



8

# Surface water salinity

## This Chapter

This chapter summarises investments supported by the NAP and the regional component of the Trust that have a major focus on the surface water salinity matter for target. The first section of the chapter summarises priority action investments approved to the 30 June 2004. It also provides a summary of the type of activities supported by these investments and progress in the achievements of these activities to the 31 March 2004.

The second section summarises regional investments having a major focus on surface water salinity from regional strategies based on accredited regional plans to 30 June 2004. This section details the specific surface water salinity targets and related management action targets from approved investments. It also provides a summary of the type of activities supported by these investments and progress in the achievements of these activities to the 31 March 2004.

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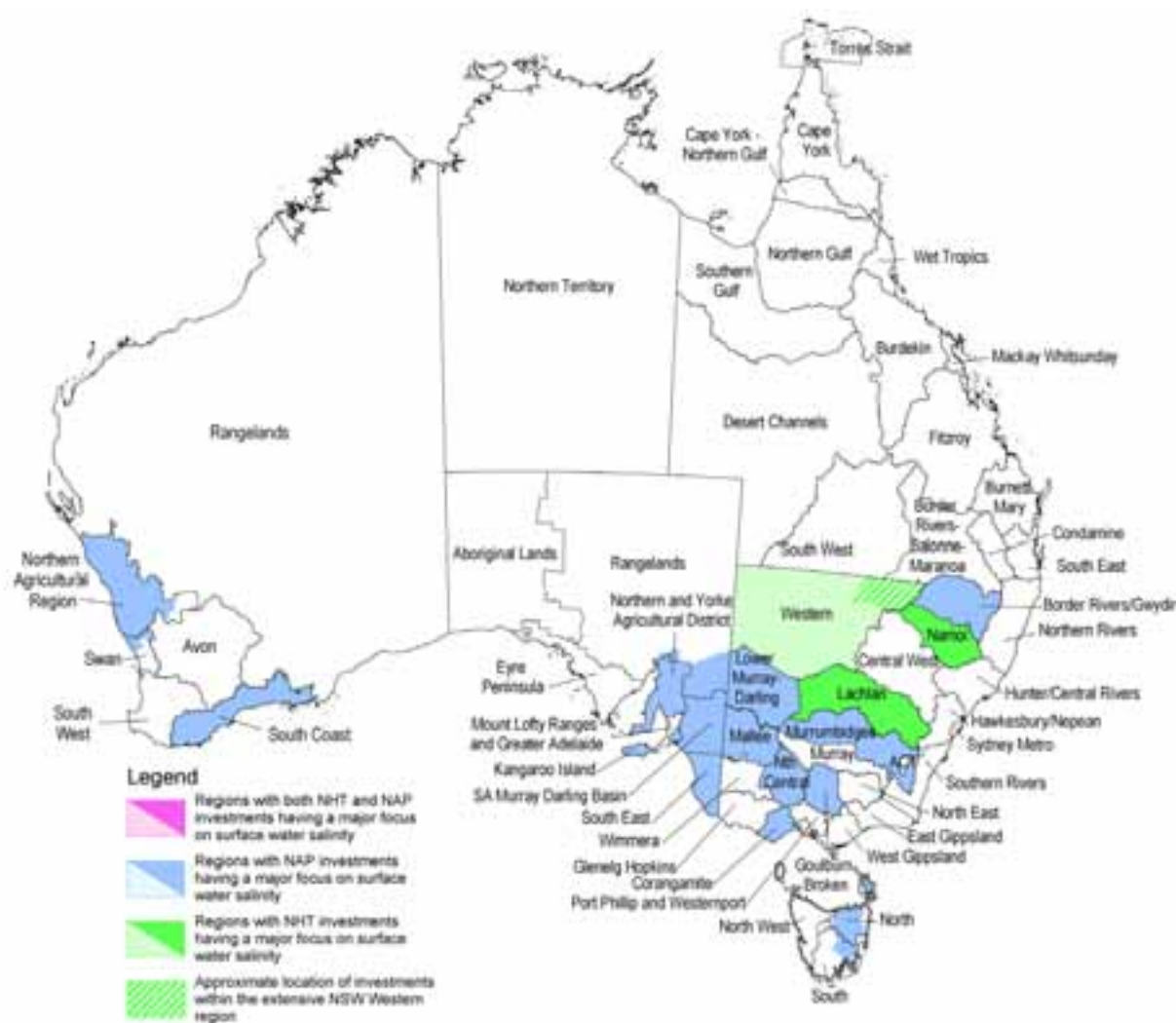
## Glossary

## 8.1 PRIORITY ACTIONS HAVING A MAJOR FOCUS ON SURFACE WATER SALINITY

### Approvals and reported expenditure

Investments by the NAP and the regional component of the Trust for priority actions having a major focus on surface water salinity total approximately \$40m. Figure 8.1.1 shows the regions addressing surface water salinity through this funding. Table 8.1.1 details the approved priority action funding for each region. Table 8.1.2 details the reported expenditure by each of these regions.

