



# CLEAN MARINAS

What it takes to become certified “green”

BY MARIANNE SCOTT

**A**s the oceans cover 70 percent of the world’s surface, we used to think they are without limits. In the Middle Ages, people thought ships could fall into the abyss when they reached the end of the flat earth. Over the past 500 years, we have conquered the waves with ever-faster ships that today transport 90 percent of the world’s goods, fuel and food. But also in the last century, we have managed to challenge the oceans’ vastness with trash, plastic and hydrocarbons. We’ve been careless with our water resources globally and locally.

It’s not a 21st century phenomenon. In the 19th century, James Bay, a section of Victoria Harbour, served as the city’s landfill—so to speak—where local garbage was tossed into the water. The effluent from tanneries, soap makers, paint manufacturers and turpentine factories was discharged into the bay, killed fish and made the area reek. On land, industries poured PCBs into the ground and often leaked or dumped oil. The discharge from pulp mills poisoned water, air and land and could quickly kill whole shellfish colonies.

Fortunately, we’ve come some distance from that free-for-all waste disposal. Federal, provincial and local laws have halted many offences against nature. And answers to the question, “what can we do locally and personally?” have multiplied. ▶



The Royal Victoria Yacht Club.



While individual marinas and boatyards can't remove abandoned fishnets from ocean gyres, for example, they have many opportunities to keep our local environment as pristine as possible. To give guidance to marinas and boatyards, the non-profit Georgia Strait Alliance (GSA) developed its Clean Marine BC Best Practices Handbook, presenting a comprehensive overview of how to clean up marinas and rewarding those marinas that followed their recommendations with "anchor" ratings.

One anchor means the marina complies with federal and provincial legislation. The cleanest marinas earn five anchors. "We started the program in 2008," said BC Clean Marine coordinator Michelle Young. "We recommend improvements to marinas who want to participate in the program, but they're not mandatory." Although keeping water clean remains a main focus, the handbook also offers information on pollutants, waste prevention and reduction, ecological products and staff training.

Presently, 32 BC marinas have obtained rankings from three to five

anchors. For their main facilities and out-stations, Royal Vancouver Yacht Club has achieved five-anchor status for two of its properties, and four anchors for the other seven. West Vancouver Yacht Club's Fisherman's Cove has also hooked down five anchors. The Greater Victoria Harbour Authority has upgraded its four marinas to reach a five-anchor designation for all of them.

I spoke with four marina operators (and some contractors) who had earned multiple anchors to learn how they approached the environmental upgrading of their marina, the time it took to earn that ranking and how they covered costs.



**MAPLE BAY MARINA** earned its five anchors some time ago. David Messier, who owns the marina with his wife Carol, recalled he had many conversations with Mike Richards, then in charge of the GSA's Clean Marine program. "He encouraged us to participate in the venture," Messier said. "So we were among the first to follow the recommendations. The handbook helps with specifics on how to establish an environmental culture. The whole industry is moving this way. It's not hard to collect oil and upgrade light bulbs. That's the low hanging fruit."

He says that some marina and boatyard owners resist environmental

upgrading. "They don't like being told what to do. They have old-fashioned ideas of rugged sailor independence. But I see it as the right thing to do as well as good business practice."

Messier explained that becoming greener takes planning. After GSA sent a representative to conduct an initial audit and rank the marina's environmental practices, he put together a plan to ensure his marina could elevate its environmental profile over time. He attended a GSA class on preventing oil spills. "Seventy-five percent of our moorage customers are permanent," he added. "We built our own sewage plant in a joint venture with the municipality of North Cowichan. We have a pump-out at the fuel station and offer it free of charge. We also have a zero-dumping policy, and an environmentally responsible bottom washing system."

The Messiers believe that their large marina isn't just a place to tie up your boat. "We're selling an experience, not a parking spot," Messier stated. "The environment is our product. We are promoting a cultural change."

Maple Bay's customers have bought into the environmental concept. They're continually informed and reminded of green practices. The marina conducts fecal counts to determine if boaters pump their sewage overboard, and waste oil and other hydrocarbons are collected by a

company that disposes of it properly. "Our customers donate their recyclable cans and bottles," said Messier. "We use that money to pay for the oil pickup. It's a win-win."



**VICTORIA INTERNATIONAL MARINA (VIM)** is a newly built commercial marina that, from its start, included green initiatives in its design and construction. "Fortunately, the world is increasing its environmental sensitivity," said operations manager Steve Sinclair. "That goes for e-cars, locally grown food, recycling and now marine infrastructure. Working with several companies, we sought out today's best practices ranging from low-flow faucets in the buildings to installing high-amp electrical outlets that can charge present and future fully-electric yachts. All lighting on the dock and in the buildings is LED. And we cleaned up the sea bottom on our site."

Victoria International Marina hired Nanaimo-based Aquaparian Environmental Consulting to conduct the marine habitat site assessment. "We researched the history of harbour use and scuba dived the ocean floor," said principal Sarah Bonar. "It was a poor habitat for marine life. A shake mill and fuel tanks once operated on shore and log booms frequently lodged here leaving their residues." The marina's footprint was dredged, removing layers of mouldering wood that suck oxygen from the water (and digging up a pile of vintage glass bottles). Afterwards, the bottom was seeded with a gravel substrate. "The area now provides habitat for many species," said Bonar. "We've observed algae, shellfish and geoducks."

