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**ADVISORY  
DRAIN WATER HEAT RECOVERY UNIT INSTALLATION**

BUILDING CODE SERVICES



## **DRAIN WATER HEAT RECOVERY UNIT INSTALLATION**

This Advisory applies to the installation of plumbing drain water heat recovery (DWHR) units installed in new low-rise residential construction.

A DWHR system recovers heat from wastewater and is intended to work with simultaneous flows from showers where there is a demand for hot water at the same time as waste water is discharged from the drain. The warmed DWHR outlet water is directed to the hot water tank inlet or the cold water supply serving a shower or a washroom grouping containing a shower, reducing the energy required to provide hot water.

A DWHR is required to be installed in all new residential dwellings.

### **OUTLET**

The outlet of the DWHR unit must be directed to the inlet of a hot water heater or the cold water supply for a shower to produce a benefit in energy consumption. Alternatively, the outlet may be directed to the cold water supply of a bathroom grouping that includes the shower connected to the DWHR unit. As the primary cold water demand for the washroom grouping will be the shower when it is in operation, the intended reduction in energy consumption to temper cold water to the shower will have been met.

### **ADEQUATE FALL TO ACCOMMODATE SINGLE DWHR UNIT**

Where a plumbing drainage system has insufficient vertical fall to accommodate the height of a DWHR unit, then the unit is not required to be installed. Typical examples would include a single-storey home on private services, homes with low crawl spaces, or homes using slab-on-grade construction where there is insufficient vertical fall to permit the installation of a DWHR unit.

### **DISTANCE BETWEEN SHOWERS ON A SINGLE DWHR UNIT**

The DWHR efficiency may be reduced if drain water must travel a great distance. The maximum distance will normally be dictated by the proximity of showers, maintaining the minimum required drain pipe slope, and available space to accommodate the DWHR unit.

### **MULTIPLE DWHR UNIT INSTALLATIONS**

Where a dwelling contains more than one shower, drain water from at least two showers must be connected to a single DWHR unit or, alternatively, to two individual DWHR units.