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Appendix G

Table 7.1 Evaluation of Options for
Stormwater Management

Table 7.1 Evaluation of Options for Stormwater Management

Action No.	Waterway	Authority	Option Type	Description	COSTS				BENEFITS						RANK			
					Installation	10 Year Operating	Total Installation + 10 Year operating Cost	Cost Index	Target Pollutant	No. Pollutants	Rel Impacts of Pollutants in Cooks River	%of Catchment benefited	Effectiveness	Education Value	Education Value No.	Benefit Index	Cost/Benefit Ratio	Rank
				Litter														
7	ALL	EDDept	ED	Develop an education and awareness program in schools, in cooperation with the Department of Education	\$2,000	\$20,000	\$22,000	1	Litter	7	6	100%	med	high	10	6.6667	1.5	2
5	ALL	ALL-C	ED	Develop and implement signage in public areas to provide feedback on improvements in stormwater quality through information of stormwater treatment measures. Pollutant loading measures could be regularly updated.	\$20,000	\$30,000	\$50,000	1	Litter	7	6	40%	med-high	high	10	6	1.6667	6
15	ALL	ALL - C	MAN	Influence state government to introduce legislation to require manufacturers to reduce packaging and provide return fees for recyclables (eg. container deposits, and waste oil) .	\$2,000	\$20,000	\$22,000	1	Litter	1	6	100%	high	med-low	3	5.3333	1.875	14
14	ALL	ALL	MAN	Provide stickers "NO JUNK MAIL - We're protecting the Cooks River Catchment" in Council Rate Notices.	\$13,000	\$0	\$13,000	1	Litter	1	6	80%	med	med-high	7	5	2	19
4	ALL	ALL-C	ED	Trial park areas by removing bins and providing signage "Thank You for caring for the park and the Cooks River". Monitor success of the trial bin removal project and implement appropriate strategy for ALL park areas within the catchment.	\$8,000	\$0	\$8,000	1	Litter	1	6	10%	med	high	10	4.1667	2.4000	28
12	ALL	ALL	MAN	Develop and implement a planning policy requiring GPT and/or litter interceptors to be installed (and maintained by the development), in new commercial, industrial and shopping centre developments and redevelopments.	\$13,000	\$0	\$13,000	1	Litter	1	6	20%	med-high	med-high	7	4.1667	2.4	29

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9	ALL	ALL	MAN	Implement a policy for new commercial developments and redevelopments to install adequate and appropriately designed bins.	\$13,000	\$0	\$13,000	1	Litter	1	6	20%	med-high	med	5	3.8333	2.6087	36
2	ALL	ALL	ED	Support anti-Litter education campaigns at a local level through signage and local education. eg. Clean -Up Australia Day, The Drain is Just for Rain, Streets to rivers project, Cooks River Valley Association street clean up project.	\$26,000	\$130,000	\$156,000	3	Litter	7	6	100%	med	high	10	6.6667	4.5	54
1	ALL	ALL	ED	Stencil Drains to educate people on the link between their backyard and the waterway and make drains readily identifiable (ie. through numbering).	\$8,000	\$100,000	\$108,000	3	Litter	7	6	60%	med-high	high	10	6.3333	4.7368	55
6	ALL	ALL - C	ED	Support EPA "dob in a dumper" hotline through advertising within the Cooks River catchment.	\$2,000	\$150,000	\$152,000	3	Litter	2	6	100%	med-high	high	10	6.1667	4.8649	57
13	ALL	ALL	MAN	Target regular users of parks adjacent to river eg. sporting clubs. Make the clubs responsible for leaving the area free of Litter after use of the facilities. Use leasing or hire arrangements to implement a cleanup charge for areas left in an unsatisfactory state.	\$7,800	\$65,000	\$72,800	2	Litter	1	6	5%	med-high	med-high	7	4	5	58
10	ALL	ALL	MAN	Upgrade recycling bins which perform poorly by investigating alternative bins, in conjunction with the Inner Sydney Waste Board.	\$26,000	\$130,000	\$156,000	3	Litter	1	6	80%	med-high	Med-High	7	5.1667	5.8065	76
8	ALL	ALL	EN	Warn and fine people littering in accordance with EPA authority for action to be taken by authorised Council officers. Implement a recording system for fines issued.	\$2,000	\$260,000	\$262,000	4	Litter	1	6	20%	med	high	10	4.3333	9.2308	111
141	ALL	ALL	MAN/ED	Investigate demand for recycling bins at parks.	\$50,000	\$200,000	\$250,000	4	Litter	1	6	10%	med	med-high	7	3.6667	10.909	121

