



Kimron Rink, the BeauSoleil Solar Aquatics Water Reclamation System architect describes how the plants work as filters.
photo by Denise Hoskins

THERE ARE NO CHEMICALS AND IT IS A MUCH SLOWER PROCESS THAN A CONVENTIONAL PLANT BUT AFTER 14 YEARS, IT STILL MEETS PROVINCIAL TREATMENT STANDARDS

ORGANIC MATTERS

The bus parked outside a large greenhouse in the town of Errington where the troupe ducked through patches of rain to reach the translucent, oblong structure. Inside the air held a rich, moist earthy scent reminiscent of a tropical garden – which it was in some respects – as exotic plants grew vigorously along with duckweed and aquatic pond plants, herbs and flowers in cement containers and portly plastic tubs.

These were part of the BeauSoleil Solar Aquatics Water Reclamation System that serve 46 mobile homes nearby. The system replicates the natural cleansing abilities of wetland processes through several stages. There are no chemicals and it is a much slower process than a conventional plant but, after 14 years, it still meets Provincial treatment standards.

The system was built to replace failing septic fields in an area of high water table. One of the first things the designers did was work with BC Hydro to reduce water flows into the system. Installing low flush toilets, sink aerators and low flow showerheads reduced flows by a whopping 30% in three days enabling the plant to be right sized.

Kimron Rink, the system architect joined Angela to describe how the plants work as cleaners. “The root mass of the water hyacinth actually gathers up sewage, that’s the icky part of things, and allows the bacteria to work on it. The sewage acts as fertilizer and help the plants grow. It’s perfect food for them – they just love it.”

Tour participant Jodie Dong, a senior planner for the Province with a specialty knowledge of making resources out of waste commented, “I’ve never seen that before, it’s very new and different and they do it at a very low cost using plants to treat sewage in a small development – it’s eco friendly, low tech and low energy.” They could have lingered in the tropical warmth but there was one more intriguing site to visit.

FLOWER POWER

The final tour stop was in the community of Saltair where the group met with inventor and applied wetland scientist Curt Kerns outside two private homes. The homeowners had replaced failed septic fields with new systems.

The systems were a combination of three elements; a septic tank, a Nayadic secondary treatment aeration plant and Kerns’ invention: the Vegetative Tertiary Filter type III (VTF).

The VTF uses peat, hog fuel and plants that help create topsoil. Typically, primary treatment fields are on large, flat raised areas. Installers sternly warn against planting anything on these fields other than grass since tree roots interfere with the drainage pipes. In short, a raised septic field looks like a septic field and it’s embarrassingly difficult to hide the fact.

Curt Kerns discussing a newly installed VTF, as yet unplanted with vegetation (above). A planted up VTF in the front lawn of a single family home in Sheltair (below). Kerns describes how the system works (right)
 photos by Denise Hoskins & Helen Reid



WHAT TOUR PARTICIPANTS SAID

“I came home from the trip enthusiastic about sewage of all things. I came back feeling that taking small steps will make big changes in the long run. Learned a lot in a short few hours. I hope she does another one...”

*Councilor
Jayne Ingram
Cowichan Lake*

“It was one of the best tours I’ve ever been on.”

*Helen Reid
Cowichan Tribes*

“It’s the only tour of that kind that I have done in British Columbia”

*Jodi Dong
Province of
British Columbia*

LANDSCAPED WITH PLANTS AND A COLOURFUL FLOWER-BED, THE DISPERSAL AREA WAS INDISTINGUISHABLE FROM A TYPICAL GARDEN

Kerns first developed the VTF as an alternative to unsightly sand mounds on challenging sites. Relying on the huge surface area of peat moss, VTF systems are designed to remove trace contaminants such as endocrine disrupting compounds, pharmaceuticals and personal care products, preventing them from entering the water table or surface waters.

The group was particularly fascinated with the dispersal area. Landscaped with plants and a colourful flowerbed, thanks to the talents of the homeowner, it was indistinguishable

from a typical garden. “It looks like any other small suburban front lawn,” remarked one tour participant. “This solution would work really well on Reserve, it’s an incredible solution for a major problem we have throughout the community,” remarked another.

At the end of the day, the group still had questions but were equipped with information gained from experiential training “I learned something I didn’t even know existed, and I was able to share that with people, marveled Cowichan Lake Councillor Jayne Ingram, “I now feel quite comfortable talking to the superintendent of Public Works about sewage treatment and what the options are.”

Others agreed they would be delving more deeply into the possibilities for transferring the concepts to their own communities keeping in mind Evans’ favourite quote, “It’s only wastewater if we waste it.”



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