

The Dirty Truth

(The Stormwater Pollution Awareness Campaign)

ENVIRONMENTAL HEALTH AUSTRALIA NATIONAL CONFERENCE
HOBART, 03 NOVEMBER 2016,
Diane Ross, CEO



WHY WE'RE HERE

To help the public better understand the stormwater system.

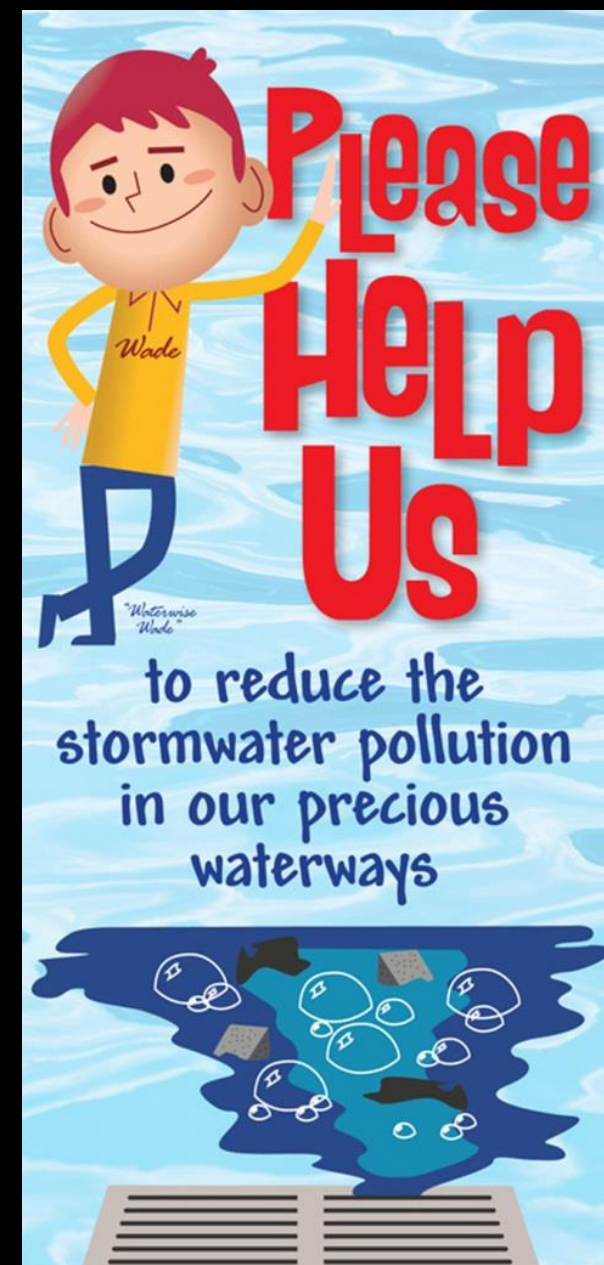
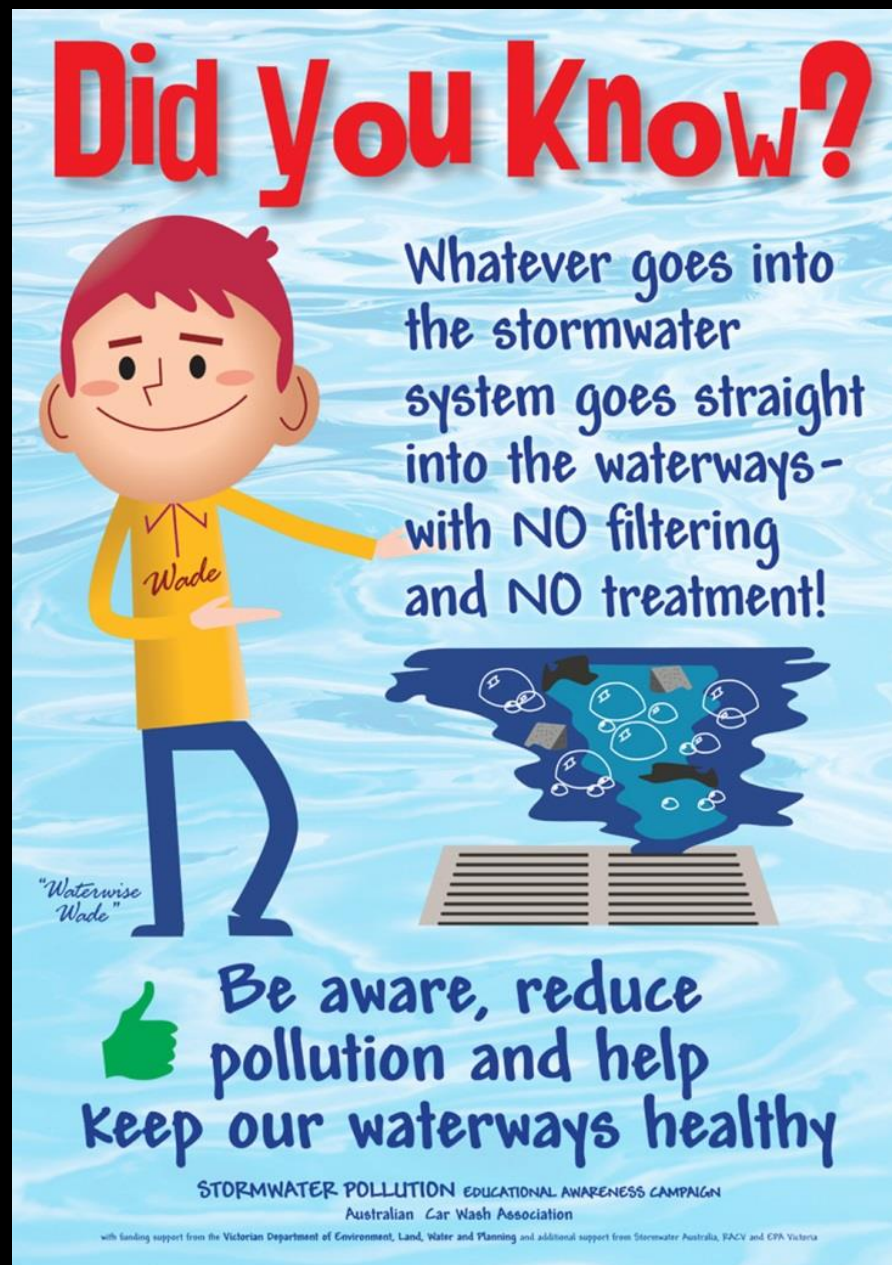
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STORMWATER POLLUTION CALCULATOR