Figure 8.1.1 Regions with priority actions having a major focus on surface water salinity



**Table 8.1.1** Priority actions having a major focus on surface water salinity approved to June 2004\*

State	Region	2003-04 Approvals (\$)		Total Approvals to June 2004 (\$)	
		NAP	Trust	NAP	Trust
New South Wales	Border Rivers - Gwydir	412,500		997,500	
	Lachlan				95,000
	Lower Murray Darling			152,920	
	Murrumbidgee			2,580,000	
	Namoi				100,000
	State-wide			152,530	
	Western				38,437
South Australia	Kangaroo Island			376,400	
	Northern and Yorke Agricultural District			56,500	
	SA Murray Darling Basin			3,635,300	
	South East			25,401,100	
Tasmania	North Tasmania	227,400		227,400	
	South Tasmania	160,700		160,700	
Victoria	Corangamite			171,600	
	Goulburn Broken			800,000	
	Mallee			2,537,000	
	North Central			2,070,000	
Western Australia	Northern Agricultural	268,400		268,400	
	South Coast	121,320		121,320	
Total		1,190,320		39,708,670	233,437

\* Figures reflect Australian Government and State/Territory Government approvals for NAP and only Australian Government approvals for the Trust. State/Territory Government cash and in-kind funding for the Trust is not included.

**Table 8.1.2** Reported expenditure for priority actions having a major focus on surface water salinity

State	Region	Budgeted Activity Expenditure (\$)				Reported Activity Expenditure (\$)			
		July 03 - March 04		Total to March 04		July 03 - March 04		Total to March 04	
		NAP	Trust	NAP	Trust	NAP	Trust	NAP	Trust
New South Wales	Border Rivers - Gwydir	585,000		705,000		73,472		94,922	
	Lachlan		22,000		22,000				
	Lower Murray Darling			152,920		114,690		114,690	
	Murrumbidgee			2,580,000		955,224		955,224	
	Namoi		18,000		18,000				
	State-wide	52,530		152,530		66,416		152,530	
	Western		1,000		1,000				
South Australia	Kangaroo Island			326,400		153,220		153,220	
	Northern and Yorke Agricultural District	5,000		56,500		14,125		14,125	
	SA Murray Darling Basin	1,678,300		3,553,300		2,617,000		3,341,250	
	South East	655,370		2,011,860		985,103		1,336,168	
Tasmania	North Tasmania	227,400		227,400					

State	Region	Budgeted Activity Expenditure (\$)				Reported Activity Expenditure (\$)			
		July 03 - March 04		Total to March 04		July 03 - March 04		Total to March 04	
		NAP	Trust	NAP	Trust	NAP	Trust	NAP	Trust
Victoria	Corangamite			171,600				171,600	
	Goulburn Broken			800,000				800,000	
	Mallee			2,537,000		799,592		1,286,329	
	North Central			2,070,000				2,070,000	
Total		3,203,600	41,000	15,344,510	41,000	5,778,842		10,490,058	

## Activities and achievements

### Funded activities

Funding for the types of priority action activities having a major focus on surface water salinity supported by the NAP and the regional component of the Trust, is shown in Table 8.1.3.

**Table 8.1.3** Types of activity supported by priority actions having a major focus on surface water salinity

Activity Type	Budgeted Activity Expenditure (\$)				Reported Activity Expenditure (\$)			
	July 03 - March 04		Total to March 04		July 03 - March 04		Total to March 04	
	NAP	Trust	NAP	Trust	NAP	Trust	NAP	Trust
Resource assessment	1,110,680	1,000	2,396,330	1,000	811,233		1,168,797	
Planning			2,070,000				2,070,000	
Capacity building	692,920	22,000	4,368,660	22,000	1,910,327		2,030,642	
On-ground activities	1,400,000	18,000	6,509,520	18,000	3,057,282		5,220,619	
Total	3,203,600	41,000	15,344,510	41,000	5,778,842		10,490,058	

Funding for priority action activities having a major focus on surface water salinity supported by the NAP and the regional component of the Trust are described in Table 8.1.4.

