

3. Overview of RRHS Addendum Program

RRHS Addendum Budgets 2008/09 to 2012/13

The total budget for region-wide and catchment specific actions within the RRHS Addendum 5-year period from 2008/09 to 2012/13 is summarised in Table 3. This is broken down further into an OPEX/CAPEX expenditure summary by major catchment and Waterway Health program in Table 4 and Figure 3.

Table 3: Total Expenditure for Regional and Catchment Specific Actions within the RRHS Addendum 5-year Program

	5 Year Cost \$
Catchment Actions	
Dandenong	\$10,760,000
Maribyrnong	\$14,730,000
Werribee	\$15,025,000
Westernport	\$25,455,000
Yarra	\$54,040,000
Total	\$120,010,000
Regional Actions	
Community Engagement, Partnerships & Education Initiatives	\$26,530,000
Regional Plans and Initiatives	\$65,745,000
Research and Investigation Programs	\$11,790,000
Research and Investigation Programs where MWC is a Partner*	\$45,000
Total	\$104,110,000
GRAND TOTAL	\$224,120,000
TOTAL COST PER YEAR	\$44,824,000
* MWC Component of costs was taken at 20% of total cost	

5-year Waterway Works Program

A summary of expenditure across the region by major Waterway Health programs (Channel Form, Riparian Management and Aquatic Habitat) and Management Unit in Presented in Figures 4 to 7. This information has also been consolidated into a table of expenditure by Waterway Health program, major catchments and Management Unit (Appendix 3). Regional actions and budgets are presented in Tables 5 to 7.

Catchment actions, budgets and targets on a Management Unit by Management Unit basis are presented in Appendix 6. A guide to interpreting this information is given in Appendix 5.



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5-year Works Implementation Targets

The table below outlines the region-wide 5-year Implementation Targets for the RRHS Addendum period between 2008/09 and 2012/13. These targets will be used to measure the outcomes of river health actions undertaken over the five years of the Water Plan 2 period. Catchment specific 5-year Implementation Targets for each Management Unit are given in Appendix 4.

Target area	5-year Target 2008/9 to 2012/13
Number of rivers with negotiated environmental flow regimes	12 *
Number of rivers with improvements made to environmental flow regimes	17 *
Area of streamside land under management agreements	10km2
Length of streamside land revegetated ~ +	1026 km#
Number of fish barriers removed	31
Kilometres of riparian land subject to weed management +	2042 km#
Number of plans developed for rivers and creeks of high social value	15 ^
Rivers where heritage values are protected or improved	34
Number of plans developed for rivers and creeks of high environmental value	11 ^
Number of investigations to fill data gaps in rivers or creeks	55
Number of sites subject to bed and bank stabilisation	55
Number of IRC reaches with instream habitat reinstated	12
~ kilometres of rivers and creeks for streamside zone revegetation may overlap with kilometres of weed control + length calculated for both sides of the stream * and ^ denotes action which covers multiple MUs counted as one target in the overall targets. # target has been adjusted to reflect 80% of the total kms of stream length	

5-Year Community, Education & Partnership Targets

The table below outlines the region-wide 5-year Community, Education & Partnership targets for the RRHS Addendum period between 2008/09 and 2012/13. These targets will be used to measure the outcomes of stakeholder engagement actions undertaken over the five years of the Water Plan 2 period.

Target area	5-year Target 2008/9 to 2012/13
Involve Melbourne Waterwatch Coordinators and/or volunteers in Melbourne Water research and investigations initiatives	A minimum of 2 activities per year
Communities providing data and information on the condition of rivers and creeks	Establish a regional Waterwatch data management system
Involvement of community in decision making	Provide a diversity programs and activities that maximise the value of, and opportunities for community and stakeholder involvement in the planning and management of river health consistent with the Melbourne Water Cultural Heritage Strategy and Waterways Stakeholder Engagement and Communications Framework Plan
Increased awareness of river health issues among the general community	River health issues promoted at 5 field days per year and support 5 community events or community attendance at 5 training courses/conferences
Capturing river and creek related knowledge and values from a range of stakeholders	Develop an ongoing program for capturing stories including indigenous values

