

Appendix 6 – Catchment Specific Actions by Management Unit 2008/09 to 2012/13 Westernport Catchment

Management Unit
Bass

Number
2



The Bass River rises near Poowong and flows through Glen Forbes and Bass before joining Western Port, north of San Remo. Total Kms: 72

Sub-management unit	No.	Sub-management unit	No.
Bass Lower	149	Bass Middle	150
Bass Outfall	148	Bass Upper	151

Targets for Management Unit					
	Water quality	Aquatic life	Habitat & stability	Vegetation	Flow
Excellent		●	●		●
Good	●	●	●	●	
Moderate	●	●	●	●	
Poor					
Very poor					

Importance	Low
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	Current	Target
Condition	Moderate	Good
Social Value	Moderate	Moderate

Five Year Implementation Target Area	Target
No. rivers with negotiated environmental flow regimes	1
No. rivers with improvements made to environmental flow regimes	1
Area of streamside land under mgmnt agreement km ²	0.13
Kilometres of streamside land revegetated	14.9
Number of fish barriers removed	-
Number of sites subject to bed and bank stabilisation	1
Kilometres of riparian land subject to weed mgmnt	28.0
No. of plans developed for Rivers and Creeks of high social value	-
Rivers where heritage values protected or improved	-
No. of plans developed for rivers and creeks of high environmental value	1
No. of investigations to fill data gaps	1
No. IRC reaches with instream habitat reinstated	-

* and ^ denotes action which covers multiple MUs counted as one target in the overall targets.

Program for the Bass Management Unit General

Program	Action	Lead responsibility	Partners	Costs (MW only)
Flow Management (not Bass Outfall)	Develop Bass River local management rules to manage private licensed water use	Southern Rural Water	Private Diversers	\$9,000
Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$937,000
Riparian Management (not Bass Middle)	Target riparian zone management to areas of remnant vegetation and/or creation of habitat links	Melbourne Water		\$31,000

Program for the Bass Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
Bass Outfall	Riparian Management	Implement recommendation from the Westernport Sediment Study 2003 - manage sediment contribution from bank erosion by implementing effective riparian zone management including stream frontage management (see riparian management program actions) and stabilising local instabilities	Melbourne Water		\$11,000
Bass Upper	Aquatic Habitat	Create opportunities to improve habitat for Platypus	Melbourne Water		Guiding
	Channel Form	Implement bed erosion control as recommended in the SKM study in tributaries upstream of Poowong	Melbourne Water		\$250,000
		Implement recommendation from the Westernport Sediment Study 2003 - "encourage adoption of land use practices that reduce the potential for gully initiation in currently gullied areas"	Melbourne Water	Port Phillip & Westernport CMA, DPI	\$19,000
	Investigations	Undertake stream health investigations to fill the data gaps	Melbourne Water		\$40,000
Plans	Develop the Upper Bass Waterway Plan	Melbourne Water	Agencies, Community	\$50,000	

Appendix 6 – Catchment Specific Actions by Management Unit 2008/09 to 2012/13 Westernport Catchment

Management Unit
Cardinia, Toomuc, Deep and Ararat **6**

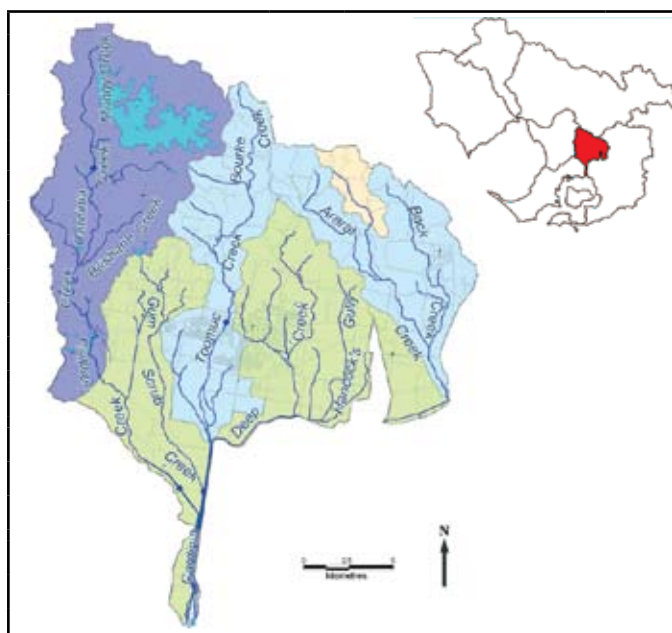
Targets for Management Unit					
	Water quality	Aquatic life	Habitat & stability	Vegetation	Flow
Excellent		●			
Good		●	●	●	●
Moderate	●			●	
Poor	●			●	
Very poor					

Importance Moderate

	Current	Target
Condition	Poor	Moderate
Social Value	Moderate	Moderate

Five Year Implementation Target Area	Target
No. rivers with negotiated environmental flow regimes	-
No. rivers with improvements made to environmental flow regimes	-
Area of streamside land under mgmnt agreement km ²	0.24
Kilometres of streamside land revegetated	27.6
Number of fish barriers removed	2
Number of sites subject to bed and bank stabilisation	5
Kilometres of riparian land subject to weed mgmnt	50.2
No. of plans developed for Rivers and Creeks of high social value	-
Rivers where heritage values protected or improved	2
No. of plans developed for rivers and creeks of high environmental value	1
No. of investigations to fill data gaps	2
No. IRC reaches with instream habitat reinstated	-

* and ^ denotes action which covers multiple MUs counted as one target in the overall targets.



