NOTES OF THE RCA FORUM STORMWATER GROUP MEETING

Wellington City Council offices

9.15 am Friday 31 August 2012

Present:	Wayne Newman		Convenor
	Nicci Wood	Wellington City Council	
	Craig Redmond	NZTA, National Office	
	Balt Gregorius	NZTA, National Office	to 10:30
	Jon Schwass	Napier City Council	
	Laura Keown	Ministry of Transport	
	Jonathan Moores	NIWA	from 10:30
Apologies:	Hayley Vujcich	Greater Wellington Regional Council	
	Dale Nicholls	NZTA Operations, Napier	

ITEM	DISCUSSION	ACTION
1.Welcome and apologies	Noted apologies from Dale and Hayley.	
2. Minutes of 8 December 2011 and matters arising	Noted the actions from the previous meeting that were completed included: • Blurb for the On-site Stormwater Management Guidelines had been drafted and circulated • Note on Wellington waterfront devices was currently in draft • Blurbs for research reports 260, 395, 282, 315 and 345 had been circulated • Blurb for rain-garden maintenance guidelines had been circulated • Blurb and amendments to risk assessment flowchart have been circulated • Blurb and amendments to FAQ material have been circulated • Request for time to report research has been made to Forum content manager • Website pages have been reviewed for material able to be deleted Agreed the minutes of the last meeting were a true and accurate record.	

3. Update of Stormwater Group pages on the website • New structure • Material to come down • Material to go up	Received the circulated material for the website. Noted the material, especially the body of work developed for the FAQ section and now being used to give a general introduction to the topic and issues, fails to address the purpose of the pages or to clearly identify the target audience. For the majority of road asset managers the issue will be volume, velocity and sediment content. The threshold for effects from use of the road is far higher than traffic levels on almost all roads in NZ and the principal contributor of urban contaminants in road runoff was urban land-use of land adjacent to those roads. Industrial and commercial land use was a far more certain determinant of high heavy metal and TPH contamination than VPD counts. Agreed the pages need to give a succinct summary of the problems, threshold for effects and where to find solutions. Agreed the landing page needs to tie in the risk analysis, identify responses and provide links.	**Wayne to begin drafting model.**
	Meeting broke for a fire drill and elected to move on to Item 4 on reconvening.	
4. Report on proprietary devices field trials in Auckland by NIWA	Received a presentation on the trials and their findings from Jonathan. Noted the research programme had been extended by about a year for reasons outside the researchers' control. The extension of time had allowed the evaluation of performance to meet the Auckland Council protocol requirement that testing extend over 15 events. Noted the trials evaluated the performance of a Hynds Upflo, Humes Filternator and Stormwater 360 Stormfilter in field conditions against the performance efficiencies claimed for each device by the manufacturer. As this was not a comparison of devices operating in the same conditions in the same time and place, monitoring additional 'control' devices was not considered beneficial in developing the scope of the research. Noted the Upflo device consisted of two units comprising 6 modules each containing sand media installed at Westfield Albany to service 4,500m^2 of carpark, with spaces for 175 vehicles, which was swept weekly. The Stormfilter device consisted of 33 cartridges containing ZPG media (zeolite/perlite/granular activated carbon) installed to service 9,000m^2 of Esmonde Road carrying 38,000vpd. The Filternator device consisted of 2 cartridges containing perlite installed to service 900m^2 of SH17 at Silverdale carrying 35,000vpd.	**Wayne to raise presenting this research to Nov Forum again.** **Wayne to put news of report and link to it on website as soon as it is released.**

	Noted the mean of treatment of TSS by the devices (against the efficiency claimed from US studies) for the Uplflo was 17% (90%), for the Stormfilter was 46% (80%), and for the Filternator was 65% (80%) with extreme variations and with only the last device meeting claimed efficiency within the sampled range. Noted the principal determinant of device effectiveness appeared to be sediment concentration and particle size in the influent. Relatively clean influent called into question not only the benefit of performance measures for devices, but even the use of devices in situations like Westfield Albany where the maintenance regime counters effective device performance. Noted stormwater influent was bypassing the treatment devices in 50% of events and all devices performed poorly in treating dissolved metals, with levels in effluent often higher than the corresponding influent, and dissolved zinc levels generally being in excess of recommended levels in water quality guidelines. Agreed the findings showed that performance targets for treatment devices were probably meaningless, certainly inappropriate and possibly unachievable unless they recognise the specific character of influent concentrations and particle size, and the whole treatment function. Agreed the frequency of bypassing suggests the sizing methodology for such devices should be reviewed using NZ data, rather than US Northwest data, for design storm limits to address both the issue of bypassing and the issue of re-suspension of settled material in subsequent events.	**Wayne to draft material to put this research into guidance for members.**
5. General Business	Received a report from Jonathan on research that has been completed on road runoff and on a possible gap in the research. Noted research has been done on why contaminant levels vary, looking at vehicle numbers, traffic behaviour, road surface and load model, treatment effectiveness, looking at ponds, swales, media filters and floating wetlands, and environmental effects, looking at sensitive receiving environments and stream impacts. Noted the potential for source control of zinc and copper or the cost/benefit of source control compared to stormwater treatment has not been considered. LIUDD solutions have not addressed source, but have tended to focus on road runoff and ignored adjacent land uses. Agreed NZTA might be interested in a contaminant load model, which would fit with existing models e.g. noise, but source control will tend to fall under district planning rules.	**Craig to provide a model to Jonathan**

6. Next meeting	Agreed the next meeting will be in November, but outside the week of 10-17 November.	
	Meeting concluded at 12:20	
ACTIONS	**Craig to provide model to Jonathan for contaminant load model research.** **Nicci to complete draft note on waterfront devices case study and circulate.** **Wayne to upload rain garden maintenance guidelines.** **Wayne to begin drafting model for new website landing page and circulate.** **Wayne to raise NIWA research as November Forum topic and liaise with NIWA.** **Wayne to put news of report and link to it on website as soon as it is released.** **Wayne to draft material to put this research into guidance for members and circulate.**	**5** **2** **2** **3** **4** **4** **4**