

Water Supply and Sewerage

PERFORMANCE MONITORING REPORT 2005/2006

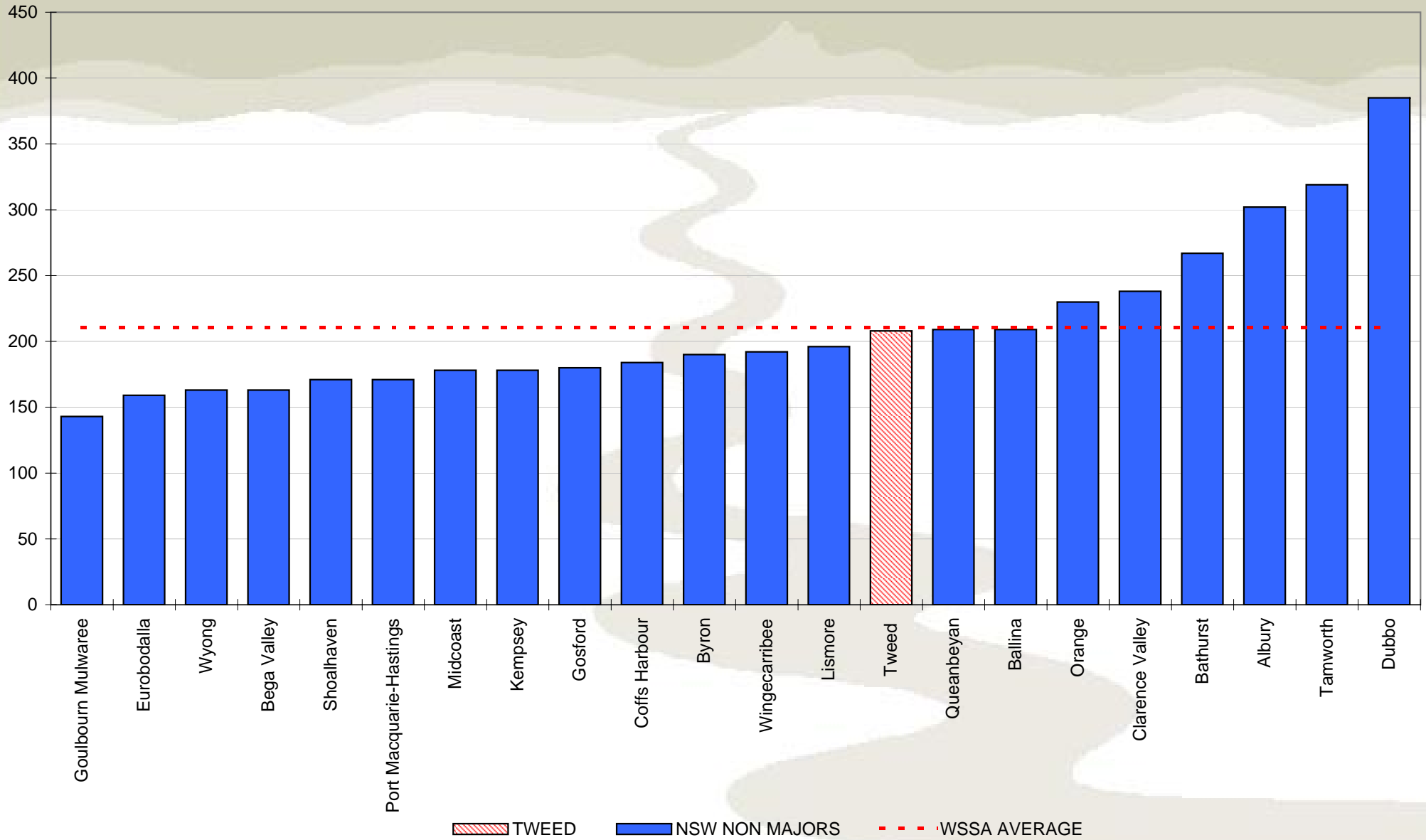
(Incorporating comparisons with NSW Non Major Utilities)