Cardinia, Toomuc, Deep and Ararat creeks, including Gum Scrub Creek, cover a large portion of the northern Westernport catchment and incorporates areas such as Upper Beaconsfield, Nar Nar Goon and Dalmore. Total Kms: 289

Sub-management unit	No.	Sub-management unit	No.
Ararat Creek Upper Forested (no actions)	1	Ararat Creek	21
		Cardinia/Gum Scrub	28
Deep Creek S.E.	38	Toomuc Creek	85
Upper Cardinia	164		

Program for the Cardinia, Toomuc, Deep and Ararat Management Unit General

Program	Action	Lead responsibility	Partners	Costs (MW only)
Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$1,758,000

Program for the Cardinia, Toomuc, Deep and Ararat Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
Ararat Creek	Aquatic Habitat	Create opportunities to improve River blackfish habitat	Melbourne Water		Guiding
		Investigate opportunities for improving native fish habitat	Melbourne Water		Guiding
	Channel Form	Investigate the extent of localised bed (and bank) erosion in the lower Ararat (and Bessie) Creek and implement key actions proposed in Brizga et al, 2002	Melbourne Water		\$510,000
	Investigations	Investigate swamp forest restoration and wetland development between northern boundary drain and railway as proposed in Brizga et.al. (2002)	Melbourne Water		\$20,000
	Plans	Develop Ararat Creek Waterway Plan	Melbourne Water	Agencies, Community	\$41,000
Cardinia/Gum Scrub	Aquatic Habitat	Investigate opportunities for improving native fish habitat	Melbourne Water		\$60,000
	Channel Form	Implement appropriate management solutions as outlined in the Cardinia Creek Geomorphology study(GHD 1998), particularly sedimentation control on Cardinia Creek	Melbourne Water		\$478,000
	Flow Management	Develop the Cardinia/ Toomuc Local Management Rules to manage private licensed water use	Southern Rural Water	Private Diverters	\$2,500
	Investigations	Undertake a fish investigation	Melbourne Water		\$20,000
Deep Creek S.E.	Channel Form	Investigate the extent of localised bank erosion from stormwater inputs and implement appropriate management solutions	Melbourne Water		\$50,000
	Flow Management	Develop the Cardinia/Toomuc Local Management Rules to manage private licensed water use	Southern Rural Water	Private Diverters	\$2,500

Program for the Cardinia, Toomuc, Deep and Ararat Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
Toomuc Creek	Aquatic Habitat	Investigate opportunities for improving native fish habitat	Melbourne Water		Guiding
	Channel Form	Investigate the extent of bank erosion and implement appropriate management solutions	Melbourne Water		\$247,000
	Flow Management	Develop the Cardinia/ Toomuc Local Management Rules to manage private licensed water use	Southern Rural Water	Private Diverters	\$2,500
	Investigations	Undertake platypus investigation	Melbourne Water		\$20,000
Upper Cardinia	Aquatic Habitat	Ensure the translocation of fish is undertaken in accordance with the Guidelines for Assessing Translocations of Live Aquatic Organisms in Victoria to minimise impacts on biodiversity	Primary Industries	Melbourne Water	Guiding
		Investigate and undertake the construction of fishways at the retarding basin at Princes Freeway and stream flow gauging weir at Chadwick Road	Melbourne Water		\$60,000
		Protect vegetation in wetlands to aid with the protection of Dwarf galaxias habitat	Melbourne Water		\$20,000
	Channel Form	Investigate the extent of localised bed erosion and excess sandy sediment supply and implement appropriate management solutions	Melbourne Water		\$460,000
	Flow Management	Develop the Cardinia/ Toomuc Local Management Rules to manage private licensed water use	Southern Rural Water	Private Diverters	\$2,500
	Investigations	Conduct fish survey to assess the effectiveness of fishways and impact of upstream barriers	Melbourne Water		\$20,000
	Riparian Management	Target riparian zone management to areas of remnant vegetation and/or creation of habitat links	Melbourne Water		Guiding

Appendix 6 – Catchment Specific Actions by Management Unit 2008/09 to 2012/13

Westernport Catchment

Management Unit

Dalmore Outfalls

Number

4

Targets for Management Unit					
	Water quality	Aquatic life	Habitat & stability	Vegetation	Flow
Excellent					
Good			●		
Moderate	●	●			
Poor				●	●
Very poor					