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11	ALL	ALL	MAN	Continue existing dry street sweeping of commercial, industrial and residential areas, including carparks.	\$0	\$15,000,000	\$15,000,000	10	Litter	4	6	75%	med-high	med	5	5.3333	18.75	149
3	ALL	ALL	MAN	Investigate if mixed and recyclable waste removal frequency and timing is adequate. Upgrade waste removal program to increase frequency of bins emptied in areas where required.	\$10,000	\$1,500,000	\$1,510,000	8	Litter	1	6	80%	med	med-low	3	4.1667	19.2	150
16	ALL	All	ST	Install trapped street gully pits at selected locations throughout the catchment along roads and provide regular maintenance.	\$ 650,000	\$1,500,000	\$2,150,000	8	Litter	3	6	60%	medium	low	1	3.8333	20.87	151
HOT SPOTS															0			
166	MU	SW	ST	Install floating boom at Muddy Creek downstream of Bestic St bridge, Muddy Creek	\$35,000	\$100,000	\$135,000	1	Litter	1	6	6%	low	med-high	7	3.6667	2.7273	39
23	CO	CANT	ST	Maintain existing pollutec pollutant trap at the park near Belmore Rugby League field	\$ -	\$100,000	\$100,000	2	Litter	3	6	5%	medium	med-high	7	4	5	59
42	WO	HUR	ST	Incorporate litter & erosion controls into redevelopment of site upstream of King Georges Rd, Hurstville by developer	\$ 30,000	\$30,000	\$60,000	2	Litter	1	6	3%	medium	med-low	3	3	6.6667	82
43	MUNNI	MAR	ST	Install gross pollutant interceptor at pipe outlet near Thornley St, Marrickville	\$ 20,000	\$50,000	\$70,000	2	Litter	1	6	1%	medium	med-low	3	3	6.6667	83
154	BA	ROC	ST	Provide minor gross pollutant trap to end of pipe discharging to Bardwell Creek near Bardwell Rd	\$ 30,000	\$50,000	\$80,000	2	Litter	3	6	4%	medium	low	1	3	6.6667	84
37	Omaha	CANT	ST	Provide buffer strips behind embankment walls of channel at Rudd Park, Belfield where necessary.	\$ 15,000	\$50,000	\$65,000	2	Litter	1	6	2%	medium	low	1	2.6667	7.5	92
44	CO	MAR	ST	Retrofit pit litter baskets at selected sites Hercules St area, Dulwich Hill	\$ 10,000	\$50,000	\$60,000	2	Litter	1	6	2%	medium	low	1	2.6667	7.5	93
45	AC	RAN	ST	Install pit litter baskets in area near the Australian Golf Club where appropriate	\$ 10,000	\$50,000	\$60,000	2	Litter	1	6	1%	medium	low	1	2.6667	7.5	94
27	BA	ROC	ST	Provide coarse trash rack along Bardwell Creek near Eilersie Rd, Bexley North to protect the downstream bushland	\$ 30,000	\$100,000	\$130,000	3	Litter	2	6	5%	medium	med-high	7	3.8333	7.8261	101

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21	UP	BANK	ST	Maintain existing trash rack at Muir Rd, Chullora	\$ -	\$200,000	\$200,000	3	Litter	1	6	5%	medium	med-high	7	3.6667	8.1818	104
22	CO	CANT	ST	Repair and maintain floating boom along Cooks River at Fifth Ave, Campsie	\$ 10,000	\$100,000	\$110,000	3	Litter	1	6	5%	medium	med-high	7	3.6667	8.1818	105
24	MUNNI	MAR	ST	Install pollutant trap at Tennyson St subcatchment	\$ -	\$150,000	\$150,000	3	Litter	1	6	5%	medium	med-high	7	3.6667	8.1818	106
150	BA	ROC	ST	Provide GPT along Bardwell Creek downstream of Preddys Road, Bexley North	100,000	\$100,000	\$200,000	3	Litter	1	6	4%	medium	medium	5	3.3333	9	110
41	Rookwood	SW/BLG	ST	Maintain GPT and construct wetland in redevelopment of SRA land at Chullora Rail Workshops and provide maintenance.	\$ 250,000	\$250,000	\$500,000	5	Litter	4	6	4%	high	med-high	7	5	10	114
175	CO	SW	ST	Maintain existing GPT at Orissa Drain, Fifth Avenue Campsie.	\$ -	\$343,000	\$343,000	4	Litter	2	6	5%	med	med-high	7	3.8333	10.435	120
176	MUNNI	SW	ST	Maintain existing GPT and drainage pumping station/detention basin at the Brickpit, Railway Road, Sydenham.	\$ -	\$900,000	\$900,000	4	Litter	1	6	5%	medium	med-high	7	3.6667	10.909	122
39	CO	CANT	ST	Install and maintain proposed GPT at Tasker Park, Campsie	\$ 150,000	\$150,000	\$300,000	4	Litter	3	6	2%	medium	medium	5	3.6667	10.909	123
171	UC	SW	ST	Investigate feasibility and provide GPT along Cooks River at Verona St, Strathfield South	\$200,000	\$150,000	\$350,000	4	Litter	2	6	15%	medium	medium	5	3.6667	10.909	124
33	Mascot	SW	ST	Provide gross pollutant interceptor/GPT near pipe end of Mascot West SWS	\$ 100,000	\$ 150,000	\$250,000	3	Litter	1	6	2%	medium	low	1	2.6667	11.25	126
36	Munni	SW	ST	Provide gross pollutant interceptor near pipe outlet of Munni SWS upstream of proposed dechannelisation works.	\$ 200,000	\$ 150,000	\$350,000	3	Litter	1	6	2%	medium	low	1	2.6667	11.25	127
159	CS	CANT	ST	Provide pit litter baskets at selected locations in Campsie industrial area within Cup and Saucer Creek catchment.	\$10,000	\$100,000	\$110,000	3	Litter	1	6	3%	medium	low	1	2.6667	11.25	128
172	UC	STRA	ST	Provide Litter baskets at Cosgrove Road/ Madeline St industrial area	\$15,000	\$100,000	\$115,000	3	Litter	1	6	1%	medium	low	1	2.6667	11.25	129
179	Orissa	CANT	ST	Retrofit litter baskets/silt traps at selected pits in Orissa St subcatchment, Campsie	10,000	\$100,000	\$110,000	3	Litter	1	6	1%	medium	low	1	2.6667	11.25	130
170	UC	SW / STRA	ST	Provide GPT along Cooks River near Cleveland St, Strathfield South	\$200,000	\$200,000	\$400,000	4	Litter	2	6	15%	medium	medium	5	3.5	11.429	131