**Table 8.1.4** Funding for priority action activities having a major focus on surface water salinity

Region	Activity Title	Budgeted Activity Expenditure (\$)				Reported Activity Expenditure (\$)			
		July 03 - March 04		Total to March 2004		July 03 - March 04		Total to March 2004	
		NAP	Trust	NAP	Trust	NAP	Trust	NAP	Trust
New South Wales									
Border Rivers - Gwydir	Groundwater Data Collection and Interpretation for Border Rivers	213,000		273,000		67,039		80,158	
	Groundwater Investigations for Salinity Management in the Gwydir Catchment	372,000		432,000		6,433		14,764	
Lachlan	Benchmarking Community Attitudes Towards Natural Resource Management Within the Lachlan Catchment		22,000		22,000				

Region	Activity Title	Budgeted Activity Expenditure (\$)				Reported Activity Expenditure (\$)			
		July 03 - March 04		Total to March 2004		July 03 - March 04		Total to March 2004	
		NAP	Trust	NAP	Trust	NAP	Trust	NAP	Trust
Lower Murray Darling	Lower Murray Irrigation Areas Land and Water Management Plan - Further Implementation			152,920		114,690		114,690	
Murrumbidgee	Implementation of Heads of Agreement Between NSW Government and Communities of Coleambally, Kerarbury and Coleambally Outfall			2,580,000		955,224		955,224	
Namoi	Mitigating Water Quality Decline Through the Management of Point Source Salinity and Gully Erosion		18,000		18,000				
State-wide	Quantifying Sub-catchment Impacts of Tree-Planting on Salt Mobilisation, Stream Water Quality and Flow to Support Market-based Solutions to Dryland Salinity	52,530		152,530		66,416		152,530	
Western	Location and Significance of Saline Inflows to the Barwon-Darling River System		1,000		1,000				
<b>South Australia</b>									
Kangaroo Island	Assessment and Monitoring of Kangaroo Island's Surface and Ground Water Resources			326,400		153,220		153,220	
Northern and Yorke Agricultural District	Small Groundwater Basins Risk Assessment	5,000		56,500		14,125		14,125	

Region	Activity Title	Budgeted Activity Expenditure (\$)				Reported Activity Expenditure (\$)			
		July 03 - March 04		Total to March 2004		July 03 - March 04		Total to March 2004	
		NAP	Trust	NAP	Trust	NAP	Trust	NAP	Trust
SA Murray Darling Basin	Accelerated Evaluation of Salt Interception Options in SA (Part A - Chowilla, Loxton, Lock 4, Bookpurnong & New Proposals) - Stage 2	1,400,000		2,848,000		2,143,000		2,848,000	
	Accelerated Evaluation of Salt Interception Options in South Australia - Part B: Regional Saline Disposal Strategy - Stage 2	19,250		108,500		70,000		89,250	
	Impacts of salinity on the aquatic invertebrate & aquatic & terrestrial vertebrate fauna of the River Murray Floodplain in SA	93,750		187,500		110,000		110,000	
	On-ground Assistance to Achieve Irrigation Efficiency in the SA Murray-Darling Basin	68,300		168,300		150,000		150,000	
	Providing baseline data to improve wetland Management aimed at reducing salinity, improving water quality & enhancing biodiversity	97,000		241,000		144,000		144,000	
South East	Padthaway: Salt Accession Investigations and Determination of Sustainable Extraction Limits (PAV)	50,000		500,000		250,000		500,000	
	Upper South East Community Support for Recharge Control (Devolved Grant Scheme)	605,370		1,511,860		735,103		836,168	
Tasmania									
North Tasmania	Understanding Groundwater Flow Systems and Processes Causing Salinity in the Northern Midlands	227,400		227,400					
Victoria									
Corangamite	Corangamite Drainage and Diversion Scheme			171,600				171,600	
Goulburn Broken	Goulburn Broken CMA - Upper Goulburn catchment activities targeting salinity and water quality			800,000				800,000	

Region	Activity Title	Budgeted Activity Expenditure (\$)				Reported Activity Expenditure (\$)			
		July 03 - March 04		Total to March 2004		July 03 - March 04		Total to March 2004	
		NAP	Trust	NAP	Trust	NAP	Trust	NAP	Trust
Mallee	Salinity and Water Quality - Irrigation			2,537,000		799,592		1,286,329	
North Central	Loddon Murray Land and Water Management Strategy			2,070,000				2,070,000	
Total		3,203,600	41,000	15,344,510	41,000	5,778,842	-	10,490,058	-

## Achievements

The outputs, or products and services produced by these activities, are summarised in four tables according to the types of outputs described in Chapter 1. Summaries of the outputs related to resource assessment, planning, capacity building and on-ground activities are shown in Table 8.1.5, Table 8.1.6, Table 8.1.7, Table 8.1.8.

**Table 8.1.5** Priority action resource assessment outputs related to surface water salinity

Standard Output	July 03 - March 04			Total to March 04		
	NAP	Trust	Joint	NAP	Trust	Joint
<b>Baseline, trend or condition studies for targets</b>						
Number of sites monitored	154			154		
Number of studies undertaken	7.5			7.5		
<b>Decision support tools</b>						
Number models, information management systems and other decision support tools developed	5			9		
<b>Investigations (survey, inventory and mapping and data analysis)</b>						
Number undertaken	219.5			219.5		
Area (hectares) surveyed	41.6			41.6		
<b>Research and development studies</b>						
Number undertaken	4			4		