Importance	Low
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	Current	Target
Condition	Poor	Poor
Social Value	High	High

Five Year Implementation Target Area	Target
No. rivers with negotiated environmental flow regimes	-
No. rivers with improvements made to environmental flow regimes	-
Area of streamside land under mgmnt agreement km ²	0.05
Kilometres of streamside land revegetated	5.1
Number of fish barriers removed	-
Number of sites subject to bed and bank stabilisation	-
Kilometres of riparian land subject to weed mgmnt	9.3
No. of plans developed for Rivers and Creeks of high social value	-
Rivers where heritage values protected or improved	1
No. of plans developed for rivers and creeks of high environmental value	-
No. of investigations to fill data gaps	-
No. IRC reaches with instream habitat reinstated	-

* and ^ denotes action which covers multiple MUs counted as one target in the overall targets.



The Dalmore Outfalls consist of a number of creeks and drains that flow into Western Port via the Pearcedale, Devon Meadows, Clyde and Tooradin areas. Total Kms: 146

Sub-management unit	No.	Sub-management unit	No.
Christies Drain	31	Langwarrin Creek	54
Tooradin Road Drain	86	Western Outfall Drain	91

Program for the Dalmore Outfalls Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
Christies Drain	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management to gradually improve conditions and facilitate future rehabilitation with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$63,000
Langwarrin Creek	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management to gradually improve conditions and facilitate future rehabilitation with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$12,000
Tooradin Road Drain	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$125,000
Western Outfall Drain	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$125,000

Management Unit

French and Phillip Islands

Number

30

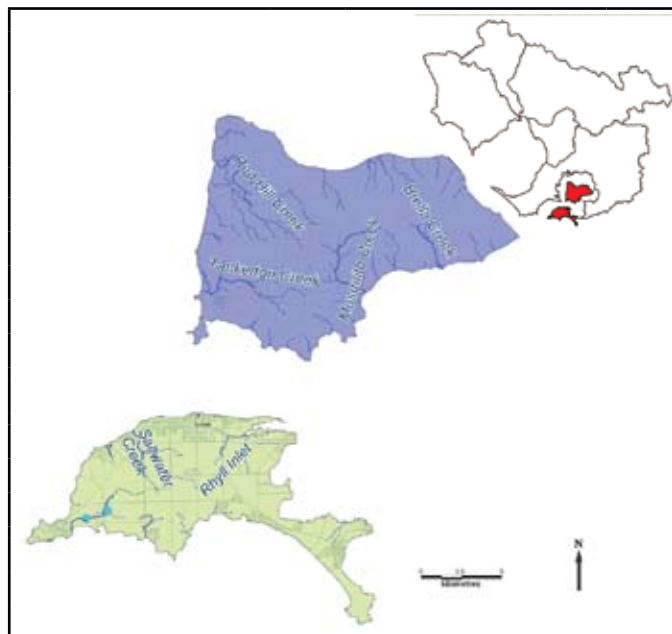
Targets for Management Unit					
	Water quality	Aquatic life	Habitat & stability	Vegetation	Flow
Excellent	Insufficient data				
Good					
Moderate					
Poor					
Very poor					

Importance	Very High
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	Current	Target
Condition	Excellent	Excellent
Social Value	Low	Low

Five Year Implementation Target Area	Target
No. rivers with negotiated environmental flow regimes	-
No. rivers with improvements made to environmental flow regimes	-
Area of streamside land under mgmnt agreement km ²	0.02
Kilometres of streamside land revegetated	2.0
Number of fish barriers removed	1
Number of sites subject to bed and bank stabilisation	1
Kilometres of riparian land subject to weed mgmnt	3.6
No. of plans developed for Rivers and Creeks of high social value	-
Rivers where heritage values protected or improved	-
No. of plans developed for rivers and creeks of high environmental value	1
No. of investigations to fill data gaps	1
No. IRC reaches with instream habitat reinstated	-

* and ^ denotes action which covers multiple MUs counted as one target in the overall targets.



The small creeks of French Island are isolated from the mainland and many provide important references. Total Kms: 40

Sub-management unit	No.	Sub-management unit	No.
French Island	152	Phillip Island	173

Program for the French and Phillip Islands Management Unit General

Program	Action	Lead responsibility	Partners	Costs (MW only)
Plans	Develop a French or Phillip Island Waterway Plan	Melbourne Water	Agencies, Community	\$50,000
Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$126,000

Program for the French and Phillip Islands Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
French Island	Aquatic Habitat	Investigate opportunities for improving native fish habitat	Melbourne Water		Guiding
	Investigations	Undertake stream health investigations to fill the data gaps	Melbourne Water		\$80,000
	Riparian Management	Target riparian zone management to areas of remnant vegetation and/or creation of habitat links	Melbourne Water		Guiding
Phillip Island	Aquatic Habitat	Investigate the extent of fish barriers and identify opportunities for removal	Melbourne Water		\$60,000
	Channel Form	Investigate options for stabilisation of Whalehead Creek adjacent to Kitty Miller Wetlands	Melbourne Water		\$94,000