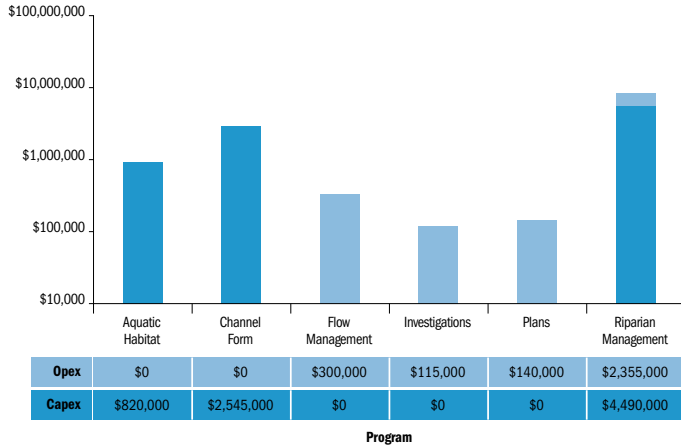
Table 4: Capital Expenditure (CAPEX) to Operational Expenditure (OPEX) by Major Catchment and Program from 2008/09 to 2012/13

Program	Total Program Cost	Capital Expenditure (Capex)	Capital Expenditure (Opex)
Dandenong Catchment			
AH	820,000	820,000	
CF	2,545,000	2,545,000	
FM	300,000		300,000
INV	115,000		115,000
P	140,000		140,000
RM	6,845,000	4,490,000	2,355,000
Total	10,765,000	7,855,000	2,910,000
Maribyrnong Catchment			
AH	240,000	240,000	
CF	4,325,000	4,325,000	
FM	750,000		750,000
INV	230,000		230,000
P	60,000		60,000
RM	9,125,000	6,385,000	2,735,000
Total	14,730,000	10,950,000	3,775,000
Werribee Catchment			
AH	910,000	910,000	
CF	3,740,000	3,740,000	
FM	200,000		200,000
INV	400,000		400,000
P	270,000		270,000
RM	9,505,000	6,235,000	3,270,000
Total	15,025,000	10,885,000	4,140,000
Westernport Catchment			
AH	1,190,000	1,190,000	
CF	12,315,000	12,315,000	
FM	195,000		195,000
INV	375,000		375,000
P	600,000		600,000
RM	10,780,000	7,025,000	3,755,000
Total	25,455,000	20,530,000	4,925,000
Yarra Catchment			
AH	1,280,000	1,280,000	
CF	8,035,000	8,035,000	
FM	1,670,000		1,670,000
INV	510,000		510,000
P	690,000		690,000
RM	41,855,000	26,375,000	15,480,000
Total	54,040,000	35,690,000	18,350,000
Grand Total	120,010,000	85,910,000	34,100,000

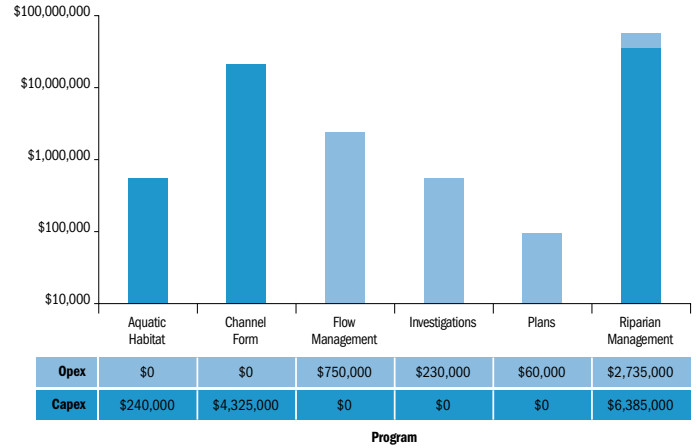
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Figure 3: Proportion of Capital Expenditure (CAPEX) to Operational Expenditure (OPEX) by Major Catchment and Program from 2008/09 to 2012/13

