



# CENTRAL GROUND WATER AUTHORITY

(Constituted under sub-section (3) of section 3 of the Environment (Protection) Act, 1986)

## **GUIDELINES/CRITERIA FOR EVALUATION OF PROPOSALS/ REQUESTS FOR GROUND WATER ABSTRACTION**

(with effect from 15/11/ 2012)

Central Ground Water Authority  
Ministry of Water Resources  
Government of India

Government of India  
**CENTRAL GROUND WATER AUTHORITY**  
(Constituted under Environment Protection Act -1986)

West Block 2, Wing 3, Sector 1, R K Puram, New Delhi-110066

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*CGWA Guidelines*

**Criteria for Evaluation of Proposals/Requests for Ground Water  
Abstraction**  
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**Criteria for Evaluation of Proposals/Requests for Ground Water  
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**OBJECTIVE**

The prime objective of the guidelines for evaluation of proposals/requests for the withdrawal of ground water, is to focus on a specific part of ground water management viz. ensuring sustainability of ground water both in terms of quantity & quality and also focus on land based management of ground water resources, looking into the variations of availability of water in different climatologically regions and diverse hydrogeological conditions in various states of the country.

The annual replenishable ground water resources availability plays an important role in defining the guidelines. The latest assessment of the state wise ground water resources as on 31.03.2009 is available at the Central Ground Water Board web site ([www.cgwb.gov.in](http://www.cgwb.gov.in)). As per the ground water resource estimates of 2009, out of the **5842** assessment units (Blocks, Mandals, Talukas, districts), **802** over-exploited units, **169** critical units, **523** semi-critical units, **4277** safe units and **71** saline units have been identified across the country by Central Ground Water Board. The Annual replenishable ground water resources have been estimated as **431** Billion Cubic Metres (bcm). The Net Ground Water Availability is **396** bcm and the overall stage of ground water development of the country is **61%**. The present guidelines will follow the assessment as on GWRE 2009 till it is revised.

Central Ground Water Authority (CGWA) so far has notified **82** areas (list available at [www.cgwb.gov.in/](http://www.cgwb.gov.in/)) for the purpose of regulation of ground water development. The District Administrative Heads (DC or DM) in case of Administrative Block or Taluka, or the Head of the Municipality (in case of Municipal Area) of the notified areas in the country have been appointed as 'Authorised Officers' by Central Ground Water Authority under Section 4 of the Environmental Protection Act (EPA) (1986). Regulation of Ground Water development in Notified areas is through district administrative heads assisted by Advisory Committees under the provisions of Section 4 of the EPA, 1986. All issues pertaining to granting of NOC's for ground water withdrawal, checking violations, sealing of groundwater abstraction structures, launching of prosecution against offenders, attending to complaints, etc., are to be addressed by the Authorised Officers. Explanation of technical terms used in the guideline are given in Annexure-I.

The guidelines for abstraction of ground water in Notified and Non-Notified areas for various users are given below.

## A. NOTIFIED AREAS

I. Permission to abstract ground water through any energized means **will not be accorded** for any purpose other than drinking water.

II. Drinking purpose:

NOC can be accorded for construction of groundwater abstraction structures/ replacement of existing defunct well for drinking purpose only to:

- a. Government department/Agency/Undertaking entrusted with the water supply
- b. Other Government organizations/State Government Guest Houses/ Registered Housing societies
- c. Schools/ educational & State/Central Government recognized research Institutions/ Universities
- d. Hospitals

NOC for the item (b to d) will be considered only if Water Supplying Department is not providing adequate water in the area/premises. Proof for this to be produced from the concerned authority by the applicant.