Appendix 6 – Catchment Specific Actions by Management Unit 2008/09 to 2012/13

Westernport Catchment

Management Unit

Lang Lang River

Number

15

Targets for Management Unit					
	Water quality	Aquatic life	Habitat & stability	Vegetation	Flow
Excellent		●	●		
Good		●	●		
Moderate	●		●	●	●
Poor	●			●	
Very poor				●	

Importance	Low
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	Current	Target
Condition	Poor	Moderate
Social Value	Low	Low

Five Year Implementation Target Area	Target
No. rivers with negotiated environmental flow regimes	-
No. rivers with improvements made to environmental flow regimes	-
Area of streamside land under mgmnt agreement km ²	0.24
Kilometres of streamside land revegetated	39.8
Number of fish barriers removed	1
Number of sites subject to bed and bank stabilisation	4
Kilometres of riparian land subject to weed mgmnt	72.3
No. of plans developed for Rivers and Creeks of high social value	-
Rivers where heritage values protected or improved	-
No. of plans developed for rivers and creeks of high environmental value	-
No. of investigations to fill data gaps	3
No. IRC reaches with instream habitat reinstated	-

* and ^ denotes action which covers multiple MUs counted as one target in the overall targets.



The headwaters of the Lang Lang River are situated in the Strzelecki Ranges near Poowong. Total Kms: 282

Sub-management unit	No.	Sub-management unit	No.
Lang Lang	52	Lang Lang Lower	53
Little Lang Lang	57	Minnieburn/O'Mahoney's	66

Program for the Lang Lang River Management Unit General

Program	Action	Lead responsibility	Partners	Costs (MW only)
Aquatic Habitat	Investigate opportunities for improving native fish habitat	Melbourne Water		Guiding
Investigations (not Little Lang Lang)	Undertake stream health investigations to fill the data gaps	Melbourne Water		\$75,000
Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$2,533,000

Program for the Lang Lang River Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
Lang Lang	Aquatic Habitat	Investigate opportunities to improve habitat for Freshwater crayfish	Melbourne Water		Guiding
	Channel Form	Implement priority actions from the Geomorphological study (in prep) to address bank and bed erosion to aid with the reduction in sediment loads to Westernport Bay	Melbourne Water		\$815,000
		Implement priority actions to address catchment and gully erosion to aid in reduction of sediment loads to Western Port	Primary Industries	Port Phillip and Westernport CMA	
Lang Lang Lower	Aquatic Habitat	Construct vertical slot fishway on the barrier at Heads Road	Melbourne Water		\$500,000
	Channel Form	Implement priority actions from the Geomorphological study (in prep) to address bank and bed erosion to aid with the reduction in sediment loads to Westernport Bay	Melbourne Water		\$1,438,000
		Investigate actions from the Geomorphology study 1998, to assess feasibility of reducing peak flows through upstream measures and potential to re-engage floodplain	Melbourne Water		-
Minnieburn/O'Mahoney's	Aquatic Habitat	Address downstream fish barriers	Melbourne Water		\$40,000
	Channel Form	Identify priority actions in the Geomorphology Study, 1998 to address localised bank and bed erosion	Melbourne Water		\$303,000

Management Unit
Lower Bunyip

Number
19

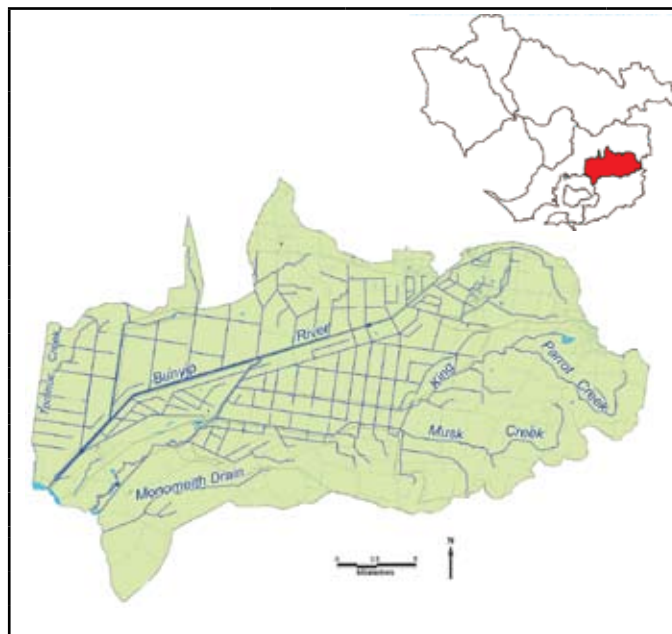
Targets for Management Unit					
	Water quality	Aquatic life	Habitat & stability	Vegetation	Flow
Excellent			●		
Good		●	●	●	
Moderate					
Poor	●			●	●
Very poor	●				

