The Madurai City Municipal Corporation Building (Water Conservation) Rules, 2002

TAMILNADU
India

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Rule
THE-MADURAI-CITY-MUNICIPAL-CORPORATION-BUILDING-WATER-C of 2002

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The Madurai City Municipal Corporation Building (Water Conservation) Rules, 2002Published vide Notification Ms. No. 140, Municipal Administration and Water Supply, dated 11th October, 2002In exercise of the powers conferred by section 268 read with sub-section (1) of section 431 of Madurai City Municipal Corporation Act, 1971 (Tamil Nadu Act 15 of 1971), the Governor of Tamil Nadu hereby makes the following rules, namely:-

1. Short title.

- These rules may be called the Madurai City Municipal Corporation Building (Water Conservation) Rules, 2002.

2. Application.

- These rules shall apply in addition to the Revised Building Rules, 1942.

3. Water conservation.

- For effective conservation of rain water, application for permission to construct or reconstruct or alter or add to a building, other than a hut, shall contain water conservation proposals as detailed below:-(A)Tiled and sloped terrace building. - (1) In the tiled or sloped building, semi circular gutters of width 15 to 25 centimetres of plastic or any other material shall be provided on the down side roof slopes of the building for harvesting rain water. The gutter shall be connected at the down

stream end with a down pipe of 75 to 100 millimetres diametre, depending upon roof area and size of tank to convey the harvested rain water from gutters to a plastic or any other material storage tank or sump (through a filter emit). An inlet screen (wire mesh) to prevent entry of dry leaves and other debris into the down-pipe shall be fitted. The collected rain water from the roof shall be allowed to pass through a filter unit. The filter unit is to be filled with suitable filter material such as well-burnt broken bricks (or pebbles) up to 15 centimetres from top. The top 15 centimetres shall be filled up with coarse sand. The filter unit shall be placed either over a storage tank or at bottom of the down pipe.(2)The filtered rain water shall be collected in a collection tank or storage tank placed over the ground or underground. The shape of the tank shall be cylindrical, rectangular or square of suitable size with a capacity ranging from 1000 to 10,000 litres or even higher depending on the roof area. The material of construction shall be brick work, stone work, cement bricks, ferro-cement, High Density Polyethylene (HDPE), plain cement concrete or reinforced cement concrete. The storage tanks or collection tanks shall be provided with pipe fixtures at appropriate places to draw the water, to clean the tank and to dispose of the excess water depending upon use or re-use either to open-well or bore-well or to a percolation pit.(B)Ordinary building (Ground First Floor). - (1) Percolation pits of 30 to 45 centimetres diametre and of depth adequate, not less than one metre, to recharge the ground, shall be made. This pit shall be filled with suitable filter material such as well-burnt broken bricks (or pebbles) up to 15 centimetres from top. The top 15 centimetres shall be filled up with coarse sand. The top of this pit shall be covered with perforated reinforced concrete cement (RCC) slab or of any other material, wherever considered necessary. The number of such percolation pits shall be provided on the basis of one pit per 30 square metres of available open terrace area or plinth area. The cross distance between the pits shall be minimum 3 metres.(2)Wherever an open-well or bore-well is available within the building premises, the rain water collected from the open terrace shall be collected through pipes of 150 millimetres diametre or other suitable sizes and led to a filter pit of size 60 centimetres x 60 centimetres x 60 centimetres (with appropriate filter material) and then led into the open-well or bore-well through 150 millimetres diametre or other suitable pipes, after filling up a storage tank or sump.(3)Wherever existing water storage sumps are available, the rain water so collected, after it passes through the filter, shall be allowed to flow to the sump through closed pipes. An overflow pipe shall be provided to the storage sump so that the surplus water is led into the nearby open-well or bore-well or percolation pit.(C)Ordinary building (Ground + 2 Floors and above). - (1) The specification detailed in item "B" above for Ordinary building (Ground + First Floor) is also applicable to building specified in this category.(2)In addition to the percolation pits of 30 centimetres diametre to be provided at 3 metre interval/ a pit of 1 to 1.5 metres width and appropriate depth, so as to recharge the ground, shall be provided all along the plinth boundary depending upon the soil classification below ground. This pit shall be filled with appropriate filter material namely, broken bricks, pebbles, broken stones, etc., at the bottom and the top 15 to 25 centimetres shall be filled with coarse sand. The ground or pavement surface around the building shall be sloped towards the percolation pit so that the surplus rain water from terrace and sides-open spaces, etc., flow over this slopped surfaces and spread into the filter bed all around. Masonry dwarf walls of 5 to 7.5 centimetres or of suitable height depending upon the site conditions shall be constructed, if necessary, a: lie entrance and exit gates to allow the surplus rain water collected within the compound to recharge the ground within the premises itself; and from draining out to the road.(3)If the sub-soil is not a permeable one (namely, clay or black cotton), appropriate recharge structures, namely, recharge shaft or borepit

