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# **RIVER MURRAY ACT ANNUAL REVIEW 2010-11 AND TRIENNIAL REVIEW 2008-11**

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**DEPARTMENT FOR  
WATER**



**Government of South Australia**  
Department for Water

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## FOREWORD

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The *River Murray Act 2003* reflects the importance of a healthy River Murray system for South Australians. The Act showed an understanding back in 2003, of the need for an integrated and coordinated approach to decision making for the River Murray. This concept has proven its value throughout the difficult period of drought management and I believe it will show its continued relevance in the future as we consider the implications of the Basin Plan, climate change and major investment in river management infrastructure through *Murray Futures*.

As the River Murray system is recovering from the drought and with the new challenges facing us, it is a good time to reflect on the *River Murray Act 2003* and particularly, what has been achieved, and opportunities for future improvements.

We have recently undertaken a thorough analysis of the past five years work through the review of the *River Murray Act 2003 Implementation Strategy*. The experiences and insights provided by the people and agencies that contributed to the review will assist the Department for Water in developing a new Implementation Strategy for the *River Murray Act 2003*.

This year's Annual Report includes the third Triennial Review of the *River Murray Act 2003*, as required by section 11 of the *River Murray Act 2003*.

The Triennial Review reports on the interaction between this Act and other related operational Acts and provides an assessment of the state of the River Murray taking into account the Objectives for a Healthy River Murray in the *River Murray Act 2003*. It is also the first Triennial Review to report on a wider legislative review of the *River Murray Act 2003*, undertaken in conjunction with the review of the *River Murray Act 2003 Implementation Strategy*.

The reporting requirements of the *River Murray Act 2003* in 2010-11 have presented a unique opportunity to comprehensively review the Act and to provide recommendations for its future implementation. The Review has highlighted the importance of the Act and South Australia's commitment to maintaining a healthy working River Murray.

It is with pleasure that I present the *River Murray Act 2003* Annual Report for 2010-11, which highlights some of the excellent work that has been undertaken this past year. In addition, I present the Triennial Review for 2008-11, which I believe provides a sound basis for the future direction of the *River Murray Act 2003* and its implementation.



**PAUL CAICA**

**MINISTER FOR THE RIVER MURRAY**

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# CONTENTS

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<b>DEPARTMENT FOR WATER</b>  Head Office Level 1, 25 Grenfell Street Adelaide SA 5000 GPO Box 2834 (08) 8463 6800  Last Updated: 13 September 2011	<b>FOREWORD</b>	<b>IV</b>
	<b>CONTENTS</b>	<b>V</b>
	<b>1 INTRODUCTION</b>	<b>1</b>
	<b>2 OVERVIEW</b>	<b>2</b>
	<b>2.1 OVERVIEW OF THE ACT</b>	<b>2</b>
	<b>2.2 OVERVIEW OF THE REPORT</b>	<b>4</b>
	<hr/>	
	<b>PART 1: ANNUAL REPORT 2010-11</b>	<b>6</b>
	<b>3 PROGRESS AGAINST THE IMPLEMENTATION STRATEGY</b>	<b>7</b>
	<b>3.1 ABATE THE CLEARANCE OF NATIVE VEGETATION</b>	<b>7</b>
<b>3.2 ACHIEVE AN ENVIRONMENTAL FLOW REGIME FOR THE RIVER</b>	<b>9</b>	
<b>3.3 IMPROVE WATER QUALITY</b>	<b>10</b>	
<b>3.4 CONSERVE AND PROTECT HERITAGE VALUES</b>	<b>11</b>	
<hr/>		
<b>4 ACHIEVEMENT OF THE <i>RIVER MURRAY ACT 2003</i> OBJECTS AND OBJECTIVES FOR A HEALTHY RIVER MURRAY</b>	<b>13</b>	
<b>4.1 RIVER HEALTH OBJECTIVE</b>	<b>13</b>	
<b>4.2 ENVIRONMENTAL FLOW OBJECTIVE</b>	<b>14</b>	
<b>4.3 WATER QUALITY OBJECTIVE</b>	<b>14</b>	
<b>4.4 THE HUMAN DIMENSION OBJECTIVE</b>	<b>15</b>	
<hr/>		
<b>5 REPORT ON RELEVANT MATTERS</b>	<b>17</b>	
<b>5.1 REFERRAL OF MATTERS UNDER THE RELATED OPERATIONAL ACTS</b>	<b>17</b>	
<b>5.2 ENFORCEMENT OF GENERAL DUTY OF CARE AND ISSUE OF ORDERS</b>	<b>20</b>	
<hr/>		
<b>PART 2: TRIENNIAL REVIEW 2008-09 – 2010-11</b>	<b>23</b>	
<b>6 INTERACTION BETWEEN THE RIVER MURRAY ACT, RELATED OPERATIONAL ACTS AND ANY OTHER ACT CONSIDERED RELEVANT BY THE MINISTER</b>	<b>24</b>	
<b>6.1 <i>ABORIGINAL HERITAGE ACT 1988</i></b>	<b>28</b>	
<b>6.2 <i>AQUACULTURE ACT 2001</i></b>	<b>28</b>	
<b>6.3 <i>COAST PROTECTION ACT 1972</i></b>	<b>29</b>	
<b>6.4 <i>CROWN LAND MANAGEMENT ACT 2009</i></b>	<b>29</b>	
<b>6.5 <i>DEVELOPMENT ACT 1993</i></b>	<b>29</b>	
<b>6.6 <i>ENVIRONMENT PROTECTION ACT 1993</i></b>	<b>32</b>	
<b>6.7 <i>ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999</i></b>	<b>33</b>	
<b>6.8 <i>FISHERIES MANAGEMENT ACT 2007</i></b>	<b>34</b>	
<b>6.9 <i>HARBORS AND NAVIGATION ACT 1993</i></b>	<b>35</b>	
<b>6.10 <i>HERITAGE PLACES ACT 1993</i></b>	<b>35</b>	
<b>6.11 <i>HISTORIC SHIPWRECKS ACT 1981</i></b>	<b>36</b>	