Importance	Low
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	Current	Target
Condition	Poor	Moderate
Social Value	Very High	Very High

Five Year Implementation Target Area	Target
No. rivers with negotiated environmental flow regimes	1*
No. rivers with improvements made to environmental flow regimes	1*
Area of streamside land under mgmnt agreement km ²	0.13
Kilometres of streamside land revegetated	14.6
Number of fish barriers removed	-
Number of sites subject to bed and bank stabilisation	2
Kilometres of riparian land subject to weed mgmnt	26.6
No. of plans developed for Rivers and Creeks of high social value	-
Rivers where heritage values protected or improved	-
No. of plans developed for rivers and creeks of high environmental value	-
No. of investigations to fill data gaps	-
No. IRC reaches with instream habitat reinstated	-

* and ^ denotes action which covers multiple MUs counted as one target in the overall targets.



This area includes Yallock Creek, Monomeith Drain and the Bunyip River and its tributaries from the Princes Highway to Western Port near Koo Wee Rup. Total Kms: 586

Sub-management unit	No.	Sub-management unit	No.
Bunyip Drains	26	Bunyip Lower	25
Mackay Drain	59	Monomeith Drain	68
Yallock/King Parrot/Musk	93		

Program for the Lower Bunyip Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
Bunyip Drains	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$28,000
Bunyip Lower	Channel Form	Implement recommendations from the Westernport Sediment Study 2003 and Bunyip Main Drain Improvement Works Plan to stabilise the Lower Bunyip River	Melbourne Water		\$3,716,000
	Flow Management	Develop and implement Bunyip/ Tarago Stream Flow Management Plan to manage water allocation between private water use and the environment	Southern Rural Water	Agencies, Community	\$37,500
	Riparian Management	Investigate opportunities to protect Mangrove communities, whilst maintaining opportunities for fishing	Melbourne Water		\$31,000
In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist		Melbourne Water	Agencies, Community	\$467,000	
Mackay Drain	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management to gradually improve conditions and facilitate future rehabilitation with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$11,000
Monomeith Drain	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management to gradually improve conditions and facilitate future rehabilitation with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$8,000
Yallock/King Parrot/Musk	Aquatic Habitat	Protect vegetation in wetlands to aid in the protection of Dwarf galaxias habitat	Melbourne Water		\$20,000
	Channel Form	Implement priority actions in the Bunyip River Geomorphological study, 1998, to address localised bed erosion	Melbourne Water		\$125,000
	Flow Management	Develop and implement Bunyip/ Tarago Stream Flow Management Plan to manage water allocation between private water use and the environment	Southern Rural Water		\$37,500
	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$385,000

Appendix 6 – Catchment Specific Actions by Management Unit 2008/09 to 2012/13

Westernport Catchment

Management Unit

Middle and Upper Bunyip

Number

33

Targets for Management Unit					
	Water quality	Aquatic life	Habitat & stability	Vegetation	Flow
Excellent		●			●
Good	●		●	●	
Moderate				●	
Poor					
Very poor					

Importance	Low
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	Current	Target
Condition	Good	Excellent
Social Value	Moderate	Moderate

Five Year Implementation Target Area	Target
No. rivers with negotiated environmental flow regimes	1*
No. rivers with improvements made to environmental flow regimes	1*
Area of streamside land under mgmnt agreement km ²	0.10
Kilometres of streamside land revegetated	11.7
Number of fish barriers removed	-
Number of sites subject to bed and bank stabilisation	-
Kilometres of riparian land subject to weed mgmnt	21.2
No. of plans developed for Rivers and Creeks of high social value	-
Rivers where heritage values protected or improved	-
No. of plans developed for rivers and creeks of high environmental value	-
No. of investigations to fill data gaps	-
No. IRC reaches with instream habitat reinstated	1

* and ^ denotes action which covers multiple MUs counted as one target in the overall targets.



The catchment includes the Upper Bunyip River and tributaries upstream of Princes Highway. Total Kms: 251

Sub-management unit	No.	Sub-management unit	No.
Bunyip/Cannibal	27	Bunyip/Cannibal Upper Forested	3

Program for the Middle and Upper Bunyip Management Unit General

Program	Action	Lead responsibility	Partners	Costs (MW only)
Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$743,000