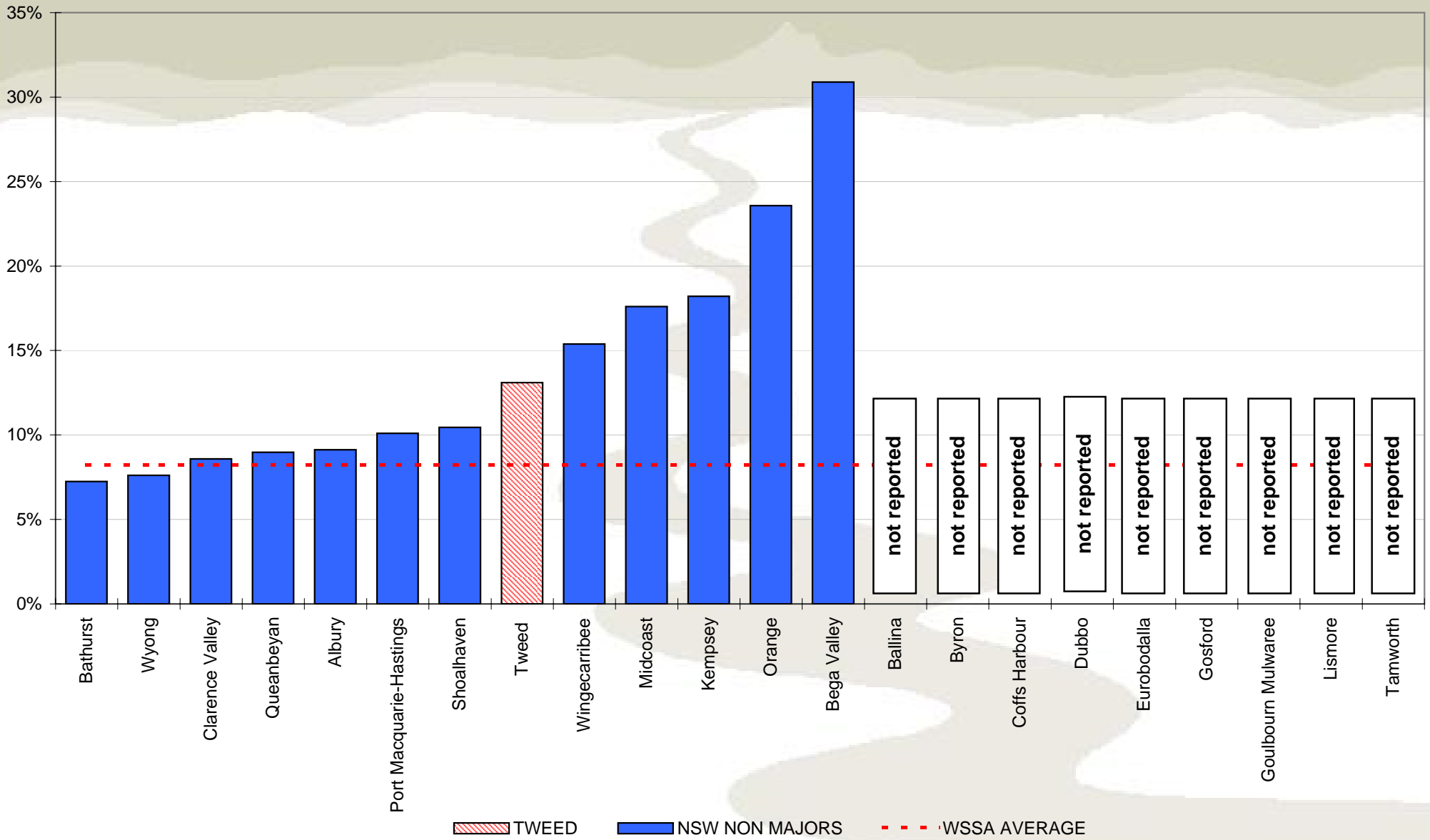
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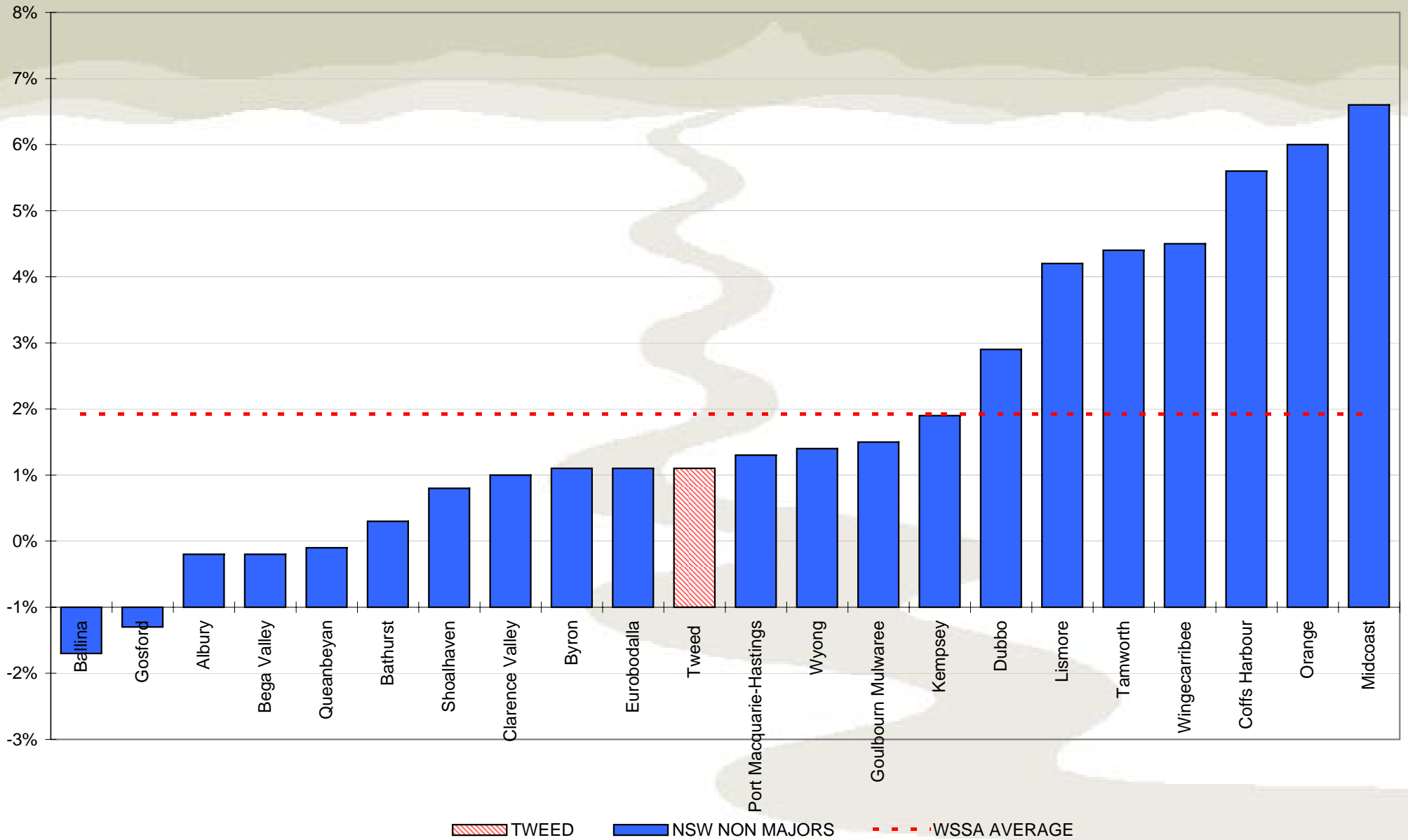
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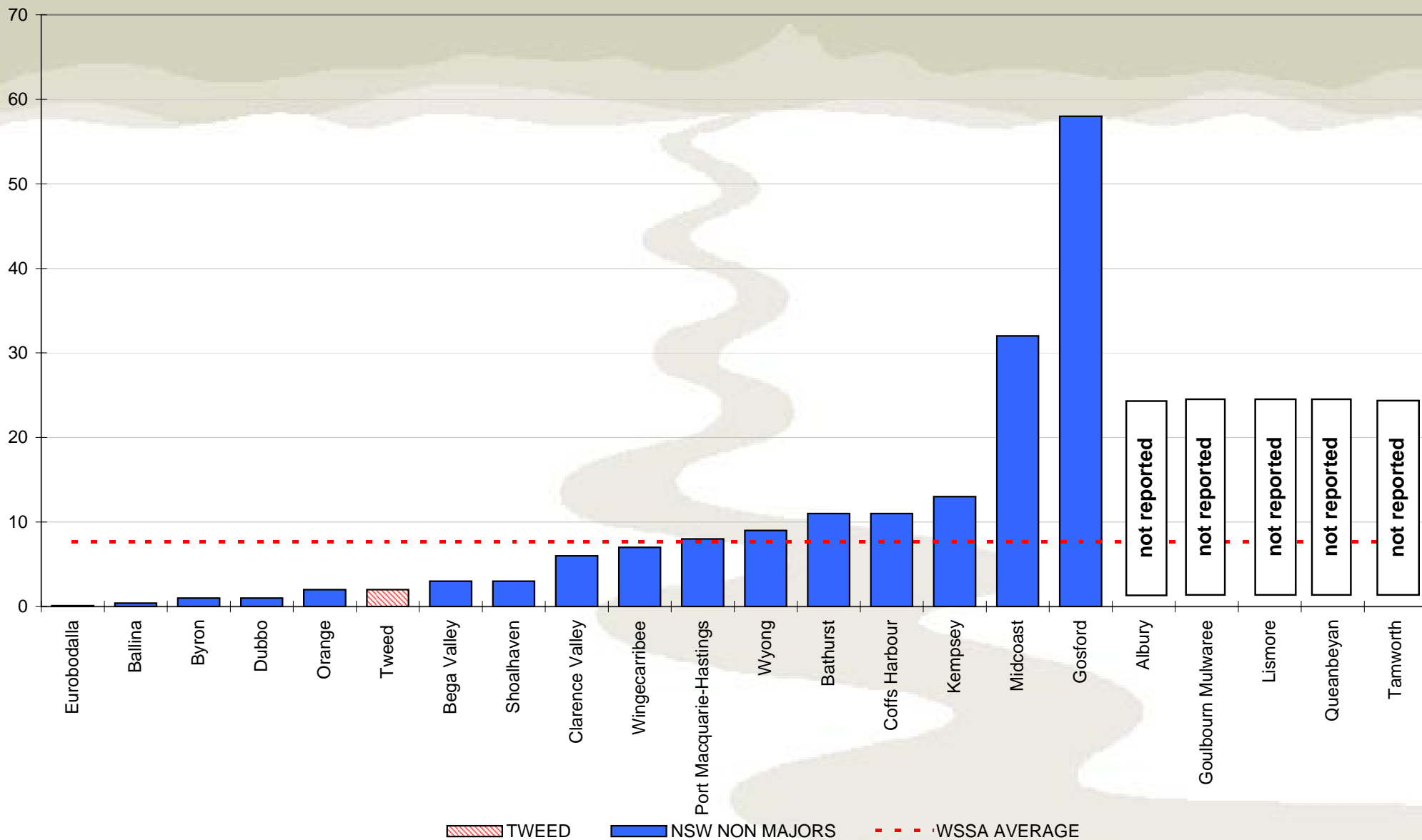
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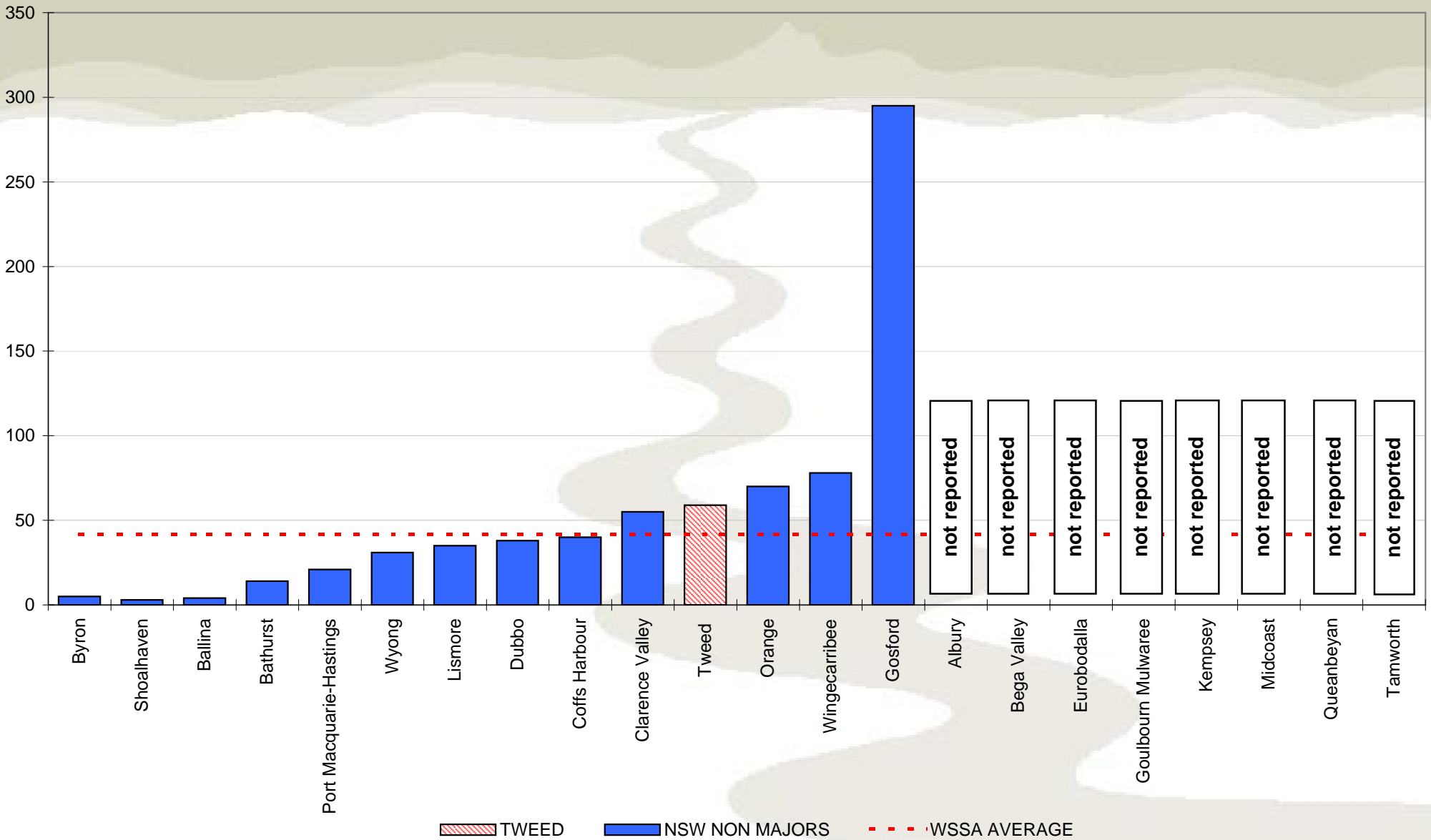
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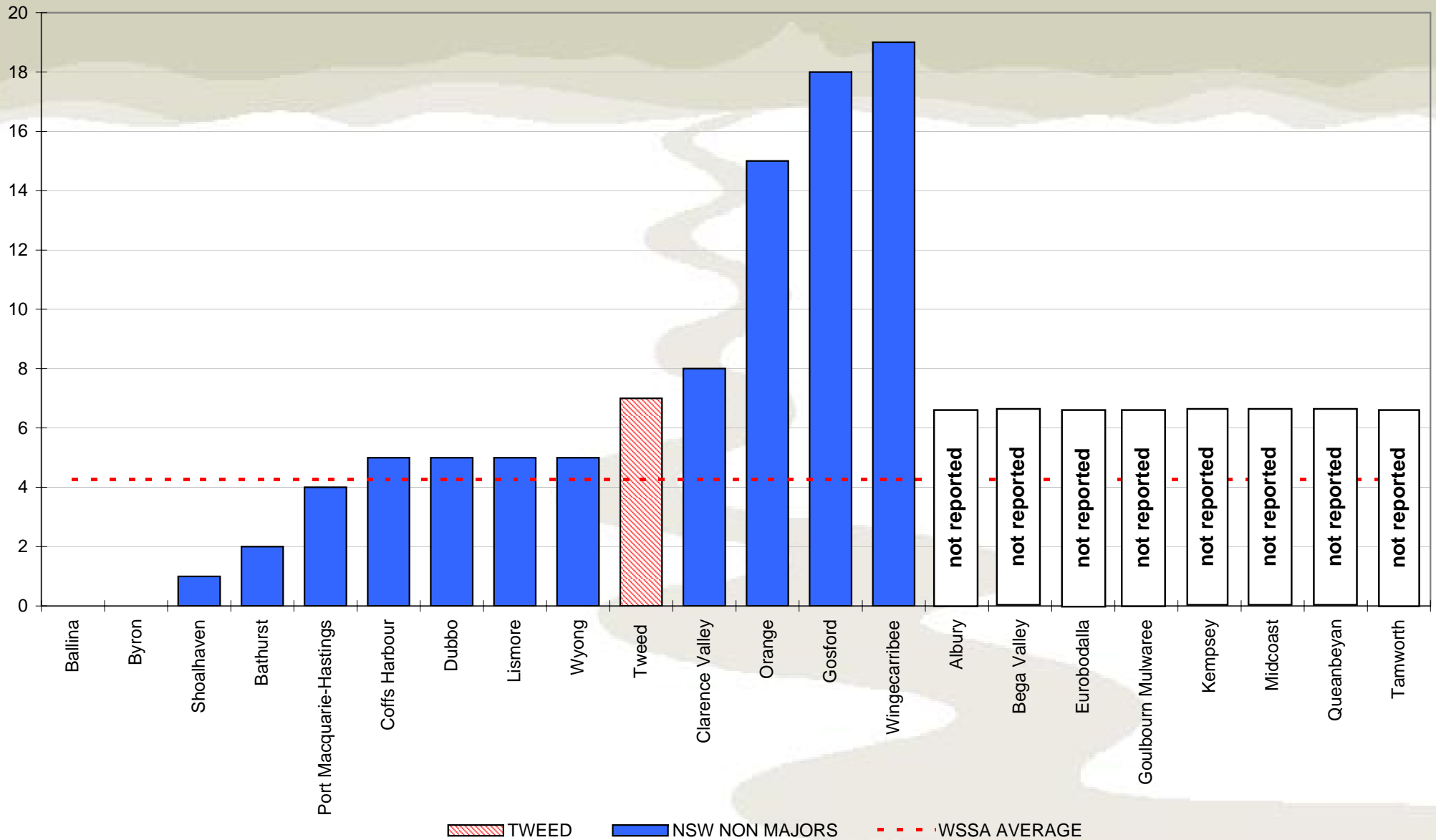
4 Water Quality Complaints (per 1,000 properties) 2005/2006