6.12 IRRIGATION ACT 2009	36
6.13 MINING ACT 1971	36
6.14 MURRAY-DARLING BASIN ACT 2008	36
6.15 NATIONAL PARKS AND WILDLIFE ACT 1972	36
6.16 NATIVE VEGETATION ACT 1991	37
6.17 NATURAL RESOURCES MANAGEMENT ACT 2004	37
6.18 PETROLEUM AND GEOTHERMAL ENERGY ACT 2000	38
6.19 SOUTH EASTERN WATER CONSERVATION AND DRAINAGE ACT 1992	39
6.20 WATER ACT 2007 (CTH)	39
6.21 WILDERNESS PROTECTION ACT 1992	40
<hr/>	
7 STATE OF RIVER MURRAY	41
7.1 STATE OF THE RIVER MURRAY: TRENDS FOR 2008-2011	42
7.2 SUMMARY OF THE STATE OF THE RIVER AGAINST THE ORMs	42
<hr/>	
8 KEY FINDINGS AND RECOMMENDATIONS OF THE IMPLEMENTATION STRATEGY REVIEW	46
8.1 KEY ACHIEVEMENTS OF THE <i>RIVER MURRAY ACT 2003</i>	46
8.2 OPPORTUNITIES FOR IMPROVEMENT	48
8.3 ASSESSMENT OF PRIORITIES AND STRATEGIES	49
8.4 THE RECOMMENDATIONS OF THE IMPLEMENTATION STRATEGY REVIEW	50
<hr/>	
9 REVIEW OF THE ACT	52
9.1 CONTEXT AND SCOPE FOR LEGISLATIVE REVIEW	52
9.2 REVIEW OF POWERS AND FUNCTIONS OF THE <i>RIVER MURRAY ACT 2003</i>	53
<hr/>	
10 DRIVERS FOR SETTING NEW DIRECTIONS	58
10.1 DROUGHT AND CLIMATE VARIABILITY	58
10.2 <i>WATER ACT 2007</i> AND THE BASIN PLAN	58
10.3 THE STATE PLANNING REVIEW	59
10.4 STATE NATURAL RESOURCES MANAGEMENT PLAN 2006	59
10.5 SA MDB NRM BOARD REGIONAL NRM PLAN 2009-2019	60
<hr/>	
11 SUMMARY	61
LIST OF ACRONYMS	62
APPENDIX 1 - CONTRIBUTORS	63
APPENDIX 2 – OBJECTS AND OBJECTIVES FOR A HEALTHY RIVER MURRAY (ORMS)	64

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# 1 INTRODUCTION

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The *River Murray Act 2003* was enacted in 2003 after recognition of the need for improved policy frameworks and integration of activities between agencies to ensure adequate protection of the River Murray.

This is the eighth annual report, reporting on the relevant activities that have occurred in the period from 1 July 2010 to 30 June 2011. This report also contains the third Triennial Review, reviewing the *River Murray Act 2003* and its interaction with other legislation, and reporting on the state of the River Murray over the period 2008-09 to 2010-11.

Section 10 of the *River Murray Act 2003* requires the Minister responsible for the administration of the Act, on or before 30 September of each year, to prepare a report on the operation of the *River Murray Act 2003* for the preceding financial year. The Minister for the River Murray must provide a copy of the report to both Houses of Parliament within six sitting days of the report being prepared.

As per Section 10(2) of the *River Murray Act 2003* the report must include:

- a. information on the implementation of the *River Murray Act 2003* (taking into account the provisions of the *River Murray Act 2003 Implementation Strategy* (the Implementation Strategy));
- b. information on the extent to which the Objects of the *River Murray Act 2003* and the Objectives for a Healthy River Murray (ORMs) are being achieved; and
- c. report on the following matters for the financial year –
  - i. the referral of matters to the Minister for the River Murray under any related operational Act;
  - ii. the enforcement of the general duty of care; and
  - iii. action taken by the Minister for the River Murray or an authorised officer under Part 8 of the *River Murray Act 2003* (protection and other orders).

Section 11 of the *River Murray Act 2003* requires the Minister for the River Murray, on a three-yearly basis, to undertake a review (the Triennial Review) that includes:

- an assessment of the interaction between the *River Murray Act 2003* and related operational Acts; and
- an assessment of the state of the River Murray, especially taking into account the ORMs.

