

## **NZWWA SWANS-SIG – Small Wastewater and Natural Systems Special Interest Group**

### **NEWSLETTER No. 8 July 2007**

#### **EDITORIAL**

Newsletter No. 7 of February 2007 outlined the background to the SWANS-SIG initiative in engaging with Environment Bay of Plenty (EBOP) re potential use of the OSET (On-site Effluent Treatment) testing facility at Rotorua as a National Testing Facility. Following a meeting of representatives of SWANS-SIG, EBOP, Environment Waikato (EW) and Rotorua District Council (RDC) on 13 March prior to the NZ Land Treatment Collective Conference in Rotorua, and endorsement of the outcomes of that meeting by the SWANS-SIG Management Committee later the same day, a position paper and business plan regarding the project is under preparation by consultants Glasson Potts Fowler (GPF). This is to be discussed at a Management Committee meeting in Rotorua on 1 August which will be attended by EBOP representatives. The outcomes of this meeting and the likely directions for the project will be presented by John Lavery of GPF as the lead paper in the SWANS-SIG stream at NZWWA 2007 annual conference on 19 September.

Details of the eight SWANS-SIG papers for Wednesday 19 September are set out below. Note that early bird registration for the full conference 19 to 21 September closes this week, on Friday 20 July. Those attending just the one-day SWANS-SIG stream can register direct on-line via the conference link on [www.nzwwa.org.nz](http://www.nzwwa.org.nz) using the “SWANS Registration Form”. The conference programme also includes a panel discussion on the topic of “On-site versus Centralised” relating to wastewater management. This is scheduled in the Operations Stream on Thursday afternoon 20 September.

I am pleased to welcome Catherine Waugh as SWANS-SIG liaison with NZWWA. Catherine has joined the NZWWA team in Wellington as a Policy and Projects Adviser, taking over from Anna Porter who is off to Canada. The Management Committee looks forward to meeting her during the coming meeting in Rotorua.

Ian Gunn  
Editor  
[ian.gunn@xtra.co.nz]

**SWANS-SIG Stream at NZWWA Conference – Wednesday 19 September**  
**REGISTER via NZWWA web-site [www.nzwwa.org.nz](http://www.nzwwa.org.nz)**  
**and the “Whose Water?” link**

**SWANS-SIG STREAM at NZWWA ANNUAL CONFERENCE –  
Wednesday 19 September 2007**

Presentation of papers in the SWANS-SIG stream commences in the second half of the morning after the conference opening and keynote address “Whose Water?” by Dr Rawiri Taonui, Head of the School of Maori & Indigenous Studies at the University of Canterbury.

Programme details are as follows:

**Wednesday 19 September**

<b><u>Time</u></b>	<b><u>Author</u></b>	<b><u>Topic</u></b>
11:00am to 11:30am	John Lavery	Progress Update – SWANS-SIG Involvement with the EBOP/EW/RDC OSET Trial
11:30am to 12:00 noon	Andrew Carvell	Small Scale Wastewater Systems – Coordination between Regulatory Authorities
12:00 noon to 12:30pm	Joe Whitehead	A Servicing Strategy Model for Improved Sludge Management at Remote Area On-site Wastewater Management
2:00pm to 2:30pm	Ray Hedgland	Options and Flexibility within Decentralised Sewerage
2:30pm to 3:00pm	A. Houltham	Decentralised Wastewater Management – A series of Case Studies
3:00pm to 3:30pm	Niki Johnstone	Case Study of Tui Ridge Membrane Bioreactor Plant Installation
4:00pm to 4:30pm	Keith Peacock	Monitoring of Domestic On-site Wastewater Treatment Systems in Hawke’s Bay
4:30pm to 5:00pm	Robert van Duivenboden	Investigating the Effects of On-site Systems in a Coastal Lagoon – Waitakere City’s Experience at Piha

**UPDATE on the RESULTS of the ROTORUA ON-SITE EFFLUENT TREATMENT (OSET) NITROGEN REDUCTION TRIALS**

Two treatment plants currently meet the EBOP requirements for discharge of advanced on-site wastewater treated effluent into the Rotorua Lakes catchment from all new development. The Regional Rule 13 which governs the effluent quality from such systems states:

13 (f): The wastewater flow receives advanced treatment such that the effluent quality is a maximum of 30 grams per cubic metre of BOD<sub>5</sub> and 45 grams per cubic metres of suspended solids prior to discharge to the dispersal system and a total nitrogen (TN) level of 15 grams per cubic metre as nitrogen prior to discharge to the dispersal system;

These two plants are:

- Advantex<sup>®</sup> AX20 Mode 3 [Innflow Technologies NZ Ltd, Auckland]
- Supertreat SB440 (N12) [Waipapa Tanks and Waste Treatment Systems Ltd, Kerikeri]

The testing criteria on which certification in compliance with Rule 13 (f) is based is that 14 of 16 samples taken over a 96 day period at 6 day intervals should be equal or less than 15 g/m<sup>3</sup> Tot-N. The 96 day test period follows a settling in period (nitrification-denitrification acclimatisation) of 6 months, with the whole test procedure thus taking place over 9 months.