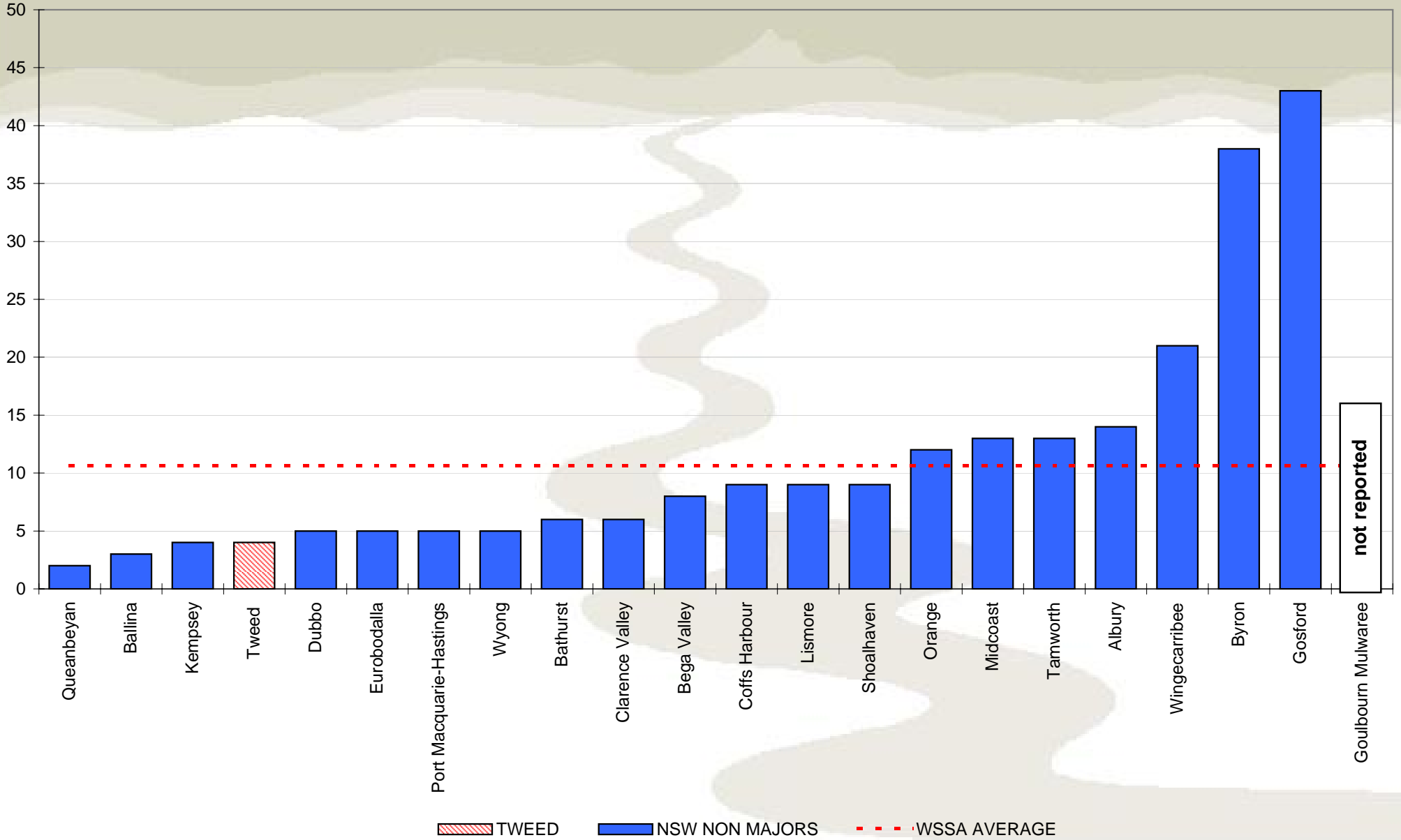
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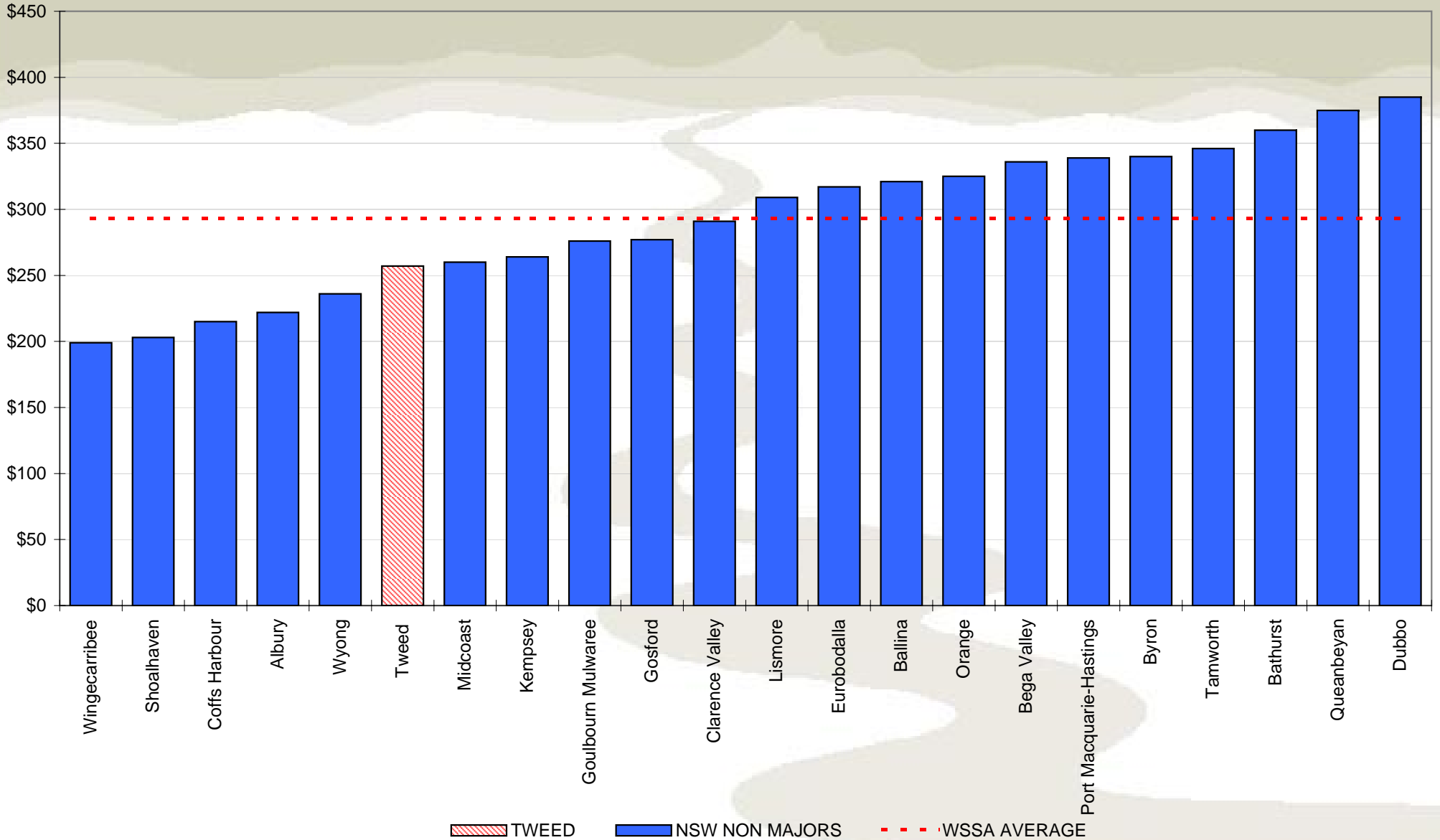
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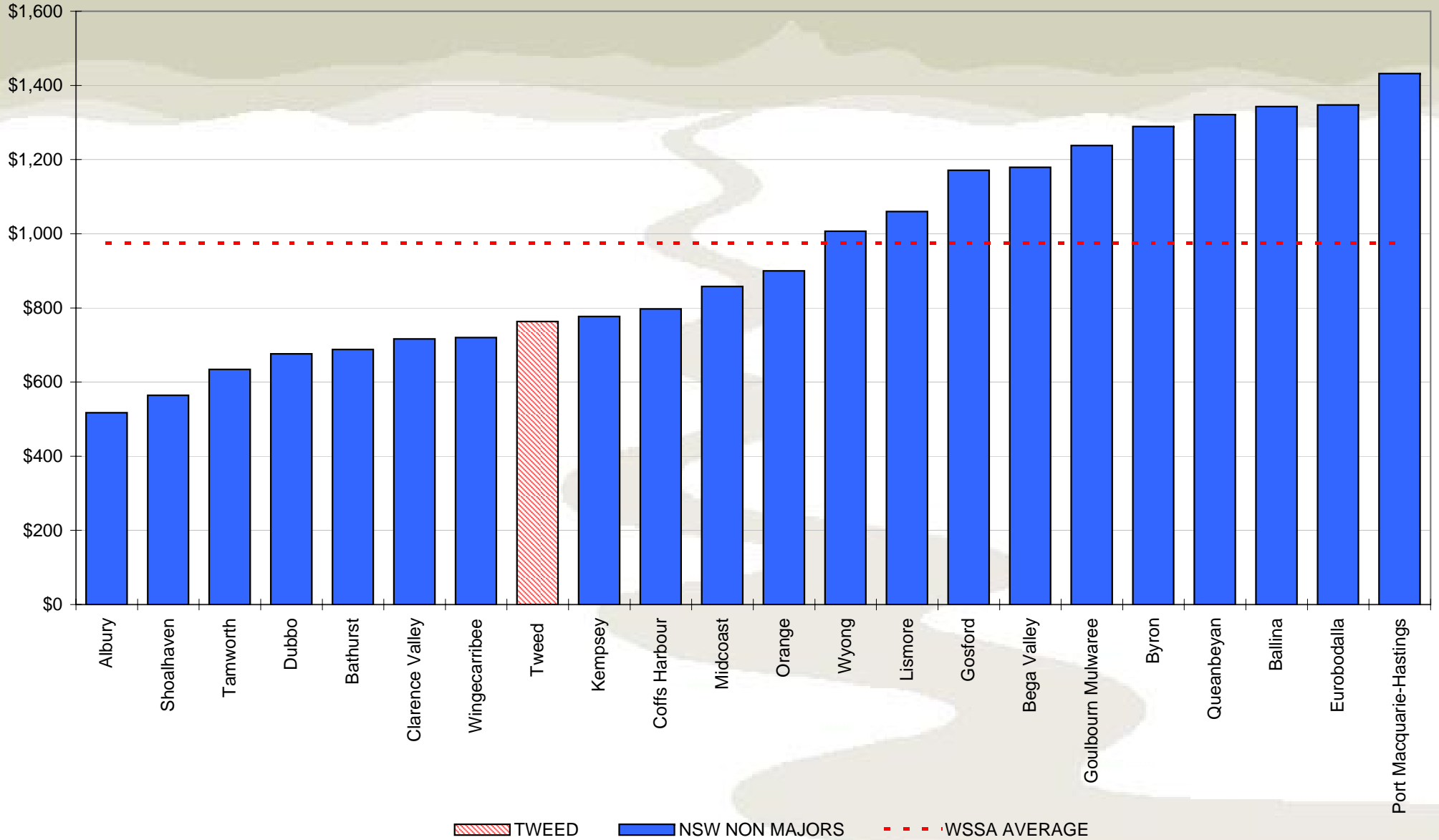
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9 Water Operating Costs (\$'s per ML) 2005/2006