**Table 8.1.6** Priority action planning outputs related to surface water salinity

Standard Output	July 03 - March 04			Total to March 04		
	NAP	Trust	Joint	NAP	Trust	Joint
<b>Integrated catchment or sub-catchment plans</b>						
Number developed	8			8		
<b>Property management plans</b>						
Number completed	85			85		

**Table 8.1.7** Priority action capacity building outputs related to surface water salinity

Standard Output	July 03 - March 04			Total to March 04		
	NAP	Trust	Joint	NAP	Trust	Joint
<b>Awareness raising activities</b>						
Number of demonstrations, field days, study tours and other non-training forums held	15			16		
Number of participants in person-days at demonstrations, field days, study tours and other non-training forums	107			107		
Number of brochures, newsletters, displays and other non-training products developed	198			198		

Quantity of brochures, newsletters, displays and other non-training products distributed	11083			11083		
Number of media opportunities including websites developed	42			42		
<b>Facilitation motivation and support activities</b>						
Number of active positions (FTE) supported	6			6		
<b>Skills and training activities</b>						
Number of training sessions, workshops seminars and other events held	47			47		
Number of participants in person-days at training sessions, workshops seminars and other events	510			510		
Quantity of workbooks, course notes and other key materials distributed	300			300		

**Table 8.1.8** Priority action on-ground activity outputs related to surface water salinity

Standard Output	July 03 - March 04			Total to March 04		
	NAP	Trust	Joint	NAP	Trust	Joint
<b>Conservation by agreements</b>						
Number of conservation agreements or covenants established	124			124		
Area (hectares) covered by conservation agreements or covenants	806			806		
<b>Indigenous vegetation protected by fencing</b>						
Area (hectares) protected	545.3			612.3		
<b>Indigenous vegetation enhanced/rehabilitated</b>						
Area (hectares) enhanced or rehabilitated	10.26			10.26		
<b>Revegetation with indigenous vegetation</b>						
Area (hectares) revegetated	224.4			273.4		
<b>Revegetation with exotic vegetation</b>						
Area (hectares) revegetated	3567.5			3567.5		
<b>Riparian and waterway health</b>						
Length (km) of stream bank or stream bed stabilised	143.34			143.34		
Number of off-river stock watering points established	23			23		
<b>Wetlands health protected or enhanced</b>						
Area (hectares) of wetland protected or enhanced	21			23		
<b>Significant pest plant control</b>						
Area (hectares) of pest plant control	79548			79548		
Area (hectares) of pest animal control	17296.92			17296.92		
<b>Significant pest vertebrate control</b>						
Area (hectares) of pest animal control	12500			12500		
<b>Soil management</b>						
Area (hectares) of soil treatment for other than erosion, salinity or acid sulfate soils	3148			8706		
<b>Water use efficiency</b>						
Number of land managers using improved irrigation practices	86			86		