Pre-conditions for grant of NOC for abstraction of ground water to categories under Sl No. (a) to (d) are:

1. *Maximum diameter of the groundwater abstraction structures should be restricted to 150 mm (6 inches) only and capacity of the pump should not exceed 1 HP. In case of Government water supply agencies, housing societies, tube well size/dia & HP of prime mover can be more depending on the ground water availability and requirement.*
2. *Concurrent with the construction of groundwater abstraction structures, the organization shall undertake artificial recharge to groundwater through rain water harvesting structure in the premises within 45 days of issuance of NOC and will confirm to the Authorised Officer for verification.*
3. *Water meter installation in the abstraction structure is mandatory and confirmation of water meter installation shall be given to the Authorised Officer under intimation to the concerned Regional office of CGWB immediately after construction. The daily water meter reading should be maintained and quarterly report should be submitted to Authorised Officer.*
4. *The water from the groundwater abstraction structures will be used for drinking and domestic purposes only.*
5. *All details of the drilling like rock formations encountered, the depth and diameter of the constructed groundwater abstraction structures, type of pipes used, yield of bore well/ tube well (Fracture zones encountered/zones tapped) and ground water quality etc have to be furnished to the nodal agency authorized by district administration head within 15 days of the completion of the construction.*
6. *The permission for construction of groundwater abstraction structure would be valid for a period of six months from the date of issue of NOC.*

7. *The NOC issued would be non-transferable.*

e. For Individual households:

1. *Permission to be granted only for such cases where public water supply system does not exist. The permission shall be valid only till such time there is no public water supply provided. In that case, the abstraction structure shall be exclusively utilized for artificial recharge to groundwater or sealed.*
2. *A certificate from the water supply agency regarding non-availability of government water supply to the area/individual is to be submitted by the applicant.*
3. *The premises should have only one Groundwater abstraction structure (either existing or new) to meet the drinking and domestic requirements. No tube-well/bore-well will be constructed, if any working tube-well already exists. In case the existing well has become non-functional and is to be replaced, it should be converted into recharge well, if possible or properly sealed and no water be pumped from it. **An undertaking as per Annexure-II is to be submitted by individual.***
4. *The person(s) intending to construct new tube-well will seek permission from the Authorized officer/Advisory Committee, at least 30 days in advance along with the name and address of the drilling agency, which will undertake construction of tube-well. Authorities/Nodal Agency can ask the user to supply additional information.*
5. *The maximum diameter of the tube-well should be restricted to 110 mm (4 ½ inches) only and the capacity of the pump should not exceed 1HP. In case of deep water level the capacity/dia of the structure will be decided by the Authority based on the site specific recommendations.*
6. *Concurrent with the construction of groundwater abstraction structure, the owner of the tube-well shall undertake artificial recharge to groundwater through rainwater harvesting in the premises.*
7. *The water from the tube-well/bore-well will be used exclusively for drinking and domestic purposes only within the premises.*
8. *All details of the drilling like rock formations encountered, the depth and diameter of the constructed tube-well, (Fracture zones encountered/zones tapped) type of pipes used in tube well, yield of bore well/tube well and ground water quality etc., shall be kept for record and are to be provided at the time of inspection.*
9. *Any violation of the above conditions will attract legal action under section 15 of the Environment (Protection) Act, 1986.*

In case the notified area is de-notified subsequently, the conditions pertaining to “non-notified areas” shall be followed.

## B. NON-NOTIFIED AREAS

NOC for Ground Water withdrawal will be considered for Industries/Infrastructure projects which are either NEW or under EXPANSION as per the criteria given below:

### I. Industries

<b>Category *</b>	<b>Recycle/Reuse</b> (for various purposes except recharge to ground water)	<b>Withdrawal permitted</b> (% of proposed recharge)
Safe	Mandatory recycling and reuse of water	NOC is required for groundwater withdrawal if quantity of groundwater abstraction exceeds 100 m <sup>3</sup> /day. AR to groundwater to be adopted. However, Industries under B-VI have no exemption from obtaining NOC.
Semi-critical	Major and Medium industries shall recycle and reuse at least 50% of the waste water	Withdrawal may be permitted subject to undertaking of recharge** measures. The withdrawal should not exceed 200% of the recharged quantity.
Critical	Major and Medium industries should fully recycle and reuse the waste water	Withdrawal may be permitted subject to undertaking of recharge** measures. The withdrawal should not exceed 100% of the recharged quantity.
Over-exploited (except industries falling under category mentioned in B (VI).	Full utilization of recycled water and reuse of water should be mandatory	Withdrawal may be permitted subject to undertaking of recharge** measures. The withdrawal should not exceed 50% of the recharged quantity.