Both the Annual Report and the Triennial Review have been compiled from information provided by the Department for Water (DFW) and other relevant agencies. Agencies contributing to the report are listed in Appendix 1. Current programs and projects relevant to the achievement of the ORMs for 2010-11 are set out in the *River Murray Act 2003 Annual Report 2010-11 Supporting Document* (Supporting Document).

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## 2 OVERVIEW

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### 2.1 OVERVIEW OF THE ACT

The *River Murray Act 2003* aims to protect, enhance and restore the River Murray in South Australia, ensuring that its use and management are sustainable.

The River Murray is defined in the *River Murray Act 2003* as the main stem of the River Murray and its associated natural resources.

The natural resources include:

- a) the River Murray system including all of its tributaries, anabranches, wetlands and floodplains;
- b) soil, groundwater, surface water, air, vegetation and ecosystems connected with the River Murray system;
- c) cultural and natural heritage, amenity and geological value connected with the River Murray system; and
- d) minerals and other substances and facilitates subject to the *Mining Act 1971*.

This definition recognises the range of River Murray values that need to be protected.

In addition, the *River Murray Act 2003* provides for the declaration of River Murray Protection Areas (RMPAs) by regulation (see Figure 1 : River Murray Protection Areas). The RMPAs are defined areas for regulating activities and policies to ensure that they are consistent with the protection of River Murray values. There are two RMPAs: the River Murray Floodplain Area (including the main stem of the river) and the River Murray Tributaries Area.

The *River Murray Act 2003* has a set of key Objects and Objectives for a Healthy River Murray (ORMs) (See Appendix 2) to guide effective management of the River Murray. The Objects cover the requirements to:

- incorporate the principles of ecologically sustainable development into management and rehabilitation of the river;
- ensure development does not compromise the values of the river;
- recognise indigenous and local communities' views of managing the river; and
- ensure that strategies and plans developed take into account the river values.

The ORM's give specific criteria which determine what a 'healthy' river is, and what should be pursued as 'good river health'. The ORM's have been endorsed by the Murray-Darling Basin (MDB) Ministerial Council and are grouped under the following themes:

- river health;
- environmental flows;
- water quality; and
- the 'human dimension'.



The *River Murray Act 2003* furthers the Objects and ORMs by providing a legislative framework which ensures that all reasonable measures are taken to safeguard, restore and enhance the River Murray. This includes regulations, referrals, compliance tools and policies.

The *River Murray Act 2003* plays a key coordinating role and interacts with related operational Acts, existing institutions and plans to improve the focus on the River Murray, in particular the protection of river values. The establishment of the referral mechanism for related Acts to refer relevant issues to the Minister for the River Murray is central to the integration of the river's protection into other regulatory frameworks.

The administration of the *River Murray Act 2003* aims to serve community based activities and plans as well as government programs.

The Implementation Strategy has been formulated to help guide implementation of the *River Murray Act 2003*. The Implementation Strategy:

- sets out priorities that the Minister for the River Murray will pursue in order to achieve the Objects of the *River Murray Act 2003* and to further the implementation of the ORMs;
- sets out strategies that the Minister for the River Murray intends to adopt to meet those priorities; and
- takes into account the *State Natural Resources Management (NRM) Plan* and the *Planning Strategy*.

The key priorities outlined in the Implementation Strategy are as follows:

- abate the clearance of native vegetation;
- achieve an environmental flow regime for the River;
- improve water quality; and
- conserve and protect heritage value.

The strategies which are deemed to be required for achieving the outcomes in each priority area are:

- providing advice or direction;
- promoting integration;
- undertaking or promoting programs;
- enforcement and compliance; and
- adopting a leadership role in relation to management of the MDB.

The strategies are based on using each of the Minister for the River Murray's powers and functions under the *River Murray Act 2003*.

The Implementation Strategy was reviewed in early 2011 and the outcomes of the review are outlined in Section 8 of this report.

## 2.2 OVERVIEW OF THE REPORT

The report is structured around the reporting requirements of Sections 10 and 11 of the *River Murray Act 2003*.

### Part 1: Annual Report Specific Content

Section 3 of this report examines current progress against the Implementation Strategy with a focus on the identified priorities and strategies.

Section 4 explores the extent to which the Objects and ORMs of the *River Murray Act 2003* are being achieved to the extent that this is not covered in Section 3.

Section 5 reports on referrals of matters to the Minister for the River Murray under related operational Acts, the enforcement of the duty of care, and any action taken by the Minister for the River Murray or an authorised officer under part 8 of the *River Murray Act 2003*.

### Part 2: Triennial Review Specific Content

Section 6 outlines the relationship between the *River Murray Act 2003* and the related operational Acts, and identifies legislative changes that have occurred between 2008 and 2011.

Section 7 provides a summary of the current State of the Environment for the River Murray in South Australia.