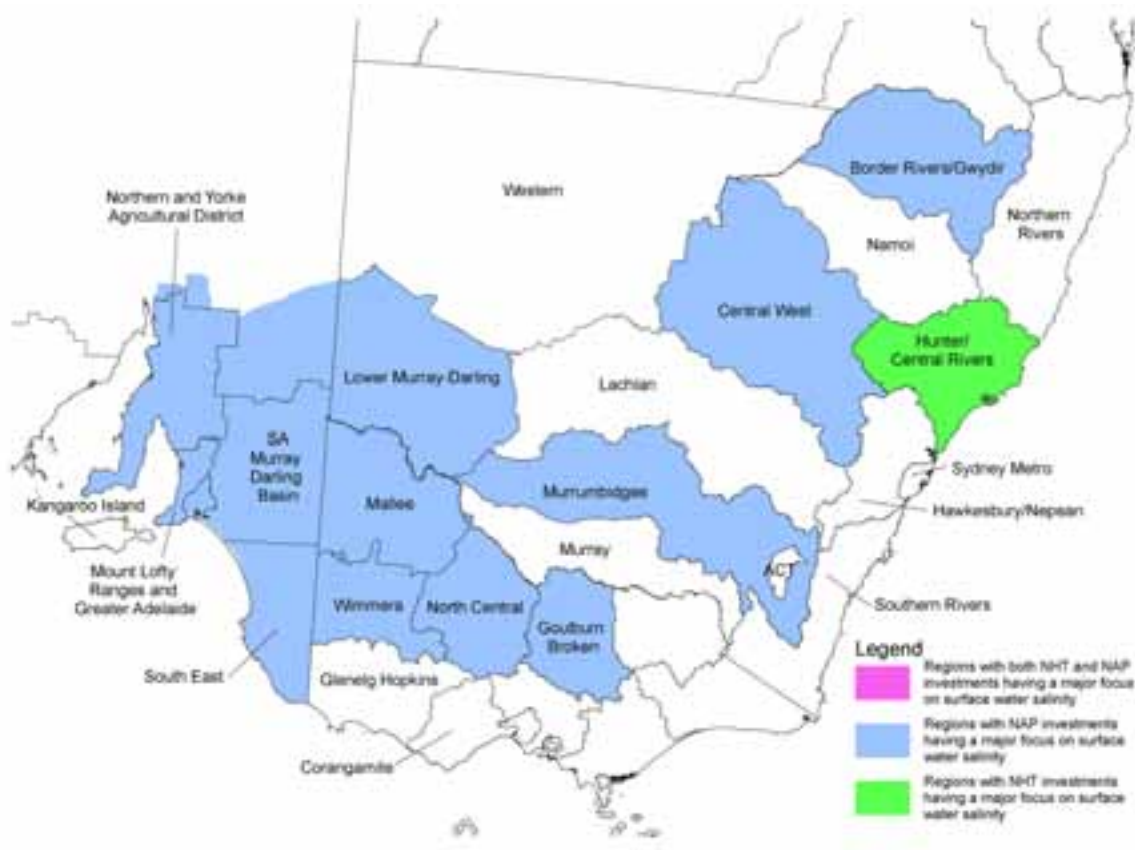
## 8.2 REGIONAL INVESTMENTS HAVING A MAJOR FOCUS ON SURFACE WATER SALINITY

### Approvals and reported expenditure

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Funding through regional investment strategies based on accredited regional plans commenced after 30 June 2003. Investment strategies based on accredited regional plans have been approved for regions in the Australian Capital Territory, New South Wales, South Australia and Victoria. Up to 30 June 2004, investments having a major focus on surface water salinity total approximately \$16m. Figure 8.2.1 shows the regions having a major focus on surface water salinity through this funding. Table 8.2.1 and Table 8.2.2 respectively show the approved funding and the reported expenditure by region through its investment strategy.

Figure 8.2.1 Regions with regional investments having a major focus on surface water salinity



**Table 8.2.1** Regional investments having a major focus on surface water salinity approved to June 2004\*

State	Region	2003-04 Approvals (\$)		Total Approvals to June 2004 (\$)	
		NAP	Trust	NAP	Trust
New South Wales	Border Rivers - Gwydir	431,800		431,800	
	Central West	320,000		320,000	
	Hunter - Central Rivers		45,000		45,000
	Lower Murray Darling	22,300		22,300	
	Murrumbidgee	1,620,000		1,620,000	
South Australia	Mount Lofty Ranges	172,700		172,700	
	Northern and Yorke Agricultural District	98,920		98,920	
	SA Murray Darling Basin	8,660,000		8,660,000	
	South East	808,880		808,880	
Victoria	Goulburn Broken	1,452,000		1,452,000	
	Mallee	1,173,150		1,173,150	
	North Central	318,000		318,000	
	Wimmera	867,900		867,900	
<b>Total</b>		15,945,650	45,000	15,945,650	45,000

\* Figures reflect Australian Government and State/Territory Government approvals for NAP and only Australian Government approvals for the Trust. State/Territory Government cash and in-kind funding for the Trust is not included.

**Table 8.2.2** Reported expenditure for regional investments having a major focus on surface water salinity

State	Region	Budgeted Activity Expenditure (\$)				Reported Activity Expenditure (\$)			
		July 03 - March 04		Total to March 04		July 03 - March 04		Total to March 04	
		NAP	Trust	NAP	Trust	NAP	Trust	NAP	Trust
New South Wales	Border Rivers - Gwydir	140,366		140,366					
	Central West	235,000		235,000					
	Hunter - Central Rivers		45,000		45,000				
	Lower Murray Darling	22,300		22,300					
	Murrumbidgee	810,000		810,000					
Victoria	Goulburn Broken	1,452,000		1,452,000	1,089,000		1,089,000		
	Mallee	1,173,150		1,173,150	39,358		39,358		
	North Central	318,000		318,000	152,250		152,250		
	Wimmera	867,900		867,900	140,063		140,063		
<b>Total</b>		5,018,716	45,000	5,018,716	45,000	1,420,671	1,420,671		

## Activities and achievements

### Funded activities

Funding for the types of regional investment activities having a major focus on surface water salinity supported by the NAP and the regional component of the Trust, is shown in Table 8.2.3.

**Table 8.2.3** Types of activity supported by regional investments having a major focus on surface water salinity

Activity Type	Budgeted Activity Expenditure (\$)				Reported Activity Expenditure (\$)			
	July 03 - March 04		Total to March 04		July 03 - March 04		Total to March 04	
	NAP	Trust	NAP	Trust	NAP	Trust	NAP	Trust
Resource assessment	1,349,000	45,000	1,349,000	45,000	151,607		151,607	
Planning	481,756		481,756		172,001		172,001	
Capacity building	51,760		51,760					
On-ground activities	3,136,200		3,136,200		1,097,063		1,097,063	
Total	5,018,716	45,000	5,018,716	45,000	1,420,671		1,420,671	

Funding for regional investment activities having a major focus on surface water salinity supported by the NAP and the regional component of the Trust are described in Table 8.2.4.