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40	Greenacre Park	SW/BANK	ST	Provide GPT/wetland downstream of Hume Highway along Greenacre Park SWS	\$ 250,000	\$250,000	\$500,000	5	Litter	4	6	4%	med-high	medium	5	4.1667	12	132
151	BA	ROC	ST	Provide pit litter baskets at selected locations within Bardwell Creek catchment.	100,000	\$100,000	\$200,000	3	Litter	1	6	6%	med-low	low	1	2.3333	12.857	134
20	MUNNI	SW	ST	Maintain existing trash rack at Mackey Park, Marrickville	\$ -	\$400,000	\$400,000	5	Litter	2	6	5%	medium	med-high	7	3.8333	13.043	135
28	Botany	SW	ST	Provide gross pollutant trap/interceptor near Botany Rd SWS pipe end	\$ 250,000	\$250,000	\$500,000	4	Litter	3	6	3%	medium	low	1	3	13.333	136
30	CS	SW/CANT	ST	Provide gross pollutant interceptors at pipe outlets (approx. 3) to Cup and Saucer Creek at industrial area near Alfred St, Campsie	\$ 75,000	\$200,000	\$275,000	4	Litter	1	6	4%	medium	med-low	3	3	13.333	137
155	CO	MAR	ST	Install gross pollutant traps before pipe outlets (approx. 2) to Cooks River at HJ Mahoney Memorial Reserve, Marrickville South	100,000	\$300,000	\$400,000	4	Litter	2	6	2%	medium	low	1	2.8333	14.118	139
19	CS	SW	ST	Maintain existing trash rack at Cup & Saucer Creek, Canterbury	\$ -	\$640,000	\$640,000	6	Litter	2	6	5%	medium	med-high	7	3.8333	15.652	145
18	WO	SW	ST	Maintain existing GPT at Wolli Creek, Kingsgrove	\$ -	\$900,000	\$900,000	7	Litter	3	6	10%	medium	med-high	7	4	17.5	146
31	CX	SW	ST	Provide gross pollutant traps on pipe outlets (approx. 3) to Cox's Creek near King Georges Rd, Greenacre	\$ 150,000	\$300,000	\$450,000	5	Litter	2	6	3%	medium	low	1	2.8333	17.647	147
NUTRIENTS AND BACTERIA																		
143	ALL	ALL	MAN	Introduce a planning policy to ensure that adequate facilities are provided for new developments, including units, residential, commercial and industrial.	\$7,800	\$0	\$7,800	1	Nutrients	5	5	80%	med-high	med-low	3	5.3333	1.875	15
57	ALL	ALL - C	MAN	Support and encourage prioritisation for upgrade of sewerage infrastructure within the catchment as identified by Sydney Water's Priority Actions (SOLP).	\$1,000	\$0	\$1,000	1	Bacteria	2	5	100%	med-high	low	3	5.3333	1.875	16
54	ALL	ALL- C	MAN	Identify appropriate procedures to manage blue green algal blooms.	\$3,000	\$20,000	\$23,000	1	Toxicants	2	8	20%	med-high	low	3	5	2	20

