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GOVERNMENT OF PUDUCHERRY
CHIEF SECRETARIAT (AGRICULTURE)

(G.O. Ms. No. 2/Ag., Puducherry, dated 12th April 2023)

NOTIFICATION

1. Back Ground.— 1.1 On the directions of the Hon'ble Supreme Court *vide* its Order, dated 10th December, 1996 passed in Civil Writ Petition No. 4677 of 1985 in M.C. Mehta Vs. Union of India, the Central Government constituted the Central Ground Water Authority *vide* Notification No. S.O.38(E), dated 14th January, 1997 to exercise the powers under section 5 of the Environment (Protection) Act, 1986 (29 of 1986) for the purposes of regulation and control of groundwater management and development and to exercise certain powers and perform certain functions relating thereto.

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1.2 In similar line, the Government of Puducherry enacted Legislations namely, Puducherry Ground Water (Control and Regulation) Act, 2002 and Puducherry Ground Water (Control and Regulation) Rules, 2003 to regulate and control the development of groundwater and for the matters connected therewith.

1.3 In exercise of the powers conferred under sub-section (2) of section 3 of the Puducherry Ground Water (Control and Regulation) Act, 2002 (Act No. 2 of 2003), the Puducherry Ground Water Authority had been constituted *vide* G.O. Ms. No. 22/Ag., dated 15th October 2004 of the Chief Secretariat (Agriculture), Government of Puducherry, for the purpose of regulation, control and development of groundwater management in the Union territory of Puducherry;

1.4 The Puducherry Ground Water Authority has been regulating groundwater development and management by way of issuing Permit, Certificate of Registration and Licence for groundwater extraction for various purposes and framed guidelines in this connection, from time to time, applicable to the Union territory of Puducherry.

1.5 Now, the Central Ground Water Authority has issued new guidelines to regulate groundwater extraction and conserve the scarce groundwater resources in the country. This guidelines will come into force with immediate effect from the date of Gazette Notification and supersede guidelines issued by the Central Ground Water Authority *vide* S.O. 6140 (E), dated the 12th December 2018. The guidelines will have Pan India applicability.

2. Order.— 2.1 In order to implement the New Guidelines in the Union territory of Puducherry to control and regulate the extraction of groundwater in accordance with the Notification issued by the Central Ground Water Authority, New Delhi, the following notification shall be published in the Extraordinary, Official Gazette of Government of Puducherry.

2.2 In exercise of the powers conferred by sub-section (1) of section 5 of the Puducherry Ground Water (Control and Regulation) Act, 2002 (Act No. 2 of 2003), the Lieutenant-Governor, Puducherry, is pleased to issue the following guidelines by superseding all the previous G.Os issued in respect of control and regulation of groundwater extraction, *viz.*,

- (i) G.O. Ms. No. 6/Ag., dated 21-01-1980 of Development Department,
- (ii) G.O. Ms. No. 39/Ag., dated 21-09-1988 of Chief Secretariat (Agriculture),
- (iii) G.O. Ms. No. 134/88/F6, dated 24-11-1988 of Finance Department (Housing),
- (iv) G.O. Ms. No. 13/Ag., dated 18-04-1989 of Chief Secretariat (Agriculture),
- (v) G.O. Ms. No. 16/Ag, dated 13-05-1991 of Chief Secretariat (Agriculture and Forest),
- (vi) G.O. Ms. No. 30/Ag., dated 02-02-2005 of Chief Secretariat (Agriculture and Forest) and
- (vii) G.O. Ms. No. 5/Ag., dated 05-07-2010 of the Chief Secretariat (Agriculture and Forest), Puducherry, in public interest to the Puducherry Ground Water Authority constituted *vide* G.O. Ms. No. 22/Ag., dated 15-10-2004 of the Chief Secretariat (Agriculture and Forest), Puducherry.

3. Regulations of Ground Water usage.— 3.1 Any user of groundwater except categories mentioned in clause 5.1 desiring to sink a tubewell in the notified area for any purpose, *viz.*, Industries, Institutions, Hotels/Lodges, Resorts, Marriage Halls, all Infrastructure Projects, Construction of Buildings and Roads, all types of Commercial Establishments, *etc.*, either on personal or community basis, shall apply in Form-I appended in sub-rule (1) of rule 11 of the Puducherry Ground Water (Control and Regulation) Rules, 2003, before Puducherry Ground Water Authority (PGWA), as per section 6 of Puducherry Ground Water (Control and Regulation) Act, 2002, for grant of permit for this purpose and shall not proceed with any activity connected with such sinking, unless a permit has been granted by the Ground Water Authority.

3.2 Similarly, as per sub-section (1) of section 7 of Puducherry Ground Water (Control and Regulation) Act, 2002 read with rule 12 of the Puducherry Ground Water (Control and Regulation) Rules, 2003 (hereinafter referred to as “Rules”) every user of groundwater shall apply

to Puducherry Ground Water Authority for grant of a Certificate of Registration recognizing its existing use, in Form-IV appended in the said rules.

3.3 Sinking of tubewell without obtaining the necessary prior permit of Puducherry Ground Water Authority except categories mentioned in clause 5.1 and extraction of groundwater without obtaining the necessary prior Certificate of Registration for user of groundwater will attract penal action under section 20 of the Puducherry Ground Water (Control and Regulation) Act, 2002 (hereinafter referred to as "Act").

4. Prohibited zone for construction of tubewells.— No tubewell shall be sunk by any individual/agency for extracting groundwater for any purpose, in Coastal Regulatory Zone (CRZ), *i.e.*, within 500m distance from the High Tide Line (HTL), since extraction of groundwater in the CRZ area is a prohibited activity under Coastal Regulatory Zone notification, 2011.

5.1. Exemptions from seeking permission.— (A) The following categories have been exempted from obtaining permit of Puducherry Ground Water Authority for sinking of tubewells and for groundwater extraction:

- (i) Individual domestic consumers in both Rural and Urban areas for personal drinking water and domestic uses.
- (ii) Rural and Urban drinking water supply Schemes.
- (iii) Armed Forces Establishments in both Rural and Urban areas.
- (iv) Agriculture activities, and
- (v) Micro and Small Enterprises/Industries drawing groundwater up to 10,000 LPD except packaged drinking water industries/mineral water units, soft drink manufacturing units and high water consuming industries.

(B) The exempted categories mentioned above, should register their tubewells with Puducherry Ground Water Authority, within 30 days from the date of completion of sinking of tubewell and should obtain Certificate of Registration for the existing user of groundwater from Puducherry Ground Water Authority.

5.1.1 Drinking and Domestic use for Residential Apartments/ Group Housing Societies.— 5.1.1.1 For grant of Permit to sink tubewell for groundwater extraction, the project proponent shall apply to Puducherry Ground Water Authority along with the details in Form-I appended under the said rules. Permit to sink tubewell shall be granted only in such cases, where the local Government water supply agency is unable to supply the requisite amount of water in the area.

5.1.1.2. Permit 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 groundwater requirement is more than 20,000 LPD. The water derived from Sewage Treatment Plants shall be utilized for toilet flushing, car washing, gardening, *etc.*

(ii) The Permit 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 permit, intimation regarding availability of public water supply shall be sent by the project proponent, to the Puducherry Ground Water Authority and permit shall be cancelled by the Puducherry Ground Water Authority.

(iii) Proponents shall be liable to pay groundwater extraction charges for the quantum of groundwater proposed to be extracted, as applicable.

(iv) Details of documents to be submitted with the Form-I appended under the said rules are furnished *vide* Annexure-VII.