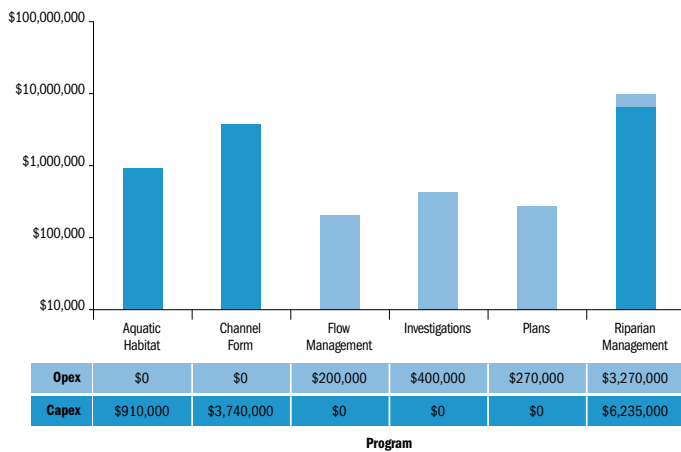
**Waterways Improvements Program
Dandenong Catchment 2008/09 - 2013**



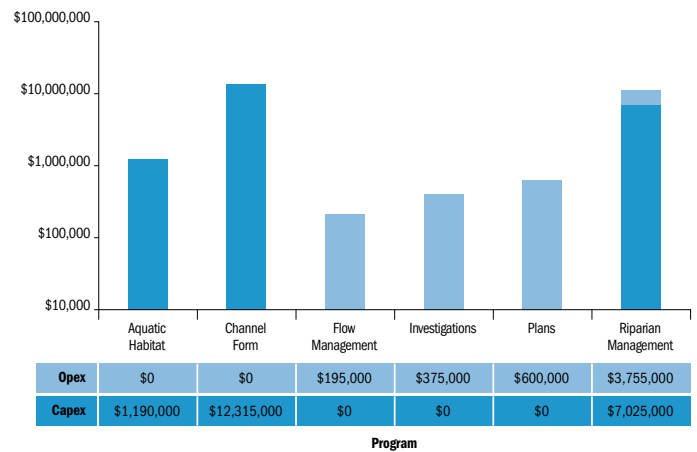
**Waterways Improvements Program
Maribyrnong Catchment 2008/09 - 2013**