**Table 8.2.4** Funding for regional investment activities having a major focus on surface water salinity

Region	Activity Title	Budgeted Activity Expenditure (\$)				Reported Activity Expenditure (\$)			
		July 03 - March 04		Total to March 2004		July 03 - March 04		Total to March 2004	
		NAP	Trust	NAP	Trust	NAP	Trust	NAP	Trust
New South Wales									
Border Rivers - Gwydir	Integrating Salinity, Water Quality and Biodiversity Management With Queensland	8,606		8,606					
	NAP - BMPs for NREM Management in the Border Rivers/Gwydir (Salinity, Riverine Ecosystem, Soils and Biodiversity Focus)	51,760		51,760					
	Targeted Investment to Manage Native Vegetation for Salinity, Water Quality and Conservation Outcomes in the Border Rivers/ Gwydir	40,000		40,000					
	Targeted Investment to Manage Wetlands and Riverine Ecosystems for Water Quality, Salinity and Conservation Outcomes in the Border Rivers/Gwydir	40,000		40,000					
Central West	Salinity - Increased Wateruse Efficiency	235,000		235,000					

Region	Activity Title	Budgeted Activity Expenditure (\$)				Reported Activity Expenditure (\$)			
		July 03 - March 04		Total to March 2004		July 03 - March 04		Total to March 2004	
		NAP	Trust	NAP	Trust	NAP	Trust	NAP	Trust
Hunter - Central Rivers	Research and Development of a Remedial Plan for Zaires Drain		45,000		45,000				
Lower Murray Darling	Irrigation Best Management Practice (non Land and Water Management Plan area)	22,300		22,300					
Murrumbidgee	Defining and Prioritising Saline Sub-catchments	240,000		240,000					
	Jugiong Creek Salinity and Water Quality	190,000		190,000					
	Muttama Creek Salinity and Water Quality	190,000		190,000					
	Yass River Salinity and Water Quality	190,000		190,000					
<b>Victoria</b>									
Goulburn Broken	Farm exploratory drilling	114,000		114,000		85,500		85,500	
	Farm Forestry	15,000		15,000		11,250		11,250	
	Future Options for Irrigation - joint project with NPIRD	150,000		150,000		112,500		112,500	
	South West Goulburn	150,000		150,000		112,500		112,500	
	Sub-catchment Plans	50,000		50,000		37,500		37,500	
	The Farm Program	973,000		973,000		729,750		729,750	
Mallee	Guiding new irrigation development	273,150		273,150		22,001		22,001	
	Hydrogeological Investigations and Monitoring of Saline Groundwater Systems	900,000		900,000		17,357		17,357	
North Central	Assessing Salinity Interventions in the Wild Duck Creek Catchment	75,000		75,000		41,250		41,250	
	Implementing the Dryland Groundwater Monitoring Strategy	35,000		35,000		7,500		7,500	
	Reedy and Paradise Creeks targeted salinity project	188,000		188,000		96,000		96,000	
	Regional dryland groundwater, land salinity and surface water monitoring project	20,000		20,000		7,500		7,500	

Region	Activity Title	Budgeted Activity Expenditure (\$)				Reported Activity Expenditure (\$)			
		July 03 - March 04		Total to March 2004		July 03 - March 04		Total to March 2004	
		NAP	Trust	NAP	Trust	NAP	Trust	NAP	Trust
Wimmera	Undertaking salinity management actions in priority groundwater flow systems to reduce the decline in water quality in the wetlands and streams of the Millicent Coast Basin	73,000		73,000		54,750		54,750	
	Undertaking Salinity Management Actions in Priority Groundwater Flow Systems to Reduce the Decline in Water Quality in the Wetlands and Streams of the Wimmera River Basin	794,900		794,900		85,313		85,313	
Total		5,018,716	45,000	5,018,716	45,000	1,420,671	-	1,420,671	-

## Achievements

The outputs, or products and services produced by these activities, are summarised in three tables according to the types of outputs described in Chapter 1. Summaries of the outputs related to resource assessment, planning, capacity building and on-ground activities are shown in Table 8.2.5, Table 8.2.6, Table 8.2.7 and Table 8.2.8.