5.1.2 Agriculture Sector.— Agriculture sector shall be exempted from obtaining permit to sink tubewells for ground water extraction. However, such tubewell should be registered with Puducherry Ground Water Authority and Certificate of Registration to be obtained in this regard. Certificate of Registration from Puducherry Ground Water Authority is essential for energizing the tubewell by Electricity Department, for any purpose.

No tubewell shall be permitted within the Coastal Regulatory Zone.

5.2. Commercial Use.— (i) No Commercial users requiring more than 10,000 LPD will be permitted within 6 kms. from the sea coast. However, Commercial users which are requiring groundwater up to 10,000 LPD within 6 kms. from Coastal line shall be permitted.

(ii) Permits for sinking tubewells extracting more than 10,000 LPD beyond 6 kms. from sea coast shall be considered without adopting spacing norms between the tubewells.

(iii) Commercial entities, extracting more than 1 lakh LPD of groundwater shall be required to submit annual water audit report, including an audit of water use as per the Annexure-VI. Puducherry Ground Water Authority shall publish all such audit reports online.

(iv) All Commercial entities extracting groundwater shall be required to pay groundwater extraction fee/charges as applicable.

5.2.1. Industrial Use.— (i) No industries requiring more than 10,000 LPD will be permitted within 6 kms. from the sea coast. However, Micro and Small Industries which are extracting groundwater within 6 kms. from Coastal line are permitted to draw water up to 10,000 LPD for production/industrial purposes. Water consumed for drinking and sanitation purposes will not be counted as a part of the above limit.

(ii) Permits for sinking tubewells shall be issued in respect of industries beyond 6 kms. from sea coast as per the conditions stipulated below:

(a) No tubewell shall be sunk within 30m from any irrigation canal/tank bund both in Puducherry and Karaikal regions.

(b) Construction of appropriate recharge structures, as suggested by Puducherry Ground Water Authority (PGWA).

(iii) Permits shall be issued for sinking tubewells to industries for extracting groundwater exclusively for the use of drinking/domestic use for work force, green belt use, beyond 6 kms. from the sea coast.

(iv) Water intensive industries are not to be encouraged. Grant of permits to sink tubewells beyond 6 kms. from sea coast for groundwater extraction for water consuming industries shall be considered, depending upon the groundwater availability and the hydrogeological conditions of the area.

(v) While considering the grant of permission for industries, the change of water use from Agriculture to industries should be considered, by taking into account, the reduction in water use.

(vi) Permit shall not be granted to new packaged water industries/mineral water units, soft drink manufacturing units and high water consuming industries, even if, they belong to MSME category, in the Union territory of Puducherry.

(vii) Permit to sink tubewells for groundwater extraction by industries beyond 6 km. from the sea coast shall be granted subject to the following conditions:-

(a) Permit shall be granted only, in such cases where Local Government water supply agencies are not able to supply the desired quantity of water.

(b) All industries shall be required to adopt latest water efficient technologies so as to reduce dependence on groundwater resources.

(c) All industries, extracting groundwater in excess of 1,00,000 LPD shall be required to undertake annual water audit through Confederation of Indian Industries (CII)/Federation of Indian Chamber of Commerce and Industry (FICCI)/National Productivity Council (NPC) certified auditors and submit audit reports as per Annexure-XII, within three months of completion of the audit to Puducherry Ground Water Authority.

(d) Any new/existing major water consuming industrial unit, drawing more than 1,00,000 LPD should mandatorily construct an observation tubewell. Monitoring of water level shall be done by the project proponent. The piezometer/observation well shall be constructed at the maximum distance available, from the existing pumping bore well/tubewell production, well,

in consultation with Ground Water Unit and Soil Conservation, Department of Agriculture and Farmers Welfare. Depth shall be such that the 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 Puducherry Ground Water Authority, within 10 days from the succeeding month.

(e) The proponent shall be required to adopt roof top rain water harvesting/recharge in the project premises.

(f) Industries which are likely to pollute groundwater (chemical, pharmaceutical, dyes, pigments, paints, textiles, tannery, pesticides/insecticides, fertilizers, slaughter house, explosives *etc.*) shall not install roof top rain water harvesting structures to recharge the aquifers in the project premises, but, the proponent may store the harvested rain water in surface storage tanks for use in the industry.

(g) Injection of treated/untreated waste water into aquifer system is strictly prohibited.

(h) Industries which are likely to cause groundwater pollution *e.g.*, tanning, slaughter houses, dye, chemical/petrochemical, coal washeries, other hazardous units, *etc.*, (as per Central Pollution Control Board list) need to undertake necessary well head protection measures, to ensure prevention of groundwater pollution (Appendix-1 and 2).

(i) All industrial units shall be required to pay groundwater extraction fee/charges as applicable.

(j) All existing industries drawing groundwater in over-exploited assessment units shall be liable to pay groundwater restoration fee/charges as applicable.

(k) Details of documents to be submitted along with the application are furnished *vide* Annexure-VIII.

5.2.2. Infrastructure projects.— (i) Permits shall be issued for Infrastructure/Construction projects as per conditions stipulated in the proposed G.O. subject to the conditions that no permit shall be issued

within 6 kms. from the sea coast. However, Infrastructure/Construction projects requiring groundwater up to 10,000 LPD within 6 km from coastal line shall be permitted.

(ii) Permits for sinking tubewells in the case of Educational Institutions and Hospitals within 6 kms. from the sea coast will be permitted.

(iii) Permits for sinking tubewells extracting more than 10,000 LPD beyond 6 kms. from sea coast shall be considered without adopting spacing norms between the tubewells.

(iv) All infrastructure projects/residential and commercial buildings shall be required to pay groundwater extraction fees/charges, as applicable.

5.2.2.3. Indicative list of Infrastructure projects is given in Annexure-V.

5.2.2.4. The permit to sink tubewell for groundwater extraction will be granted for infrastructure projects/construction subject to the following specific conditions:

(i) Infrastructure projects requiring dewatering, shall be considered depending upon the location, distance from the coastal line and the hydrogeological conditions of the area. 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 with telemetry system) and submit the data to Puducherry Ground Water Authority as applicable. Monitoring records and results should be retained by the proponent for two years, for inspection or reporting, as required by Puducherry Ground Water Authority.

(ii) Installation of Sewage Treatment Plants (STP) shall be mandatory for new projects, where groundwater requirement is more than 20,000 LPD. The water from STP shall be utilized for toilet flushing, car washing, gardening, *etc.*

(iii) For infrastructure dewatering/construction activity, Permit shall be valid for specific period, as per the detailed proposal submitted by the project proponent.

(iv) All infrastructure projects extracting groundwater in safe, semi-critical and critical assessment units shall be required to pay groundwater extraction fee/charges as applicable.

(v) All infrastructure projects (new/existing) extracting groundwater in over-exploited assessment units shall be liable to pay groundwater restoration fee/charges as applicable.

(vi) Applicants requiring dewatering process shall produce NOC/Technical opinion of State Ground Water Unit of Agriculture and Farmers Welfare Department, before commencement of work.

(vii) The details of documents to be submitted along with the application are furnished *vide* Annexure-IX.

6. Registration of Drilling Machineries.— Any individual/drilling agency desiring to carry on the business of sinking of wells (*i.e.*, for drilling machinery) and installation of devices for extraction and transport of groundwater, shall apply to the Ground Water Authority in Form-IX as per rule 13 of Puducherry Ground Water (Control and Regulation) Rules, 2003, for the grant of a licence in this behalf.