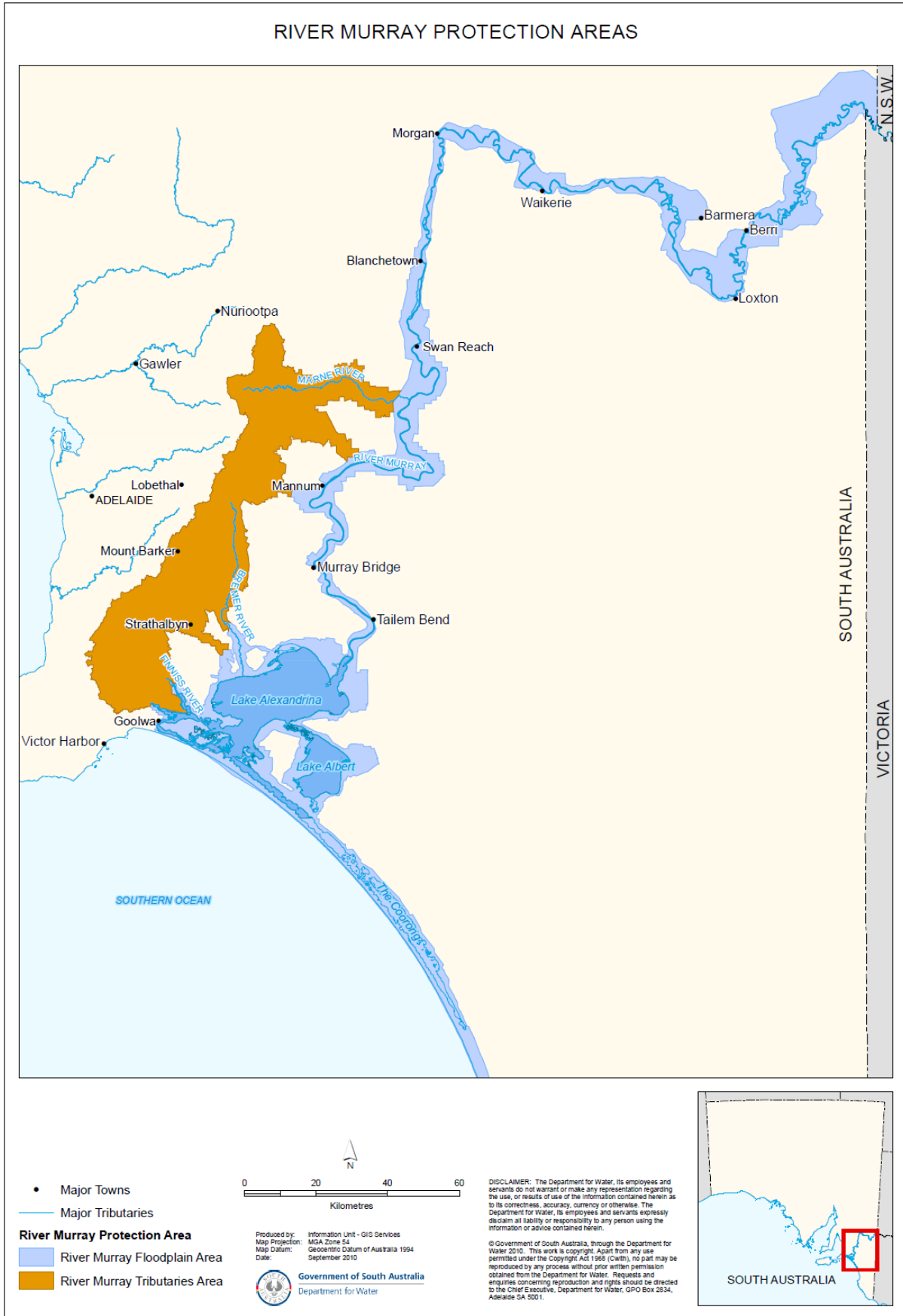
Section 8 summarises the key findings and recommendations from the recent review of the Implementation Strategy.

Section 9 provides the findings of a legislative review of the *River Murray Act 2003* and assesses opportunities to align, streamline and activate powers.

Section 10 documents emerging issues that may potentially impact on future implementation of the *River Murray Act 2003*.

Section 11 provides a summary of the report.

Figure 1 : River Murray Protection Areas



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# **PART 1:**

# **ANNUAL REPORT**

# **2010-11**

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## 3 PROGRESS AGAINST THE IMPLEMENTATION STRATEGY

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The Implementation Strategy was reviewed in 2011 and the review identified a number of opportunities for improvement to streamline the operation of the *River Murray Act 2003* and achieve greater benefits for the River Murray. The recommendations of the review are detailed in Section 8.

As described in Section 2, the Implementation Strategy outlines four key priorities for implementation of the *River Murray Act 2003*. Evidence of progress against these key priorities for the 2010-11 annual period is described in the following sections.

### 3.1 ABATE THE CLEARANCE OF NATIVE VEGETATION

The key outcome for this priority is:

- Controlled vegetation clearance to encourage the restoration, protection and management of native vegetation and habitats.

This includes clearance of endemic native vegetation, and encouraging re-vegetation. It also includes controlling the clearance of non-endemic vegetation where vegetation significantly benefits an aspect of the river.

Clearance in this context is defined as any process which threatens the integrity of native vegetation systems. This encompasses a range of threats to integrity, including pest plants and animals, inadequate environmental flows, and grazing pressure.

#### 3.1.1 Legislation and Policy Initiatives

Native vegetation is protected from clearance through the *Native Vegetation Act 1991* and *Native Vegetation Regulations 2003*. Clearance is only allowed under circumstances prescribed in the *Native Vegetation Regulations 2003*, or if approved through a vegetation clearance application.