Program for the Middle and Upper Bunyip Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
Bunyip/Cannibal	Aquatic Habitat	Retain large woody debris within the stream channel. Identify key sites for large woody debris introduction and undertake works	Melbourne Water		\$70,000
		Protect vegetation in wetlands to aid with the protection of Dwarf galaxias habitat in this sub management unit	Melbourne Water		\$20,000
		Ensure the translocation of fish is undertaken in accordance with the Guidelines for Assessing Translocations of Live Aquatic Organisms in Victoria to minimise impacts on biodiversity	Primary Industries	Melbourne Water	Guiding
	Channel Form	Implement priority actions in the Westernport Sediment Study 2003 to address the impacts of poor water quality linked to sediment loads from channel erosion on the downstream environment in Westernport Bay	Primary Industries & Melbourne Water	Port Phillip & Westernport CMA	\$1,279,000
	Flow Management	Develop and implement Bunyip/ Tarago (unregulated) Stream Flow Management Plan to manage water allocation between private water use and the environment	Southern Rural Water		\$37,500
Bunyip/Cannibal Upper Forested	Aquatic Habitat	Investigate opportunities for improving native fish habitat	Melbourne Water		Guiding
		Investigate opportunities to improve habitat for Platypus	Melbourne Water		Guiding
	Riparian Management	Target riparian zone management to areas of remnant vegetation and/or creation of habitat links	Melbourne Water		Guiding

Management Unit
North Eastern Peninsula Rivers and Creeks

Number
46

Targets for Management Unit					
	Water quality	Aquatic life	Habitat & stability	Vegetation	Flow
Excellent					
Good		●	●		
Moderate			●	●	●
Poor	●				
Very poor	●				

Importance	Low
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	Current	Target
Condition	Moderate	Moderate
Social Value	Low	Moderate

Five Year Implementation Target Area	Target
No. rivers with negotiated environmental flow regimes	-
No. rivers with improvements made to environmental flow regimes	-
Area of streamside land under mgmnt agreement km ²	0.02
Kilometres of streamside land revegetated	2.4
Number of fish barriers removed	-
Number of sites subject to bed and bank stabilisation	-
Kilometres of riparian land subject to weed mgmnt	4.4
No. of plans developed for Rivers and Creeks of high social value	-
Rivers where heritage values protected or improved	-
No. of plans developed for rivers and creeks of high environmental value	-
No. of investigations to fill data gaps	-
No. IRC reaches with instream habitat reinstated	-

* and ^ denotes action which covers multiple MUs counted as one target in the overall targets.



The north-eastern Peninsula rivers and creeks flow into Western Port and include several small creeks including Watsons, Olivers, Kings and Warrangine creeks. Total Kms: 60

Sub-management unit	No.	Sub-management unit	No.
Hastings North	46	Watson Creek S.E.	88

Program for the North Eastern Peninsula Rivers and Creeks Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
Hastings North	Aquatic Habitat	Investigate opportunities for improving native fish habitat	Melbourne Water		Guiding
	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$44,000
Watson Creek S.E.	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$109,000

Appendix 6 – Catchment Specific Actions by Management Unit 2008/09 to 2012/13

Westernport Catchment

Management Unit
South Eastern Peninsula Rivers and Creeks **Number** 47

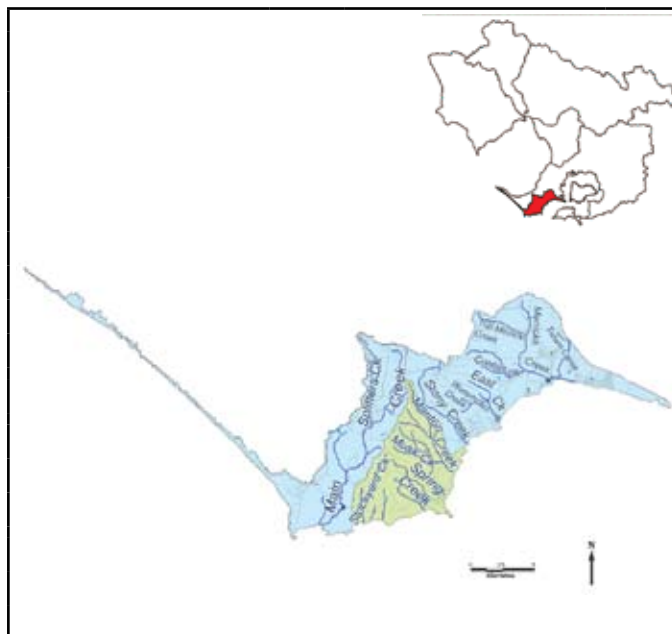
Targets for Management Unit					
	Water quality	Aquatic life	Habitat & stability	Vegetation	Flow
Excellent		●			
Good			●	●	
Moderate	●			●	●
Poor					
Very poor					

Importance High

	Current	Target
Condition	Moderate	Moderate
Social Value	High	High

Five Year Implementation Target Area	Target
No. rivers with negotiated environmental flow regimes	-
No. rivers with improvements made to environmental flow regimes	1
Area of streamside land under mgmnt agreement km ²	0.15
Kilometres of streamside land revegetated	17.7
Number of fish barriers removed	2
Number of sites subject to bed and bank stabilisation	3
Kilometres of riparian land subject to weed mgmnt	32.1
No. of plans developed for Rivers and Creeks of high social value	2
Rivers where heritage values protected or improved	1
No. of plans developed for rivers and creeks of high environmental value	1
No. of investigations to fill data gaps	1
No. IRC reaches with instream habitat reinstated	1

* and ^ denotes action which covers multiple MUs counted as one target in the overall targets.