7. Ground water extraction/restoration charges.— (a) All Non-Agriculture users of groundwater, including Micro, Small Enterprises, Commercial users, all residential apartments/Group Housing Societies, all industries/infrastructure projects, drawing groundwater, will have to pay groundwater abstraction charges based on the quantum of groundwater extraction and category of assessment unit, as applicable.

(b) In over-exploited assessment units, all non-agriculture users will have to pay groundwater restoration charges, based on quantum of groundwater extraction.

(c) The revenue generated from the proposed groundwater extraction/restoration charges shall be kept in a separate fund under Puducherry Ground Water Authority for implementation of site specific suitable demand/supply side intervention like water harvesting structures/recharge structures and also for the expenditure towards the administration of Puducherry Ground Water Authority and other purposes, as the Government may direct.

7.1. Bulk Water Supply.— (a) All those users, extracting groundwater for bulk water supplies, through private tanker lorries, should obtain Certificate of Registration for the tubewells and licence for the tanker lorries to transport groundwater respectively, by applying in the prescribed forms, along with documents mentioned in the Annexure-X. No application for sinking new tubewells towards bulk water supply will be entertained. Similarly, permission for conversion of usage for borewells of any kind, to bulk water supply shall not be entertained. Further, those who desire to procure groundwater through private tanker lorries, should apply to Puducherry Ground Water Authority and obtain permit for the same.

(b) Import and Export of extracting groundwater, outside the Union territory of Puducherry, is prohibited, except in case of Disaster and Natural Calamities, which do not require any permission.

7.1.1. General Conditions.— (i) All Tankers shall be labelled “Potable Water”.

(ii) Extraction structures shall be fitted with tamper proof digital water flow meter with telemetry. Flow meters shall be calibrated once in a year from an authorized agency.

(iii) Water shall be used for dinking/domestic purposes only.

(iv) The Certificate of Registration/Licence holders shall submit monthly groundwater usage report to Puducherry Ground Water Authority in Form-VII (B)/VIII (B) in Puducherry Ground Water (Control and Regulation) Rules, 2003, before the 10th day of every succeeding month.

(v) Water quality being supplied by the bulk water supplier, shall be in accordance with BIS norms for drinking and domestic purpose.

(vi) Filling of tanker with water by the authorized bulk water suppliers shall be done only from the source within the premises authorized by the Puducherry Ground Water Authority.

7.1.1. (a) Certificate of Registration/Licence shall be issued with a validity term of 2 years/1 year respectively, for all the assessment units, with validity up to 31st March only.

7.1.2. Renewal of Certificate of Registration/Licence.— (i) Certificate of Registration/Licence shall be renewed once in 2 years/every year, subject to the compliance of the conditions mentioned therein.

(ii) The applicant shall apply for renewal of Certificate of Registration/Licence at least 90 days prior to expiry of its validity.

(iii) Application for renewal of Certificate of Registration/Licence shall be accompanied by the compliance report from the authorized independent water auditor.

(iv) Before granting renewal, the Puducherry Ground Water Authority shall satisfy itself, that the conditions of Certificate of Registration/Licence have been duly complied with.

(v) If, the application for renewal is submitted in time and if, the Puducherry Ground Water Authority is unable to process the application in time, Certificate of Registration/Licence shall be deemed, to be extended till the date of renewal of Licence.

(vi) If, the applicant fails to apply within the validity period of Certificate of Registration/Licence, the proponent shall be liable to pay Environmental Compensation, as applicable, levied by the Puducherry Ground Water Authority, for the period starting from the date of expiry of Certificate of Registration/Licence till the Certificate of Registration/Licence is renewed by Puducherry Ground Water Authority.

7.1.3. Fees.— The bulk water suppliers shall pay requisite fee for Certificate of Registration and to pay groundwater extraction/restoration charges, as applicable.

7.1.4. Other Important Conditions.— (i) Sale and procurement of ground water by a person/agency not having valid Permit/Licence of Puducherry Ground Water Authority is not permitted.

(ii) Non-compliance of conditions mentioned in the Permit/Certificate of Registration/Licence may be taken as sufficient reason for cancellation of Permit/Licence accorded/non-renewal of Permit/Certificate of Registration/Licence.

(iii) No application shall be entertained without supporting documents as specified in relevant section.

(iv) Extraction structure (s) should be located inside the premises of project property, approved for the purpose, by the Puducherry Ground Water Authority.

(v) Self-compliance of conditions laid down in the Permit/Certificate of Registration/Licence, shall be reported by the users, to the Puducherry Ground Water Authority before 10th day of every succeeding month.

(vi) Extraction of groundwater for Bulk Water Supply and procurement of groundwater without a valid Permit of Puducherry Ground Water Authority and transportation of groundwater through tanker lorries without a valid licence of Puducherry Ground Water Authority, shall be considered illegal and such entities shall be liable to pay Environmental Compensation, as applicable, levied by the Puducherry Ground Water Authority, for the quantum of groundwater so extracted.

(vii) Penalty provision for non-compliance of conditions of Permit/Certificate of Registration/Licence shall be applicable, as per the penalty provisions stipulated by the Puducherry Ground Water (Control and Regulation) Act, 2002.

(viii) Processing fee prescribed, if any, from time to time, shall be charged for various services.

8. General conditions for grant of Permit/Certificate of Registration/Licence.— The grant of Permit/Certificate of Registration/Licence will be subject to adherence to the following conditions:

(i) Installation of water meter and electrical meter of BIS/IS standards in the tubewell/Borewell/Dugwell shall be mandatory for all users except agriculture users, seeking Permit/Certificate of Registration, except for agriculture purpose and drinking/domestic purposes, as follows:

- (a) up to 2000 LPD - analog water flow meter.
- (b) 2001-10,000 LPD - digital water flow meter.
- (c) above 10,000 LPD - digital water flow meter with telemetry system. Intimation regarding their installation shall be communicated to the Puducherry Ground Water Authority within 60 days of grant of Permit/Certificate of Registration and Licence.

(ii) Proponents shall mandatorily get water flow meter and energy meter calibrated from an authorized agency, once in a year.

(iii) Further, if any existing user of groundwater in safe, critical and semi critical Assessment units, (*i.e.*, owner of tube well) meant for commercial, industrial, infrastructure purpose, *etc.*, requires enhancement of groundwater extraction due to expansion, of the project or for any other reason, shall also apply before Puducherry Ground Water Authority and obtain permit for such enhancement.

(iv) The Permit/Certificate of Registration/Licence holders for groundwater usage for commercial and non-agricultural purposes, shall submit monthly report to Puducherry Ground Water Authority in prescribed Form on or before 10th day of succeeding month, as per sub-rule (5) of rule 12 of Puducherry Ground Water (Control and Regulation) Rules, 2003, except agricultural purpose and drinking/ domestic purpose.

(v) Processing fee prescribed, if any, from time to time shall be charged for various services.

(vi) Proponents shall also pay Ground Water Extraction/ Restoration Charges based on quantum of groundwater extraction, as applicable.

(vii) Proponents shall install roof top rain water harvesting and recharge system in the project area.

(viii) Construction of purpose-built observation wells (piezometers) for groundwater level monitoring is mandatory. Monthly water level data shall be made available to Puducherry Ground Water Authority. Detailed guidelines for construction of piezometers are given in Annexure-II.