**Table 8.2.5** Regional investment resource assessment outputs related to surface water salinity

Standard Output	July 03 - March 04			Total to March 04		
	NAP	Trust	Joint	NAP	Trust	Joint
Baseline, trend or condition studies for targets						
Number of sites monitored	30000			30000		
Decision support tools						
Number models, information management systems and other decision support tools developed	2			2		

**Table 8.2.6** Regional investment planning outputs related to surface water salinity

Standard Output	July 03 - March 04			Total to March 04		
	NAP	Trust	Joint	NAP	Trust	Joint
Property management plans						
Number completed	22			22		

**Table 8.2.7** Regional investment capacity building outputs related to surface water salinity

Standard Output	July 03 - March 04			Total to March 04		
	NAP	Trust	Joint	NAP	Trust	Joint
Skills and training activities						
Number of training sessions, workshops seminars and other events held	1			1		

**Table 8.2.8** Regional investment on-ground activity outputs related to surface water salinity

Standard Output	July 03 - March 04			Total to March 04		
	NAP	Trust	Joint	NAP	Trust	Joint
<b>Indigenous vegetation protected by fencing</b>						
Area (hectares) protected	97			97		
<b>Revegetation with indigenous vegetation</b>						
Area (hectares) revegetated	106			106		
<b>Revegetation with exotic vegetation</b>						
Area (hectares) revegetated	265			265		

## Surface water salinity targets

### Resource condition targets related to approved investment activities

Surface water salinity targets are shown in Table 8.2.9.

**Table 8.2.9** Resource condition targets for surface water salinity

Region	Resource condition target
<b>New South Wales</b>	
Border Rivers - Gwydir	By 2012, median salinity levels in the Macintyre River at Mungindi should not exceed 230µs/cm EC; salinity levels should not exceed 630µs/cm EC more than 20% of the time
	By 2010, median salt loads in the Mehi River at Bronte should not exceed 6,500 tonnes/year and loads should not exceed 20,600 tonnes/year more than 20% of the time
	By 2010, median salinity levels in the Mehi River at Bronte should not exceed 390 µs/cm EC and levels should not exceed 730 µs/cm EC more than 20% of the time
Central West	By 2010, the Castlereagh River at Coonamble will be equal to or less than: 50th percentile for salinity concentration levels at 315 EC
	By 2010, the Macquarie River at Carinda will be equal to or less than: 50th percentile for salinity concentration levels at 500 EC
	By 2010, the Castlereagh River at Coonamble will be equal to or less than: 50th percentile for salt load at 18,000 tonnes annually
	By 2010, the Bogan River at Gongolgon will be equal to or less than: 50th percentile for salinity concentration levels at 550EC
	By 2010, the Macquarie River at Carinda will be equal to or less than: 50th percentile for salt load at 35,000 tonnes annually
	By 2010, the Bogan River at Gongolgon will be equal to or less than: 50th percentile for salt load at 30,000 tonnes annually
Hunter - Central Rivers	By 2012, salinity levels for the Hunter River at Greta not to exceed 670 µS/cm for 50 % of the time and 900 µS/cm for 80% of the time
Lower Murray Darling	To maintain the year 2000, 95th percentile, salt concentration of 463 EC at Lock 6
Murray	A return to average 2000 salinity concentration level at the Murray River downstream of the Wakool River junction by 2020, allowing for a limited 3% increase in the salt load concentration (median and 80th percentile) by 2012
Murrumbidgee	A year 2010 target of less than 245EC for 50% of the time and less than 320EC for 80% of the time at Balranald. A salt load of less than 145,000 tonnes per year for 50% of the time and less than 325,000 tonnes per year for 80% of the time by 2010
Namoi	By 2010, median salinity levels in the Namoi River at Goangra should not exceed 550 µs/cm and levels should not exceed 1000 µs/cm more than 20% of the time
	By 2010, the median salt load at Goangra should not exceed 11,000 tonnes and level should not exceed 315,000 tonnes more than 20% of the time

Region	Resource condition target
Western	Salt load in the Barwon-Darling at Wilcannia less than 530, 000 tonnes per year for 80% of the time and less than 160, 000 tonnes per year for 50% of the time by the year 2010
	Salinity in the Barwon-Darling at Wilcannia less than 800EC for 80% of the time as measured on a daily basis and less than 350EC for 50% of the time by the year 2010
South Australia	
Mount Lofty Ranges	To reverse the trend in rising water tables in at least three priority sub catchments by 2022
SA Murray Darling Basin	By mid 2006, to have reduced the total drainage volume from highland irrigation areas by 50%
	By 2020, to have salinity of water in the River Murray less than 770EC for 80% of the time at Murray Bridge Pump Station to ensure drinking water standards
	By 2020, to have salinity of water in the River Murray less than 543EC for 80% of the time at Berri Irrigation Pump Station to ensure drinking water standards
	By 2020, to have salinity of water in the River Murray less than 800EC for 95% of the time at Morgan to ensure drinking water standards
	By 2015, salinity of water in the River Murray less than: 1) 800 EC for 95% of the time at Morgan; 2) 412 EC for 80% of the time downstream of Rufus River; 3) 543 EC for 80% of the time at Berri Irrigation Pump Station; 4) 770 EC for 80% of the time
	By 2020 groundwater resources will not have salinity impacts on land condition and will meet the needs of dependent ecosystems
	By 2020, a 30% reduction in priority areas of floodplain currently affected by salinity from groundwater discharge
	By 2015, a 30% reduction in priority areas of floodplain currently affected by salt
Victoria	
Glenelg Hopkins	Interim surface water salinity targets for 2012 at key catchment points are:
	Other resource condition targets will be developed by 2004
	Hopkins River at Hopkins Falls <7,500 EC 90% of the time
	Hopkins River at Wickliffe <15,000 EC 90% of the time
	Glenelg River at Sandford <3,300 EC 90% of the time
Wannon River at Henty <5,840 EC 90% of the time	
Goulburn Broken	Salinity concentrations of River Murray resulting from groundwater disposal to be kept within acceptable limits by only disposing when flows are sufficiently high
	Maintain increases to salinity levels of the River Murray at Morgan from the Shepparton Irrigation Region at or below 17.0 EC's by 2020
	This also means keeping groundwater below 2m and remove saline water by consistently pumping groundwater over 216,000 ha of land
	This means maintaining net salt load below 102,000 tonnes/year from Shepparton Irrigation Region by 2020
Mallee	Regional contributions to river salinity at Morgan reduced by a yet to be determined number of EC units
	Average irrigation drainage volumes at annual maximum of 1 mega litre per hectare