**Waterways Improvements Program
Werribee Catchment 2008/09 - 2013**



**Waterways Improvements Program
Westernport Catchment 2008/09 - 2013**



**Waterways Improvements Program
Yarra Catchment 2008/09 - 2013**

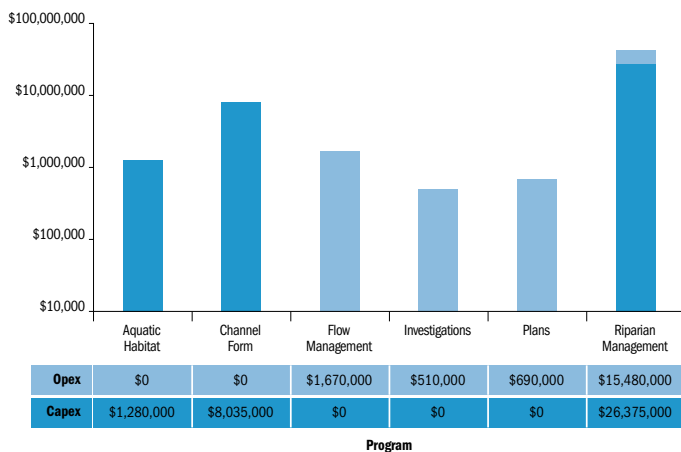
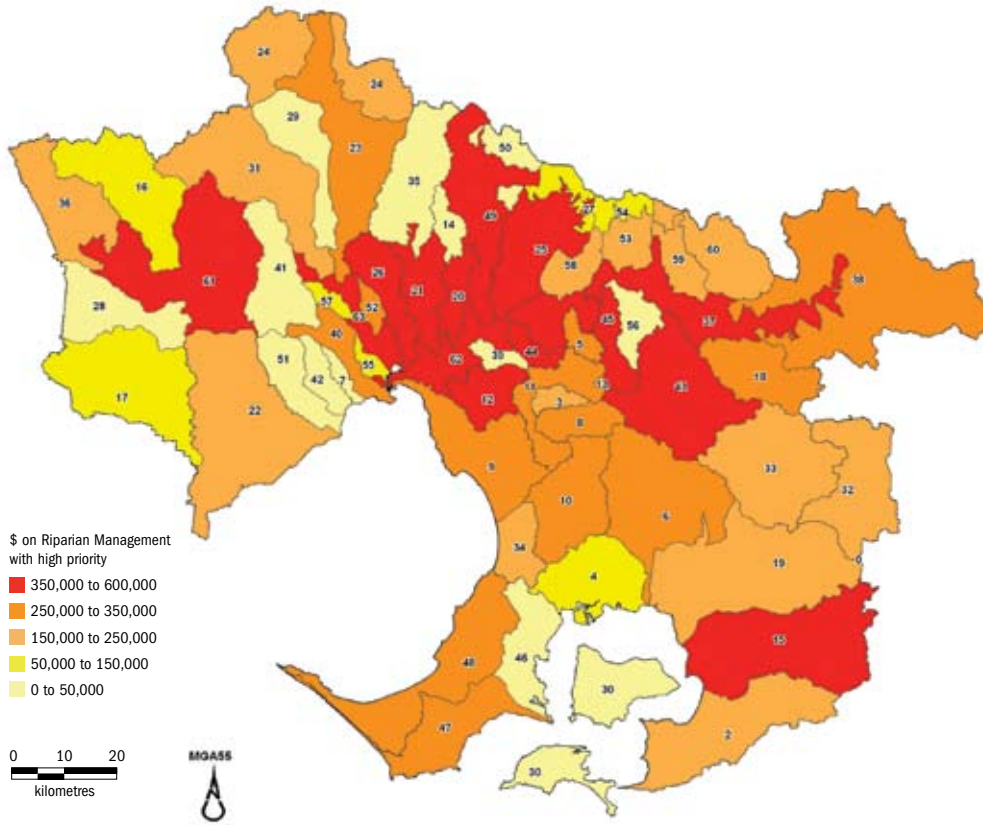
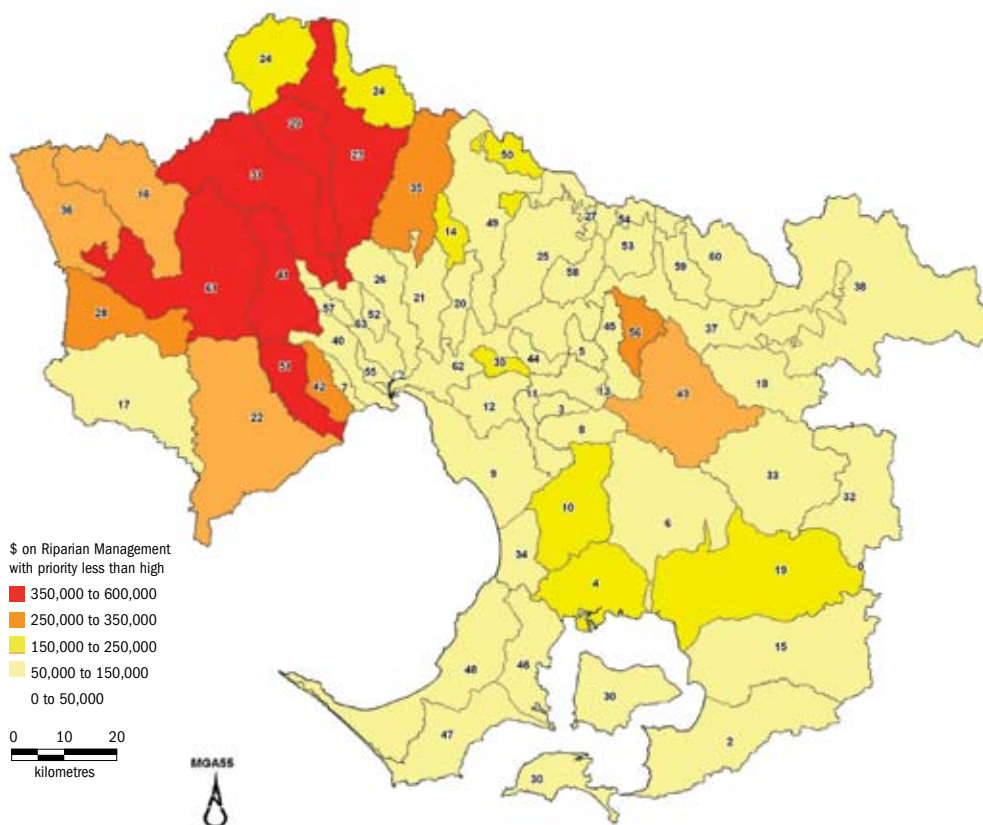