Stormwater Pollution Calculator

Home Car Washing

Change City and Population in yellow for results for each urban area

Capital City Population - 2011

Australia	21,507,700
Sydney	4,391,700
Melbourne	4,000,000
Brisbane	2,066,000
SE Queensland	2,880,600
Gold Coast	507,700
Perth	1,728,900
Adelaide	1,225,200
Canberra	356,600
Hobart	211,700
Darwin	120,600

	Drought	Non Drought	
City	Australia		
Population	21,507,700		people
Vehicle Ownership	0.6		vehicles per person - source ABS, 2011
Cars in Community	12,904,620		vehicles
Car Washing Frequency	10.4	20.12	washes per annum per car - source ACWA Survey, 2008
Car Washes per Annum	134,208,048	259,640,954	total washes per annum
Commercial Car Wash Use	48%	30%	always or mostly use commercial - source ACWA Survey 2008
Commercial Car Washes per Annum	64,419,863	77,892,286	washes per annum
Home Car Wash Use	52%	70%	
Home Car Washes per Annum	69,788,185	181,748,668	washes per annum
Proportion that drain to stormwater	70%	70%	Higher in inner-urban areas, lower in rural areas.
Washes that drain to stormwater	48,851,729	127,224,068	washes per annum
Volume of water per wash	105	105	litres per wash - source ACWA survey 2005
Litres to stormwater	5,129,431,595	13,358,527,104	litres 13.36 Gigalitres