In 2010-11, seventeen native vegetation compliance issues within the RMPA were investigated. Seven incidents were either exempt under the *Native Vegetation Regulations 2003* or required no further action. Seven incidents were sent either an Educational Letter or Written Caution for minor incidents under the *Native Vegetation Act 1991*. Two Enforcement Notices (stop work) and one Expiation notice were issued for clearance and were assessed to be minor clearance.

No clearance under delegation of the South Australian Country Fire Service was reported within the reporting year and no Bushfire Prevention Plans or Ecological Plans using prescribed burning were presented to the Native Vegetation Council.

Under section 5(1)(a) of the *Native Vegetation Regulations 2003* for Dwellings and Associated Structures, two clearance applications were accepted. One application was received under Regulation 5(1)(l) for clearance for avoiding the risk of damage to property and personal injury and one application was received under Regulation 5(1)(zi) for clearance for preserving and enhancing ecological processes.

The Roadside Vegetation Management Plan for the Alexandrina Council area was presented and approved by the Native Vegetation Council in the reporting year.

The protection of native vegetation from pest plants and animals is legislated by the *Natural Resources Management Act 2004*. Staff from the South Australian Murray-Darling Basin Natural Resources Management (SA MDB NRM) Board administer these requirements and undertook regular pest plant and animal control programs during 2010-11.

Consultation with the administrators of the *Crown Land Management Act 2009* of the Department of Environment and Natural Resources (DENR) occurred for 88 development applications referred via the *River Murray Act 2003* process. These applications largely related to works on or adjacent to the river and were predominantly associated with jetties, moorings and recreational areas. The ORMs of the *River Murray Act 2003* were considered as part of the assessment processes to limit vegetation removal and environmental impacts.

### **3.1.2 Implementation of Major Projects and Programs**

A number of major government projects and programs contributed towards the native vegetation priority of the Implementation Strategy:

**The River Murray Forest Project** – This revegetation initiative is aimed at re-establishing native vegetation on both public and private land. This has involved the commissioning of 2,450 hectares for planting in 2010-11, with plantings to be staged over several years. Audits of plantings undertaken in 2010-11 showed that the better than average rainfall during the year contributed to a successful planting program.

**Vegetation Condition Monitoring** – Work continued on a number of research projects relating to monitoring vegetation condition in wetland and floodplain areas. Many of these are ongoing monitoring programs whereby data has been collected to determine trends and opportunities to improve environmental outcomes.

**Bioremediation Program in the Coorong, Lower Lakes and Murray Mouth** – This vegetation program was originally designed to address the legacy of severe drought and to re-establish functioning ecosystem resilience within the broader wetland region. In 2010-11, the program has adapted to higher water levels by concentrating effort and investment in shore erosion zones. Aerial seeding and sedge planting has reduced shoreline erosion, provided habitat and food sources, encouraged the natural bioremediation of acid sulphate soils and assisted in restoring wetland health.

**Pest Plant and Animal Control Programs** – Programs were implemented to control rabbits, prickly pear and African boxthorns at Katarapko, Maize Island and the cliffs at Loxton.

**Floodplain Management at Chowilla Creek** – An environmental regulator is being constructed to enable large areas of the floodplain to be inundated when flows in the River Murray would otherwise be insufficient to inundate the floodplain naturally. This will help achieve ecological objectives including managing the health of native vegetation.

## 3.2 ACHIEVE AN ENVIRONMENTAL FLOW REGIME FOR THE RIVER

The key outcome for this priority is:

- Increased and manipulated flows to assist in protecting and enhancing ecological assets. This will include allowing for the wetting and drying of floodplains and wetlands and providing flows to the Coorong and Murray Mouth to maintain estuarine conditions.

This includes promoting formal allocation and management of environmental flows and promoting water use efficiency and water savings to reduce the level of reliance on River Murray water.

### 3.2.1 Legislation and Policy Initiatives

The *Water Act 2007* (Cth) outlines the requirement for the Murray-Darling Basin Authority (MDBA) to develop a Basin Plan. Water Allocation Plans for the South Australian part of the Murray-Darling Basin (MDB) will be developed to comply with the new sustainable diversion limits (SDLs) and any other requirements to be outlined in the Basin Plan.

Strategies are in place to ensure a coordinated whole-of-government response from South Australia which has been achieved in relation to the *Guide to the proposed Basin Plan* and will be provided for the draft Basin Plan when it is released.

The *Natural Resources Management Act 2004* regulates the State-wide protection of water resources and water dependent ecosystems. It also stipulates the requirement to develop Water Allocation Plans for prescribed water resources to ensure water resources are managed within the SDLs. Within the River Murray system, the Peake, Roby and Sherlock Water Allocation Plan was adopted in 2010-11, and consultation commenced on the draft Eastern Mount Lofty Ranges (EMLR) Water Allocation Plan.

The Living Murray (TLM) is an inter-governmental agreement developed to address the over allocation of water in the MDB and the requirement to achieve environmental objectives. The TLM Initiative included a national water recovery target of 500 gigalitres (GL) of ongoing water entitlements for environmental purposes. South Australia received 157 GL in 2010-11 through the TLM Initiative.