Figure 4: RRHS Riparian Management Program 5-year Budget Allocations (High Priority actions)



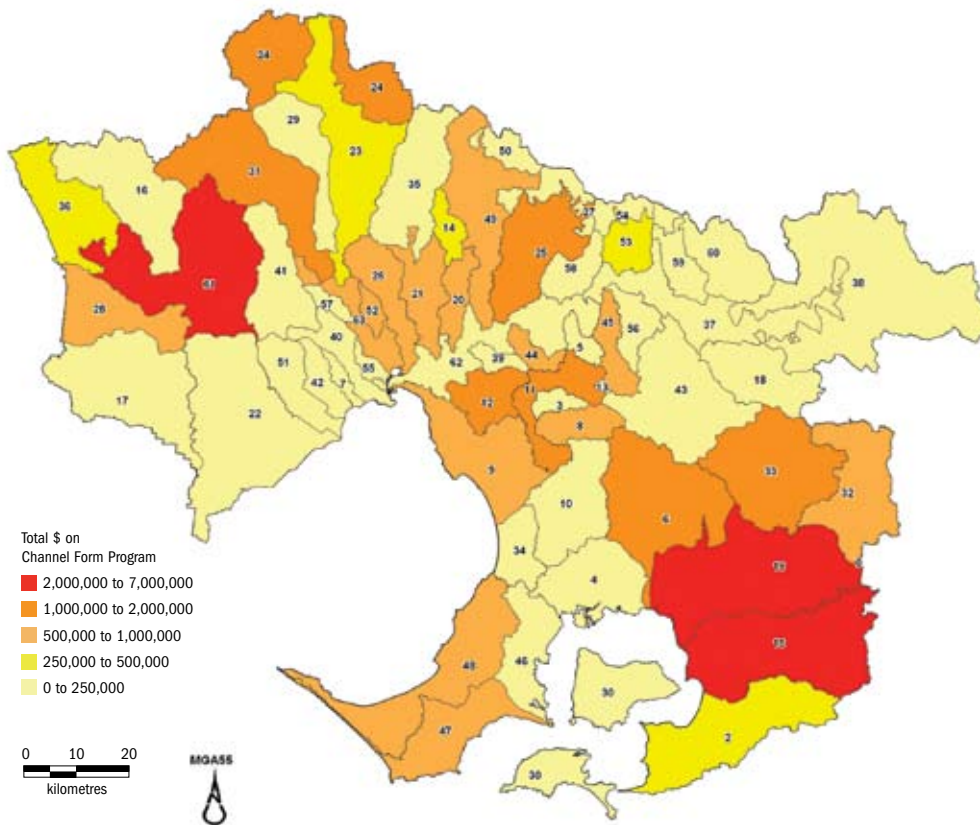
Management Unit ID	Management Unit Name
2	Bass
3	Blind Creek
4	Dalmore Outfalls
5	Brushy Creek
6	Cardinia, Toomuc, Deep and Ararat
7	Cherry Main Drain
8	Corhanwarrabul, Monbulk and Ferny Creeks
9	Dandenong Creek Lower
10	Eumemmerring
11	Dandenong Creek Middle
12	Gardiners
13	Dandenong Creek Source
14	Darebin Creek (rural)
15	Lang Lang River
16	Lerderderg River
17	Little River
18	Little Yarra and Hoddles Creek
19	Lower Buryip
20	Darebin Creek (urban)
21	Merri Creek (urban)
22	Werribee Lower
23	Deep Creek Lower
24	Deep Creek Upper
25	Diamond Creek (rural)
26	Moonee Ponds
27	Diamond Creek (source)
28	Parwan Creek
29	Emu Creek
30	French and Phillip Islands
31	Jacksons Creek
32	Tarago
33	Bunyip River Middle and Upper
34	Kananook
35	Merri Creek (rural and forested)
36	Werribee Upper
37	Yarra Upper (rural)
38	Yarra Upper (source)
39	Koonung Creek
40	Kororoit Creek Lower
41	Kororoit Creek Upper
42	Laverton
43	Woori Yallock
44	Mullum Mullum
45	Olinda Creek
46	North Eastern Peninsula Rivers and Creeks
47	South Eastern Peninsula Rivers and Creeks
48	West Peninsula Rivers and Creeks
49	Plenty River (rural and lower)
50	Plenty River (source)
51	Skeleton Creek
53	Steels and Pauls Creek (rural)
54	Steels and Pauls Creek (source)
55	Stony
56	Stringybark Creek
57	Taylors
58	Watsons Creek
59	Watts River (rural)
60	Watts River (source)
61	Werribee Middle
62	Yarra Middle and Lower
63	Maribymong River
64	Steele