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49	ALL	ALL	ED	Provide doggie dunnit bags/stations at selected parks.	\$2,000	\$20,000	\$22,000	1	Bacteria	2	5	20%	med	high	10	4.8333	2.069	22
55	ALL	ALL-C	MAN	Introduce requirement for inspection of sewer and stormwater connections into section 176 certification required for all residential and commercial property sales.	\$13,000	\$0	\$13,000	1	Bacteria	1	5	100%	med	low	1	4.5	2.2222	25
47	ALL	ALL-C	MAN	Influence state government to investigate alternatives to phosphorus use in detergents and reconsider sodium chloride (salt) levels.	\$2,000	\$0	\$2,000	1	Nutrients	1	5	100%	med	low	1	4.3333	2.3077	26
142	ALL	ALL-C	MAN	Investigate the feasibility of introducing dung beetles to replace fertiliser use in council Park areas. (Note Strathfield Council currently trialling)	\$15,000	\$0	\$15,000	1	Bacteria	2	5	10%	med	low	1	3.1667	3.1579	43
53	ALL	ALL	MAN	Replace fertiliser use with worms or reuse captured stormwater which may be high in nutrients. Based on ongoing trial into effectiveness by Marrickville Council.	\$20,000	\$0	\$20,000	1	Nutrients	1	5	10%	med	med-low	3	3.1667	3.1579	44
50	ALL	ALL	ED	Education and enforcement of council maintenance crews and gardeners to pick up grass clipping from mowing of maintenance strips and parks.	\$26,000	\$130,000	\$156,000	2	Organic	3	7	20%	med-high	med	5	5.1667	3.871	51
149	ALL	ALL	ED	Educate the community not to sweep or blow leaves into the gutter.	\$30,000	\$75,000	\$105,000	3	Organic	1	7	80%	med	high	10	6.3333	4.7368	56
51	ALL	ALL - C	ED	Educate the community to prevent car washing on the street .	\$30,000	\$75,000	\$105,000	3	Nutrients	1	5	100%	med	high	10	5.8333	5.1429	70
48	ALL	ALL	ED	Negotiate with local car washing places for first visit free coupons to encourage use of carwash centres. Focus on high residential areas with little or no alternatives. Incorporate an education component with the distribution of coupons	\$5,000	\$50,000	\$55,000	2	Nutrients	1	5	10%	med	med- high	7	3.8333	5.2174	71

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52	ALL	ALL	EN	Control dog droppings by implementing Companion Requirements.	\$13,000	\$130,000	\$143,000	3	Bacteria	2	5	20%	med	high	10	4.8333	6.2069	79
58	ALL	ALL- C	MAN/EN	Policy requiring car washing facilities to be connected to sewer for units. Need to then distribute and enforce.	\$26,000	\$130,000	\$156,000	3	Nutrients	1	5	2%	med-high	med-low	3	3.5	8.5714	107
144	ALL	MAR, CANT BANK,	ST/ED	Provide public car wash areas connected to sewer or a suitable alternative. Also provide signs to educate people about carwashing in the streets.	\$60,000	\$300,000	\$360,000	4	Nutrients	2	5	10%	med	med-high	7	4	10	115
56	ALL	ALL	ED	Educate residents about overfertilisation. Develop and distribute an information brochure.	\$30,000	\$75,000	\$105,000	5	Nutrients	1	5	20%	med	med-low	3	3.3333	15	143
HOT SPOTS																		
63	CO	SW	ST	Sydney Water to ensure that investigations are carried out to determine the cause of the sewer overflow problem at crn of Homer Street and Illawarra Road and Undercliffe Road roundabout. Ensure this action is included in the SOLP action plan.	\$2,000	\$0	\$2,000	1	Bacteria	3	5	5%	high	low	1	4.1667	2.4	30
64		? SW	ST	Sydney Water to ensure that investigations are carried out to determine the cause of the sewage smell, a possible leak near sugar mill site. Ensure action is included in the SOLP action plan.	\$2,000	\$0	\$2,000	1	Bacteria	3	5	3%	high	low	1	4.1667	2.4	31
67	WO	SW	ST	Sydney Water to ensure that investigations are carried out to determine the cause of the sewer leaks in Girraween Park. Manholes always overflow after rainfall . Ensure action is included in the SOLP action plan.	\$10,000	\$0	\$10,000	1	Bacteria	3	5	3%	high	low	1	4.1667	2.4	32
60	ALL	ALL	ST	Feasibility study to install wetlands at Golf Courses.	\$25,000	\$0	\$25,000	1	Nutrients	3	5	15%	med	med	5	4	2.5	34
61	UC	STRA	ST	Construct urban stream at Strathfield Golf Course/Freshwater Park	\$ 200,000	\$100,000	\$300,000	4	Nutrients	4	5	15%	high	high	10	5.8333	6.8571	88

