

Water System

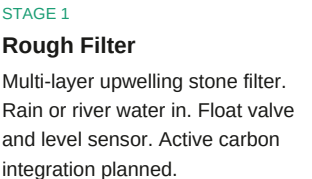
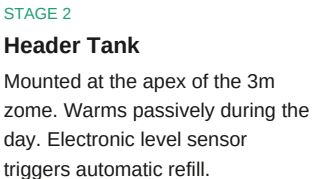
Clean water. From the forest to your tap.

Fully independent. No municipal connection required.

From any clean natural source to drinking quality at the tap.



Water is the first thing you lose control of when you depend on a municipal system.
And the first thing you reclaim when you build outside it.

Rain or River	Rough Filter	Header Tank	Booster Pump	RO System	Tap
					
STAGE 1 Rough Filter Multi-layer upwelling stone filter. Rain or river water in. Float valve and level sensor. Active carbon integration planned.	STAGE 2 Header Tank Mounted at the apex of the 3m zone. Warms passively during the day. Electronic level sensor triggers automatic refill.	STAGE 3 Booster Pump Marine-grade 24V DC pressure pump. Self-priming. Maintains consistent water pressure at all outlets.	STAGE 4 Control System Three-position switch: Manual / Off / Auto. In Auto, the system monitors levels and refills the header tank automatically.		

DRINKING WATER — REVERSE OSMOSIS

Aquaphor K7M 4-stage RO system mounted under the sink.

Removes dissolved solids, microorganisms, and trace contaminants. No chemicals. No supply dependency.

WINTER OPERATION

The entire system drains completely via a single valve. No water remains in pipes or tanks during periods of frost.

System Specifications

Water source	Rain collection or river / stream intake
Stage 1 — Filter type	Multi-layer upwelling stone filter
Stage 1 — Media	Graded stone aggregate + active carbon (planned)
Stage 1 — Level control	Float valve + electronic level sensor
Stage 2 — Storage	Header tank at zome apex (~20 L)
Stage 2 — Heating	Passive solar warming during daylight hours
Stage 2 — Level control	Electronic sensor triggers automatic refill
Stage 3 — Pump type	Marine-grade 24V DC self-priming pressure pump
Stage 3 — Pressure	Constant supply pressure maintained
Stage 4 — Control	Three-position switch: Manual / Off / Auto
Stage 4 — Auto logic	Header refills from rough filter when level drops
Drinking water	Aquaphor K7M — 4-stage reverse osmosis
Sink & armatures	Stainless steel sink, hot/cold mixer tap
Winter drainage	Full system drain via single valve — freeze safe
Power	24V DC — compatible with solar / battery system
Grid connection	None — fully independent of municipal supply

ON WATER QUALITY — A PROFESSIONAL OBSERVATION

Not all water is equal.

Most people assume water is water — H₂O is H₂O. Fifteen years of water quality work suggests the picture is considerably more complex.

Municipal water undergoes chlorination and in some regions fluoridation. Both processes alter the chemical environment of the water. Chlorine in particular — while effective at killing pathogens — leaves residual compounds that continue reacting inside the body long after the water has been consumed.

Beyond the additives, municipal water travels under pressure through kilometres of metal, plastic, and composite pipework, passing through pumping stations, pressure regulators, and storage tanks. Each of these interactions has consequences for the molecular environment of the water that are difficult to fully model or predict.

Molecular structure and bioavailability.

Natural water — collected from rainfall or clean running streams — has not been subjected to these processes. There is emerging evidence that the molecular clustering and charge characteristics of natural water differ meaningfully from treated water.

Zeta potential — the surface electrical charge on water molecule clusters — may be one factor. Higher (more negative) zeta potential is associated with greater molecular stability and is thought by some researchers to improve cellular water uptake through osmosis. Natural sources tend to exhibit higher zeta potential than treated water.

This is not settled science. But fifteen years of water quality experience suggests the question is worth taking seriously. The SovereignZome water system was designed to collect and deliver water in the most natural state possible — minimising the interventions between source and glass.

The water that reaches your glass has been touched by nothing but stone, carbon, and the geometry of the filter.