Figure 5: RRHS Riparian Management Program 5-year Budget Allocations (less than High Priority actions)



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Figure 6: RRHS Channel Form Program 5-year Budget Allocations



Management Unit ID	Management Unit Name
2	Bass
3	Blind Creek
4	Dalmore Outfalls
5	Brushy Creek
6	Cardinia, Toomuc, Deep and Ararat
7	Cherry Main Drain
8	Corhanwarrabul, Monbulk and Ferry Creeks
9	Dandenong Creek Lower
10	Eumemmerring
11	Dandenong Creek Middle
12	Gardiners
13	Dandenong Creek Source
14	Darebin Creek (rural)
15	Lang Lang River
16	Lerderberg River
17	Little River
18	Little Yarra and Hoddles Creek
19	Lower Bunyip
20	Darebin Creek (urban)
21	Merri Creek (urban)
22	Werribee Lower
23	Deep Creek Lower
24	Deep Creek Upper
25	Diamond Creek (rural)
26	Moonee Ponds
27	Diamond Creek (source)
28	Parwan Creek
29	Emu Creek
30	French and Phillip Islands
31	Jacksons Creek
32	Tarago
33	Bunyip River Middle and Upper
34	Kananook
35	Merri Creek (rural and forested)
36	Werribee Upper
37	Yarra Upper (rural)
38	Yarra Upper (source)
39	Koonung Creek
40	Kororoit Creek Lower
41	Kororoit Creek Upper
42	Laverton
43	Woori Yallock
44	Mullum Mullum
45	Olinda Creek
46	North Eastern Peninsula Rivers and Creeks
47	South Eastern Peninsula Rivers and Creeks
48	West Peninsula Rivers and Creeks
49	Plenty River (rural and lower)
50	Plenty River (source)
51	Skeleton Creek
52	Stony
53	Steels and Pauls Creek (rural)
54	Steels and Pauls Creek (source)
55	Stringybark Creek
56	Stringybark Creek
57	Taylors
58	Watsons Creek
59	Watts River (rural)
60	Watts River (source)
61	Werribee Middle
62	Yarra Middle and Lower
63	Maribyrnong River
64	Steele