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152	BA	ROC	ST	Construct wetland along Bardwell Creek downstream of Ellierslie Road	250,000	\$150,000	\$400,000	4	Nutrients	3	5	5%	high	high	10	5.5	7.2727	91
160	CS	SW/CANT	ST	Provide estuarine wetland at Heynes Reserve, Canterbury on Cup and Saucer Creek	\$150,000	\$150,000	\$300,000	4	Nutrients	4	5	2%	med-high	high	10	5.1667	7.7419	97
162	CX	SW/STRA TH	ST	Construct wetland along Cox's Creek at Begnell Park, Belfield. Consider in SRA land upstream of Cosgrave Road in Enfield Marshalling Yards.	\$250,000	\$250,000	\$500,000	4	Nutrients	4	5	9%	med-high	high	10	5.1667	7.7419	98
164	MU	SW/ROC	ST	Construct wetlands along Muddy Creek at reserve on Bestic St and White Oak Reserve	\$250,000	\$250,000	\$500,000	4	Nutrients	4	5	6%	med-high	high	10	5.1667	7.7419	99
167	Omaha	SW/cant	ST	Construct offline wetland upstream of tidal limit on Omaha Canal	\$200,000	\$200,000	\$400,000	4	Nutrients	4	5	5%	med-high	high	10	5.1667	7.7419	100
177	CO	CANT	ST	Install backwash storage tanks and dispose of backwash from Roselands and Canterbury Pools to sewer.	\$60,000	\$50,000	\$110,000	3	Nutrients	2	5	1%	high	low	1	3.8333	7.8261	102
62	CS	SW/CANT	ST	Provide wet detention basins along creek at Hughes Park	\$ 150,000	\$150,000	\$300,000	4	Nutrients	4	5	4%	med-high	medium	5	4.3333	9.2308	112
65	WO	ROC	ST	Develop wetland as part of the proposed NPWS regional park in lower Wolli Creek area	\$ 500,000	\$200,000	\$700,000	6	Nutrients	4	5	12%	high	high	10	5.8333	10.286	118
66	AC	SW	ST	Trial wetlands as proposed in Alexandra Canal Water Environment Plan from Sydney Park to Canal Rd, St Peters.	\$3,000,000	\$20,000	\$3,020,000	8	Nutrients	4	5	15%	high	high	10	5.8333	13.714	138
				TOXICANTS (including heavy metals, herbicides, pesticides, oil and grease)														
145	ALL	ALL, SW, Rail, RTA	MAN	In all areas where weed spraying is undertaken along drainage lines implement stormwater verge revegetation planting as detailed in the Sydney Water Trial (Durham, 1997).	\$20,000	\$12,000	\$32,000	1	Weeds	6	8	10%	med-high	med	5	5.5	1.8182	11
73	ALL	ALL- C	MAN	Lobby EPA to audit all licensed premises in the catchment.	\$1,000	\$0	\$1,000	1	Sediments	8	5	5%	med-high	med	5	5	2	21

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70	ALL	ALL	AU/ED	Education/ Training /Auditing of businesses through application of the knowledge gained through the solutions to pollution campaign and auditing undertaken throughout the catchment.	\$30,000	\$300,000	\$330,000	4	Toxicants	5	8	30%	med-high	med-high	7	6.3333	6.3158	81	
74	ALL	ALL - C	MAN	Develop and implement a water quality monitoring program, database and reporting system.	\$60,000	\$600,000	\$660,000	6	Toxicants	8	8	100%	high	high	10	9	6.6667	85	
69	ALL	ALL, EPA	AU	Initiate increased auditing of non-EPA licenced industrial and commercial premises by Council Officers.	\$67,600	\$676,000	\$743,600	6	Toxicants	3	8	15%	med-high	med-high	7	5.8333	10.286	119	
HOT SPOTS																			
78	CS	CANT	ST	Investigate need for site remediation and leachate control at Harp St brick pit, Campsie	25,000	\$0	\$25,000	1	Toxicants	1	8	1%	high	medium	5	5.5	1.8182	12	
76	AC	MAR	ST	Remediation of Tempe Reserve landfill area to prevent off site leachate of contaminants.	\$100,000	\$100,000	\$200,000	3	Toxicants	3	8	15%	high	med	5	6	5	60	
77	ALL	All	ST	Encourage the installation of OSD where feasible within industrial sites	20,000	\$100,000	\$120,000	3	Nutrients	1	5	15%	high	high	10	5.3333	5.625	74	
80	ALL	ALL	MAN	Audit connections from industrial areas to stormwater and implement policies to ensure connections are reviewed on sale or for any new or redevelopments.	\$25,000	\$250,000	\$275,000	4	Toxicants	3	8	25%	med-high	high	10	6.5	6.1538	78	
MANAGERIAL & SOCIAL																			
87	ALL	ALL-C	MAN	Establish co-ordinating body to achieve implementation of all catchment based actions. Co-ordinating body to be given appropriate power. Refer to Section 9 of the Plan.	\$5,000	\$0	\$5,000	1	ALL	4	9	100%	med	med	5	6.8333	1.4634	1	
90	ALL	ALL-C	MAN	Identify ownership of government land and agree responsibilities between land managers in the catchment.	\$5,000	\$10,000	\$15,000	1	ALL	8	9	20%	med-high	med	5	6.5	1.5385	3	