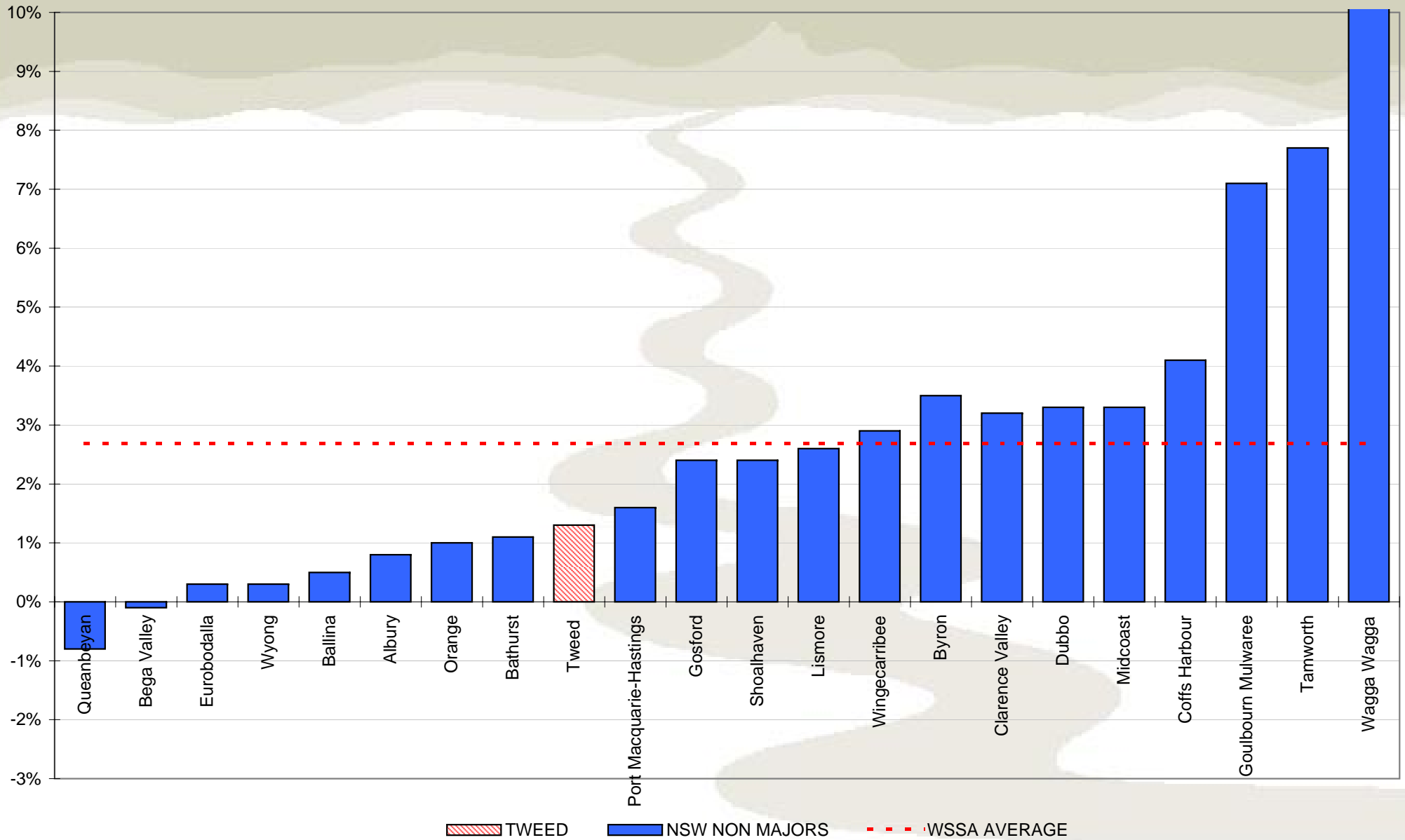


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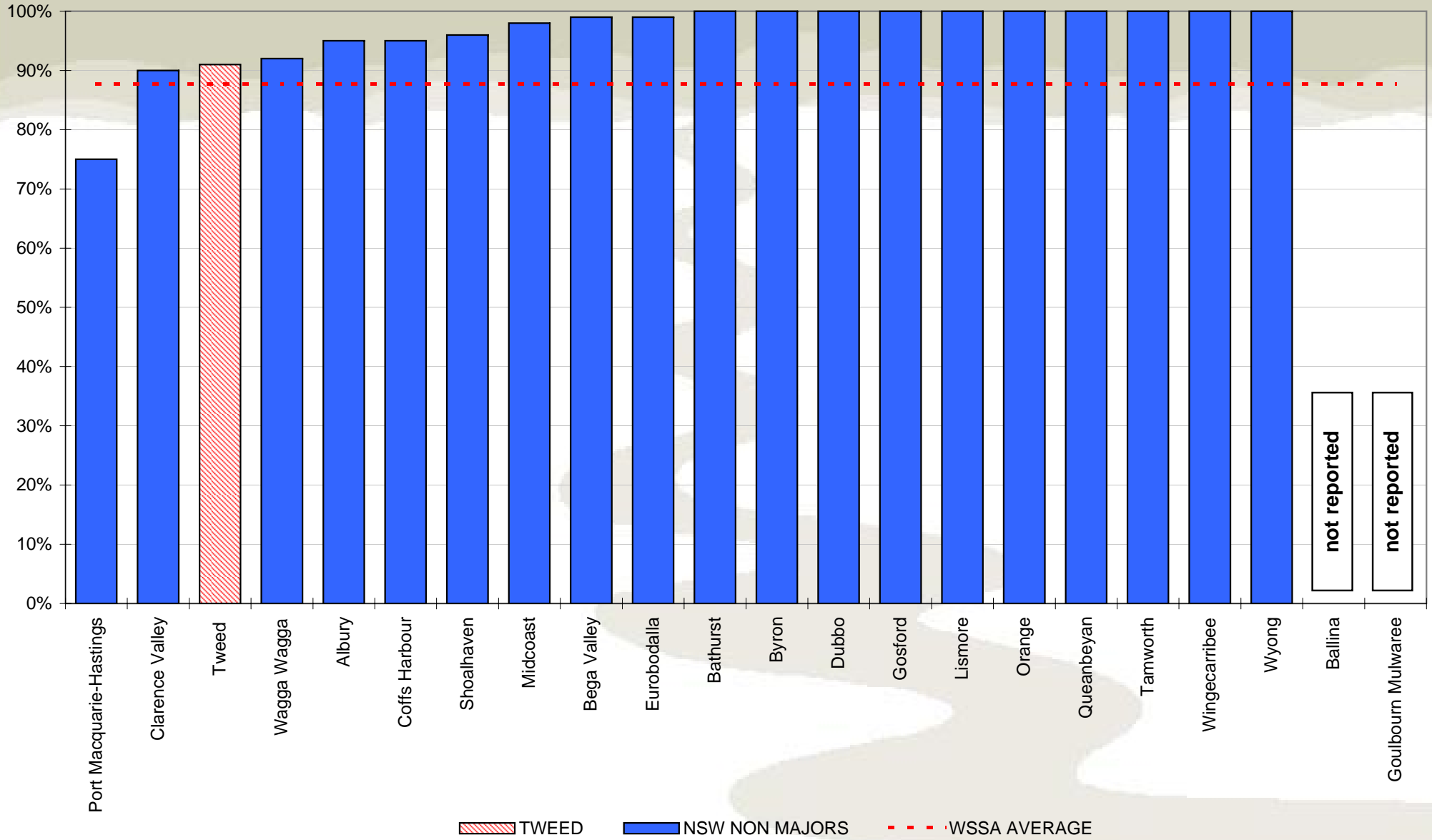
NSW NON MAJORS

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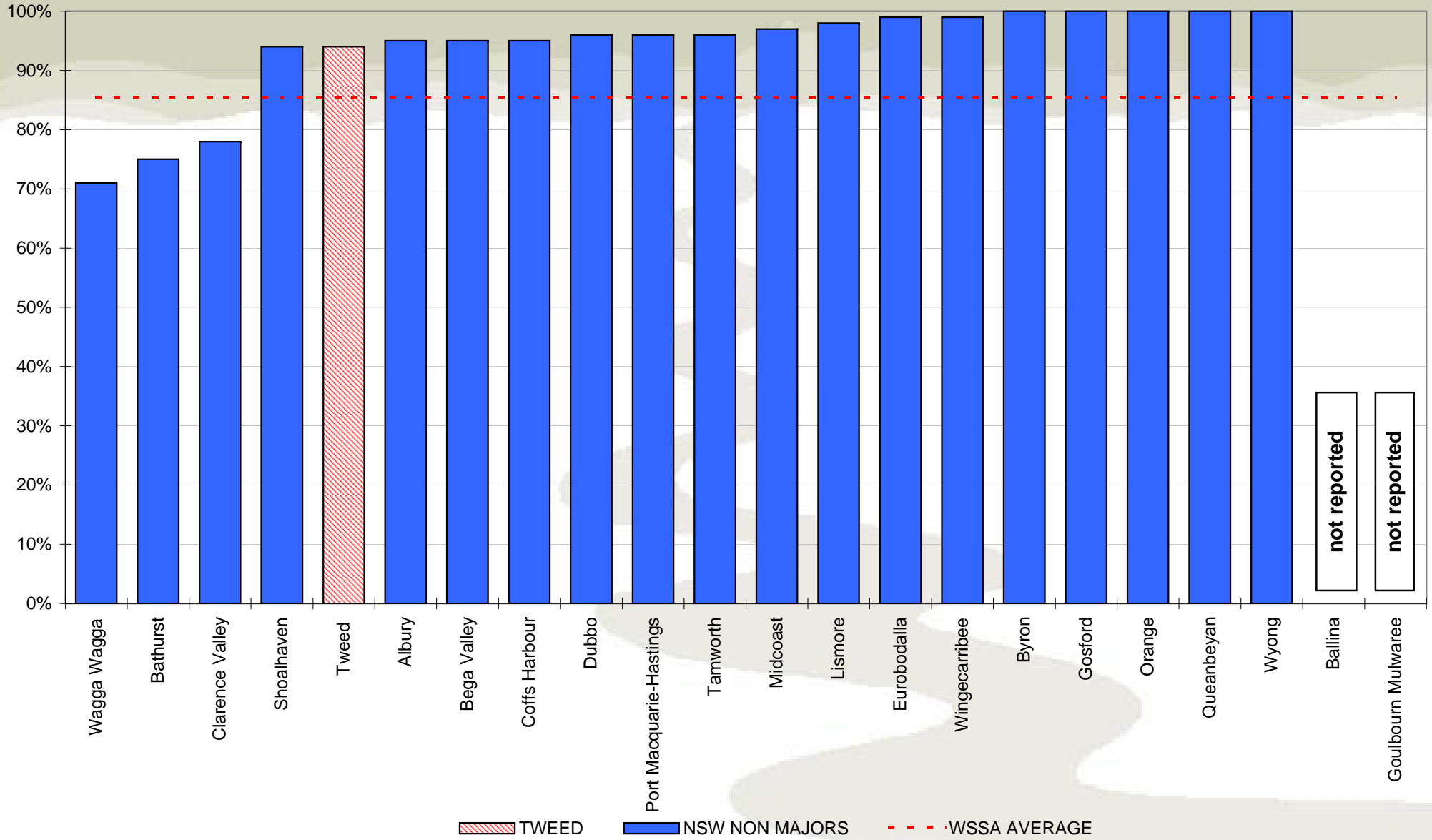
10 Sewer - Economic Real Rate of Return (%) 2005/2006