(ix) Proponents who are extracting more than 1 lakh LPD of water shall monitor quality of groundwater from the extraction structure(s) twice a year. Water samples from bore wells/tube wells/dug wells shall be collected during August/September and during January/ February every year and analyzed in National Accreditation Board for Testing and Calibration of Laboratories [NABL] accredited laboratories/ the laboratories of Puducherry Government, *viz.*, Public Health Laboratory of Public Works Department and Puducherry Water

Resources Organization, *etc.*, for basic parameters (cations and anions), heavy metals, pesticides/organic compounds, *etc.* Water quality data shall be made available to Puducherry Ground Water Authority.

(x) If, the existing well becomes defunct due to mechanical failure, within the validity period of Permit/Certificate of Registration, the user can construct a replacement well, after obtaining necessary prior permit from Puducherry Ground Water Authority. The defunct well shall be properly sealed/closed. The user will be required to submit documentary proof in this regard.

(xi) Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled/treated waste water.

(xii) In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary amendment/in the Permit/Certificate of Registration and Licence with documentary proof within 60 days of taking over possession of the premises/drilling machineries, *etc.*

(xiii) No tubewell shall be sunk for extracting groundwater in Coastal Regulatory Zone (CRZ) *i.e.*, within 500 m distance from the High Tide Line (HTL) since extraction of groundwater in CRZ area is a prohibited activity under CRZ notification 2011.

9. Monitoring of compliance of Permit/Certificate of Registration/Licence Conditions.— To monitor the compliance of Permit/Certificate of Registration/Licence conditions, the Puducherry Ground Water Authority shall take the following steps:

(i) Suitable Management Information System will be developed for compliance monitoring.

(ii) The Member-Secretary, Puducherry Ground Water Authority or person(s) authorized by Puducherry Ground Water Authority/ Government is/are authorized to take enforcement measures like sealing/ closing of unauthorized groundwater extraction structures, disconnection of electricity, launching of prosecution against those violating the Permit/Certificate of Registration/Licence conditions and taking action for imposition of Environmental Compensation.

(iii) Technical Officers of Puducherry Ground Water Authority are authorized to take actions with respect to monitoring and periodical inspections with the approval of Member-Secretary, Puducherry Ground Water Authority.

(iv) In case of violation of any of the Permit/Certificate of Registration/Licence conditions, the proponents shall be liable for penal action under section 20 of Puducherry Ground Water (Control and Regulation) Act, 2002.

10. Validity of Certificate of Registration/Licence.— Certificate of Registration and Licence shall be renewed periodically, subject to the compliance of the conditions mentioned therein:

The validity of Certificate of Registration issued for various purposes are as follows:

(i) One time Registration (*i.e.*, obtaining Certificate of Registration) in case of Agriculture, Drinking and Domestic purposes of residential categories.

(ii) Renewal of Certificate of Registration (*i.e.*, obtaining Certificate of Registration) is necessary for all commercial, infrastructure, industries, *etc.*, once in two years. (valid only up to March 31st of every 2 years).

(iii) Licence for the machineries utilized to sink tubewells and for tanker lorries to transport groundwater are renewable once in a year (valid only up to March 31st of every year).

(iv) The applicant shall apply for renewal of Certificate of Registration/Licence at least 90 days prior to expiry of its validity.

(v) Application for renewal of Certificate of Registration/Licence shall be accompanied by the compliance report.

(vi) Before granting renewal, Puducherry Ground Water Authority shall satisfy itself that the conditions of Certificate of Registration/Licence have been complied with.

(vii) In case of change in category of the assessment unit, construction of a replacement tubewell, renewals would be granted with conditions as laid down for new category.

(viii) If, the application for renewal is submitted in time and if, the Puducherry Ground Water Authority is unable to process the application in time, Certificate of Registration/Licence shall be deemed to be extended till the date of renewal of Certificate of Registration/Licence.

(ix) If, the proponent fails to apply for renewal within 90 days from the date of expiry of Certificate of Registration/Licence, the proponent shall be liable to pay Environmental Compensation for the period starting from the date of expiry of Certificate of Registration/Licence till Certificate of Registration/Licence is renewed by Puducherry Ground Water Authority.

11. Extension of Permit for sinking of tubewells.— 11.1 If, the proponent is unable to sink the tubewell during the validity period of one year Permit for genuine reasons, the proponent will have to apply for Extension of Permit to the Puducherry Ground Water Authority. Application for extension should be supported by documents justifying the reasons for delay. Other conditions for grant of extension of Permit will be the same as that for fresh permit, including the fee.

11.2 Extension of Permit will be granted by Puducherry Ground Water Authority for a maximum period of one year. 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 permit.

12. Delegation of powers against illegal groundwater extraction.— The Member-Secretary of Puducherry Ground Water Authority or any other person(s) who have been delegated power by Puducherry Ground Water Authority or Government to take enforcement measures like sealing/closing of unauthorized groundwater extraction structures, disconnection of electricity, supply to the illegally energized well launching of prosecution against those violating the conditions of Permit/Certificate of Registration and Licence and taking penal action under section 20 of Puducherry Ground Water (Control and Regulation) Act, 2002.

13. Ground Water Level Monitoring.— 13.1 All the project proponents (extracting ground water more than 1,00,000 LPD), except for agriculture purpose have to mandatorily construct Piezometers (observation wells) within their premises for monitoring of the groundwater levels. Such a mechanism of compliance conditions has been made to ensure that, every month the groundwater level in the project area can be monitored and observed.

13.2 All major water consuming industries *i.e.*, industrial units drawing more than 1,00,000 LPD to install Digital Water Level Recorder (DWLR) with telemetry.

13.3. The piezometer shall be located at the maximum distance from the existing pumping tubewell in consultation with State Ground Water Unit and Soil conservation, Department of Agriculture and Farmers Welfare and to ensure that zone of aquifer tapped in the piezometer is the same as that of the pumping well.

14. Environmental Compensation.— 14.1 Extraction of ground water for commercial use by industries and infrastructure units, and other categories without a valid permit/ Certificate of Registration from Puducherry Ground Water Authority shall be considered illegal and such entities shall be liable to pay Environmental Compensation, as applicable, for the quantum of groundwater so extracted. The norms prescribed by Central Pollution Control Board (CPCB) shall be utilized for calculating the Environmental compensation as mentioned below:

$$\text{ECGW} = \text{Ground Water consumption per day} \times \text{Environmental Compensation Rate (ECRGW)} \times \text{No. of days} \times \text{Deterrence factor.}$$

14.2 Where groundwater consumption is in m³/day and ECRGW in Rs./m³

15. Provision of Penalty.— Fine amount and penalties shall be levied as per the Government notification issued under section 20 of Puducherry Ground Water (Control & Regulation) Act, 2002.

16. Other important Conditions (Applicable to all).— (i) Sale of groundwater by a person/agency not having valid Permit/Certificate of Registration/Licence from Puducherry Ground Water Authority is not permitted.

(ii) Non-compliance of conditions mentioned in the Permit/Certificate of Registration/Licence may be taken as sufficient reason for cancellation of Permit/Certificate of Registration/Licence accorded/non-renewal of Permit/Certificate of Registration/Licence.

(iii) In infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/recharge.

(iv) No application shall be entertained without supporting documents as specified in relevant sections.

(v) Extraction structure(s) should be located inside the premises of project property/proponent.

(vi) Self compliance of conditions laid down in the Permit/Certificate of Registration/Licence shall be reported by the users to Puducherry Ground Water Authority within one month from the date of obtaining the Permit/Certificate of Registration.

(vii) Processing fee prescribed, if any, from time to time shall be charged for various services.