"It really was a dead zone," Sinclair added, "but the change is remarkable. We see fish hiding under the dock, schools of baby fish are everywhere, otters and newborn seals visit and we have a resident kingfisher."

Blue Water Systems' Adam Dwinell confirmed the return of marine life. "I've seen shrimp, mussels, herring, tubeworms, anemones and barnacles," he said. "Take a flashlight at night and look at all that life!"



Maple Bay Marina.

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Polyethylene-clad pilings at the Victoria International Marina.

Blue Water installed the concrete docks and also completely encased the flotation foam in concrete. They pounded in 82 steel pilings and sheathed them with polyethylene sleeves, which prevents paint flaking from the pilings, deters electrolysis and provides marine life habitat. Each slip has a connection to the pump-out system. Waste materials are collected, sorted and recycled as much as possible.



**THE KELOWNA YACHT CLUB** (KYC) won four anchors recently after its first GSA audit. The club is situated halfway up the 135-kilometre-long Okanagan Lake, has about 1,000 slips and 3,000 members. The club shares the lake with the cities of Penticton, Kelowna and Vernon.

"I'm fairly new to the job," said club executive director Thom Killingsworth. "And I've been highly conscious of our environmental footprint. We consider ourselves the stewards of the lake. That's why we allied ourselves with the GSA. It helped us to focus."

Kelowna Yacht Club established an environmental committee to get ready for the audit. The committee divided tasks assessing the food, beverage and banqueting departments;



The Kelowna Yacht Club.

administration; the front of house and the marina. They also worked with club members, suppliers and dockhands to gather suggestions that could be incorporated into a set of best practices. They looked at food waste and packaging. They listed deficiencies and worked to solve the issues that Killingsworth called "easy wins." Contractors were obliged to work to the club's standards.

To avoid single-use plastic bottles, especially during regattas, the club installed water refill stations. LEDs replaced incandescent and other lights on the docks and clubhouse. "That was expensive," said Killings-

worth. "We hope to recoup the costs from lower electrical bills."

The club also engaged a local environmental student to train as a site auditor. "That also got us ready for the GSA audit," said Killingsworth. "Moreover, we can share the auditor's expertise with other marinas on the lake."

One challenging task is to ensure that each yacht's thru-hull connected to the holding tank is sealed. Just like Canadian boats entering US waters, the holding tank seal is a requirement. This is especially important in a lake lacking tidal waters with strong currents; effluents are not easily

swept away in a lake. "Not everyone complies with the thru-hull regulation," said Killingsworth. "We need an audit of all boats, but it isn't easy to accomplish."

The KYC was delighted to win four anchors after their first GSA audit. "We got a lot of things done beforehand," Killingsworth said. "The upcoming audit was a kick in the butt." The club expects to have another GSA audit over the next two or three years and continues to self-audit to ensure they will advance to five anchors rather than slip back.



**THE ROYAL VICTORIA YACHT CLUB** (RVYC) earned its fifth anchor last year after adding a portable pump-out (disclosure—I'm a member). Simon Gatrell, RVYC manager, told me that the 2007 marine laws helped stimulate thoughts on making the club more environmentally friendly. "Since then we've included best marine environmental practices in our strategic plan," Gatrell said.

The board and club members support the greening initiatives. Member Mike Kory, a specialist in sustainability planning, emphasized that to create clean marinas, "we're working to develop an environmental stewardship culture so that it becomes part of our subconscious."

Gatrell attended workshops on improving the marine environment and he and the foreshore crew used the GSA handbook as a general guide. "We started inside by reducing paper use, choosing eco-friendly cleaning products, switching to LED lighting and installing low-flow toilets," he said. "Our new carpets are wool, not petroleum-based. In the yard, large signs tell club members what and where to recycle, and to place any used oil, solvents and paints in designated containers. Boat batteries are recycled. The foreshore staff was trained to minimize environmental impacts."

The club's installation of OilTrap's electrocoagulation water treatment system was a huge improvement. The \$40,000 system includes a grid that collects the heavy metals, oil and grease that drop from yachts on the slipway and hull maintenance areas while being power washed, scraped

and sanded. The water containing these contaminants is pumped up to the double-filtration system. After filtering, clean water drains into Cadboro Bay. A company specializing in safely disposing of polluting substances collects and incinerates left-over solids.

In 2014, the club rebuilt its aging and inefficient marina. It replaced wood docks with non-slip fibregrate decking allowing for light penetration below the docks. Epoxy-coated steel pilings replaced the creosoted wood pilings. "We installed e-meters at each slip, so owners learned how much electricity their yacht consumed—significantly lowering use and costs," said Gatrell. "Efficient dock lighting also led to lower electricity consumption."

While visiting the club in March, I observed a noiseless Husqvarna Automower clipping the expansive lawn. The small robot cut straight lines just as the grass began to grow. "We don't have noisy, gasoline-powered lawnmowers anymore," said Gatrell.

**THESE FOUR MARINAS** show that although we may not be able to solve some of the oceans' wider problems, we can take the initiative to reduce local and regional environmental impacts. It takes identifying shortcomings, building plans and committing funds to remedy them.

The Georgia Strait Alliance's Handbook is a good source of information on the best green practices. Their audits can provide inspiration and guidance on how marinas can—and should—move forward. What can you do to minimize your impact? ▶

The collection grid under the slipway collects pollutants at the Royal Victoria Yacht Club.



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