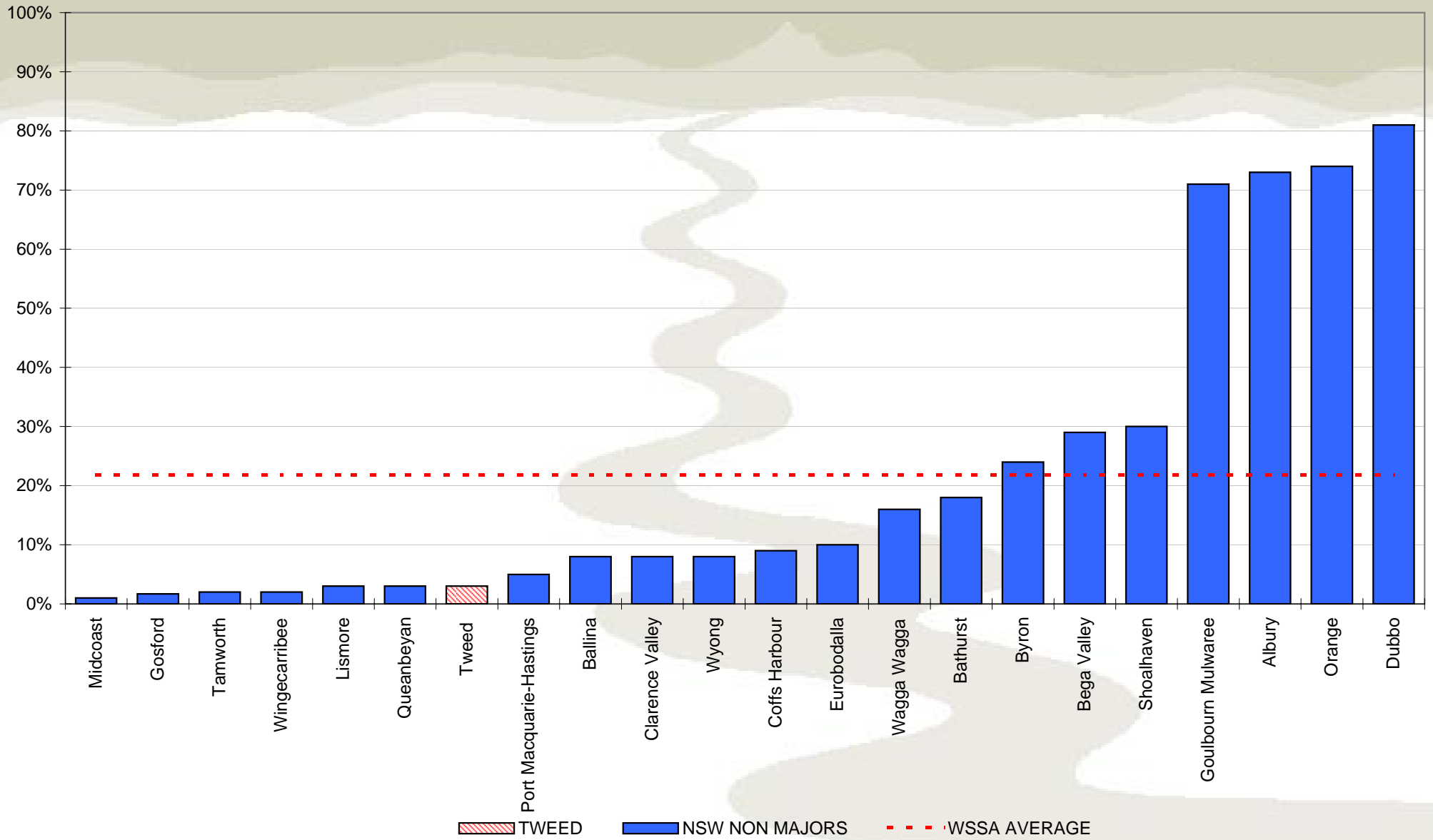
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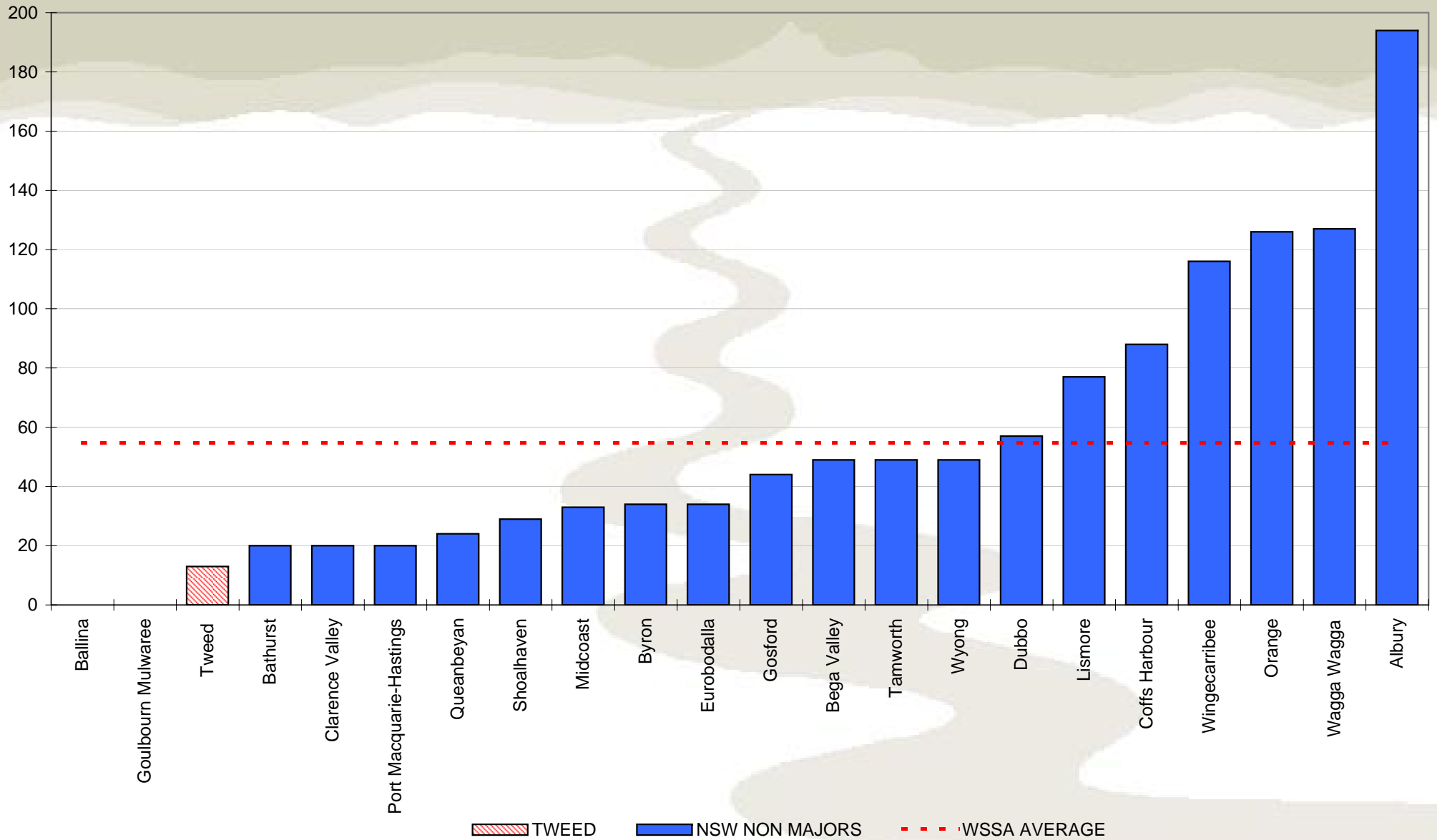
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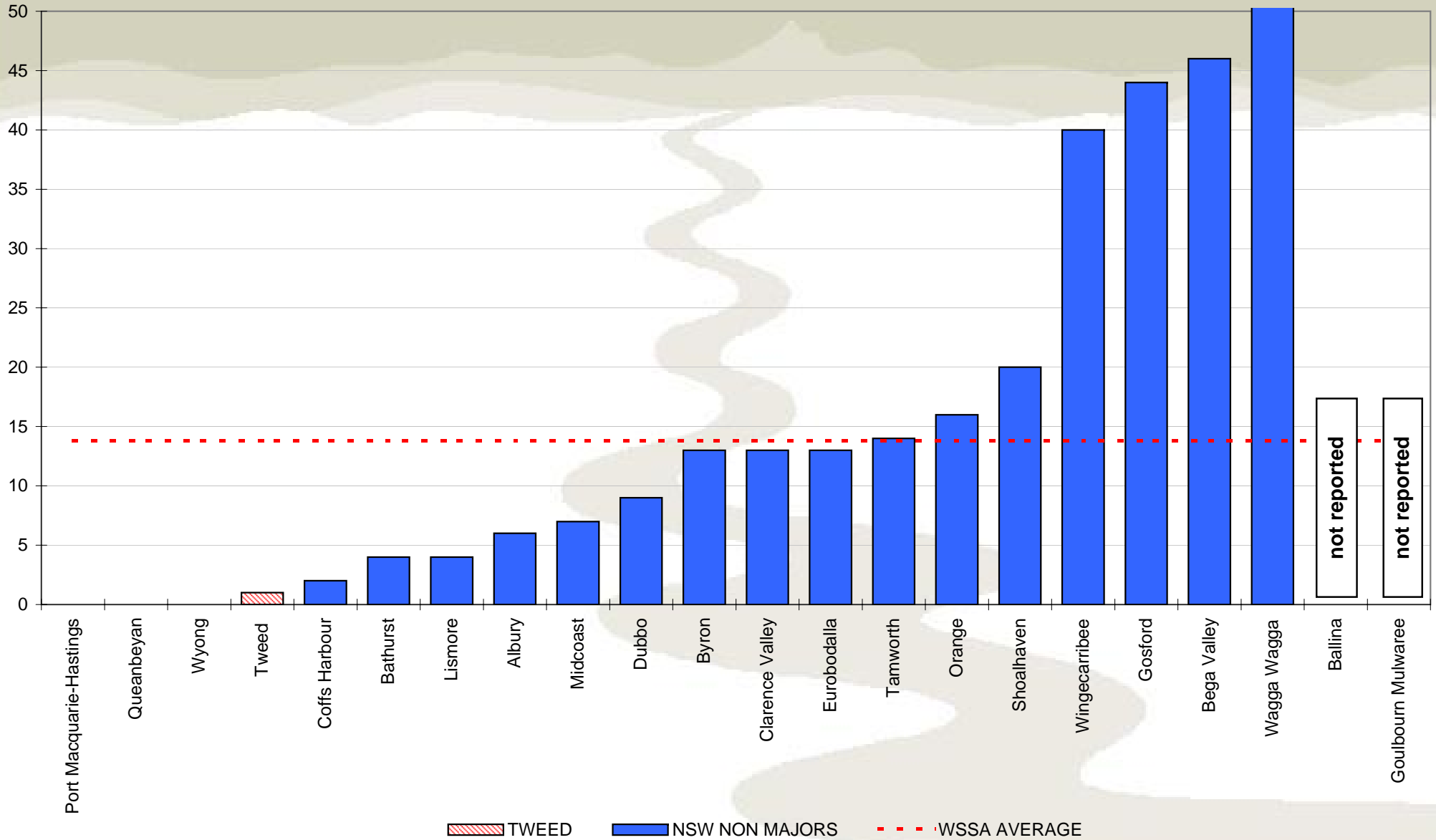
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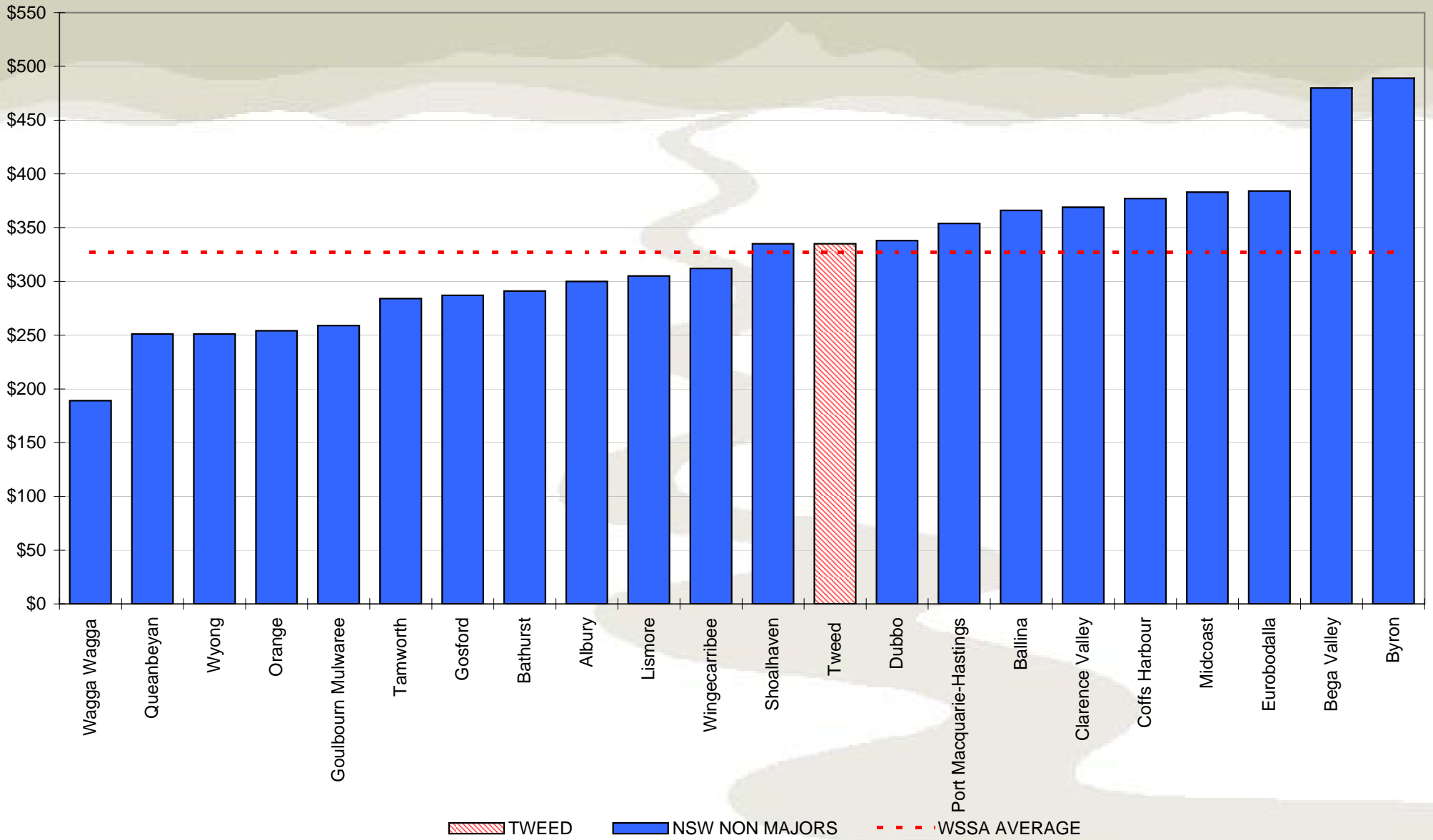
14 Confirmed Sewer Chokes & Collapses (per 100km of Main) 2005/2006



