

These are the draft regulations of the amended BWSSB Act, under which the Rain Water Harvesting Practice is made mandatory for the existing and upcoming buildings in Bangalore.

BWSSB is making an appeal to public of Bangalore to give their suggestions for these draft regulations before issuing the final Govt order in this regard. The suggestions should reach on or before 1-Oct-2009 to the Chairman, BWSSB I flr, Cauvery Bhavan, K.G.Road, Bangalore-560009, e-mail:chairman@ bwssb.org

The Bangalore Rain Water Harvesting Regulations,2009

1. Short title and commencement: (1) These Regulations shall be called Bangalore Rain Water Harvesting Regulations, 2009.

(2) They shall come in to force from ----day of ----- 2009.

2. Definitions: In these Regulations, unless **there is something repugnant in the subject or context:**

- i) **“Board”** means the Bangalore Water Supply and Sewerage Board.
- ii) **“ Bore Well”** means Well drilled in the hard rock formation for extraction of ground water
- iii) **“Buildings”** means All types of structures constructed by various agencies
- iv) **“Disinfection”** means removing the bacteriological contamination
- v) **“Expert”** means the subject matter specialist
- vi) **“ Filter ”** means fine mesh or graded material used for filtering the unwanted materials from the water.
- vii) **“Ground water”** means the water available below the ground in the zone of saturation
- viii) **“Ground Water Recharge”** means the water put below the ground to charge ground water body by artificial means.
- ix) **“Non potable water”** means the water used for garden, washing,

flushing or any other secondary purposes.

- x) **“Open Well ”** means well constructed for extraction of ground water
- xi) **“Rain Water Harvesting”** means the technique of collection, storage for future use of rain water.
- xii) **“Regulations”** means Regulations made by the Board

3. RAIN WATER HARVESTING SCHEME IMPLEMENTATION:

On or after the commencement of the Bangalore water supply and sewerage (Amendment) Act 2009 every owner or occupier who has constructed building in the site area 2400 square feet and above whether for residential/non residential/Government/commercial and any other purposes shall provide rain water harvesting structures within nine months from the date of commencement of the amendment Act 2009, in the following manner

- i. Roof based rainwater shall be harvested through a storage tank or recharged through an open well or a bore well in the building irrespective of the nature of sub-soil conditions.
- ii. Land based rain water from the open spaces around the buildings/ gardens parks shall be harvested using appropriate ground water recharge structures depending on the nature of the sub-soil conditions.

4. Roof based Rain Water Harvesting:

(a) Collection through Tanks/Storage Structures

Rain water from the roof of the buildings such as tiled/slope roof and flat/RCC roof may be collected using appropriate size of gutters or pipe lines respectively and stored either in a collection tank or storage structure of appropriate size placed over the ground or underground after proper filtering and disinfection. Appropriate filter shall be used for filtering rain water. The water shall be used for non potable purpose. However the rain water to be treated to IS 10500 standards before using for potable purpose by owner/occupier. The surplus water available after filling the storage tank/sump may be diverted to the open well or bore well or recharge pits.

(b) Recharging ground water through open well:

As mentioned above, the rain water collected from the roof tops of both tiled/sloped roof and flat/RCC roofs using gutters or pipe lines shall be diverted to the open well through a filter. Appropriate disinfection methods shall be practised before using for artificial recharge to ground water. Contaminated water should not be used as source of water for recharging the bore well.

(c) Recharging ground water through Bore well:

As mentioned above, the rain water collected from the roof tops of both tiled/sloped roof and flat/RCC roofs using gutters or pipe lines shall be a filtered through proper filter, stored and stabilized in a sedimentation tank before recharging into bore well. Expert advice may be obtained before recharging the bore well. Adequate by pass or safety arrangements shall be provided in the system.

(d) Design criteria

While designing the capacity of the storage structure for the Roof top Rain Water Harvesting or for design of artificial recharge structures to ground water a provision of 20 ltrs or more per sq.mtr of the roof area shall be adopted.

5. Harvesting Land based Rain Water:

a) Apart from the roof-top water, the rain water available in the open spaces around the buildings and in premises the rain water may be harvested and recharged into the ground water using appropriate ground water recharge structure depending on the nature of the sub-soil conditions

b) While designing the capacity of storage structure or for design of artificial recharge structure a provision of 10 ltrs or more per sq.mtr of the land surface shall be adopted.

6. On or after the commencement of the Bangalore water supply and sewerage (Amendment) Act 2009 every owner or occupier who constructs building in the site area 1200 square feet and above whether for residential/non residential/Government/commercial and other purposes shall provide rain water harvesting structures with immediate effect from the date of commencement of the amendment Act 2009)

- i. Roof based rainwater shall be harvested through a storage tank or recharged through an open well or a bore well in the building irrespective of the nature of sub-soil conditions.
- ii. Land based rain water from the open spaces around the buildings/ gardens parks shall be harvested using appropriate ground water recharge structures depending on the nature of the sub-soil conditions.

7. Roof based Rain Water Harvesting:

(a) Collection through Tanks/Storage Structures

Rain water from the roof of the buildings such as tiled/slope roof and flat/RCC roof may be collected using appropriate size of gutters or pipe lines respectively and stored either in a collection tank or storage structure of appropriate size placed over the ground or underground after proper filtering and disinfection. Appropriate filter shall be used for filtering rain water. The water shall be used for non potable purpose. However the rain water to be treated to IS 10500 standards before using for potable purpose by owner/occupier. The surplus water available after filling the storage tank/sump may be diverted to the open well or bore well or recharge pits.

(b) Recharging ground water through open well:

As mentioned above, the rain water collected from the roof tops of both tiled/sloped roof and flat/RCC roofs using gutters or pipe lines shall be diverted to the open well through a filter. Appropriate disinfection methods shall be practised before using for artificial recharge to ground water. Contaminated water should not be used as source of water for recharging the bore well.

(c) Recharging ground water through Bore well:

As mentioned above, the rain water collected from the roof tops of both tiled/sloped roof and flat/RCC roofs using gutters or pipe lines shall be a filtered through proper filter, stored and stabilized in a tank before recharging into bore well. Expert advice may be obtained before recharging the bore well. Adequate by pass or safety arrangements shall be provided in the system.

(d) Design criteria

While designing the capacity of the storage structure for the Roof top Rain Water Harvesting or for design of artificial recharge structures to ground water a provision of 20 ltrs or more per sq.mtr of the roof area shall be adopted..

8. Harvesting Land based Rain Water:

Apart from the roof-top water, the rain water available in the open spaces around the buildings and in premises the rain water may be harvested and recharged into the ground water using appropriate ground water recharge structure depending on the nature of the sub-soil conditions

While designing the capacity of storage structure or for design of artificial recharge structure a provision of 10 ltrs or more per sq.mtr of the land surface shall be adopted.