantification of water quality loads and discharges
- Quantification of variability in flows and quality parameters
- Strategies for water treatment and reuse or direct use

A detailed water balance is finally developed. Water quality requirement at various user areas is mapped, which helps in developing 'recycle' and 'reuse' opportunities.

The detailed water audit report contains the following:

- Water consumption and wastewater generation pattern
- Specific water use and conservation
- Complete water balance of the facility
- Water saving opportunities
- Method of implementing the proposals
- Full description and figures
- Investment required

Industries can undertake following measures for water conservation:

- Setting up of norms for water budgeting
- Modernization of industrial process to reduce water consumption
- Recycling water with a re-circulating cooling system
- Ozonation cooling water approach which can result in five fold reduction in blow down when compared to traditional chemical treatment
- Reduction in reuse of de-ionized water by eliminating some plenum flushes, converting from a continuous flow to an intermittent flow system and improving control on the use
- Use of waste water for gardening
- Proper processing of effluents to adhere to the norms of disposal.