15 Sewage Overflows (per 100km of Main) 2005/2006

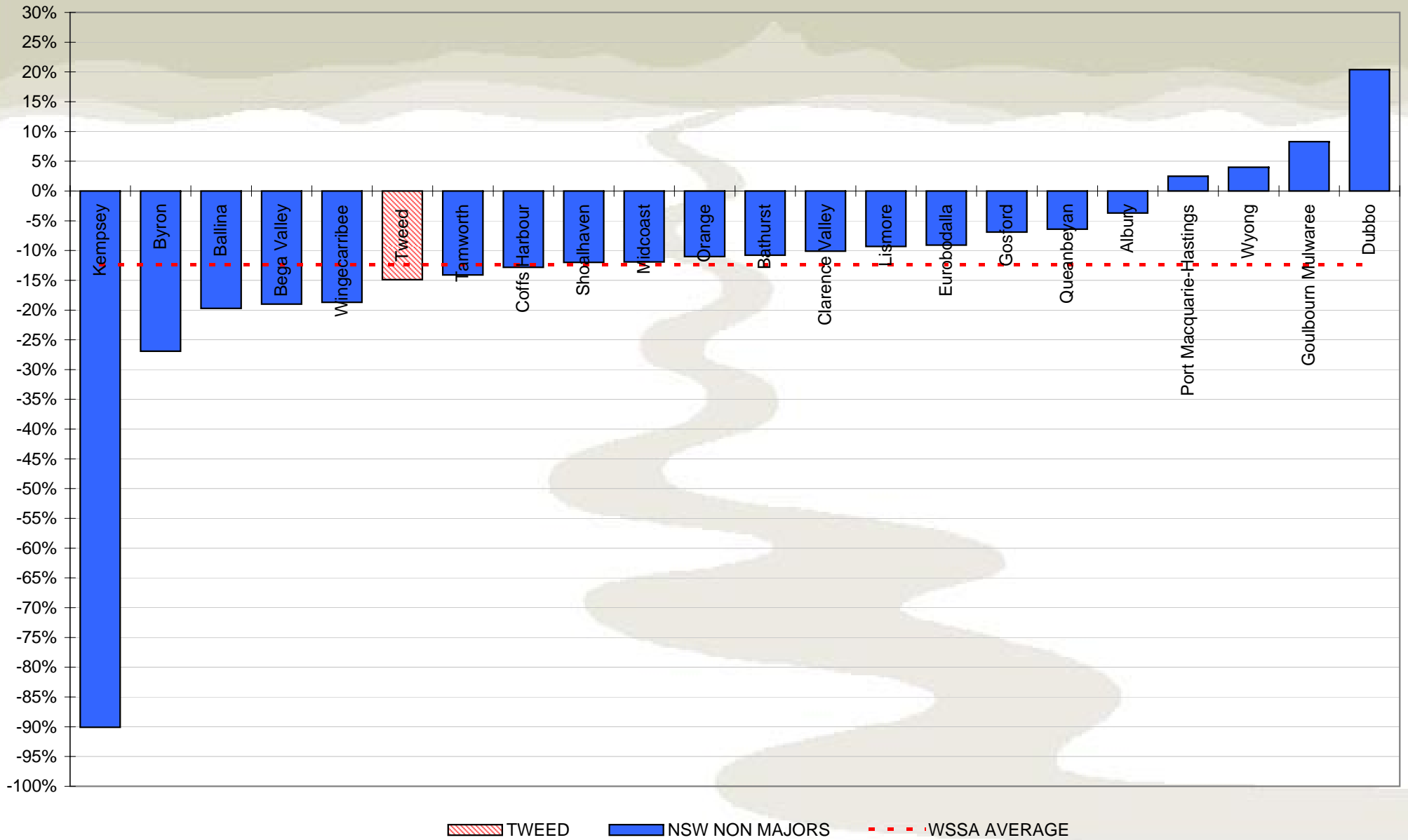


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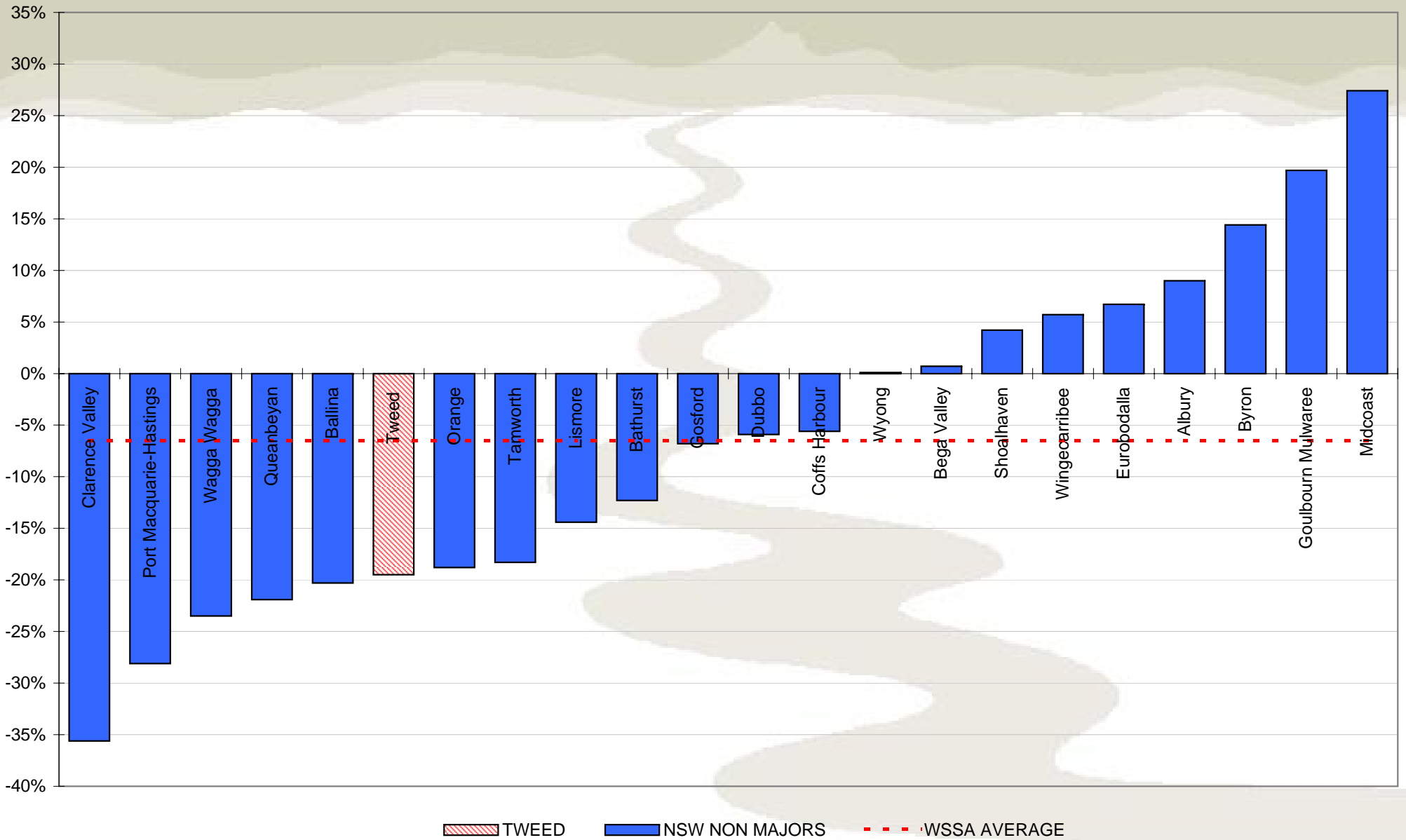


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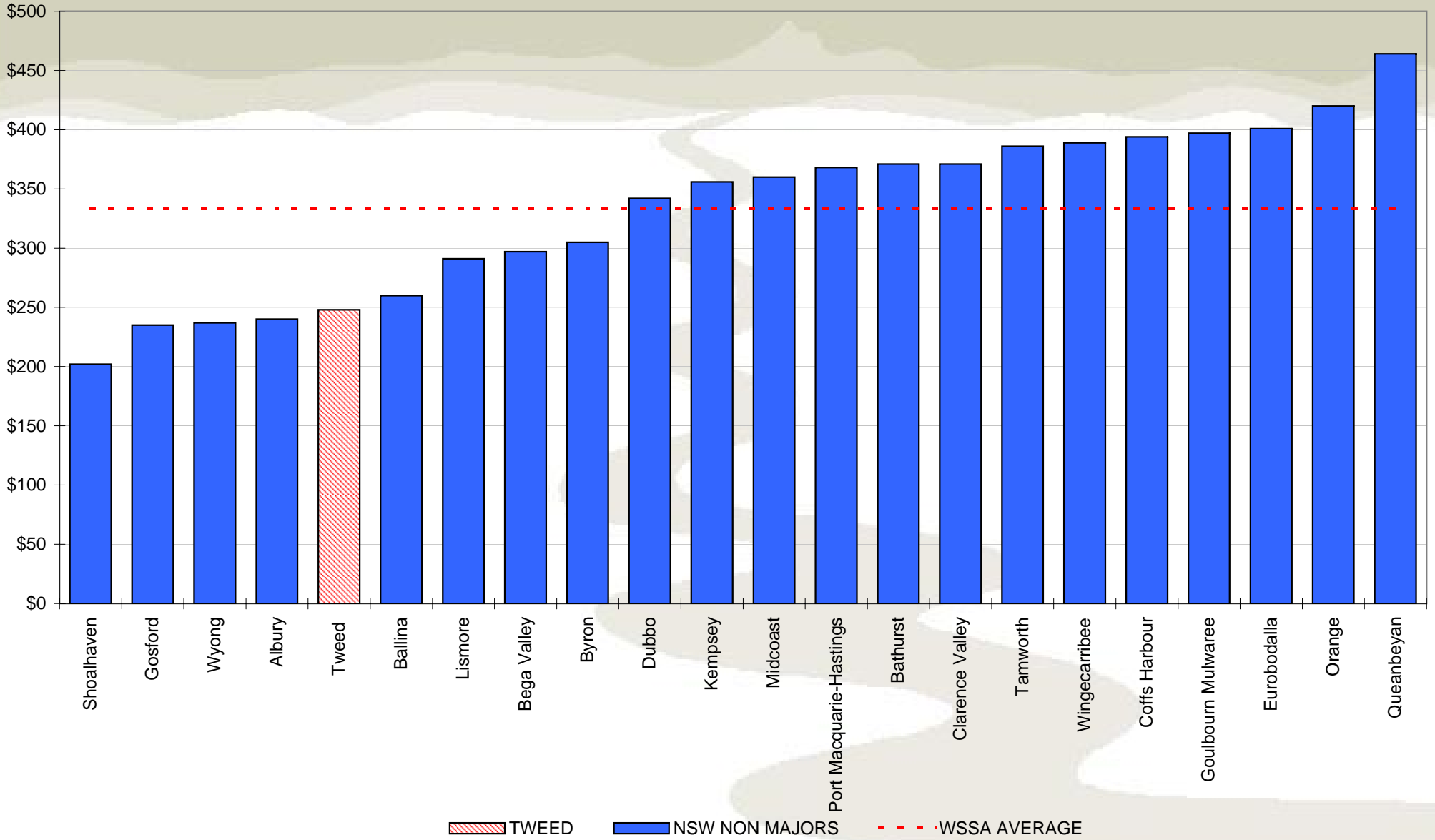
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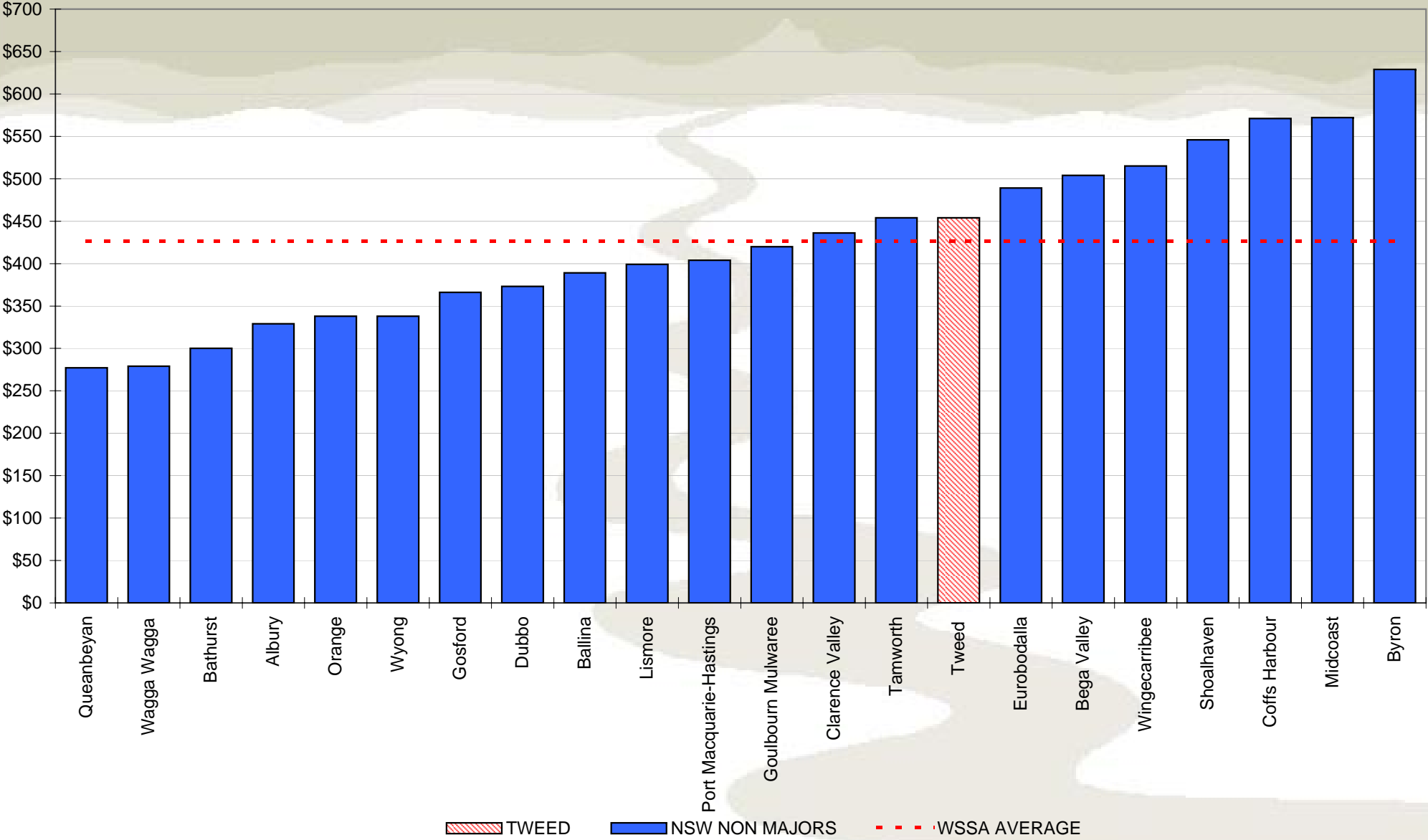
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19 Average Water Bill for Residential Customers 2005/2006



20 Average Sewer Bill for Residential Customers 2005/2006



COMPARISON WITH LOCAL NSW SHIRE COUNCILS

Comparison of Residential single dwelling property

	Tweed		Byron		Lismore		Richmond Valley		Kyogle		Ballina	
	2006/2007	2007/2008	2006/2007	2007/2008	2006/2007	2007/2008	2006/2007	2007/2008	2006/2007	2007/2008	2006/2007	2007/2008
Sewer Access Charge	\$473.00	\$492.00	\$510.00	\$544.00	\$445.00	\$461.00	\$725.00	\$750.00	\$508.00	\$526.00	\$360.00	\$400.00
Water Access Charge	\$95.00	\$95.00	\$103.00	\$115.00	\$100.00	\$100.00	\$140.00	\$120.00	\$175.00	\$192.00	\$95.00	\$100.00
Water Volumetric Charge per k/L	\$1.04	\$1.23	\$1.20	\$1.27	\$1.22	\$1.35	\$1.05	\$1.20	\$1.05	\$1.05	\$0.90	\$1.07
Total Water Charge to 200 k/L	\$303.00	\$341.00	\$343.00	\$369.00	\$344.00	\$370.00	\$350.00	\$360.00	\$385.00	\$402.00	\$275.00	\$314.00

Note: Water volumetric charge is stepped for the following councils:

Kyogle	\$1.05 for first 200k/L	\$1.75 k/L thereafter
Ballina	\$0.90 for first 350k/L	\$1.20 k/L thereafter
Richmond Valley	\$1.20 for first 200k/L	6 k/L thereafter

NUMBER OF CONNECTED PROPERTIES PER WATER UTILITY

Water Utility	Water	Sewer
Gosford	65,500	63,500
Wyong	60,130	57,200
Shoalhaven	44,630	37,400
Midcoast	35,450	31,600
Tweed	28,200	26,400
Wagga Wagga	N/A	23,600
Port Macquarie-Hastings	27,450	25,000
Coffs Harbour	22,860	21,300
Albury	22,610	21,700
Tamworth	19,130	17,100
Clarence Valley	18,180	12,900
Eurobodalla	18,780	17,000
Wingecarribee	17,150	13,300
Queanbeyan	15,390	15,400
Dubbo	15,540	14,400
Orange	15,210	14,400
Goulbourn Mulwaree	10,360	9,800
Bathurst	14,130	13,600
Lismore	13,750	12,000
Bega Valley	13,370	10,400
Ballina	14,020	12,400
Kempsey	12,030	8,800 (not included in comparison)
Byron	10,310	9,900

WATER SUPPLY SYSTEM - Tweed Shire Council serves a population of 73,100 (30,990 assessments). Water is drawn from Tweed River and Doon Doon Creek to supply Murwillumbah, Tweed Heads and Bogangar. Council has 1 dam with a storage capacity of 15000 ML. The Tweed Shire Council system comprises 3 conventional treatment works (61 Megalitres per day), 34 service reservoirs (100 ML) 22 pumping stations, 56 ML/d delivery capacity into the distribution system, 174 km of trunk mains and 481 km of reticulation. The water supply is fully treated.