Rivers and creeks within the south-eastern Peninsula include Merricks, Coolart, East, Stony, Manton and Main creeks. These rivers and creeks flow into Western Port or Bass Strait between Somers and Flinders. Total Kms: 147

Sub-management unit	No.	Sub-management unit	No.
Main	167	Manton	170
Merricks/Coolart/Stony	64		

Program for the South Eastern Peninsula Rivers and Creeks Management Unit General

Program	Action	Lead responsibility	Partners	Costs (MW only)
Channel Form	Investigate extent of localised bed and bank erosion issues and implement priority actions identified in Condina and Craigie 1998	Melbourne Water	To be determined	\$719,000
Flow Management (not Merricks/Coolart/Stony)	Implement South East Peninsula Local Management Rules for managing private licensed water use	Southern Rural Water	Melbourne Water, Private Diversers	\$16,000
Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$1,125,000

Program for the South Eastern Peninsula Rivers and Creeks Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
Main	Aquatic Habitat	Ensure that large woody debris is retained within the stream channel, identify priority sites and undertake large woody debris introduction	Melbourne Water		\$70,000
		Investigate barrer in lower reach of Main Creek and construct fishway	Melbourne Water		\$80,000
	Investigations	Undertake stream health investigations to fill the data gaps	Melbourne Water		\$20,000
	Plans	Develop the Main Creek (Peninsula) Waterway Plan	Melbourne Water	Agencies, Community	\$50,000
Merricks/Coolart/Stony	Aquatic Habitat	Investigate barriers and construct fishways on Merricks, Coolart and Stony Creeks.	Melbourne Water	To be determined	\$60,000
		Investigate opportunities for improving native fish habitat	Melbourne Water		Guiding
	Flow Management	Implement recommendations from the Merricks Creek environmental flow study	Melbourne Water	Private Diversers	\$8,000
	Plans	Develop the Merricks/ Coolart/ Stony Creeks Waterway Plan	Melbourne Water	Agencies, Community	\$350,000
	Riparian Management	Target riparian zone management to areas of remnant vegetation and/or creation of habitat links	Melbourne Water		Guiding

Management Unit
Tarago

Number
32

Targets for Management Unit					
	Water quality	Aquatic life	Habitat & stability	Vegetation	Flow
Excellent		●	●		
Good			●	●	●
Moderate	●			●	
Poor					
Very poor					

Importance	Very High
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	Current	Target
Condition	Moderate	Good
Social Value	Moderate	Moderate

Five Year Implementation Target Area	Target
No. rivers with negotiated environmental flow regimes	1*
No. rivers with improvements made to environmental flow regimes	1*
Area of streamside land under mgmnt agreement km ²	0.09
Kilometres of streamside land revegetated	10.8
Number of fish barriers removed	1
Number of sites subject to bed and bank stabilisation	1
Kilometres of riparian land subject to weed mgmnt	19.6
No. of plans developed for Rivers and Creeks of high social value	-
Rivers where heritage values protected or improved	-
No. of plans developed for rivers and creeks of high environmental value	-
No. of investigations to fill data gaps	1
No. IRC reaches with instream habitat reinstated	1

* and ^ denotes action which covers multiple MUs counted as one target in the overall targets.



The Tarago River is a major tributary of the Bunyip River. Its headwaters are within the Tarago State Forest and flow into the Tarago Reservoir at Neerim. Total Kms: 180

Sub-management unit	No.	Sub-management unit	No.
Tarago River	84	Tarago River Upper Forested	15

Program for the Tarago Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
Tarago River	Aquatic Habitat	Retain large woody debris within the stream channel and investigate key sites for reintroduction	Melbourne Water		\$70,000
		Investigate opportunities for improving native fish habitat and habitat for the Warrigul Burrowing Crayfish	Melbourne Water		Guiding
	Channel Form	Implement key actions from the Westernport Sediment Study, 2003 to reduce the sediment source entering Westernport Bay including treating localised erosion	Melbourne Water	Primary Industries	\$955,000
	Flow Management	Develop and implement the Bunyip/ Tarago Stream Flow Management Plan to manage water allocation between private water users and the environment	Southern Rural Water	Agencies, Community	\$37,500
	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian zone management in accordance with the priorities in the Tarago Catchment Management Plan, 2002	Melbourne Water	Community	\$500,000
Tarago River Upper Forested	Aquatic Habitat	Identify extent of fish barriers and identify opportunities for removal in the longer term	Melbourne Water		\$60,000
		Investigate opportunities for improving native fish habitat	Melbourne Water		Guiding
	Investigations	Undertake stream health investigations to fill the data gaps	Melbourne Water		\$80,000
	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$185,000
		Target riparian zone management to areas of remnant vegetation and/or creation of habitat links	Melbourne Water		Guiding