Pollution Type	Parameter	Average Concentration of Wash Water	ANZECC Guidelines 95% in Marine Waters	Volume per Wash	Load per Wash	Drought Conditions		Non Drought Conditions	
						Washes to Stormwater	Annual Load to Stormwater	Washes to Stormwater	Annual Load to Stormwater
Physico-Chemical	Suspended Solids	200 mg/L	20 mg/L	105 L	21.0 g	48,851,729 /a	1,026 t/a	127,224,068 /a	2,672 t/a
	Turbidity (NTU)	80 NTU	5 NTU	105 L					
Heavy Metals	Copper	300 mg/L	1.3 mg/L	105 L	31.5 mg	48,851,729 /a	1,539 kg/a	127,224,068 /a	4,008 kg/a
	Lead	20 mg/L	4 mg/L	105 L	2.1 mg	48,851,729 /a	103 kg/a	127,224,068 /a	267 kg/a
	Zinc	500 mg/L	15 mg/L	105 L	52.5 mg	48,851,729 /a	2,565 kg/a	127,224,068 /a	6,679 kg/a
Organic Pollutants	Total Organic Carbon	59 mg/L	10 mg/L	105 L	6.2 g	48,851,729 /a	303 t/a	127,224,068 /a	788 t/a
	Hydrocarbons	5 mg/L		105 L	0.5 g	48,851,729 /a	25,647 kg/a	127,224,068 /a	66,793 kg/a
	Surfactants	27 mg/L		105 L	2.8 g	48,851,729 /a	138,495 kg/a	127,224,068 /a	360,680 kg/a

Average concentrations sourced from ACWA / Smartwater Research, 2008.

Numbers in blue under ANZECC Guidelines are typical water quality parameters and do not appear in ANZECC Guidelines

STORMWATER POLLUTION RESEARCH RESULTS

13.3 billion litres estimated contamination from home car washing in Australia.



WASTE WATER CONTAMINANTS



WASTE FROM WASHING YOUR CAR

Petroleum hydrocarbon waste: gasoline, diesel and motor oil

Copper, Lead, Zinc

Nutrients: phosphorous and nitrogen

Surfactants

Solids

Too many bacteria in the water can cause fish and other living organisms to die.



A significant proportion of local creeks, rivers and sea shore pollution results from **every day, individual activities**.



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STORMWATER POLLUTION EDUCATIONAL AWARENESS CAMPAIGN

THEDIRTYTRUTH.COM.AU

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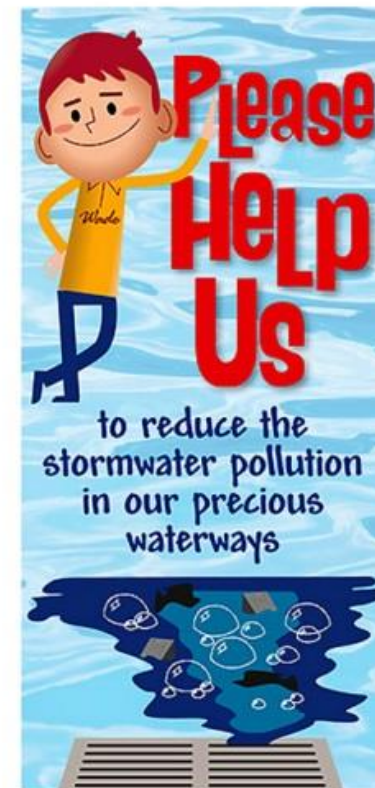
Do you know what happens to water and rubbish that goes down the gullies and drains in our streets and in our gardens?

Are you aware that the stormwater pipe network is quite separate from the sewer system?

The stormwater system is only designed to collect reasonably clean rain water and there is no filtering or treatment.

Whatever goes into these pipes flows straight into our waterways and the sea shore.

If you do anything that causes pollutants of any sort to contaminate the water that flows into the stormwater system, you are directly contaminating your local creeks and rivers, and through them the lakes and the sea.



WATERWISE WADE



THE DIRTY TRUTH – CAR WASHING



THE DIRTY TUTH – OTHER HOME ACTIVITIES





POSTERS



BROCHURE



CAR STICKERS

Resources available at
www.thedirtytruth.com.au



To show people in your communities how to reduce stormwater pollution in our precious waterways...

Thank you for listening.

Diane Ross

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