

## SUSTAINABLE PLUMBING CHECKLIST

### House As A System

- Install high-quality shut-off valves on piping and provide easy access to them through walls or floors.
- Use high-quality materials, fittings and fixtures.
- Insulate cold and hot water pipes with a minimum RSI-0.7 (R-4) insulation.
- Run plumbing inside the air barrier system, or, if piping must pass through the barrier, properly seal the joint with acoustical caulking (or other appropriate material), and ensure it is structurally supported.

### Kitchen

- Install WaterSense® tap or faucet aerators (5.7 litres per minute (lpm) / 1.5 gallons per minute (gpm) or less).
- Ensure aerator or faucet has flow regulation settings or a hands-free faucet
- Avoid a sink garbage disposal unit – use compost or kitchen waste programs instead.
- Select an ENERGY STAR® dishwasher (as little as 15 litres per cycle / 4 gallons per cycle).
- Chose a dishwasher with a timer, a heat on/off setting, or a smart sensor.
- Install an ENERGY STAR® fridge.
- Install shut-off valves in under the sink faucet and dishwasher.

### Bathroom

- Install WaterSense® tap or faucet aerators (5.7 lpm / 1.5 gpm or less).
- Install a WaterSense® showerhead (7.6 lpm / 2.0 gpm or less) and no multiple-head shower systems.
- Install thermostatic valves at shower, bath and faucet fixtures.
- Install a drainwater heat recovery unit on the shower drain.
- Check for leaks: Faucets, diverter tub spouts, showers, baths and toilets.

- Choose WaterSense® high-efficiency toilets (4.8 litres per flush (lpf) or less).
- Consult MaP testing scores prior to purchasing a new toilet.
- Ensure Drainline is clear of defects and not sagging.
- Install accessible shut-off valves on service pipes to sink taps, toilets, tub and shower.

### Hot Water System

- Set hot water tank to 60°C (140°F or as required to meet building code, safety regulations.) and insulate it.
- Put heat traps on cold and hot water pipe connections to the water tank.
- Minimize both the pipe size of the distribution network and the distance between the source of hot water and the fixtures.
- Install a drainwater heat recovery unit on the shower drain piping.
- Make a new construction solar ready more easily to accept solar water heating systems in the future.

### Laundry and Mechanical Rooms

- Select a CEE Tier 3 washing machine (Water factor of 4.0 or less).
- Check the Water Softener Buyers Guide prior to choosing a new model.
- Set water softener to a demand-based regeneration cycle.
- Install water pressure regulator(s); set to 310-380 kPa (45-55 psi).
- Install backwater valve on building drain to prevent sewer backup.

### Rainwater and Greywater

- Obtain advanced training in installation of rainwater harvesting and greywater systems.
- Obtain written approval from appropriate regulatory authority for installation of rainwater or greywater systems.
- Rough in new builds to accommodate future dual plumbing for non-potable water distribution.

Source: Canada Mortgage and Housing Corporation (CMHC)