## Management action targets related to approved investment activities

Accredited regional plans detail management action targets having a major focus on surface water salinity. Management action targets are shown in Table 8.2.10.

**Table 8.2.10** Management action targets for surface water salinity

Region	Management action target
<b>Australian Capital Territory</b>	
Australian Capital Territory	By 2014, reduce the salt entering the rivers from sewerage plants by increasing the reuse from sewerage plants to 20%
<b>New South Wales</b>	
Border Rivers - Gwydir	Establish deep rooted perennial vegetation to intercept groundwater
	Improvement in water quality in wetlands
	Manage significant point sources
	No nett increase in salt loads/river EC from new development
Lachlan	Within valley interim EC and salt load targets achieved at identified sites
Murray	By 2012, reduce both salt concentration and saline run-off by remediation works on 60% (279ha) of known saline discharge sites
Murrumbidgee	By 2012, assist land managers and communities to increase perennial vegetation in the 12 priority Murrumbidgee sub catchments with the aim of reducing the predicted mean annual mid-catchment salt load by 12,000 tonnes at Wagga by 2010
	By 2012, assist land managers and communities to reduce the current salt load from the Murrumbidgee Irrigation area to the river from its current level of about 5000 tonnes per year to 3000 tonnes per year
Namoi	By 2010 to have all land managers (including urban) using better management practices throughout the catchment to minimise the mobilisation of salt to rivers
	By 2010, existing point sources of river salinity to have a reduction of 10% on current salt loads
	By 2010, halt existing gully erosion and bed lowering within priority salinity sub-catchments by constructing 1000 gully control and bed lowering structures to reduce the mobilisation of salt to the river
Western	Major salt intrusions within the Barwon Darling River not significantly impacting on water quality as defined by the Interim Water Quality Objectives and associated ANZECC criteria within 10 years of Blueprint approval
<b>South Australia</b>	
SA Murray Darling Basin	Increase water use efficiency in the LMRIA to 65% minimum
	No return of surface run off (except major storm) in the LMRIA to the river
	Supply infrastructure upgrades, on-ground activities, best farm management practices and reuse will reduce annual total nitrogen loads from irrigated areas to the river system by an estimated 80%
	Supply infrastructure upgrades, on-ground activities, best farm management practices and reuse will reduce annual total phosphorous loads from irrigated areas to the river system by an estimated 80%
	To review and refine allocation plans for prescribed water resources by 2005
<b>Victoria</b>	
Goulburn Broken	By 2007 complete regional surface water management of 2,102 km (2020 target 2,464 km) Contribution to goal: 0.71 EC added by 2007 (1.3 EC by 2020 ) Primary surface water management system: 251km by 2007 (362 km by 2020)
	Install farm reuse system: 4,980 systems by 2007 (5,660 systems by 2020)
	Install groundwater pumps public 17,000 ha by 2007 (85,000 ha by 2020)
	Use groundwater: 74,575ML by 2007 (105,875ML by 2020) Contribution to goal: 3.47 EC reduced by 2007 (8.86 ECs reduced By 2020)

Region	Management action target
Mallee	A robust and comprehensive database on water quality developed
	Continuous upgrade of irrigation systems and water use efficiency.
	End-of-valley targets under the Basin Salinity Management Strategy achieved.
	Federal, State and MDB Ministerial Council objectives for nutrients, salt and other pollutants fulfilled
	Improvements in irrigation management to reduce river salinity by a yet to be determined number of EC units
	Information on threats to water quality improved to enable the development of cost-effective management strategies
	No net increase in river salinity arising from water trade
	Regional irrigation, nutrient and biodiversity management to exceed national best practice.
	Regional salt interception works to reduce river salinity by a yet to be determined number of EC units