### 3.2.2 Implementation of Major Projects and Programs

**Environmental flows** – Over 300 GL of environmental water was delivered to priority wetlands and floodplains in 2010-11, including the Coorong, Lower Lakes and Murray Mouth (CLLMM) icon site. The water contributed to managing lake levels and providing for water releases through the barrages, enhancing the natural unregulated flow event experienced during the year.

**Reconnection of wetlands** – Improved flow conditions during 2010-11 led to the reconnection of a number of managed wetlands that had been previously disconnected from the main River Murray channel, ensuring the wetlands could receive the benefits of higher flows coming down the River.

**Cessation of dredging** – Dredging at the Murray Mouth ceased in December 2010 following the return of higher flows to the River Murray system. Dredging work had been undertaken at the Murray Mouth since 2002 to maintain connectivity between the ocean and the Coorong.

**Implementation of *Water for Good* actions** – A range of initiatives were progressed from the *Water for Good* plan to reduce the reliance on the River Murray for urban water supplies. This includes construction of the Adelaide Desalination Plant, the development of a *Stormwater Strategy* and delivery of a number of water re-use schemes.

## 3.3 IMPROVE WATER QUALITY

The key outcome for this priority is:

- Improved water quality through reducing salinity and all types of pollution.

This includes preventing the impacts of salinity and reducing the likelihood of future salinity increases. It also includes the management and prevention of other water quality threats including acid sulfate soils, nitrification and contamination from chemicals and pesticides.

### 3.3.1 Legislation and Policy Initiatives

The primary Act which protects water quality within South Australian waters, including the River Murray, is the *Environment Protection Act 1993* and associated *Environment Protection (Water Quality) Policy 2003*. This sets the environmental values for the River Murray, the criteria for discharges, and through codes of practice, attempts to manage diffuse sources of pollution to the River.

The *Environment Protection Act 1993* has been amended to ensure that it is administered in a way that takes into account and seeks to further contribute to the Objects and ORMs of the *River Murray Act 2003*. The Environment Protection Authority (EPA) also has power of direction on all statutory referrals received through the *Development Regulations 2008*.

In order to protect water quality values, the *National Water Quality Management Strategy* is currently being implemented in the River Murray region. Work being undertaken includes:

- Development of a “Salinity and Water Management Plan” and confirmation of environmental values in conjunction with the process to develop a Basin Plan;
- Assessing appropriate water quality objectives for South Australia under different flow conditions; and
- Amending the *Environment Protection (Water Quality) Policy 2003* to reflect environmental values and water quality objectives as a result of the above actions.

South Australia is committed to managing salinity under the MDBA’s Basin Salinity Management Strategy. This includes keeping a positive balance on the Basin Salinity Management Strategy Salinity Registers. This requirement sets the framework for a range of actions which create positive outcomes on the register, including salt interception schemes (SISs) and irrigation efficiency programs.

In addition, DFW has provided advice on the water quality and salinity aspects of the MDBA *Guide to the proposed Basin Plan*, and also provided input into the Science Review of the *Guide to the proposed Basin Plan* (conducted by the Goyder Institute for Water Research).

In relation to compliance issues in 2010-11, a major focus has been the engagement with all private and commercial vessel owners operating on the River Murray to ensure compliance with the *Code of Practice for Vessel and Facility Management (marine and inland waters)*.



A 12 month trial was implemented at the Hindmarsh Island and Mannum slipways, to inspect and assess private vessels operating on inland waters for compliance with the blackwater and greywater requirements, as per the *Code of Practice for Vessel and Facility Management (marine and inland waters)*. The program had considerable success in promoting compliance with the Code and the scheme is set to be extended and expanded to other sites and inspectors in 2011-12.

### 3.3.2 Implementation of Major Projects and Programs

**Salinity Management Program** – A Salinity Management Program Plan has been developed and there has been good progress against project milestones during 2010-11. Overall, South Australia maintained a positive balance on the Basin Salinity Management Strategy Registers. Program actions included SISs, development of policy guidelines for accounting for salinity impacts of environmental watering and completion of a project quantifying the local risk of floodplain salinity to the River Murray.

**Lower Lakes and Tributaries Monitoring Program** – Water quality monitoring was undertaken in the Lower Lakes in 2010-11 as part of a Lower Lakes and Tributaries Monitoring Program to support the Long Term Plan for the CLLMM region. Monitoring provides an early warning of changes to water quality and ecology, to guide adaptive management responses and better prepare for future periods of low inflows and rewetting events.

**Flood Event Response Monitoring** – With the advent of floodwaters in 2010, the initiatives under the Water Quality Drought Monitoring program were used to track the progress of floodwaters and potential effects on water quality from re-flooded wetlands.

**Audit Program for River Boat Vessels** – Random vessel wastewater compliance audits have been undertaken of private river craft black and greywater management systems. Letters of compliance regarding the design and proper management for on-board black water management systems have been issued where relevant.

## 3.4 CONSERVE AND PROTECT HERITAGE VALUES

The key outcome for this priority is for heritage values of the River Murray to be conserved and protected.

This includes places of natural and cultural heritage value such as Aboriginal sites, historical vistas, significant landscape features and built heritage.

