

*Inspired from Oasis Design: <http://www.oasisdesign.net>*

**CLIENT / OWNER OF THE FACILITY/IES:**

- Install low water consuming fixtures in the showers and on all faucets; today they no longer reduce the quality of the experience of taking a shower for example while representing a saving of up to 2/3 of your initial quantity of water.
- Install low water consuming toilets: several options are available on the market today. Seek toilets with lowest consumption possible per flush (less or equal to 6 Litres); consider dual-flush toilets, where flush for urine can be as low as 0.3 liter/flush to less or equal to 3 liter/flush) than for faeces (+/- 6 Litters).
- If you manage a facility to be used by a non-residents or a large number of people, consider putting up signs in strategic locations requesting your guests to remember that water is a precious resource: this can be done very elegantly and phrased in such a way as to not be invasive or imposing and on materials such as wood, metal or ceramics. Displayed or given information should include following information:
  - Please close taps when not using water, in particular during tooth brushing;
  - Your towels are clean for several uses, please consider having us laundry them only when necessary, after 3 to 4 uses minimum (but we will be happy to laundry them every day if you prefer);
  - Please don't use the shower for heating or cooling as it will at least triple the amount of water used;
  - Please don't throw anything solid in the toilet, as it will clog our drainage system.

Experience shows that clients are generally very happy to participate to your efforts at keeping the site environmentally sustainable, provided they are made aware of your efforts (information of the customer is of paramount importance, either at the entrance of the facility or in the bathroom/s).

- Avoid putting toxic chemicals down the drain - divert greywater to the septic/sewer if you do.
- Maintain the system as needed and indicated by the manufacturer or designer.

**ARCHITECT/ ENGINEER:**

- When possible, build the house uphill from the area where the treatment will be placed or from the areas to be irrigated when landscaping is taking place.
- Build all wastewater generating items slightly elevated when possible: specify floors a foot or two above grade—so the plumbing reaches the soil level outside the building/s at grade.
- Make all the plumbing easily accessible with a small control box at each intersection or joint between different pipes when possible.
- **Order a separate plumbing line for:**
  - The grey water of showers/baths and washing machines);
  - The grey water of the toilet lavabo;
  - The kitchen wastewater;
  - When using Urine Diverting Toilets: one line for brown water (faeces) and one line for yellow water (urine).
- Pipes should extend at least 40 cm outside of the infrastructure they service, even if they are to be regrouped into a single pipe for a treatment of all wastewater mixed. It is good practice in case the client wishes to fine-tune its sustainability in the long term (differential treatment between kinds of water or to recuperate urine for example).
- Vents may be combined.

### **GENERAL CONTRACTOR:**

- Ensure that the plumber is doing proper work and installing vents.
- Ensure that the person or company in charge of excavations works diligently with attention to existing vegetation that is to remain on the land after construction.

### **PLUMBER:**

- Plumb everything as high as possible in elevation and conserve fall along the whole length of the pipes to the minimum necessary. Don't forget this in your quote to client, as it will take more time (in some cases more than twice as much time).
- Plumb diversions downstream from traps and vents.
- Plumb the greywater, blackwater and kitchen water lines separate until outside the house: see the plumbing section for "Architects".
- When the plumbing lines are on the floor, put a pipe riser or control box to facilitate inspection and maintenance.

### **LANDSCAPER:**

- Priority use for greywater is shady, cool, fruit-filled outdoors living space as close as possible to the source of emission.
- Consider planting along the blackwater drainage line (with non-invasive rooted plants).
- Discuss with us best location of the constructed wetland in order to enhance overall landscaping value.
- Put water loving plants where there is more greywater.
- If you intend to put high-value plants in the treated water drainage area, consider adding a corresponding freshwater irrigation source that can be turned off independently; you'll use this backup irrigation when there is no water coming into the drainage area, and turn it off when there is. This is especially important when high value vegetation is planted and is still at its early growing stage.

### **GUTTER INSTALLER:**

- Make rainwater downspouts divertible to drainage lines or irrigated areas for rainwater flushing of accumulated salts, greywater recharge, and flood control.
- Do not permanently dedicate rainwater to irrigated areas except in the driest climates.

### **INSPECTOR:**

- Ensure that systems are designed and built well, using performance of familiar systems as an indicator of quality of unfamiliar systems.
- Fulfil potential as advocate/ resource for builders who are investing effort to reduce the overall impacts from the built environment and projects which aim at maximum sustainable management of water and minimal impact on the local ecosystem.