\* The present guidelines will follow the assessment of Ground Water Resource Estimation (GWRE) 2009 till it is revised.

\*\* The recharge should be implemented within the premises and/or preferably in the same water shed / assessment unit. Detailed Project Proposal (DPR) shall be included along with the application for NOC.

### II. Infrastructure Projects

(SEZ, Group Housing projects, Residential townships, Hospitals, Educational Institutions, Roads, Bridges, Technology parks, Malls, Multiplex, etc.)

- a. Run-off from the entire project area is to be utilized for artificial recharge to ground water unless risk of contamination exists or area is water logged. The runoff from the entire premises shall be utilized for harvesting/storage also, apart from recharge.
- b. The quantum of ground water for usage other than drinking/ domestic shall not exceed 25% of total ground water abstraction in case of Housing projects/ Residential Townships.
- c. Proponents are to submit a status report stating the quantum of water required and the quantity that would be provided by the Government Water Supplying agency. This should be supported by a letter from the agency.

### **III. Areas Having Specific Depth Zones Notified:**

- a. In areas where specific depth zones are notified, permission to withdraw groundwater can be considered based on the site specific recommendations of Regional Directorate of CGWB from the depth zones, which are not coming under the notification.

### **IV. Mining and Dewatering Projects**

Abstraction of ground water by mining industries intersecting water table for dewatering of mine pit water, and dewatering ground water for basement construction of buildings, etc., may be permitted subject to the following conditions in addition to those already specified under Para B-I.

- a. The dewatered quantum of water is to be put to gainful use. This may include water supply and provide to water supply agencies, agriculture, dust suppression by the industry, utilization by the mining industry, utilization for artificial recharge to groundwater, etc.
- b. Piezometers for monitoring the ground water level are to be mandatorily installed within the premises and in peripheral areas. The record of water level data be maintained and to be provided periodically or whenever demanded by the regulating agency.
- c. Wherever the mines/dewatering project is situated in the coastal area special care should be taken to prevent sea water ingress. This should be supported by a technical evaluation report.
- d. In case of mining projects detailed and continuous study on the groundwater regime, including groundwater modeling should be carried out and the results should be submitted to the Regional Directorate of CGWB periodically.

### **V. Abstraction of Saline Ground Water by Industries/infrastructure Projects**

Industries/infrastructure projects desirous of utilizing saline ground water would be permitted to extract saline groundwater. However, due care to be taken in respect of disposal of the effluents by the units so as to protect

the water bodies and the aquifers from pollution. Proposals pertaining to such cases must have a detailed project report elucidating the mechanism of handling the effluent water and its various uses. All precautions must be taken for protection of environment especially fresh water aquifers in and around the area. Large scale recharge mechanism should be adopted wherever feasible in such cases to improve the ground water conditions in the region.

## VI. Industries Using Groundwater as Raw Material and other Water Intensive Industries

Industries using water as raw material/water intensive industries like packaged drinking water, mineral water industries, distilleries, breweries, soft drink manufacturing industries, textiles, paper & pulp, etc shall **not be granted NOC** for groundwater withdrawal from OE areas. In Safe, Semi-Critical & Critical areas NOC for ground water withdrawal is mandatory for these industries as per Section B-1. However, ground water withdrawal will be limited as follows:

Category	Ground water withdrawal limit
Safe	Withdrawal limited to 200% of ground water recharge
Semi-critical	Withdrawal limited to 100% of ground water recharge
Critical	Withdrawal limited to 50% of ground water recharge
Over-exploited	No permission for industries under this category

### C. CHANGE IN LAND USE

Industries/ Infrastructure projects coming up in agricultural land or any other land after change in land use shall have to submit all documents endorsing the change of land use from competent authority. Withdrawal of ground water from existing abstraction structures, if any, after change in land use in the area can be done only after approval from the Central Ground Water Authority. Cases would be processed as per changed land use.