(viii) 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 to Puducherry Ground Water Authority.

(ix) Guidelines are subject to modification from time to time.

17. Powers to relax.— Provision/Norms notified in the guidelines issued under the notification are relaxable with the approval of the Government.

(By order of the Lieutenant-Governor)

SUNDARARAJAN. P.,
Deputy Secretary to Government
(Agriculture).

ANNEXURE-I

Estimation of Water Requirements for Drinking and Domestic Use**(Source: National Building Code 2016, BIS)***(a) Residential Buildings:*

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

Note:

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 of per capita per day may be considered for domestic and non-domestic needs:

(a) For communities with population up to 20,000:

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

(b) For communities with Population 20,000 . . . 100 to 135 Lpcd to 1,00,000 together with full flushing system.

(c) For communities with population above . . . 150 to 200 Lpcd 1,00,000 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.

Water Requirements for Buildings Other than Residences

Sl. No.	Type of Building	Domestic Lpcd	Flushing Lpcd	Total consumption Lpcd
(1)	(2)	(3)	(4)	(5)
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	Nurse's homes and medical quarters.	90	45	135

(1)	(2)	(3)	(4)	(5)
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	15	70
		per seat	per seat	per seat
	(b) Food Court	25	10	35
		per seat	per seat	per seat
10	Club house	25	20	45
11	Stadiums	4	6	10
12	Cinemas, concert halls and theatres and multiplex.	5	10	15
		per seat	per seat	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

(1)	(2)	(3)	(4)	(5)
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 Terminal/ Metro Stations.	10	5	15

Note:

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:

(a) The piezometer is to be installed/constructed at the maximum distance available from the existing pumping well through which groundwater is being withdrawn, in consultation with State Ground Water Unit and Soil Conservation, Department of Agriculture and Farmers Welfare. The diameter of the piezometer should be about four inches to six inches.

(b) The depth of the piezometer should be such that it taps the same aquifer/assessment unit as that of the pumping well from which groundwater is being extracted. 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.

(c) 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.

(d) The groundwater quality has to be monitored once in a year during pre-monsoon (April/May) period by industries. Samples of groundwater should be analyzed from NABL accredited laboratory/ Government approved laboratories, the laboratories of Government of Puducherry, *viz.*, Public Health Laboratory of Public Works Department and Puducherry Water Resources Organization, *etc.*

(e) A permanent display board should be installed at Piezometer/Tubewell site for providing the coordinates of the location, piezometer/tubewell number, depth and zone tapped of piezometer/tubewell for standard referencing and identification.

(f) 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

(a) It has been observed that groundwater 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 groundwater 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.

(b) No tubewell/borewell/dugwell should be constructed in the vicinity of the processing unit. Tubewell/borewell should be constructed at the place which is hygienically maintained.

(i) Only mild steel pipe should be used for assembly/casing and PVC (Poly Vinyl Chloride) or similar pipes should not be used. The tubewell/borewell having PVC or similar pipes should be abandoned and filled back.

(ii) Around the tubewell/ borewell, RCC (Reinforced Concrete Cement) grouting of 3 metres (length) x 3 metres (width) x 2 metres (depth) must be provided. The pipe of the tubewell/ borewell must be raised 1 metre above ground level (1 magl). The tubewell/ borewell must be surrounded by RCC wall of 0.5 metre height and 1.5 metre depth to prevent any surface contamination entering the constructed tubewell/ borewell. Plan/Sectional diagram is enclosed for reference (Appendix-1 and 2).

(iii) The tubewell/borewell must be fitted with NRV (Non Return Valve) in order to ensure that the constructed tubewell/borewell is exclusively used for extraction of groundwater only.

(iv) At no point of time there should be any injection of any water or fluid into the constructed tubewell/borewell/piezometer.

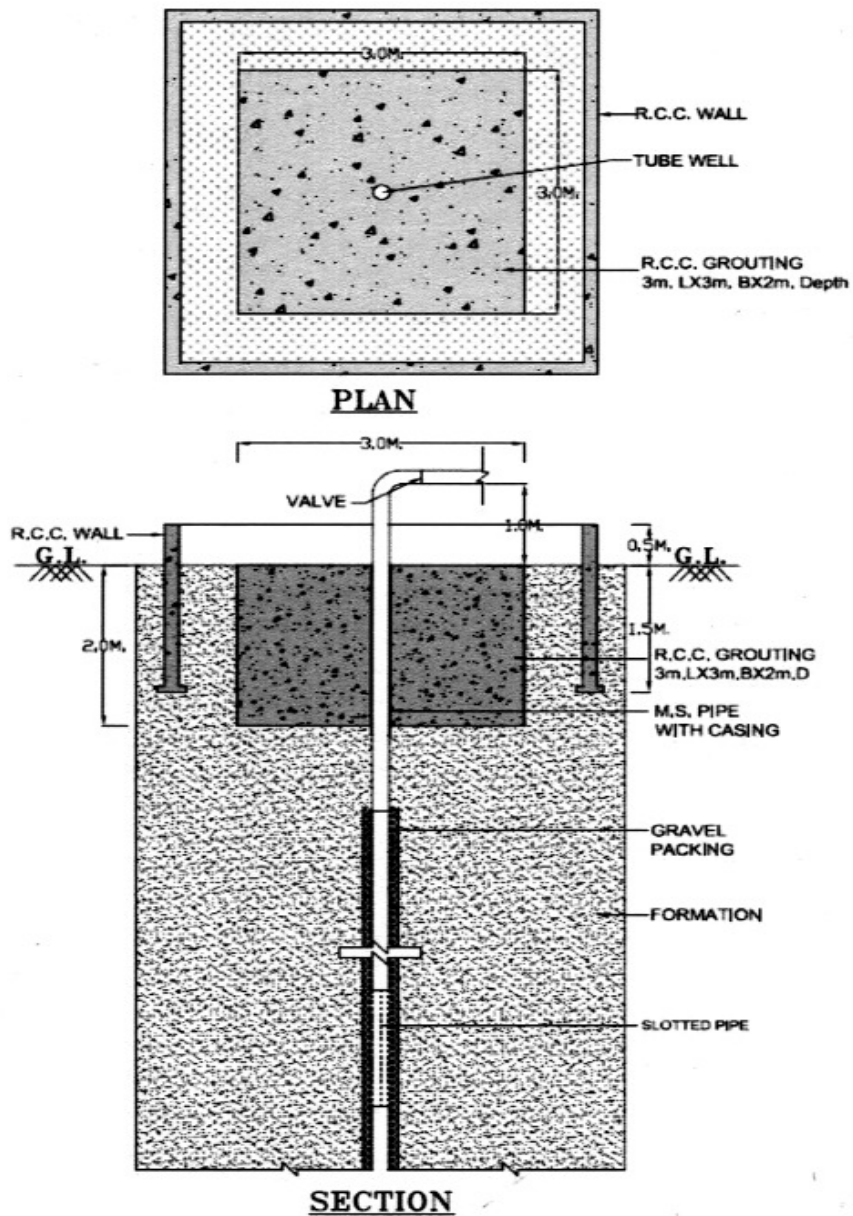
(v) The industries/projects under this category should not implement any recharge measures within the plant premises.

(vi) Any tubewell/borewell located/constructed in the vicinity of STP (Sewage Treatment Plant) or ETP (Effluent Treatment Plant) should be abandoned and filled back.

(vii) The piezometer to be constructed for monitoring purpose should follow the same procedure as that for tubewell/borewell for such industries/projects.