### 3.4.1 Legislation and Policy Initiatives

Aboriginal heritage in South Australia is protected through the *Aboriginal Heritage Act 1988* including protection for Aboriginal remains, sites and objects of significance to Aboriginal archaeology, anthropology, history and tradition.

A key part of the *River Murray Act 2003* is to refer development applications to the Department of the Premier and Cabinet (DPC) Aboriginal Affairs and Reconciliation Division (AARD) for assessment against a register of Aboriginal sites to ensure their protection.

Owing to the heavy rains in this reporting period, Aboriginal burial sites have become eroded and exposed in several locations along the River Murray.

In relation to three recently discovered sites on tracks along the river, the team from DPC AARD has worked with the local council, the local Aboriginal people and land owners to draw up and implement management plans which address the issue of access for local people and the need for the burials to be conserved and protected into the future. Local councils assisted in determining the engineering requirements of the conservation works.

The key pieces of legislation for the protection of non Aboriginal heritage are the *Heritage Places Act 1993* and the *Historic Shipwrecks Act 1981*. These acts protect cultural and natural heritage values of the region, including visual amenity.

Twenty-three development applications potentially affecting State heritage places were referred to DENR during 2010-11 for advice on heritage impacts. Of these, 13 applications were not in the vicinity of any State heritage place, and were returned with no comment. Two of the remaining ten applications were approved with conditions to ensure that they retained the character and visual amenity of the site in question, whilst the remaining applications were supported without conditions.

### **3.4.2 Implementation of Major Projects and Programs**

**Aboriginal Partnerships Project** – A program employing indigenous people to work on a range of natural resource management projects, including management plans and revegetation programs. Accredited training is provided to support the skills development of participants. In 2010-11, projects took place at Calperum Station, Monarto Zoological Park, Pike River, Chowilla and other Riverland sites.

**Indigenous Involvement in the Coorong, Lower Lakes and Murray Mouth Program** – The Kungun Ngarrindejri Yunnan Agreement and the Ngarrindjeri Partnerships Project have enabled cultural beliefs to become integral to planning and management arrangements for the CLLMM region.

The Ngarrindjeri Heritage Committee provided heritage clearance advice for the removal of the Narrung bund and the CLLMM vegetation and fencing projects.

**Maritime Heritage Program** – This Program aims to identify, conserve, and protect the built and maritime heritage of South Australia, including maritime heritage along the River Murray. The program protects and conserves the heritage value of maritime heritage sites and enhances community awareness of historic sites. Shipwreck trails have been established along the River Murray for the community which explore the ships' graveyards and their abandoned vessels.

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## 4 ACHIEVEMENT OF THE *RIVER MURRAY ACT 2003* OBJECTS AND OBJECTIVES FOR A HEALTHY RIVER MURRAY

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A large number of government programs and projects played a role to further progress the Objects and ORMs of the *River Murray Act 2003* in 2010-11. These include both State-wide projects and projects focused on the River Murray region.

A number of Government agencies were responsible to lead and partner in such activities according to their specific obligations and agency focus. A range of community groups were also instrumental in the implementation of such projects including Local Action Planning Associations and Aboriginal Groups.

Each Government agency provided information relating to relevant programs and projects under the four themes of the 'healthy River Murray.' These are fully detailed in the Supporting Document and a summary of key outcomes is detailed below according to the four ORMs.

### 4.1 RIVER HEALTH OBJECTIVE

Major projects contributing to this Objective in 2010-11 included on-ground works such as the provision of environmental flows, reconnection of wetlands and water level management.

Major achievements of the program in 2010-11 included:

- Delivery of the South Australian Government's response to the MDBA's *Guide to the proposed Basin Plan*. The response addressed environmental water requirements, key environmental assets, catchment risks, socio-economic issues, water quality and salinity issues, critical human water needs and state water resource plan requirements;
- Rehabilitation of the CLLMM region through a number of projects covering ecological monitoring, vegetation, environmental water delivery, the development of a CLLMM Icon Site Environmental Watering Plan and the reconnection of four Lower Lakes wetlands;
- Actions to protect native fish species of the region. These included a targeted monitoring program to record fish passage through the barrage fishways and studies on the impacts of river regulation, drought, fishing pressure and flow regime on fish;
- Management of wetlands to prevent the loss of native species such as the Southern Bell Frog, the Regent Parrot and the Murray Hardyhead; and
- Reconnection of a number of managed wetlands previously disconnected from the River channel during the drought.

For more detailed information please refer to sections in the Supporting Document that relate to River Health.

## 4.2 ENVIRONMENTAL FLOW OBJECTIVE

Major projects contributing towards this Objective in 2010-11 included securing environmental flows and improving connectivity and the progress of the Riverine Recovery Project.

Major achievements in this area in 2010-11 included:

- Development of environmental water requirements for the River Murray channel, wetlands and floodplain within South Australia in response to the MDBA's *Guide to the proposed Basin Plan*;
- Successful negotiation for the allocation and delivery of 305.5 GL of environmental water to priority sites. The vast majority of the water was delivered to the CLLMM icon site where it contributed to managing lake water levels and providing for water releases through the barrages;
- Cessation of dredging at the Murray Mouth and development of a monitoring framework and contingency plan to re-establish dredging, if required;
- Announcement of a further investment of \$86.7 million for the Riverine Recovery Project to improve ecological outcomes for floodplains and wetlands, use environmental water more effectively, provide social benefits, and deliver up to 15 GL of water savings to the Commonwealth to help protect or restore environmental assets in the MDB;
- Consultation on the draft Water Allocation Plan for the EMLR; and
- Introduction of the *Natural Resources Management (Commercial Forests) Amendment Bill* into Parliament to manage the water resource impacts of plantation forests. This is of particular importance to the Tributaries Protection Area.