Figure 7: RRHS Aquatic Habitat Program 5-year Budget Allocations

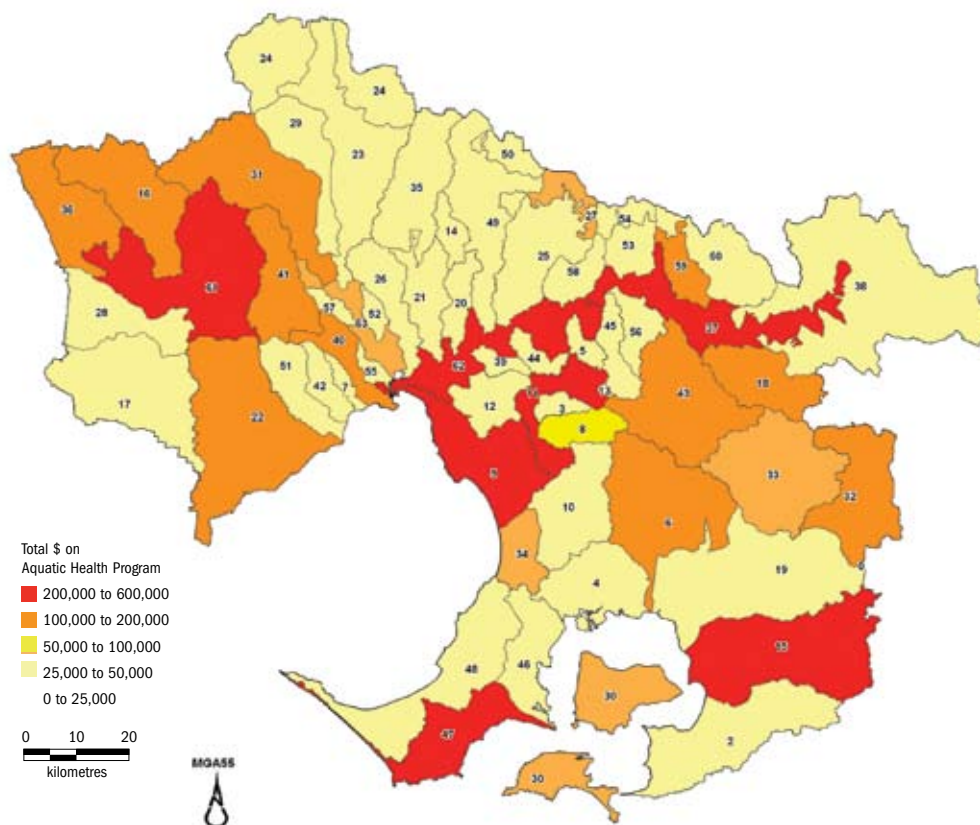


Table 5: Regional Actions: Community Engagement, Partnerships & Education Initiatives

Project	Time Frame	5-year Cost (\$)	Lead	Partners
Continue to support research and community programs to monitor key biological indicators for healthy rivers	Ongoing	60,000	Melbourne Water	Amphibian Research Centre, Australian Platypus Conservancy
Continue to implement Melbourne Water's river health communications and community education program, including information on indigenous issues and knowledge (consistent with Melbourne Water's Cultural and Heritage Strategy) and information for culturally and linguistically diverse (CALD) communities.	Ongoing	3,070,000	Melbourne Water	
Continue to implement the River Health Incentives Program	Ongoing	17,500,000	Melbourne Water	
Continue to regionally co-ordinate the Melbourne Waterwatch program and support the implementation of the Melbourne Waterwatch Strategic Plan	Ongoing	1,415,000	Melbourne Water	Department of Sustainability and Environment, local government, Port Phillip and Westernport CMA and industry
Support community involvement in planning and onground activities for river health, including field days	Ongoing	2,286,000	Melbourne Water	
Regularly undertake activities to understand community perceptions and levels of awareness specific to waterways	Ongoing	860,000	Melbourne Water	
Consistent with the Melbourne Water Cultural Heritage Strategy develop and implement a process for involving Indigenous communities in river health planning and activities	Ongoing	-	Melbourne Water	Woiworung, Boonerwung and Wathurong communities, Koorie Heritage Trust
Implement the Waterways Stakeholder Engagement and Communications Framework	Ongoing	1,090,000	Melbourne Water	Stakeholders and communities of the region
Continue to document material on Indigenous and European values associated with rivers and creeks of the Port Phillip and Westernport region	Ongoing	250,000	Melbourne Water	Woiworung, Boonerwung and Wathurong communities, Koorie Heritage Trust