PERFORMANCE - Tweed Shire Council complied with 4 of the 6 Best Practice Criteria. The typical residential bill was \$311 which was close to the statewide median (Indicator 13). The economic real rate of return was 1.1% which was less than the statewide median (Indicator 41). The operating cost per property was close to the statewide median (Indicator 47). Water quality complaints were less than the statewide median (Indicator 23). Compliance with microbiological water quality was 100% with 3 of 3 zones compliant (Indicator 18), physical compliance was 100% (Indicator 16) and chemical compliance was 94% with 1 of 3 zones compliant (Indicator 17). Non-compliance was due to high ph due to long mains. Current replacement cost of system assets was \$221M (\$7,100 per assessment), cash and investments were \$29M, debt was nil and revenue was \$14.2M (excluding capital works grants).

COMPLIANCE WITH BEST- PRACTICE MANAGEMENT GUIDELINES CRITERIA

(1) Complete Current Strategic Business Plan & Financial Plan	YES	(3) Complete performance reporting form (by 15 September)	YES
(2) (2a) Pricing (full cost-recovery, without significant cross subsidies)	Yes	(4) Sound water conservation implemented	YES
(2a) Complying Residential Charges	Yes	(5) Sound drought management implemented	YES
(2c) Complying non-Residential Charges	Yes	(6) Integrated water cycle management strategy commenced	NO
(2d) DSP with Commercial Developer Charges	Yes	COMPLIANCE WITH ALL REQUIRED CRITERIA	

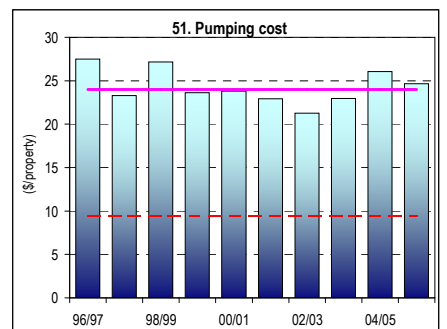
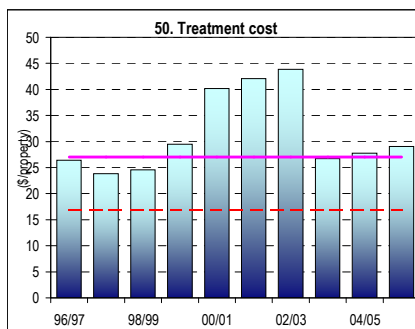
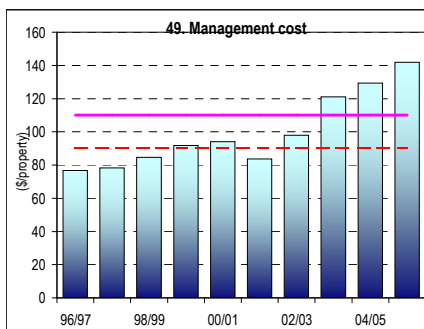
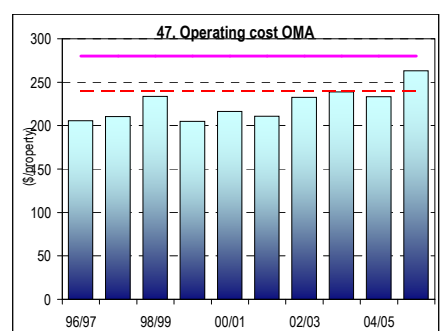
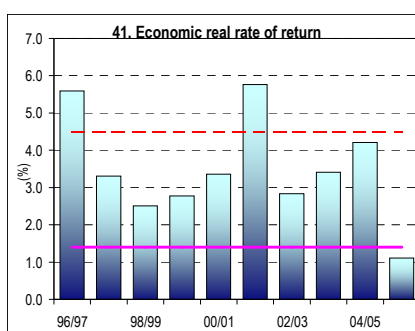
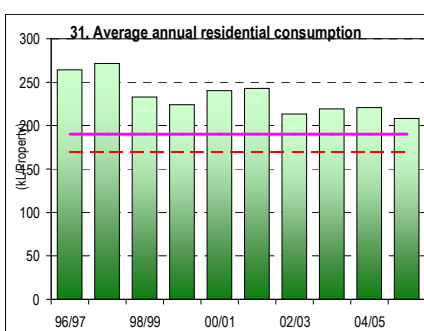
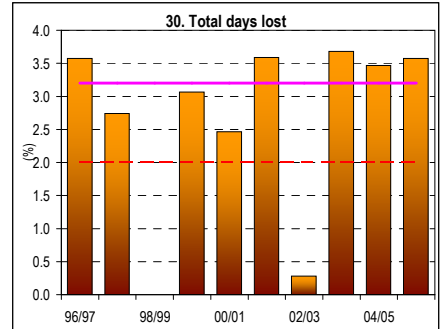
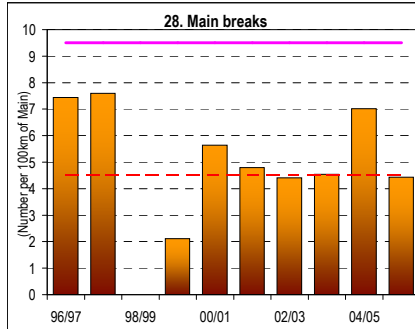
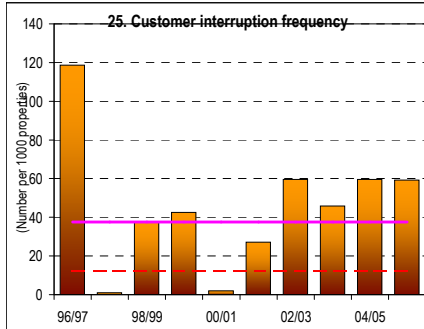
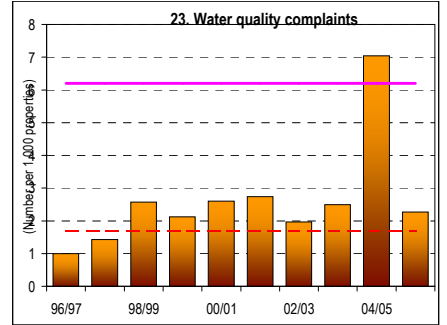
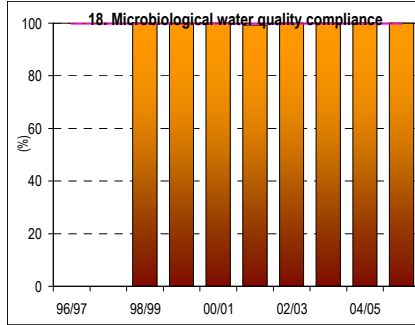
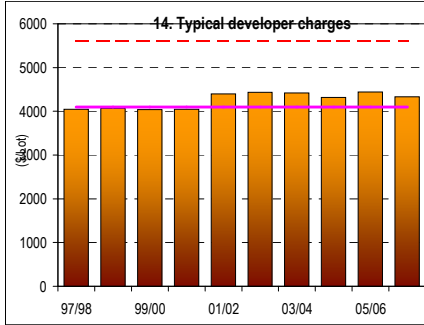
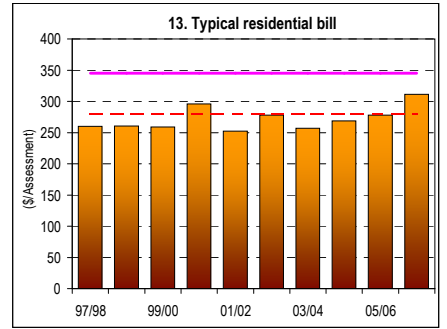
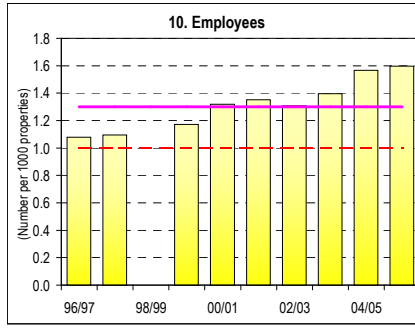
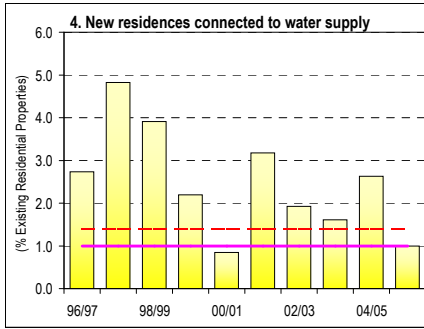
TRIPLE BOTTOM LINE (TBL) PERFORMANCE INDICATORS

Category	Indicator	LWU Result	Ranking		Statewide Median
			>10,000 properties Note 1	All LWUs Note 2	
UTILITY CHARACTERISTICS	1 Population served: 73100				
	2 Number of assessments: 30990				
	3 Residential assessments (% of total)	95			92
	4 New residences connected to water supply (%)	1.0	3	3	1.0
	5 Properties served per kilometre of main	43	2	1	33
	6 Rainfall (% of average annual rainfall)	97	2	2	86
	7 Total water supplied at master meters (ML)	9,500	2	1	7,400
	8 Peak week to average consumption (%)	123	1	1	155
	9 Renewals expenditure (% of current replacement cost of system assets)				0.0
	10 Employees per 1000 properties	1.6	4	3	1.3
SOCIAL	11 Residential tariff structure: two part ; independent of land value				
	12 Residential water usage charge (c / kL) (Note 5)	104	4	2	105
	13 Residential access charge / assessment (\$)	95	2	1	110
	14 Typical residential bill / assessment (\$)	311	2	1	345
	15 Typical developer charge / equivalent tenement (\$)	4,300	3	1	4,100
	16 Urban population without reticulated water supply (%)	0.0	1	1	0.9
	17 Physical water quality compliance (%)	100	1	1	100
	18 Chemical water quality compliance (%)	94		4	100
	19 Microbiological (E. coli) water quality compliance (%)	100	1	1	100
	20 Category 1 (minor) public health incidents per 1000 properties	0.0		5	0.0
	21 Category 2 (limited effects) public health incidents per 1000 properties	0.0		5	0.0
	22 Category 3 (major) public health incidents per 1000 properties	0.00		1	0.00
	23 Capital investment on improving public health performance per property (\$)	0		3	6
	24 Water quality complaints per 1000 properties	2	3	2	6
25 Water service complaints per 1000 properties	34	5	5	6	
26 Customer interruption frequency per 1000 properties	59		4	38	
27 Average duration of interruption (h)	2	5	1	3	
28 Average customer outage time (min)	7	4	3	6	
29 Number of main breaks per 100 km	4	1	1	10	
30 Drought water restrictions (% of time)	0	1	1	3	
31 Total days lost (%)	3.6	4	4	3.2	
ENVIRONMENTAL	32 Average annual residential consumption per property (kL)	208	3	2	190
	33 Water losses (including leakage) (%)	13		4	10
	34 Energy consumption per Megalitre (kiloWatt hours)	642		3	660
	35 Renewable energy consumption per property (kiloWatt hours)	0		1	216
	36 Category 1 (minor) environmental incidents per 1000 properties	0.0		1	0.0
	37 Category 2 (limited effects) environmental incidents per 1000 properties	0.0		1	0.0
38 Category 3 (major) environmental incidents per 1000 properties	0.00		1	0.00	
39 Capital investment on improving environmental performance per property (\$)	0.0		2	0.9	
ECONOMIC	40 Residential revenue from usage charges (% of residential bills)	68	3	2	67
	41 Non-residential revenue from usage charges (% of non-residential bills)	87	1	1	71
	42 Economic real rate of return (%)	1.1	3	3	1.4
	43 Return on assets (%)	1.6	3	3	1.6
	43a Net Debt to equity (%)	-15	4	4	-11
	44 Interest cover	>100	1	1	>100
	45 Loan payment per property (\$)	0	5	4	23
	46 Operating cost (OMA) per 100km of main (\$'000)	1,100	3	4	1040
	47 Operating cost (OMA) per property (\$) (Note 6)	257	2	1	280
	48 Operating cost (OMA) per kilolitre (cents)	76	2	3	86
	49 Management cost per property (\$)	138	4	4	110
	50 Treatment cost per property (\$)	28	2	2	27
	51 Pumping cost per property (\$)	24	3	2	24
52 Energy cost per property (\$)	19	5	3	17	
53 Water main cost per property (\$)	18	1	1	49	

NOTES :

- Ranking for LWUs with >10,000 connected properties is based on dividing the results for LWUs in this group into 5 equal divisions of 20%: ie. a ranking of 1 indicates the LWU is in the top 20% of LWUs; a ranking of 5 indicates the LWU is in the bottom 20% of LWUs. (Relevant for comparison with LWUs of similar size).
- Ranking (1 to 5) for all LWUs is on a percentage of LWUs basis. (Relevant for comparing performance with all other LWUs).
- The Statewide Median is on a percentage of connected properties basis (Table 1 of Monitoring Report) as this is the most appropriate for statewide comparisons.
- Annual review of key projections and actions in LWU's SBP are required, together with annual updating of LWU's financial plan. The SBP should be updated after 3 years.
- Non-residential Tariff: Access Charge based on Meter Size*(40mm:\$380), Two Part Tariff; All usage 104 c/kL.
Water consumption by non-residential customers was 31% of potable water consumption excluding non-revenue water.
2005/06 revenue from non-residential customers was 24% of annual rates and charges.
- The operating cost (OMA)/property was \$257. The components of operating cost were: management (\$138), operation (\$32), maintenance (\$56), energy (\$19) and chemical (\$11).