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84	ALL	ALL	MAN	Councils to incorporate detention basins, rainwater collection tanks (where applicable), limiting % of land areas that can be surfaced, and setbacks into planning requirements for new and re-development applications.	\$26,000	\$0	\$26,000	1	Sediments	4	5	80%	high	med	5	6	1.6667	7
85	ALL	ALL	MAN	Investigate additional controls for owner/developers who build or pave over more than 50% of land area. Incentives/rebates for those who install stormwater controls.	\$13,000	\$20,000	\$33,000	1	Sediments	4	5	80%	med-high	med-high	7	5.8333	1.7143	9
89	ALL	ALL - C	MAN	Define of responsibilities for clean up within the catchment.	\$5,000	\$0	\$5,000	1	Litter	8	6	100%	med	low	1	5.3333	1.875	17
93	ALL	SW, Rail, DOT, RTA	MAN	State agencies to be consistent with Council planning policies and controls to ensure stormwater management is consistent. To include such developments as the M5motorway, rail workshops etc.	\$3,000	\$0	\$3,000	1	ALL	4	9	5%	med-high	med-low	3	5.3333	1.875	18
86	ALL	ALL	MAN	Investigate opportunities for introduction of a levy collected by the co-ordinating body to fund catchment based actions to be implemented by this body.	\$20,000	\$50,000	\$70,000	2	ALL	4	9	80%	med	med-high	7	6.8333	2.9268	42
82	ALL	ALL	ED	Investigate and develop opportunities for community and businesses which are part of the problem to become part of the solution by becoming involved in stormwater management.	\$26,000	\$130,000	\$156,000	3	ALL	4	9	100%	high	high	10	8.5	3.5294	48
83	ALL	ALL	ED	Implement greater use of ethnic media to reach non-English speaking community. Develop information sheets and use community centres and schools.	\$10,000	\$50,000	\$60,000	2	ALL	4	9	15%	med-low	med-high	7	5.5	3.6364	49
88	ALL	ALL - C	MAN	Integrate Councils knowledge and information base through catchment based water quality monitoring and reporting.	\$50,000	\$600,000	\$650,000	6	Toxicants	8	8	100%	high	high	10	9	6.6667	86
				SUSPENDED SOLIDS														

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96	ALL	ALL	ED	Adoption of the blue book into all council development approvals and building approvals for construction activities as the preferred best practice techniques to have a consistent approach across the catchment.	\$13,000	\$0	\$13,000	1	Sediments	1	5	10%	med	med-high	7	3.8333	2.6087	37
97	ALL	ALL	ED	Educate occupiers of commercial premises and residences about not hosing down footpath areas. Include in above education and auditing of premises.	\$30,000	\$150,000	\$180,000	3	Sediments	3	5	15%	med	high	10	4.8333	6.2069	80
95	ALL	ALL	ED	Education of construction community through-providing best practice guidelines, eg EPA Solutions to Pollution Booklet, at the devopment approval stage (eg.signs on sediment fences).	\$13,000	\$130,000	\$143,000	3	Sediments	5	5	5%	med-high	med	5	4.5	6.6667	87
98	ALL	ALL	ED/EN	Auditing sediment controls on construction sites for compliance with development approval conditions. Enforced by council officers.	\$52,000	\$520,000	\$572,000	5	Sediments	4	5	5%	high	high	10	5.6667	8.8235	109
100	ALL	ALL	ST	Maintenance and cleaning out of manholes and sediment traps. Ensure Sediments are disposed of appropriately.	\$100,000	\$1,000,000	\$1,100,000	8	Sediments	4	5	10%	high	med-low	3	4.5	17.778	148
99	ALL	ALL	MAN	Implement regular cleaning of drains. Investigate maintenance schedules and cleaning technique and implement improvement program. Ensure Sediments are tested for contamination and disposed on appropriately.	\$100,000	\$1,000,000	\$1,100,000	8	Sediments	2	5	20%	med-high	low	1	3.5	22.857	152
HOT SPOTS																		
105	UC	AUB & BANK & STRA	ST	Investigate and install erosion controls for development immediately upstream of drain at eastern boundary of Rookwood Cemetery and for the channel itself.	\$2,000	\$0	\$2,000	1	Sediments	3	5	1%	med-high	med	5	4.1667	2.4	33

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103	CO	ALL	ST	Investigate continue dredging of sediments in most severely silted up reaches of the River eg. Third Ave, Campsie. Action should be carried out in accordance with the requirements of NSW State Rivers and Estuaries Policy.	\$50,000	\$0	\$50,000	1	Sediment s	3	5	20%	med-high	low	1	3.6667	2.7273	40
161	CS	CANT	ST	Refill eroded ground behind embankment downstream of Fore St, Earlwood	\$25,000	\$30,000	\$55,000	1	Sediment s	1	5	1%	high	low	1	3.6667	2.7273	41
109	MUNNI	MAR	ST	Investigate sludge buildup at Mackay Park, Marrickville .	\$5,000	\$0	\$5,000	1	Sediment s	3	5	1%	med	low	1	3.1667	3.1579	45
112	BA	ROC	ST	Provide buffer strips at Jubilee Park, Bardwell Park	\$30,000	\$50,000	\$80,000	2	Sediment s	2	5	1%	med-high	medium	5	4	5	61
108	WO	HUR	ST	Provide erosion controls where appropriate at the recreation/club site at Forest Rd/King Georges Rd, Hurstville	\$30,000	\$30,000	\$60,000	2	Sediment s	1	5	1%	med-high	medium	5	3.8333	5.2174	72
110	AC	SCC	MAN	Develop erosion & sediment control plan for Waste Transfer Station, St Peters	\$30,000	\$50,000	\$80,000	2	Sediment s	1	5	1%	med-high	medium	5	3.8333	5.2174	73
114	UC	SRA	MAN	Develop erosion & sediment control plan at Enfield Marshalling Yards. Investigate providing buffer strips and sediment basins at appropriate locations.	\$30,000	\$150,000	\$180,000	3	Sediment s	2	5	3%	high	high	10	5.3333	5.625	75
111	AC	MAR	MAN	Develop erosion & sediment control plan for Cooks River Goods Yards, Sydenham	\$30,000	\$100,000	\$130,000	3	Sediment s	3	5	1%	med-high	medium	5	4.1667	7.2	89
153	BA	ROC	ST	Provide bank remediation upstream of Bardwell Rd, Bardwell Park	\$100,000	\$50,000	\$150,000	3	Sediment s	2	5	4%	high	med-low	3	4.1667	7.2	90
113	UC	SRA	MAN	Develop sediment control plan at Chullora Rail Workshops. Investigate providing buffer strips and sediment basins at appropriate locations.	\$20,000	\$300,000	\$320,000	4	Sediment s	2	5	3%	high	high	10	5.3333	7.5	95
115	AC	SRA	MAN	Develop erosion & sediment control plan for Eveleigh Railway Workshops	\$30,000	\$100,000	\$130,000	3	Sediment s	2	5	1%	med-high	medium	5	4	7.5	96
157	CO	CANT/MAR	ST	Provide bank stabilisation where appropriate along the Cooks River between Illawarra Rd to Marsh St, Arncliffe	\$200,000	\$50,000	\$250,000	4	Sediment s	1	5	30%	high	med-high	7	5	8	103