Results of the trials to date have been published as follows:

- Nitrogen Reduction Trials of Advanced On-site Effluent Treatment Systems, July 2006 [Environmental Publication 2006/12]
- Nitrogen Reduction in Advanced On-site Wastewater Treatment Systems Fed Intermittently, January 2007 [Environmental Publication 2007/03]
- On-site Wastewater Treatment System Environment Discharge Performance Appraisal for the Super Treat Aerated Wastewater Treatment System SB440(N12), February 2007 [Report No. EDPA001/07]
- On-site Wastewater Treatment System Environment Discharge Performance Appraisal for the Biolytix BF6 2500 PAT, May 2007 [Report No. EDPA002/07]

Several of the above reports along with copies of the Compliance Certificates, the OSET Regional Plan and information on the Rotorua Lakes Catchments and on-site discharges are available from [www.envbop.govt.nz/Land/Rotorua-Lakes-Catchments.asp](http://www.envbop.govt.nz/Land/Rotorua-Lakes-Catchments.asp)

EBOP notes on the web site that as a result of completion of the second phase of the trial programme, the list of approved advanced domestic wastewater treatment plants for the Rotorua Catchments is likely to be expanded in July 2007.

## **UNIT STANDARDS and ON-SITE WASTEWATER MANAGEMENT TRAINING**

Water Industry Training has reviewed the public comments on the draft unit standards received earlier this year, with the next step being to forward the revised standards to NZQA (NZ Qualifications Authority) for registration. Once they are registered, approved training providers will be able to offer training courses and assessment around each of the unit standards, with completion of the full set (over say a two year period) leading to a national certificate in on-site wastewater management. Not all councils will require practitioners to reach national certificate qualification. Most will no doubt set requirements for completion of the site and soil evaluation and design unit standards for persons submitting applications for building consent and discharge consent.

Currently NZQA registered wastewater training courses are delivered under the umbrella of NZWETA (NZ Water Environment Training Academy), a joint venture between NZWWA and Opus Environmental Training Centre (ETC) in Lower Hutt. ETC is an approved training provider under the NZQA system. On-site wastewater training has been delivered to date throughout NZ by both On-Site NewZ of Auckland, and CET (Centre for Environmental Training) of NSW. Although both On-Site NewZ and CET are affiliated with NZWWA, their on-site courses are currently offered outside the NZWETA umbrella. On-Site NewZ ran an extensive training program last year throughout NZ, and ETC begins a series of course from the end of this month through the second half of 2007. Although this year's ETC courses have been reconfigured around the draft unit standards, no assessment leading to a unit standards qualification is available until the unit standards are registered, and ETC becomes an approved provider. Meanwhile, those persons having completed both On-Site NewZ and ETC on-site training may, in the future, be able to undertake a refresher course programme and sit the assessments needed to achieve qualification under any or all of the six unit standards.

For information on the ETC course programme for 2007, contact the Editor at [ian.gunn@xtra.co.nz](mailto:ian.gunn@xtra.co.nz).

## **CONFERENCES**

### **ON-SITE '07 – INNOVATION AND TECHNOLOGY for ON-SITE SYSTEMS**

This four day biennial conference and technical tour is the premier Southern Hemisphere on-site wastewater event, attracting 45 papers this year from NSW (42%), VIC (18%), QLD (16%), NZ/US/Taiwan (13% total), WA/TAS/ACT (7% total) plus 4% others. Conference welcoming reception is on Monday evening 24 September, followed by three days of conference sessions and trade exhibition Tuesday through Thursday. Friday 28 September is set aside for the optional technical tour which is organised so as not to repeat any of the visits of the past four On-site conferences, '99, '01, '03 and '05.

Paper topics this year cover environmental management related to on-site wastewater servicing (30%), land application system performance (20%), recycling (13%), treatment system/unit performance (13%), decentralised servicing/management (11%), wetland treatment (9%), and standards for on-site wastewater management (4%).

Origins of paper authors include university and research groups (38%), consultants (36%), state/regional/local government agencies (13%), and manufacturers (13%). For detailed conference information go to:

[www.lanfaxlabs.com.au/onsite07](http://www.lanfaxlabs.com.au/onsite07)

### **2<sup>nd</sup> IWA –ASPIRE Conference and Exhibition, Perth WA, 28 October to 1 November 2007**

This conference on Water and Sanitation in the Asia Pacific Region has the theme “Opportunities, Challenges and Technology”. Papers in small wastewater and natural systems have been called for. For conference details and updated information go to [www.awa.asn.au/events/aspire](http://www.awa.asn.au/events/aspire)

### **8<sup>th</sup> Specialised Conference on Small Water and Wastewater Systems, Kumaraguru College of Technology, Coimbatore, India, 6 to 9 February 2008**

For conference details go to [www.kct.ac.in/small2008](http://www.kct.ac.in/small2008)

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