Table 6: Regional Actions: Regional Plans and Initiatives

Project	Time Frame	5-year Cost (\$)	Lead	Partners
Maintenance of rivers and creeks in Melbourne Water's existing area, including litter removal, pollution spill cleanup and de-silting	Ongoing	36,870,000	Melbourne Water	Parks Victoria, Local Government, EPA
Maintenance of rivers and creeks in Melbourne Water's Extended Area, including litter removal, pollution spill cleanup, de-silting and works on underground drains	Ongoing	11,300,000	Melbourne Water	Parks Victoria, Local Government, EPA
Continue to maintain Melbourne Water's water quality treatment wetlands	Ongoing	10,000,000	Melbourne Water	
Continue to maintain Melbourne Water's Sites of Biodiversity Significance	Ongoing	2,350,000	Melbourne Water	
Implement Melbourne Water's Sites of Biodiversity Significance capital improvement program	Ongoing	2,350,000	Melbourne Water	
Establish policy and inter-agency agreement on alternative water access for land managers fencing their waterway frontage	2009	-	Melbourne Water	
Review management plans for RAMSAR wetland sites	2010	50,000	Melbourne Water	
Implement a natural floodplain management policy, including effective planning controls, that focuses on enhancing links between environmental values within rivers, creeks and floodplains	Ongoing	575,000	Melbourne Water	Department of Sustainability and Environment
Implement the regional estuarine management plan improvement works	Ongoing	2,250,000	Melbourne Water	Central Coastal Board, Parks Victoria, EPA Victoria, CMA

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Table 7: Regional Actions: Research and Investigation Programs

Project	Time Frame	5-year Cost(\$)	Lead	Partners
Continue to support waterway research via CRCs	Ongoing	1,500,000	Melbourne Water	
Continue to support waterway weed research for priority weeds in the Port Phillip and Westernport region	Ongoing	1,000,000	Melbourne Water	Department of Primary Industries, Weed CRC
Continue to support research into urbanisation impacts on stream ecology	Ongoing	600,000	Melbourne Water	
Continue to support research on the impacts of exotic animals on waterway health	Ongoing	183,000	Department of Sustainability and Environment	Melbourne Water, Port Phillip and Westernport CMA
Monitor and evaluate the outcomes of environmental flow releases	Ongoing	835,000	Melbourne Water	Department of Sustainability and Environment
Monitor the Werribee and Maribyrnong Environmental Water Reserve	2011	300,000	Melbourne Water	Department of Sustainability and Environment
Undertake a condition assessment of estuaries throughout the region so that each main estuary is covered every five years	Ongoing	265,000	Melbourne Water	Department of Sustainability and Environment, Port Phillip and Westernport Catchment Management Authority, EPA Victoria, Parks Victoria
Continue to implement Melbourne Water's Biological and Sediment Monitoring Programs	Ongoing	780,000	Melbourne Water	EPA Victoria
Continue to undertake streamside and physical form stream condition assessments so that each main river and creek is covered every five years	Ongoing	1,100,000	Melbourne Water	Department of Sustainability and Environment
Continue to implement a mosquito monitoring program	Ongoing	310,000	Melbourne Water	Department of Human Services, Local Government
Continue to implement a long-term fixed environmental site assessment program	Ongoing	525,000	Melbourne Water	EPA Victoria
Continue to implement Melbourne Water's Tributary Investigations Program including target surveys of water quality, sediment, fish, aquatic macroinvertebrates, frogs and geomorphology to better understand stream health and management requirements	Ongoing	2,475,000	Melbourne Water	Department of Sustainability and Environment
Continue to monitor cold water impacts on rivers from water supply dams	Ongoing	35,000	Department of Sustainability and Environment	Melbourne Water
Continue to implement an assessment program to improve our understanding of waterway works outcomes	Ongoing	375,000	Melbourne Water	
Continue to undertake condition assessments (ISC) and investigations at community river and creek works sites, e.g RHIP sites	Ongoing	150,000	Melbourne Water	
Continue to implement a program of threatened and flagship species monitoring	Ongoing	265,000	Melbourne Water	Department of Sustainability and Environment, Port Phillip and Westernport CMA
Continue to undertake mapping of new and emerging streamside and instream weeds to address particular species while they are easier to control	Ongoing	750,000	Melbourne Water	DPI, Port Phillip and Westernport CMA
Develop and implement a protocol for instream habitat assessment for the region, based on the outcomes of the Aquatic Habitat Strategy	2009	255,000	Melbourne Water	Department of Sustainability and Environment
Support research into climate change and implications for river health	2013	75,000	Melbourne Water	Monash University (Australian Ecological Research Laboratory)
Undertake a region-wide assessment of ecological values and potential impact on waterways of urban growth within 2030 strategy	Ongoing	230,000	Melbourne Water	