

RAIN WATER HARVESTING

- a) All the layout open spaces / amenity spaces of housing societies and new constructions/ reconstructions / additions on plots having area not less 300 sq.mt. in non gaothan areas of all towns shall have one or more Rain Water Harvesting structures having a minimum total capacity as detailed in **schedule.**

Provide that the Authority may approve the Rain Water Harvesting Structures of specifications different from those in schedule, subject to the minimum capacity of Rain Water Harvesting being ensured in each case.

- b) The owner / society of every building mentioned in the (a) above shall ensure that the Rain Water Harvesting structure is maintained in good repair for storage of water for non potable purposes or recharge of groundwater at all times.
- c) The Authority may impose a levy of not exceeding Rs. 1000/- per annum for every 100 Sq.mt. of built up area for the failure of the owner of any building mentioned in the (a) above to provide or to maintain Rain Water Harvesting structures as required under these byelaws.

SCHEDULE

RAIN WATER HARVESTING

Rain Water Harvesting in a building site includes storage or recharging into ground of rain water falling on the terrace or on any paved or unpaved surface within the building site.

1. The following systems may be adopted for harvesting the rain water drawn from terrace and the paved surface.
 - 1) **Open well** of a minimum of 1.00 mt. Dia and 6 mt. In depth into which rain water may be channeled and allowed after filtration for removing silt and floating material. The well shall

be provided with ventilation covers. The water from the open well may be used for non potable domestic purposes such as washing, flushing and for watering the garden etc.

- 2) Rain Water Harvesting for recharge of ground water may be done through a bore well around which a pit of one meter width may be excavated up to a depth of at least 3.00 mt. And refilled with stone aggregate and sand. The filtered rain water may be channeled to the refilled pit for recharging the borewell.
- 3) An impervious surface / underground storage tank of required capacity may be constructed in the setback or other open space and the rain water may be channeled to the storage tank. The storage tank shall always be provided with ventilating covers and shall have draw-off- taps suitably placed so that the rain water may be drawn off for domestic, washing gardening and such other purposes. The storage tanks shall be provided with an overflow.
- 4) The surplus rain water after storage may be recharged into ground through percolation pits or trenches or combination of pits and trenches. Depending on the geomorphological and topographical condition, the pits may be of the size of 1.20 mt. Width X 1.20 mt. Length X 2.00 mt to 2.50 mt. Depth. The trenches can be or 0.60 mt. Width X 2.00 to 6.00 mt. length X 1.50 to 2.00 mt. depth. Terrace water shall be channeled to pits or trenches. Such pits or trenches shall be back filled with filter media comprising the following materials.
 - a) 40 mm stone aggregate as bottom layer upto 50% of the depth;
 - b) 20 mm stone aggregate as lower middle layer upto 20% of the depth;
 - c) Coarse sand as upper middle layer upto 20% of the depth;
 - d) A thin layer of fine sand as top layer;

- e) Top 10% of the pits/trenches will be empty and a splash is to be provided in this portion in such a way that roof top water falls on the splash pad.
 - f) Brick masonry wall below ground shall be such that the wall prevents loose soil entering into pits / trenches. The projection of the wall above ground shall at least be 15 cms.
 - g) Perforated concrete slabs shall be provided on the pits / trenches.
- (V) If the open space surrounding the building is not paved, the top layer upto a sufficient depth shall be removed and refilled with coarse sand to allow percolation of rain water into ground.
2. The terrace shall be connected to the open well / borewell / storage tank / recharge pit / trench by means of HDPE / PVC pipes through filter media. A valve system shall be provided to enable the first washings from roof or terrace catchment, as they would contain undesirable dirt. The mouths of all pipes and opening shall be covered with mosquito (insect) proof wire net. For the efficient discharge of rain water , there shall be at least two rain water pipes of 100 mm dia mtr. for a roof area of 100 sq.mt.
 3. Rain Water Harvesting structures shall be sited as not to endanger the stability of building or earthwork. The structures shall be designed such that no dampness is caused in any part of the walls or foundation of the building or those of an adjacent building.
 4. The water so collected / recharged shall as far as possible be used for non-drinking and non cooking purpose.

Provided that when the rain water in exceptional circumstances will be utilized for drinking and / or cooking purpose, it shall be ensured that proper filter arrangement and the separate outlet for passing the first rain-water has been provided.

Provided further that it will be ensured that for such use, proper disinfectants and water purification arrangements have been made.