shall be provided below the filtration pits so as to recharge the ground.(D)Group development, industries and institutional building. - (1) For buildings for Ground-I-First floor or Ground 4-2 floors and above located within Group development, industrial or institutional premises, the specification detailed in items A, B and C above shall apply.(2)The surplus surface runoff rain water, in the open spaces within the group development or industrial or institutional premises shall be allowed to run towards collection drains of suitable size and these drains shall be constructed as rain water-friendly storm water drains. All the approach and access roads to the buildings within the group development or industrial or institutional premises shall also be provided with rainwater-friendly storm water drains. These rainwater-friendly storm water drains shall not have paved bottom. If adequate spaces are available in low lying areas, percolation ponds of suitable size shall be formed and these rain water-friendly storm water drains shall be led into the percolation ponds for recharging the ground.(3)For other localised low lying areas, recharge pits of size of minimum 1 metre x 1 metre x 1 metre or 1 metre diametre shall be provided wherever needed, so as to prevent rainwater stagnation around me building. For other places catch water pit structures of size 30 centimetres diametre and 30 centimetres depth or higher depth as necessary shall be provided wherever necessary. For existing paved storm water drains, catch water pits of 30 centimetres diametre and, 30 centimetres depth or higher depth, as necessary, shall be provided at the bottom of these drains at 10 to 15 metre intervals. These catch water pits shall be filled with appropriate filter material as described in item "B" above for Ordinary building (Ground + First Floor).Explanation. - For the purpose of these rules, in regard to rain water harvesting structures are concerned any other modifications, additional structures or alternative designs, furnished by the applicant shall be considered for approval, if it conforms to rain water harvesting concept to the satisfaction of the competent authority for building plan approval. Provision of water harvesting structures for re-use of used water like water emanating from kitchens and bathrooms for flushing toilets, gardening shall be considered for approval on its merits.

4. Provision of Rain Water Harvesting structures in existing buildings.

- Rain Water Harvesting structures as detailed in rule 3 shall be provided in all existing buildings within a time limit of one year from the 11th October 2002.

5. Separation of bath and wash basin water and reuse.

- Every building shall be provided with separate pipelines, one for collecting waste water from bath and wash basins and the other for connecting the toilets. The waste water from the toilets alone shall be connected to the street sewer. The waste water from the bath and wash basins shall be disposed off as here under:-(i)Ordinary buildings (Ground + 1 Floor, residential buildings, not exceeding four dwelling units or Commercial/ Industrial/ Institutional building not exceeding 300 square metres). - The waste water from the bath and wash basin shall be used for ground water recharge by organic filtration (by providing suitable filter media) depending upon the soil suitability or for recycling for toilet flushing as indicated for other buildings specified in item (ii) below:-(ii)Buildings other than the buildings specified in item (i) above. - Each building shall have a separate downward pipeline to collect waste water from bath and wash basins and the collected waste water shall be treated adequately by organic or mechanical recycling and taken to a sump for onward pumping to the

exclusive overhead tank or to a separate compartment of over head tank for exclusive use of toilet flushing through cisterns. The excess waste water not reused for toilet flushing, shall be suitably connected to the rain water recharge structures for ground water recharge.Explanation. - For the purposes of these rules in regard to recycling systems are concerned, any other modifications, additional structures, alternative designs furnished by the applicant shall be considered for approval, if it conforms to recycling concept to the satisfaction of the competent authority for building plan approval.