APPENDIX-1

Plan/Sectional diagram showing well head protection



ANNEXURE-IV

Impact Assessment Report**(Outline of hydrogeological Report for obtaining No Objection Certificate for industries)**

- (a) Brief about the proposed project giving location details, coordinates, Google/Topo sheet maps, *etc.*, demarcating the project area.
- (b) Groundwater 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, groundwater conditions in both core and buffer zone should be described.
- (c) 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.* Location of proposed production and groundwater level monitoring piezometer to be marked on the site plan.
- (d) Details of hydrogeological conditions in and around the project area. Groundwater resources computation of the block in which the project falls.
- (e) Detailed dewatering plan of infrastructure dewatering projects.
- (f) Proposed usage of pumped water in infrastructure dewatering projects.
- (g) Comprehensive assessment of the impact on the groundwater regime in and around the project area, highlighting the risks and proposed management strategies proposed to overcome any significant environmental issues if any.
- (h) Proposed measures for disposal of waste water by industries drawing saline water.
- (i) 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 groundwater.
 - Total water balance chart showing the usage of water for various processes.
- (j) Any other detail pertaining to the project.

ANNEXURE-V

Indicative list of Infrastructure Projects

- (a) Residential townships including commercial buildings
- (b) Office buildings/Residential buildings
- (c) Schools
- (d) Colleges
- (e) Universities
- (f) Special Economic Zones
- (g) Metro Stations
- (h) Railway Stations
- (i) Bus Depots
- (j) Airports
- (k) Seaports
- (l) Highway infrastructure
- (m) Fire Stations
- (n) Warehouses
- (o) Business plazas
- (p) Malls and Multiplex
- (q) Hospitals

- (r) Nursing Homes
- (s) Resorts
- (t) Hotels/Restaurants/Food Plazas
- (u) Banquet Hall/Marriage Gardens
- (v) IT Complex
- (w) Logistics and Cargo premises
- (x) Clubs
- (y) Trade Centers

ANNEXURE-VI

Annual water audits by the Commercial Entities/Industries (Source-CII)

(a) 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.

(b) Water audit involves preliminary water survey and detailed water audit. Preliminary water survey is conducted to collect the 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 to be conducted, which involves the following steps:

- (i) On site training and discussion with facility Manager and Personnel.
- (ii) Water system analysis
- (iii) Quantification of baseline water map
- (iv) Monitoring and measurements using pressure and flow meters and various other devices.
- (v) Quantification of inefficiencies and leaks

- (vi) Quantification of water quality loads and discharges
- (vii) Quantification of variability in flows and quality parameters
- (viii) Strategies for water treatment and reuse or direct use

(c) 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:

- (i) Water consumption and waste water generation pattern
- (ii) Specific water use and conservation
- (iii) Complete water balance of the facility
- (iv) Water saving opportunities
- (v) Method of implementing the proposals
- (vi) Full description and figures
- (vii) Investment required

(d) Industries can undertake following measures for water conservation:

- (i) Setting up of norms for water budgeting
- (ii) Modernization of industrial process to reduce water consumption.
- (iii) Recycling water with a recirculating cooling system
- (iv) Ozonation cooling water approach which can result in fivefold reduction in blow down when compared to traditional chemical treatment.
- (v) Reduction in reuse of deionized water by eliminating some plenum flushes, converting from a continuous flow to an intermittent flow system and improving control on the use.
- (vi) Use of waste water for gardening
- (vii) Proper processing of effluents to adhere to the norms of disposal.

ANNEXURE-VII

Documents to be submitted with the Form-I application seeking permit to sink tubewells for drinking and domestic use of Residential Apartments/Group Housing Societies

(a) Details of water requirement computed as per National Building Code, 2016 (Annexure-I), taking into account recycling/reuse of treated water for flushing, *etc.*

(b) Affidavit in non-judicial stamp paper of ₹ 10 by the applicant, confirming non/inadequate availability of public water supply, in case of users requiring groundwater up to 20,000 LPD for drinking/domestic use.

(c) Certificate of non-availability of water from Local Government water supply agencies in cases requiring groundwater in excess of 20,000 LPD for drinking/domestic use. Government water supply agencies applying for permit, shall submit copy of Government approval of the project proposed to be implemented.

(d) Ground water quality data of existing borewell/tubewell/dugwell from any National Accreditation Board for Testing and Calibration of Laboratories (NABL) accredited laboratory or laboratory of Puducherry Government, *viz.*, Public Health Laboratory of Public Works Department and Puducherry Water Resources Organization, *etc.*

(e) Proposal for rain water harvesting/recharge within the premises as per Model Building Bye Laws issued by Ministry of Housing and Urban Affairs and as per Bye Laws issued by the Planning Authorities of Puducherry, Karaikal, Mahe and Yanam.

ANNEXURE-VIII

Documents to be submitted with the applications for permit to sink tubewells for industrial use

(a) An affidavit in non-judicial stamp paper of ₹ 10 by the proponent regarding non-availability of water supply from Local Government agencies in cases where groundwater requirement is up to 10,000 LPD.

(b) Water quantity requirement letter/water consent obtained from the Department of Industries or Puducherry Pollution Control Committee to be furnished (for new and for enhancement in groundwater extraction).

(c) 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 10,000 LPD.

(d) Ground water quality data of existing borewell/tubewell/dugwell from any NABL accredited laboratory or Government approved laboratory of the laboratories of Government of Puducherry, viz., Public Health Laboratory of Public Works Department and Puducherry Water Resources Organization (in case of projects applying for Permit).

(e) Water quality data of borewell/tubewell/dugwell in respect of all industries from NABL accredited laboratories/Government approved laboratories, the laboratories of Government of Puducherry, viz., Public Health Laboratory of Public Works Department and Puducherry Water Resources Organization, etc.

(f) Proposal for rain water harvesting/ recharge within the premises as per Model Building Bye Laws issued by Ministry of Housing and Urban Affairs and as well as Model Building Bye Laws issued by the Planning Authorities of Puducherry, Karaikal, Mahe and Yanam.

(g) **Impact Assessment report** : All projects extracting/proposing to extract groundwater in excess of 1,00,000 LPD in over-exploited, critical and semi-critical areas shall have to mandatorily submit impact assessment report of existing/proposed groundwater withdrawal on the groundwater regime and also socio-economic impacts report prepared by accredited consultants, as per Annexure-IV.

ANNEXURE-IX

Documents to be submitted with the application seeking permit for sinking tubewells for Infrastructure projects

(a) In cases, where dewatering is involved, submission of impact assessment report prepared by an accredited consultant on the groundwater situation in the area, giving detailed plan of pumping, proposed usage of pumped water and comprehensive impact assessment of the same on the groundwater regime, shall be mandatory. The report should highlight environmental risks and proposed management strategies to overcome any significant environmental issues such as groundwater level decline, land subsidence, etc.

(b) An affidavit on non-judicial stamp paper of ₹ 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 kms. radius of the site, in 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 the Puducherry Planning Authority.

(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 obtained from the Planning Authorities of Puducherry, Karaikal, Mahe and Yanam for infrastructure projects requiring water for commercial use.

ANNEXURE-X

Documents to be submitted with the application

(a) Proof of ownership of land of size 200 m² or more in which extraction structure is installed.

(b) Proof of Ownership/Lease of tanker.

(c) Ground water quality report.

(d) Proof for authorized existence of the legal tubewell.

ANNEXURE-XI

Glossary of technical terms used

01. ***Aquifer*** : Geological formation capable of storing and transmitting groundwater.