### D. OTHER CONDITIONS (Applicable for all cases):

- a. Sale and supply of raw/unprocessed/untreated ground water by unauthorized agencies for commercial use is not permitted.
- b. Non-compliance of conditions mentioned in the NOC may be taken as sufficient reason for cancellation of NOC accorded/ non-renewal of NOC.
- c. Wherever State Government Authorities are in existence to manage and control ground water regimes, the Groundwater Regulation would be done by them. The State Ground Water Authority (SGWA) shall send a quarterly progress report to CGWA for records.
- d. In case of any delay in executing the project for bonafide reasons within the set time, for which NOC has been granted, the firm shall apply to CGWA for extension. CGWA may consider extension based on its merits.



- e. No application for NOC shall be entertained without proper referral letters from the statutory authority (Central and State Govt. Dept and Agencies).
- f. The referral letter shall contain verification on the quantum of water for the industry/project with detailed break up of groundwater consumption, recycle & reuse of the waste water, so that the wastage of the precious resource can be avoided. In case this is not given by the referral authority, applicant should obtain a letter from the Industries Dept/Project Sanctioning Authority on the same line.
- g. The CRZA rules and regulation shall be applicable wherever in vogue.
- h. No permission required for withdrawal of ground water from any area if withdrawal is done through non-energized means.
- i. Mandatory clause on RWH may be relaxed in case of water logged/shallow water level (< 5 m bgl during pre monsoon) areas.
- j. Relaxation in the quantity of ground water withdrawal in over-exploited areas, and/or quantity of recharge being affected by the firm can be permitted by CGWA if it feels it absolutely necessary in national interest.
- k. The artificial recharge proposals are required to be vetted by any competent authority of State/Centre.
- l. Treated water shall not be used for recharge to ground water, since it may contain heavy metals & other toxic elements. The treated waters shall be fully used by the proponent or any other agency, who can utilize it without contaminating the underlying aquifer / water bodies.
- m. NOC issued is non-transferable.

## **E. ISSUANCE/ RENEWAL OF NOC**

- a. NOC will be accorded in non notified areas for a period of two years initially and will be renewed for a period of three years thereafter, subject to compliance of conditions mentioned in the NOC. Subsequently NOC's shall be renewed every five years subject to the compliance of the conditions mentioned in the renewed NOC.
- b. Renewal of NOC's in notified areas will be done by the Authorised Officer for 2 years and the same shall be renewed every two years.
- c. In case of change in category of the area, renewals would be granted with conditions as laid down for such new category areas. In case it is difficult to comply with the conditions the applicant should satisfy the authority for granting exemption/alternative measures.
- d. In case it is found that some of the conditions stipulated during the issuance NOC have not been implemented in certain localities it may be relaxed by CGWA based on the recommendations of the concerned Regional Director for specific areas as per site specific condition.
- e. Processing fee prescribed if any, from time to time shall be charged for issuance and renewal of NOC's.

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### **Note:**

- i) **Guidelines are subject to modification from time to time**
- ii) Explanation of technical terms used is given in Annexure-I
- iii) Undertaking to be submitted by individual given in Annexure-II
- iv) List of proformas is given in Annexure-III.

## **ANNEXURE-I**

### **Definitions/Explanation of Technical Terms**

1. **Notified Area:** Areas notified by Central Ground Water Authority for the purpose of Regulation of Ground Water development through Public Notices.
2. **Non-notified area:** Areas other than Notified areas for ground water regulation.
3. **EPA 1986:** Environmental Protection Act (1986).
4. **Safe area:** Area categorized as SAFE from the ground water resources point of view, based on the ground water resources estimation 2009 or the latest estimation carried out by CGWB.
5. **Semi-critical area:** Area categorized as SEMI-CRITICAL from the ground water resources point of view, based on the ground water resources estimation 2009 or the latest estimation carried out by CGWB.
6. **Critical area:** Area categorized as CRITICAL from the ground water resources point of view, based on the ground water resources estimation 2009 or the latest estimation carried out by CGWB.
7. **Over-exploited area:** Area categorized as OVER-EXPLOITED from the ground water resources point of view, based on the ground water resources estimation 2009 or the latest estimation carried out by CGWB.
8. **Aquifer:** Geological formation capable of storing and transmitting ground water.
9. **Deeper Aquifer:** In areas having multiple aquifer system, the aquifer/s occurring below the uppermost aquifer.
10. **Well:** Any structure sunk for the search or 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.
11. **Tube Well; Bore Well; Dug Well:** Ground Water abstraction structures.
12. **Government Agency:** May be Central or State Government body.
13. **Mine:** Area where mining activity is taking place, or area abandoned after mining.
14. **Ground Water Recharge:** Augmenting the ground water resources of aquifer/s.
15. **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.
16. **Roof Top Rain Water Harvesting:** Collection and storage of rain water from the roof top of buildings.
17. **Artificial Recharge to ground water:** Augmenting the ground water reservoir through artificial means.