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158	CO	CANT/MAR	ST	Provide bank stabilisation along the Cooks River between Church St to Ford Ave, Hurlstone Park	\$200,000	\$50,000	\$250,000	4	Sediments	1	5	10%	high	med-high	7	4.6667	8.5714	108
104	UC	AUB	ST	Provide stream remediation/bank stabilisation along Cooks River downstream of Chullora Rail Workshops to Strathfield Golf Course	200,000	\$50,000	\$250,000	4	Sediments	1	5	4%	high	medium	5	4.3333	9.2308	113
176	CO	SW	ST	Maintain existing detention pit/drainage pumping station at Carrington Road, Marrickville.	\$0	\$300,000	\$300,000	4	Sediments	4	5	1%	med-high	med-low	3	4	10	116
182	UC	BANK	ST	Install detention basin at Chullora Railway Workshops.	\$100,000	\$200,000	\$300,000	4	Sediments	2	5	3%	med-high	medium	5	3.3333	12	133
183	MUNNI	MAR	ST	Install drainage pumping station /detention pit and silt screen at Mary Road, St Peters.	150,000	\$150,000	\$300,000	4	Sediments	2	5	5%	medium	med-low	3	2.6667	15	144
HABITAT LOSS & RIVER HEALTH																		
119	ALL	ALL	MAN	Incorporate 10m setbacks from creeklines and 20 m from main river in LEPs to allow reestablishment of a riparian zone	\$25,000	\$0	\$25,000	1	Sediments	3	5	100%	med-high	high	10	6.5	1.5385	4
146	ALL	ALL	MAN	Investigate foreshore areas in Government ownership with potential for restoration of more natural drainage lines.	\$13,000	\$0	\$13,000	1	Sediments	5	5	30%	high	high	10	6.1667	1.6216	5
120	ALL	ALL	MAN	Incorporate, preservation of existing natural drainage lines and creeks within Council planning policies and development controls.	\$10,000	\$50,000	\$60,000	1	Sediments	5	5	15%	high	high	10	6	1.6667	8
121	ALL	ALL	MAN	Investigate incorporation of propagation programs for native riparian vegetation in council nurseries.	\$10,000	\$20,000	\$30,000	1	Sediments	5	5	30%	med-high	high	10	5.6667	1.7647	10
147	ALL	ALL	ED	Provide native vegetation maps and lists to nurseries, landscapers and residents to promote greater use of native vegetation in landscaping works.	\$13,000	\$0	\$13,000	1	Nutrients	3	5	5%	med	high	10	4.6667	2.1429	24
148	ALL	ALL-C	MAN	Develop a catchment policy for landscaping along foreshore and waterways and incorporate in planning controls using native species.	\$8,000	\$0	\$8,000	1	Nutrients	4	5	5%	med-high	med	5	4.3333	2.3077	27