02. ***Authorized agency*** : Authorized Agency mean, the firm which supplies and installs the water meter, telemetry system.

03. **BCM** : Billion Cubic Meters.

04. **BGL** : Below Ground Level.

05. **Bulk Water Suppliers** : Supply of groundwater in bulk quantity to the needy sector/units from the authorized tubewells by the transporters through tanker lorries possessing valid licence obtained from Puducherry Ground Water Authority.

06. **Co-operative Group Housing Societies/Builder Flats** : A Housing Society is a Society formed by homeowners within a residential complex. The housing Society formed must be formally registered with Registrar of Co-operatives.

07. **Commercial Use** : Groundwater utilized by infrastructure projects such as Hotels, Restaurants, Malls, Residential Apartments, Marriage Halls, Educational Institutions and Hospitals, *etc.*

08. **Coastal Regulatory Zone** : Coastal land up to 500 m from the High Tide Line (HTL) and stage of 100 m along banks of creeks, estuaries, back water and rivers subject to tidal fluctuations.

09. **Critical Area** : Area categorized as CRITICAL from the groundwater resources point of view, based on the latest groundwater resources assessments carried out jointly by Central Ground Water Board and State Ground Water Organizations. Details available on the websites of No Objection Certificate Application Portal (NOCAP) and Central Ground Water Board.

10. **Deeper Aquifer** : In areas having multiple aquifer system, the aquifer(s) occurring below the uppermost aquifer.

11. **Disaster and Natural Calamities** : A natural disaster is a major adverse event resulting from natural process of the earth examples include firestorms, dust storms, floods, hurricanes, earthquakes and other geological process. Natural calamity is an event that brings terrible loss, lasting distress or severe affliction.

12. **Drinking and Domestic use** : Besides drinking and 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 and Multiplexes, Institutions, Offices, Banquet Halls, Fire Stations, Metro Stations, Railway Stations, Air ports, Sea ports and Stadia, *etc.*

13. **ECGW** : Environmental Compensation for drawing illegal groundwater.

14. **ECGWR** : Environmental Compensation Rates for drawing illegal groundwater.

15. **Extraction Charges** : Charges collected for groundwater usage in critical, semi-critical and surplus category areas.

16. **Government** means, the Administrator of the Union territory of Puducherry appointed by the President under Article 239 of the Constitution.

17. **Government Agency** : May be Central or State Government Body or Department.

18. **Government Department** : Department under Government of Puducherry.

19. **Ground water** : 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.

20. **Ground water Draft** : Quantum of groundwater withdrawal.

21. **Groundwater Extraction Structure** : Structure used to withdraw groundwater like borewell/tubewell/dugwell/dug-cum-borewell/tunnelwell.

22. **Groundwater Pollution** : If, concentration of any parameter in groundwater exceeds the maximum permissible limit for drinking water prescribed by the Bureau of Indian Standards.

23. **High Water Consuming Industries** : Industries which consumes groundwater more than 10,000 LPD.

24. **Illegal Ground water extraction structure** : Any energized extraction structure, viz., dugwell, tubewell, borewell which is being used to withdraw groundwater without valid permit from Puducherry Ground Water Authority.

25. **Industrial Use** : Groundwater utilized for various manufacturing process by industries.

26. **Infrastructure Projects** : The units consuming groundwater such as Hotels, Restaurants, Malls, Residential Apartments, Marriage Halls, Educational Institutions and Hospitals, *etc.*

27. **KLD** : Kilo litre per day.

28. **LPD** : Litre per day.

29. **LPCD** : Litre per capita per day.

30. **Major Water consuming industry** : Industries which consume more than 1,00,000 LPD of water.

31. **MAGL** : Meter above Ground Level.

32. **Mine** : Area where mining activity is taking place or area abandoned after mining.

33. **Mining Project** : Project which involves mining activity either open cast or under ground or both.

34. **MIS** : Management Information System is the portal for its usage (website).

35. **Municipality** : Municipality, a Municipal Corporation or similar Body of local urban governance by any other name.

36. **NABL** : National Accreditation Board for Testing and Calibration Laboratories.

37. **NOCAP** : Application for issue of NOC to abstract groundwater.

38. **Observation well or Piezometer** : A borewell/tubewell used only for measuring the water level/piezometric head and to take water samples periodically but, not used for groundwater extraction.

39. **Over-exploited Area** : Area categorized as over-exploited from the groundwater resources point of view, based on the latest groundwater resources assessment carried out jointly by Central Ground Water Board and State Ground Water Organizations. Details available on the websites of NOCAP and Central Ground Water Board.

40. **Project Proponent** : The persons responsible/in-charge for carrying out project and has the legal right to do so.

41. **Rain water Harvesting** : The technique or system of collection and storage of rain water, at micro watershed scale, including roof-top harvesting, for future use or for recharge of groundwater.

42. **Recycle/Reuse** : Using treated waste water for various purposes/putting water to multiple uses.

43. **Restoration Charges** : Charges collected for groundwater usage in over exploited category areas.

44. **Safe Area** : Area categorized as safe from the groundwater resources point of view, based on the latest groundwater resources assessment carried out jointly by Central Ground Water Board and State Ground Water Organizations. Details available on the websites of NOCAP and Central Ground Water Board.

45. **Saline Water** : Water having salinity in excess of 2500 μ siemens/cm at 25°C.

46. **Semi-critical Area** : Area categorized as semi-critical from the groundwater resources point of view, based on the latest groundwater resources assessment carried out jointly by Central Ground Water Board and State Ground Water Organizations. Details available on the websites of NOCAP and Central Ground Water Board.

47. **Supplier** : Government/Government approved Water Supply Agency.

48. **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.

49. **Water Table Intersection** : Intersection of the water table on excavation of the overlying material due to mining or other activities.

50. **Well** : Any structure used for the extraction of groundwater, including open wells, dug wells, borewells, dug-cum-borewells, tubewells, filter points, collector wells, infiltration galleries, recharge wells, or any of their combinations or variations.

ANNEXURE-XII

Annual water audits by the industries (source-CII)

(a) 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.

(b) 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;

- (i) On site training and discussion with Facility Manger and Personnel.
- (ii) Water system analysis
- (iii) Quantification of baseline water map
- (iv) Monitoring and measurements using pressure and flow meters and various other devices.
- (v) Quantification of inefficiencies and leaks
- (vi) Quantification of water quality loads and discharges
- (vii) Quantification of variability in flows and quality parameters
- (viii) Strategies for water treatment and reuse or direct use

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

- (i) Water consumption and wastewater generation pattern
- (ii) Specific water use and conservation
- (iii) Complete water balance of the facility
- (iv) Water saving opportunities

- (v) Method of implementing the proposals
- (vi) Full description and figures
- (vii) Investment required

(d) Industries can undertake following measures for water conservation;

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

FORM-I

[See rule 11 (1)]

APPLICATION FOR GRANT OF PERMIT TO SINK A WELL

1. In-case of individual/firm/company

- (i) Name of the applicant :
- (ii) Age in years :
- (iii) Father's/Husband's name :
- (iv) Full address :
- (v) Telephone No. :

2. Location

- (i) R.S.No. :
- (ii) Name of the Revenue Village :
- (iii) Name of the Commune :

3. Whether required for a new well or replacement well

(i) If, required for new well -

- (a) Distance from the Sea Coast :
- (b) Distance from nearest tubewell :
- (c) Purpose :
- (d) Well details : Dugwell/Dug-cum-borewell/
Tubewell
 - Type :
 - Diameter :
 - Depth :

(ii) If, required for replacement well

(a) Details of existing well -

- Diameter :
- Depth :
- Power policy No. :
- Actual discharge :
- Type of the pump :
- Horse power :
- Year of construction :

- Registration No. of Ground -
- Water Authority with :
date
- Present condition :
- (b) Reason for replacement :
4. If, required for Commercial/ :
Infrastructure/Educational
Institutions/domestic purpose.
- (i) Total number of persons :
(ii) Total water requirement per :
day in litres.
5. If, required for industrial purpose -
- (i) Type of industry :
(ii) No. of persons engaged :
(iii) Water required for industrial : Process/Washing/Cooling/
purpose. Boiler Domestic and
Sanitary/Gardening.
6. If, the applicant is not the land :
owner, whether the consent of
the land owner is obtained.
(photocopy to be enclosed)

DECLARATION

I, do hereby solemnly affirm and state that the information given in the above application is true and correct to the best of my knowledge and belief.

