

Rain Water Collection System (RWC'S)

RWC'S are mandatory for new housing units on a lot of islands around the world. The logic behind it is threefold:

1. To ensure a sufficient water supply of good quality
2. To decrease municipal budget & taxes by avoiding building costly infrastructures and by avoiding expensive maintenance related to the water supply
3. To foster a sustainable way of living

Bowen's actual policies do not seem to meet any of the above objectives. The water quality is poor, additional water needs will request new infrastructure & maintenance, people wonder about the sustainable nature of the water supplies in new housing developments.

1. RWC'S ensure a sufficient water supply of good quality

I have had 20 years of experience with RWC'S in two different houses. The water analyses done by independent labs pinpoint to a quality of water that is much better than the municipal water. Municipal water should in fact be treated to ensure an equivalent and adequate quality of water in each housing unit. Indeed, homeowners are now responsible for the quality of water in their homes and not the municipalities.

2. Decreasing municipal budget & taxes

A lot of municipalities in the world mandate RWC'S for all new housing. Thus, construction of new (water) infrastructure is avoided while budgets & taxes can be decreased.

Should cisterns be emptied by too high a consumption, additional water is trucked to the cistern at a cost to the homeowner. The important point is to avoid any additional infrastructure & maintenance demand.

3. Fostering a sustainable way of living

The information about the number of housing units that can be supported with the actual infrastructure is not known to most of the Bowen Islanders. Estimates seem to vary and are not transparent. One thing is for sure, the island population is growing and we cannot take for granted that our existing water infrastructure is limitless and without environmental cost. In other words, the municipality needs a vision and a strategic plan.

What about the cost of an RWC?

For a 17000-gallon cistern the cost of the piping, the pump system, the liner inside the cistern, labor is about \$ 8300. Filters and UV cost another \$ 3200 but they are also requested for municipal water if one wants to obtain the same quality. The cost of the cistern itself can be reduced to a minimum by using the foundation walls of the house.

What should we recommend to the municipality?

1. Review actual cost of Bowen's water infrastructure (capital investments & maintenance).
2. Analyze infrastructure costs of municipal systems versus a RWC based system.
3. Make RWC'S mandatory for all new housing if RWC based infrastructure is cheaper for the municipality.
4. Home owners with RWC'S should have their municipal water bill slashed to zero.

Conclusion

RWC'S are sustainable systems and they are more environmentally friendly. The analysis of the water infrastructure cost of municipal system versus a RWC based system should be done in order to confirm a strategic vision for the water infrastructure of Bowen.

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