18. **Infrastructure Project:** Housing, Township, SEZ, Hotel, Educational Institutions, Roads and Bridges, Commercial establishments, Offices, Airport, Transport terminus, Hospitals, others.
19. **Mining Project:** Project which involves mining activity either open cast or underground or both.
20. **Ground Water Draft:** Quantum of ground water withdrawal.
21. **Saline Water:** Water having salinity in excess of 2500  $\mu\text{mhos/cm}$  at 25°C.
22. **Water Table Intersection:** Intersection of the Water Table on excavation of the overlying material due to mining or other activities.
23. **Recycle/Reuse:** Purifying waste water for using again/ putting water to multiple uses.
24. **Schools/College/Universities:** Educational Institutions/universities approved/recognized by State / Central Government.
25. **Hospitals:** Institutions providing medical facilities/treatment approved by State / Central Government.
26. **Bhawan:** Raj Bhawan or any other Central / State Government office complex or building.
27. **Government Department:** Either Central or State.
28. **Municipality:** Municipality, a Municipal Corporation or similar body of local urban governance by any other name.
29. **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;
30. **Bgl:** Below Ground Level.
31. **BCM (bcm):** Billion cubic metres.
32. **Groundwater Abstraction structure:** Structure used to withdraw groundwater like bore well / tube well / dug well / dug cum bore well/tunnel well.
33. **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.
34. **Water Audit:** A numerical assessment quantity of water in any process, giving a detailed input and output in every stage.

**ANNEXURE -II**

**UNDERTAKING TO BE SUBMITTED BY INDIVIDUALS FOR CONSTRUCTION OF GROUNDWATER ABSTRACTION STRUCTURE FOR DRINKING AND DOMESTIC PURPOSES IN NOTIFIED AREA ON NON-JUDICIAL STAMP PAPER AS PER THE STAMP VALUE IN VOGUE**

I, ..... resident of .....

do hereby solemnly affirm and declare as under:

1. That I am the owner/lease of premises of .....
2. That in the above said premises/ building there is no supply of water by the Municipality/Govt. Agency/(ies) in the premises /area.
3. That I/we intend to install bore-well for abstraction of ground water for drinking/domestic use only. In the event of installing bore-well, the maximum diameter shall be restricted to 110 mm (four & half inches) and the capacity of the pump shall not exceed 1 H.P.
4. That I/we undertake that in the event of any instructions/directions from the Central Ground Water Authority/Deputy Commissioner/District Collector or any other authorized officer(s) of the Govt., we shall discontinue the usage of the said dug well/bore-well/tubewell if so required.
5. That I/we further undertake that I/we shall be held liable for any such civil/criminal action that may be initiated against me /us for violation of any of the terms and conditions of this Undertaking.

**(DEPONENT)**

**VERIFICATION:**

Verified at ..... on this day of ..... that the contents of the above Undertaking are correct to the best of my knowledge and belief and nothing has been suppressed.

**(DEPONENT)**

**ANNEXURE-III**

**List of Proformas**

1. **Application for permission to abstract ground water for industrial use.**
2. **Application for permission to abstract ground water for infrastructure projects.**
3. **Application for permission to dewater ground water .**
4. **Application for renewal of NOC to dewater ground water .**