I further, declare that I am making this application in my capacity as and that I am competent and authorised to make this application and to verify it.

Place :

Signature of the applicant

Date :

Note:

1. Incomplete application is liable to be rejected
2. The consent of the owner of the land (if such owner is not the applicant) should invariably accompany the application.
3. Permit will be issued on approval by competent authority within 60 days from the date of receipt of application on payment of the prescribed fee.
4. Separate permit should be obtained for each well.

FORM-IV

[See rule 12 (1)]

**APPLICATION FOR GRANT OF CERTIFICATE OF
REGISTRATION OF EXISTING USER OF GROUND WATER**

1. In case of individual/firm/company
 - (i) Name of the applicant :
 - (ii) Age in years :
 - (iii) Father's/Husband's name :
 - (iv) Full address :
 - (v) Telephone No. :
2. Location
 - (i) R.S.No. :
 - (ii) Name of the Revenue Village :
 - (iii) Name of the Commune :
3. Details of the existing well
 - (i) Type of the well : Dugwell/Dug-cum-borewell/
Tubewell.
 - (ii) Diameter :
 - (iii) Depth :

-
- (iv) Power policy No. :
- (v) Actual discharge :
- (vi) Type of the pump :
- (vii) Horse power :
- (viii) No. of hours operated per day. :
- (ix) Year of construction :
4. Permit No. issued by Ground water Authority with date, if any :
5. Purpose for which used : Agriculture/Domestic/Industrial/Transport
6. If, used for agriculture purpose -
- (i) Status of the farmer : Marginal farmer/Small farmer/Big farmer
- (ii) Total extent of land owned :
- (iii) Extent of land irrigated :
- (iv) Type of crop :
7. If, used for Commercial/Infrastructure/Educational Institutions/Domestic purpose -
- (i) Total number of persons :
- (ii) Quantity of water pumped per day. :
8. If, used for industrial purpose-
- (i) Type of industry :
- (ii) No. of persons engaged :
- (iii) Quantity of water used for Industrial purpose. : Process Washing Cooling/Boiler Domestic and Sanitary/Gardening.

9. If, water is to be used by transportation -
- (i) Purpose :
 - (ii) By whom transported :
 - (iii) From where transported :
 - (iv) Mode of transport :
 - (v) Registration No. of the transport vehicle :
 - (vi) Whether consent of the owner of the source obtained (photocopy to be enclosed) :
10. If, the applicant is not the land owner, whether the consent of the land owner is obtained (photocopy to be enclosed) :

DECLARATION

I, do hereby solemnly affirm and state that the information given in the above application is true and correct to the best of my knowledge and belief.

I further, declare that I am making this application in my capacity as and that I am competent and authorised to make this application and to verify it.

Place : *Signature of the applicant*

Date :

Note:

1. Incomplete application is liable to be rejected
2. The consent of the owner of the land/source of water (if, such owner is not the applicant) should invariably accompany the application.
3. Certificate will be issued on approval by competent authority within 60 days from the date of receipt of application on payment of the prescribed fee.
4. Separate certificate of registration should be obtained for each well.

FORM-VII (B)

[See rule 12(5)]

REGISTER OF GROUND WATER USER BY TRANSPORTATION

Name of the user : Purpose :

Address : Certificate of Registration No. :

Permitted quantity :

Sl. No.	Date	Name and address of the licensee	Licence No.	Quantity Transported			Mode of transport		Bill No. and date	Amount paid	Remarks
				Qty Trip	No. of trips	Total Qty.	Type of vehicle	Regn. No.			
₹											

DECLARATION

I, do hereby solemnly affirm and state that the information given above is true and correct to the best of my knowledge and belief, and I further declare that I am making this report in my capacity as and I am competent and authorized to make this report and to verify it.

Place :

Signature of the user.

Date :

FORM-VIII (B)

[See rule 12(5)]

**MONTHLY REPORT ON GROUND WATER CONSUMPTION BY
TRANSPORTATION****FOR THE MONTH OF**

Name of the user : Purpose :

Address : Certificate of Registration No. :

Permitted quantity :

Sl. No.	Date	Name and address of the licensee	Licence No.	Quantity Transported			Mode of transport		Bill No. and date	Amount paid	Remarks
				Qty Trip	No. of trips	Total Qty.	Type of vehicle	Regn. No.			
₹											

DECLARATION

I, do hereby solemnly affirm and state that the information given above is true and correct to the best of my knowledge and belief and I further declare that I am making this report in my capacity as and I am competent and authorized to make this report and to verify it.

Place :

Signature of the user.

Date :

FORM- IX

[See rule 13(1)]

**APPLICATION FOR GRANT OF LICENCE FOR SINKING OF
WELLS FOR EXTRACTION /TRANSPORT OF GROUND WATER**

1. In case of individual--.

- (a) Name of the applicant :
- (b) Age in years :
- (c) Father's/Husband's name :
- (d) Full address :
- (e) Telephone No. :

In case of firm/company--.

- (a) Name of the company :
- (b) Name of the owner :
- (c) Address of the company :
- (d) Telephone No. :

2. Purpose of licence : Sinking of well/Transport of ground water

3. Nature of licence : New/Renewal

4. If renewal, existing licence No. :
with date.

5. If, for sinking of wells-.

(a) Details of machinery and Equipments : Make Year of Regn. Total purchase No. Nos.

(i) Drilling rig

(ii) Hand boreset

(iii) Air-compressor

- (iv) Electrical logger
 - (v) Lorry
 - (vi) Tractor
 - (vii) Others
- (b) No. of person employed :
with their grades.
- (c) No. of borewells constructed :
so far (approximately).
6. If for transport of ground water :-
- (i) Purpose :
 - (ii) To and from where to be :
transported
 - (iii) Mode of transport :
 - (iv) Registration No. of the :
transport vehicle
 - (v) Quantity of water to be :
transported per trip.
 - (vi) No. of trips per day :

DECLARATION

I, do hereby solemnly affirm and state that the information given in the above application is true and correct to the best of my knowledge and belief.

I further declare that I am making this application in my capacity as and that I am competent and authorized to make this application and to verify it.

Place :

Signature of the applicant

Date :

Note:

- (1) Incomplete application is liable to be rejected.
- (2) The consent of the owner of the company (if, such owner is not the applicant) should invariably accompany the application.
- (3) Licence will be issued on approval by competent authority within 60 days from the date of receipt of application on payment of the prescribed fee.

(By order of the Lieutenant-Governor)

SUNDARARAJAN. P.,
Deputy Secretary to Government (Agriculture).

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