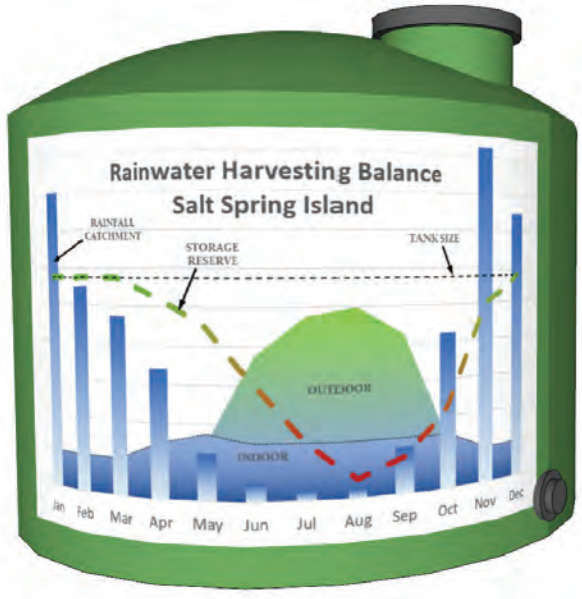
RAINWATER HARVESTING BENEFITS US AND THE ISLAND...

- Some of the abundant winter rainfall can be stored for use during summer drought periods.
- There is a finite amount of water available from traditional sources.
- Summer demand on aquifers and surface water sources is reduced, and the impact of increasing summer water demands is mitigated.
- Nearly all outdoor uses do not need to use treated/potable water.
- “Up to 50% of indoor treated water uses could be replaced with rainwater.”*

** Rainwater Harvesting Best Practices, RDN*



An illustration of how summer demand for water can be addressed through rainwater harvesting.

To get started using rainwater, follow these steps:

1. Determine your actual monthly water requirements (non-potable/potable)
2. Use a rainwater balance calculator to determine a best storage volume (see SSIWPA website)
3. Check the regulations for your area regarding permits, setbacks, etc.
4. Evaluate the site for potential hazards and contaminants, and storage location
5. Check that roof areas can be used for gutters and downspouts to move water to a centralized location
6. Determine if the roof system is conducive to high-quality water runoff
7. Investigate options for above or below-ground tank installation
8. Get costs for components, including collection, conveyance systems, and treatment distribution.
9. Contact a professional for more involved installations and treatment for potable uses.

More SSIWPA resources available:

✓ **Non-Potable Rainwater Harvesting Best PracticesGuide**

✓ **Local suppliers, consultants, installers**

www.ssiwpa.org

Why consider

Rainwater Harvesting?

- There is an abundance of winter runoff to harvest.
- The island’s sole freshwater source is rainfall, but we can only access less than one percent.
- Rainwater is more available than surface or groundwater.
- Rainwater is a viable source for indoor and outdoor use.
- On-site capture and use is beneficial to the natural processes of the island.

Salt Spring Island Watershed Protection Alliance

IS RAINWATER HARVESTING RELIABLE?

Rainfall can be collected everywhere. Rainwater systems can be easily set up and operated on most sites.

"A roof, a tank, and maybe a pump are often all it takes"

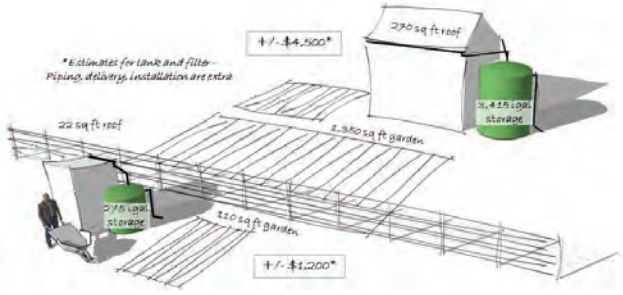
Our climate is wonderfully suited to rainwater capture, with seasonal rainfall and mild winters.

Climate change predictions indicate longer and deeper droughts along with more intense winter rain events.

"Most roofs are suitable to harvest rainwater for irrigation use"

Replacing treated water used for non-potable water demands makes sense.
Storage requirements depend on seasonal demand and precipitation cycles, and on roof catchment area.

On Salt Spring Island, approximately **2 sq m of roof area** provides catchment for **10 sq m of garden** (no turf or indoor uses).



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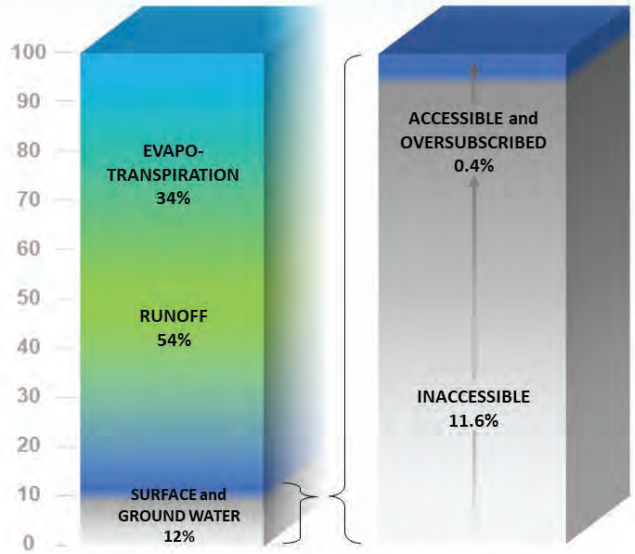

FRESHWATER BIOLOGY / NATURAL SYSTEMS

Freshwater supplies are seasonally limited on Salt Spring Island.

Summer demands on freshwater supplies are mitigated by storage of abundant winter rainfall.

1 mm on 1 sq m of roof = 1 L
80% of precipitation falls in winter

Benefits:

Outdoor / landscape uses of treated water are reduced.

Summer shortfalls and restrictions on water use can be mitigated.

Rainwater capture offsets the need for other (shared) resources.

A commitment to freshwater sustainability for Salt Spring Island.

EXAMPLE STORAGE VOLUMES FOR IRRIGATION

RAINWATER CATCHMENT* STORAGE VOLUME COMPARISONS (**drip irrigation for vegetables in organic soil)				
Roof Runoff*	Igal (litres)	314 (1,427)	1,886 (8,562)	3,929 (17,837)
Garden Area	sq ft (sq m)	108 (10)	646 (60)	1,345 (125)
Annual Demand	Igal (litres)	299 (1,357)	1,793 (8,142)	3,736 (16,963)
Storage	Igal (litres)	272 (1,237)	1,635 (7,423)	3,406 (15,465)

*'Drought' = 50% of 'Normal' Jun, Oct; = 0% Jul, Aug, Sep
*Rainwater Harvesting efficiency factor = 80%
Adapted from: *Salt Spring Groundwater Potential Mapping, GWS, 2019 and **BC Agriculture Water Calculator

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