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124	ALL	ALL-C, Fisheries	MAN	Prepare a Mangrove Management Plan for the catchment to identify areas for regeneration either via natural colonisation or habitat generation and areas where mangroves are removed to prevent flooding. Comply with NSW State Rivers and Estuaries Policy.	\$10,000	\$0	\$10,000	1	Weeds	4	5	20%	med	med-low	3	4	2.5	35
125	ALL	ALL - C, CMC, Greening Australia	MAN	Identify all areas to be retained and revegetated. Set up a register and body to support and co-ordinate the revegetation and enhancement plans of all local bushcare groups.	\$5,000	\$0	\$5,000	1	Weeds	1	5	10%	med	med-high	7	3.8333	2.6087	38
HOT SPOTS																		
135	Munni	SW	ST	Investigate the dechannelisation between the head of Alexandra Canal and Green Square of lower Sheas Creek as proposed in Alexandra Canal Water Management Plan.	\$10,000	\$0	\$10,000	1	Sediments	2	5	5%	high	high	10	5.5	1.8182	13
169	UC	SW/STRA	ST	Naturalise concrete channel by placing rock and planting native vegetation at Chain of Ponds reserve area. Little or not space available in this area. Investigate alternatives.	\$100,000	\$30,000	\$130,000	1	Natural Habitats	1	5	1%	medium	medium	5	3	3.3333	46
181			ST	Investigate condition of sheet piling along Cooks River, between the Undercliff Bridge and the footbridge at Flinders Road and identify opportunities for naturalising the banks.	\$2,000	\$0	\$2,000	1	Sediments	2	5	1%	medium	med Low	3	3	3.3333	47
184	ALL	ALL	MAN	Councils not currently mapping stormwater infrastructure to do so.	\$13,000	\$130,000	\$143,000	3	ALL	9	8	100%	high	high	10	7.8333	3.8298	50
128		ALL	ST	Enhancement of existing wetland along Wollie Creek, consistent with NSW Wetlands Policy.	\$30,000	\$50,000	\$80,000	2	Nutrients	3	5	5%	med-high	high	10	5	4	52
168	UC	STRA	ST	Provide river bank stabilisation and revegetation at Freshwater Park	\$100,000	\$30,000	\$130,000	2	Sediments	1	5	15%	high	high	10	4.8333	4.1379	53
127			ST	Protection of remnant species of Turpentine and Grey Myrtle in Maria Reserve.	\$5,000	\$50,000	\$55,000	2	Sediments	2	5	1%	low	high	10	4	5	62

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129		BANK & SRA	ST	Protect Freshwater Creek at Old Chullora Railway Workshops during redevelopment of the Chullora Site. Investigate current planning controls for the area. Look at protecting from further disturbance and continue work with Bankstown Bushland Soc.	\$5,000	\$50,000	\$55,000	2	Sediments	2	5	1%	low	high	10	4	5	63
130		CANT & ROC & HUR	ST	Protect and enhance Wolli Creek Mangroves and Saltmarsh through planning policies and bushcare regeneration programs. Investigate measures to minimise sedimentation and disturbance from railways.	\$5,000	\$50,000	\$55,000	2	Sediments	2	5	1%	low	high	10	4	5	64
131		CANT & SW & RTA	ST	Protection and preservation of Third Ave Remnant bushland, Campsie. Protect through planning policies.	\$5,000	\$50,000	\$55,000	2	Sediments	2	5	1%	low	high	10	4	5	65
132		MAR	ST	Protection of remnant Marrickville Foreshore Reserves.	\$5,000	\$50,000	\$55,000	2	Sediments	2	5	1%	low	high	10	4	5	66
133		MAR, ROC, CANT	ST	Protection of Cooks River Mangroves, Saltmarsh and Rushland areas through Canterbury LGA and incorporate in mangrove management plan.	\$5,000	\$50,000	\$55,000	2	Sediments	2	5	1%	low	high	10	4	5	67
134		Rail, ALL	ST	Protection of Cooks River Clay Plains Scrub Forest within proposed redevelopment site at Rail Yards.	\$5,000	\$50,000	\$55,000	2	Sediments	2	5	1%	low	high	10	4	5	68
137	WC	?	ST	Undertake bush regeneration and protection works on remnant vegetation along Wolli Creek from Bexley north-eastwards.	\$5,000	\$50,000	\$55,000	2	Sediments	2	5	1%	low	high	10	4	5	69
165	MU	SW	ST	Replace concrete embankment along Muddy Creek near White Oak Reserve with rock/vegetation and link to the adjacent reserve.	\$200,000	\$50,000	\$250,000	2	Natural Habitats	1	5	6%	medium	med-high	7	3.3333	6	77

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138		?	ST	Selectively replace steel sheet piling along Cooks River banks between Church St, Canterbury and Illawarra Rd, Undercliffe using rock embankment/natural vegetation, following a feasibility study.	250,000	\$100,000	\$350,000	4	Natural Habitats	1	5	30%	medium	medium	5	4	10	117
180	CX	SW/CANT	ST	Naturalise concrete channel by placing rock and planting native vegetation at Parry Park.	150,000	\$50,000	\$200,000	4	Natural Habitats	1	5	1%	medium	medium	5	3.6667	10.909	125
136	AC	SW	ST	Narrow Alexandra Canal with islands and bank extensions from Canal Rd as proposed in Alexandra Canal Water Management Plan.	\$2,000,000	\$20,000	\$2,020,000	8	Sediments	2	5	15%	high	high	10	5.6667	14.118	141
178	AC	SW	ST	Dechannel 250m section of stormwater channel between the head of Alexandra Canal and Sydney Park as proposed in Alexandra Canal Water Management Plan.	\$1,000,000	\$10,000	\$1,010,000	8	Natural Habitats	1	5	15%	high	high	10	5.5	14.545	142