



The new chemical fill and wash slab at Coffs Harbour will save the golf club around 2 million litres of potable water annually and eliminate any chance of chemicals or wash water finding its way into creeks or dams

Coffs Harbour cleans up

By Justin Sheehan

An area that has received increased attention when focusing on environmental issues and golf courses is the maintenance equipment wash area. Considering Australia's current water shortage and resulting water restrictions, this aspect of environmental compliance is appearing at the top of most superintendents' 'to do' lists.

Every golf course maintains an area or several areas where they wash down their maintenance equipment. Some of the pollutants found in the wash residue of maintenance vehicles and turf equipment are oils and grease, other hydrocarbon products, detergents, herbicides, insecticides, pesticides, fertilisers, nitrates, lead and copper to name a few. All of these are potentially dangerous to humans and wildlife when introduced in cumulative amounts to the surrounding environment.

Water regulations in the country's driest areas have restricted the use of town supply water for washing vehicles or equipment unless it is in accordance with a Water Efficiency Management Plan or is conducted within 'best practice'. The practical solution to meet best practice is to find an alternate source of wash water. Existing options include treatment and use of on-site irrigation water, stormwater collection and wash water recycling.

Since my arrival here at Coffs Harbour Golf Club some 18 months ago we have been busy working towards safeguarding the club by constructing a chemical fill and recovery slab and wash slab for all golf course operations. The management and board at the time saw the need to prevent us from a possible environmental disaster if a spill of any kind

Coffs Harbour Golf Club has taken proactive steps to safeguard the environment with the construction of a new chemical fill and machinery washdown slab.



would take place. Most of the wash water and possible chemical spill could find its way into nearby creeks that neighbour the property.

When this was pointed out to management and where the liability lay they acted very quickly and we had the full support of everyone. The only thing was that because of other priorities the project had to wait as funding was needed to deal with the issue. We were

fortunate, however, to secure a grant through the Federal Government's Community Water Grants scheme to the value of \$50,000.

Our next step was to find a product that produced high quality reuse water for use by our staff and some members that had private golf carts that they frequently clean. We looked at three units - ESD, Waterstax and the Washmaster 18. All companies put in detailed scope of works and pricing and RGF Washmaster won the rights to construct our new water treatment facility.

Tony Julian from Ecologic and Alan England from SAS Water Solutions combined and were found to have a very good product that produced high quality reuse water as this was a big concern for us. After looking at all the other units we were happy that SAS was able to design our wash bay and chemical mix area and integrate the RGF Washmaster.

The Washmaster is a four-stage treatment unit. Wash water generated from the washing down of maintenance equipment is directed through a settling trench into a primary sump for removal of some grass, sticks and leaves. A submersible pump then feeds the water into the Washmaster for the biological treatment. The four stage treatment comprises:

- Grass catcher/screen;
- Biosorb Series1 – aerobic biological treatment for organics in the form of trace chemicals such as fertilisers, herbicides and pesticides along with light oil and grease;
- Filtration – multimedia filter for suspended solids, organics, oil and grease. Polish filters to 25 microns;

- Any contaminants remaining in the stored water are eliminated through an oxidation process, a tri-reaction of UV, ozone and residual oxy-puck within the storage tank.

The site that we were looking at at the time was out the front of one of our maintenance sheds that had been carved out of the side of a hill with some fill down one end. Some 20 pier holes were put in at a range of depths between 1.2m to 3m with concrete works costing around \$30,000.

The entire slab will be covered by an awning 12mx7m giving us plenty of room to wash two machines and conduct chemical handling at any time. It was advised to keep our chemical filling area and wash area separate, so the slab was designed to have separate wash and chemical recovery areas.

In the event of a spill or the need to dump the spray rig, there was a dummy pit installed with a pump to recover spray and reuse or remove. A 20,000 litre rainwater tank has also been installed to use as top up water for the recycle system and also all chemical filling into spray rigs.

When completed the facility will save the golf club and Coffs Harbour around 2 million litres of potable water annually and eliminate any chance of chemical water or wash water finding its way into creeks or dams. ♣

EBS JOINS FORCES WITH AUDUBON

Australian company Environmental Business Solutions (EBS) and Audubon International have announced a partnership designed to further promote adoption of environmental management systems and environmental stewardship in golf.

Audubon International, a not-for-profit environmental education organisation based in the United States, created and manages the Audubon Cooperative Sanctuary Program for Golf Courses (ACSP), with members in over two-dozen countries. EBS, founded by Terry Muir, has developed the award winning golf course specific environmental management system e-par which has been implemented by nearly 160 courses around Australia, including 71 in NSW alone.

Under the partnership, e-par and the ACSP for golf courses, an environmental education and certification programme will be delivered in one, easy-to-use electronic package. EBS will also provide annual financial support to Audubon International to help broaden the organisation's golf and environment initiative internationally.

"We're looking forward to working with the team at EBS to promote voluntary

environmental leadership in golf," says Audubon International executive director Kevin Fletcher. "The partnership between the organisations is a natural one. A central element to our golf and the environmental initiative is the increased adoption of environmental management systems throughout the golf industry.

"While anyone can develop an EMS for their business, we know that most professionals in golf are looking for an 'off-the-shelf' solution to help them comprehensively manage their environmental issues. We're happy to work with Terry and the rest of the EBS team to deliver e-par and the ACSP in one convenient package."

Audubon International is a not-for-profit environmental education organisation dedicated to educating, assisting, and inspiring people to protect and sustain the land, water, wildlife and natural resources around them. Audubon International engages people and organisations in good environmental stewardship and sustainable resource management through education and certification programmes, including a set of tools specifically for golf.

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