

CHAPTER 1 - CONSERVATION AND EFFICIENCY

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601.03 CONDENSATE REUSE



INTENT

To conserve water by promoting recovery and use of air conditioning condensate for non-potable applications.

REQUIREMENT

For all new buildings with a cooling load not less than 350 kW, condensate water from all air conditioning equipment, air handling units or equipment handling a mixture of return air and outside air, where the outside air is not preconditioned, must be recovered and reused. The condensate water can be reused for irrigation, toilet flushing, or other on-site purposes wherein it will not come into direct contact with the human body. The condensate water can also be reused for heat recovery as per the requirements set in *Regulation 502.10*.

SIGNIFICANCE

Condensate water is low in mineral content and it can be effectively used in a building for a number of applications. These include irrigating plants, cooling towers, flushing toilets and many more.

On-site reuse of condensate water reduces the building's demand for water. Considering the fact that condensate is of high quality in comparison with treated sewage effluent, condensate water need not be treated before use. Use of condensate water for several applications in a building will lower not just the water demand but also reduce the overall utility bills. Also reuse of condensate water indirectly reduces the load on municipality on supply, treatment and disposal.

APPLICABILITY

This regulation is applicable to all building types. Refer to Table 101.07(1) in Section One - Administration for detailed applicability levels.

IMPLEMENTATION

For buildings having cooling loads more than 350 kW, condensate water generated from all the air conditioning equipment like FAHUs, AHUs, FCUs, CCUs etc., should be collected and used for on-site non-potable and non-contact water applications.

While calculating the cooling load of the building, project teams should also calculate the peak condensate generation rate. Based on this, size of the drainpipes, condensate water collection tank and pumps should be designed. The means of collecting and reusing condensate water vary between buildings. Proper planning at the design stage is required for collection, storage and reuse of condensate water.