(Results shown for 10 years together with 2005/06 Statewide Median and Top 20%)



NOTES:

1. Costs are in Jan 2006\$.
2. Microbiological water quality compliance 1998/99 to 2003/04 was on the basis of 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines for E. coli; from 2004/05 compliance was on the basis of the 2004 NHMRC/NRMMC Australian Drinking Water Guidelines.

LEGEND
 2005/06 State Median ————
 2005/06 Top 20% - - - - -

Tweed Shire Council

TBL Sewerage Performance

2004/05

SEWERAGE SUPPLY SYSTEM - Tweed Council has a seweraged area of 2564 ha and has 8 sewage treatment works providing advanced secondary and tertiary treatment. The system comprises 122300 EP treatment capacity (comprising Continuous extended aeration (Activated sludge) and biological nutrient removal), 174 pumping stations (61 ML/d), 128 km of rising mains, 454 km of reticulation, with discharge to river and land.

SYSTEM PERFORMANCE - The total number of sampling days at the treatment works was 266. There were no major malfunctions of the treatment processes. Peak wet weather flow was 1363 L/s and average dry weather flow was 228 L/s. The current replacement cost of system assets was \$218M (\$7,500/assessment), cash and investments were \$53M, debt was \$5.7M and turnover was \$25.3M (excluding capital works grants).

Compliance with Best-Practice Management Guidelines Criteria

(1) Complete Current Strategic Business Plan & Financial Plan	YES YES	(2d) DSP with commercial developer	YES YES YES
(2) Pricing (full cost-recovery, without significant cross subsidies)		(2e) Liquid trade waste approvals & policy	
(2a) Complying Residential Charges		(3) Complete performance Reporting Form by 15 September each year	
(2b) Complying non-Residential Charges		(6) Integrated Water Cycle Management Strategy (by June 2006)	
(2c) Complying Trade Waste Fees and Charges		Compliance with All Required Criteria	

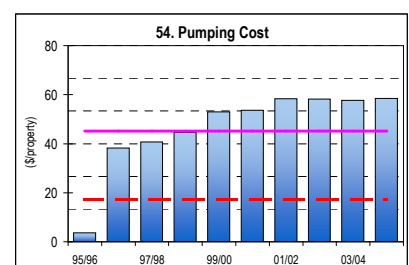
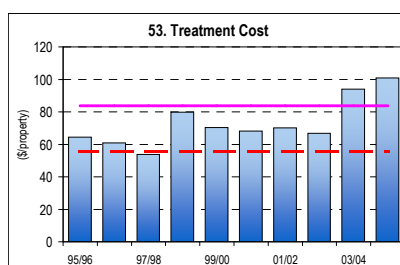
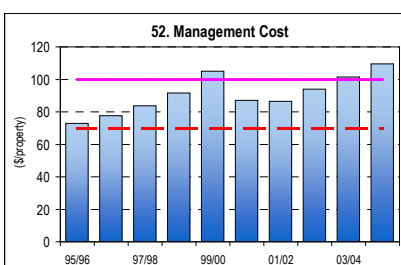
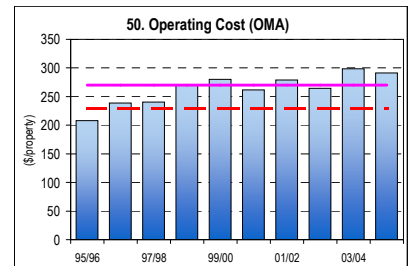
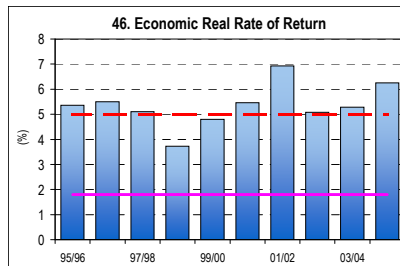
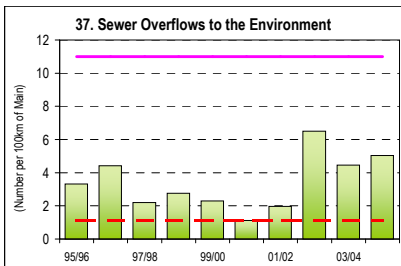
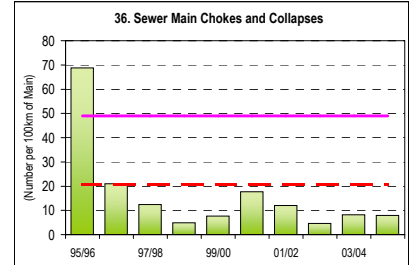
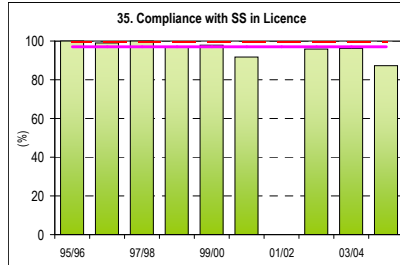
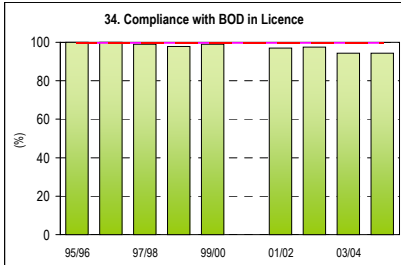
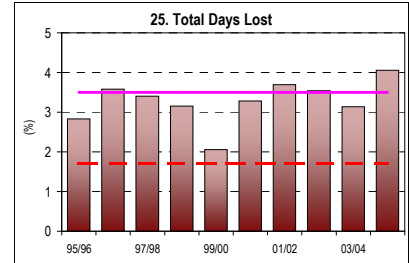
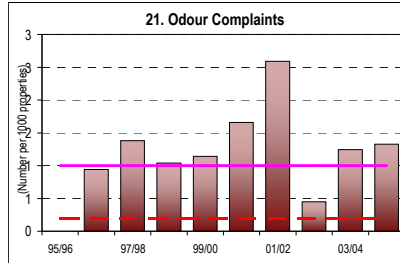
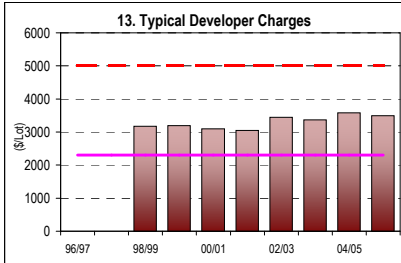
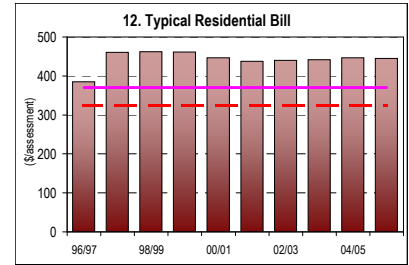
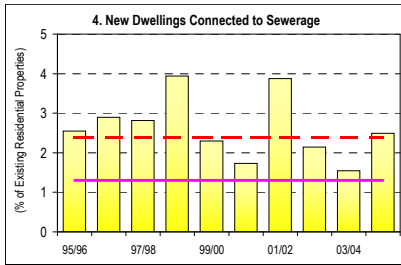
Triple Bottom Line (TBL) Performance Indicators

					LWU Result	Ranking ¹ (>10,000 Properties)	Ranking ² (All LWUs)	Statewide Median ³	
UTILITY CHARACTERISTICS		1 Population Served:	66,635	(0.91 connected properties per assessment)					
		2 Number of Assessments:	29,000	Number of Connected Properties:	26,400				
		3 Residential Assessments (% of total)				95		1	92
		4 New Residential Dwellings Connected to Sewerage (%)				2.5	1	1	1.3
		5 Properties Served per km of Main				42		2	42
		6 Volume of Sewage Collected (ML)				7,900		1	4,500
		7 Renewals Expenditure (% of current replacement cost of system assets)				0.0		2	0.4
		8 Employees (per 1000 properties)				1.9	5	4	1.5
		9 Employees Undergoing 2 or more Days of Training (%)				100		1	6
SOCIAL	Charges/Bills	10 Description of Residential ⁵ Tariff Structure:	Access Charge/property; Independent of Land Value						
		11 Residential Access Charge 2005/06 ⁴ (\$/assessment)			445		4	370	
		12 Typical Residential Bill 2005/06 (\$/assessment)			445	4	4	370	
	13 Typical Developer Charge 2005/06 (\$/equivalent tenement)			3,490		2	2,300		
	14 Average Residential Bill 2004/05 (\$/connected property)			423	4	4	335		
	16 Urban Properties without Reticulated Sewerage Service (%)			1.3	2	1	3.3		
	17 Category 1 Public Health Incidents - Minor (per 1000 properties)			0.04		4	0		
	18 Category 2 Public Health Incidents - Limited Effects (per 1000 properties)			0.1		1	0.0		
	19 Category 3 Public Health Incidents - Major (per 1000 properties)			0.00		1	0.00		
	20 Capital Expenditure on Improving Public Health (\$/property)			0		2	27		
	21 Odour Complaints (per 1000 properties)			1.3	4	4	1.0		
	22 Service Complaints (per 1000 properties)			12		2	16		
	23 Customer Interruption Frequency (per 1000 properties)			24		5	15		
	23a Average Duration of Interruption (hr)			3		4	2		
	24 Average Customer Outage Time (min)			4		5	1		
25 Total Days Lost (%)			4.1	4	4	3.5			
ENVIRONMENTAL	Natural Resource Management	26 Volume of Sewage Treated per property (kL/a)			299		5	230	
		27 Reclaimed Water (% of effluent reclaimed)			5	4	4	11	
		28 Biosolids Reuse (%)			62		2	100	
		30 Energy Consumption (kWh/ML)			748		4	600	
	32 Renewable Energy Consumption (kWh/property)						8		
	Environmental Performance	33 90 Percentile Licence Limits for Effluent Discharge: BOD 15 mg/L; SS 20 mg/L; Total N 10 mg/L; Total P 1 mg/L							
		34 Compliance with BOD in Licence (%)			94	5	4	100	
		35 Compliance with SS in Licence (%)			87	5	4	97	
		36 Sewer Main Chokes and Collapses (per 100 km of main)			17	4	2	49	
		37 Sewer Overflows to the Environment (per 100 km of main)			5	2	2	11	
39 Category 1 Environmental Incidents - Minor (per 1000 properties)				0.1		3	0		
40 Category 2 Environmental Incidents - Limited Effects (per 1000 properties)			0.0		1	0.1			
41 Category 3 Environmental Incidents - Major (per 1000 properties)			0.00		1	0.10			
42 Capital Investment on Improving Environmental Performance (\$/property)						76			
ECONOMIC	Financial	43 Revenue from Non-residential plus Trade Waste Charges (% of total)			4		5	70	
		44 Revenue from Trade Waste Charges (% of total)			3.4		1	1.3	
		46 Economic Real Rate of Return (%)			6.2	1	1	1.8	
		46a Return on Assets (%)			5.9		1	2.2	
		47 Debt to Equity (%)			2.8	3	3	5.3	
		48 Interest Cover (%)			2630		1	1200	
		48a Loan Payment (\$/property)			35	3	2	40	
		49 Operating Cost (OMA) per 100 km of Main (\$'000/100km)			1291	4	5	1160	
	Efficiency	50 Operating Cost (OMA) per property (\$/property)			310	4	4	270	
		51 Operating Cost (OMA) per kL (c/kL)			104	2	2	115	
		52 Management Cost (\$/property)			110	4	4	100	
		53 Treatment Cost (\$/property)			101	4	4	84	
		54 Pumping Cost (\$/property)			58	4	4	45	
		55 Energy Cost (\$/property)			26	5	5	17	
56 Sewer Main Operation & Maintenance Cost (\$/property)			28	2	2	31			

Notes:

- Ranking for LWUs with (>10,000) connected properties is based on dividing the results for LWUs in this group into 5 equal divisions of 20%: i.e. a ranking of 1 indicates the LWU is in the top 20% of LWUs; a ranking of 5 indicates the LWU is in the bottom 20% of LWUs. (Relevant for comparison with LWUs of a similar size).
- Rankings (1 to 5) for all LWUs is on a percentage of LWUs basis. (Relevant for comparing performance with all other LWUs).
- The Statewide Median is on a percentage of connected properties basis (see Table 2 of the 04/05 NSW Performance Benchmarking Report) as this is the most appropriate for statewide comparisons.
- Annual review of the key projections and actions in LWU's Business Plan are required, together with annual updating of LWU's Financial Plan. The business plan should be updated after 3 years.
- Non-residential: Uniform Access Charge \$445
- Trade waste volume was 26% of total sewage collected; Trade waste & non-residential rates & charges provided 4% of the annual rates & charges revenue, including usage.
- Compliance with Total N in Licence was 94%. Compliance with Total P in Licence was 64%.
- The operating cost (OMA)/property was \$310. The components of operating cost/property were: management (\$110), operation (\$77), maintenance (\$94), energy (\$26) and chemical (\$3).

(Results shown for 10 years together with 2004/05 Statewide Median and Top 20%)



Note: Costs are in Jan 2005\$.

LEGEND

2004/05 State Median
2004/05 Top 20%