Appendix 6 – Catchment Specific Actions by Management Unit 2008/09 to 2012/13

Westernport Catchment

Management Unit
West Peninsula Rivers and Creeks **Number** 48

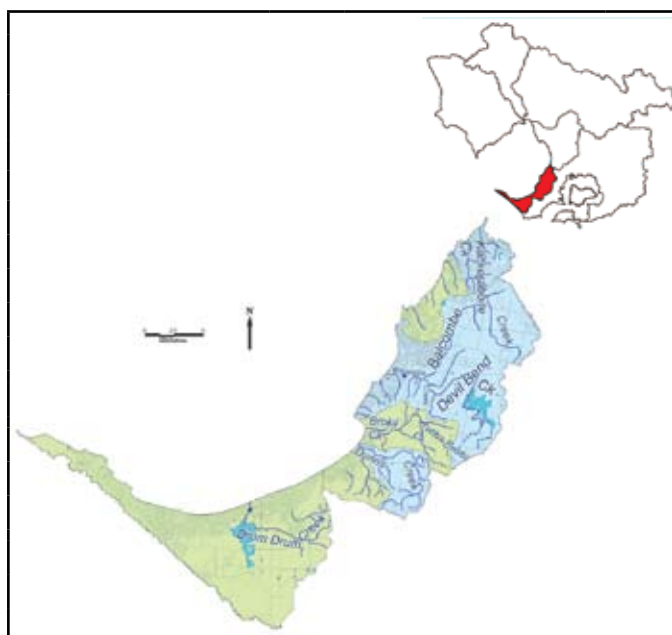
Targets for Management Unit					
	Water quality	Aquatic life	Habitat & stability	Vegetation	Flow
Excellent		●			
Good	●		●	●	
Moderate					
Poor					●
Very poor					

Importance Moderate

	Current	Target
Condition	Moderate	Moderate
Social Value	Moderate	Moderate

Five Year Implementation Target Area	Target
No. rivers with negotiated environmental flow regimes	-
No. rivers with improvements made to environmental flow regimes	-
Area of streamside land under mgmnt agreement km ²	0.19
Kilometres of streamside land revegetated	22.4
Number of fish barriers removed	-
Number of sites subject to bed and bank stabilisation	2
Kilometres of riparian land subject to weed mgmnt	40.7
No. of plans developed for Rivers and Creeks of high social value	1
Rivers where heritage values protected or improved	2
No. of plans developed for rivers and creeks of high environmental value	-
No. of investigations to fill data gaps	-
No. IRC reaches with instream habitat reinstated	-

* and ^ denotes action which covers multiple MUs counted as one target in the overall targets.



West Peninsula rivers and creeks consist of several small coastal waterways that flow into Port Phillip between Mount Martha and Rosebud. Total Kms: 202

Sub-management unit	No.	Sub-management unit	No.
Balcombe	165	Ballar	23
Drum Drum Alloc	168	Dunns	161
Sheepwash	162	Tanti	169
Tassels	163		

Program for the West Peninsula Rivers and Creeks Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
Balcombe	Aquatic Habitat	Investigate opportunities for improving native fish habitat	Melbourne Water		Guiding
	Channel Form	Investigate the extent of localised bank and bed erosion and implement appropriate management solutions	Melbourne Water		\$359,000
	Plans	Develop a Waterway Plan in the West Peninsula Rivers and Creeks Management Unit	Melbourne Water	Agencies, Community	\$20,000
	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$938,000
Ballar	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$219,000
Drum Drum Alloc	Plans	Develop a Waterway Plan in the West Peninsula Rivers and Creeks Management Unit	Melbourne Water	Agencies, Community	\$20,000
	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$219,000
Dunns	Plans	Develop a Waterway Plan in the West Peninsula Rivers and Creeks Management Unit	Melbourne Water	Agencies, Community	\$20,000
	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management to gradually improve conditions and facilitate future rehabilitation with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$16,000
Sheepwash	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$14,000

Program for the West Peninsula Rivers and Creeks Management Unit Specific to Sub-Management Unit

Sub-Mgt Unit	Program	Action	Lead responsibility	Partners	Costs (MW only)
Tanti	Channel Form	Investigate extent of localised bank erosion issue and identify appropriate management solutions	Melbourne Water		\$500,000
	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management to gradually improve conditions and facilitate future rehabilitation with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$12,000
Tassels	Aquatic Habitat	Create opportunities to improve habitat for Dwarf galaxias	Melbourne Water		-
	Riparian Management	In partnership with government agencies, local land managers and community groups undertake riparian management to gradually improve conditions and facilitate future rehabilitation with reference to local waterway plans where they exist	Melbourne Water	Agencies, Community	\$8,000