For more detailed information please refer to the sections in the Supporting Document that relate to Environmental Flow.

## 4.3 WATER QUALITY OBJECTIVE

Major projects contributing to this Objective in 2010-11 included SISs, floodwater monitoring and a *Code of Practice for Vessel and Facility Management (marine and inland waters)*.

Major achievements of the program in 2010-11 included:

- Continued progress in salinity management including ensuring that South Australia's balance on the Basin Salinity Management Strategy Registers remained in positive credit and ensuring that South Australia's obligations to manage MDB salinity under Schedule B of the MDB Agreement were delivered;
- Continued work on the construction of SISs, including commissioning the completed Loxton SIS, commencing construction on the SIS at Murtho and investigating and undertaking preliminary works on a scheme for the Pike River;
- Monitoring water quality in the Lower Lakes to guide adaptive management responses and better prepare for future periods of low inflows and rewetting events;
- Tracking the progress of floodwaters and the potential effects on water quality from re-flooded wetlands;

- Adoption of the Murray and Mallee Region Plan, a volume of the South Australian Planning Strategy, which includes policies related to Water Sensitive Urban Design to improve water quality and protect water dependent ecosystems from the impacts of land use and development; and
- Implementation of a *Code of Practice for Vessel and Facility Management (marine and inland waters)* which includes an interactive vessel management database to manage the compliance of 2,000 vessels operating on the River Murray; the licensing of slipways and marinas; and the assessment of local and regional impacts of greywater pollution from river vessels.

For more detailed information please refer to the sections of the Supporting Document that relate to Water Quality.

## 4.4 THE HUMAN DIMENSION OBJECTIVE

Major projects contributing to this Objective in 2010-11 included community capacity building programs and indigenous engagement, responding to riverbank collapse and negotiating additional storage capacity in the River Murray system.

Major achievements in this area in 2010-11 included:

- Securing agreement to a new schedule to the MDB Agreement which provides South Australia with more than 300GL of storage capacity for critical human water needs. This means that South Australia has, for the first time, the capacity to manage the delivery and timing of its entitlement water, providing much needed flexibility for water users;
- Delivery of the River Murray Drought Water Allocation Decision Framework, which enabled allocation decisions to be made in a clear and transparent manner, taking into account the longer-term needs that underpin sustainable communities, industry and a healthy river system in South Australia;
- Ensuring a comprehensive response to the Riverbank Collapse Hazard. Specific actions included raising public awareness of the issue; assisting public safety through implementing on-ground mitigation activities; and conducting a detailed physical collapse risk assessment;
- Increasing the participation of the Aboriginal community in natural resources management through the provision of training and employment, increasing cultural awareness within the community, and the development of management plans to conserve Aboriginal sites through partnerships between the South Australian Government, local councils, local Aboriginal people and land owners;
- Release of the *Guide for Marina and Moorings Structure Development Along the River Murray in South Australia* to assist the improvement of infrastructure and facilities for the rivercraft industry and rivercraft users;
- Announcement of approximately \$1.35 million in successful grants from the Riverland Sustainable Futures Fund to assist the region to diversify its economic base and facilitate recovery of the local economy;
- Delivery of a range of education programs such as the natural resources management education program, which worked with 80 schools across the region and the WaterWise

Communities program, which included a range of kits for schools, businesses and households to promote the value of water and encourage efficient water behaviour in the community; and

- The replacement, in December 2010, of Level 3 Enhanced Water Restrictions, which had been in place since January 2007, with permanent Water Wise Measures. These Measures relate to water usage for gardens, washing of cars and boats, hosing down of driveways and paved areas, and various other purposes.

For more detailed information please refer to the sections of the Supporting Document that relate to the Human Dimension.

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## 5 REPORT ON RELEVANT MATTERS

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The provisions within the *River Murray Act 2003* for establishing referrals and the general duty of care are important tools in ensuring the protection of the River Murray.

The referral provisions of the *River Murray Act 2003* require the Objects and ORMs to be taken into account in the administration of related operational Acts. Input from the Minister for the River Murray must be sought before granting approval for certain types of activities in particular locations. Most of the referral provisions are activated through regulations under the relevant related operational Act, which in turn, set out the types of activities that need to be referred. Section 5.1 outlines the referrals under related operational Acts for 2010-11.

As a part of the referral process, a one-stop-shop service is operated by DFW, on behalf of the Minister for the River Murray. DFW is the central co-ordinating body for receiving referrals and sending them out for comment to relevant technical experts, both internally and to other Government agencies. A consolidated response is then provided to the planning authority to pass on to the applicant.

The *River Murray Act 2003* also establishes a duty of care for the River, enforceable by a River Murray Protection Order or Reparation Order. All persons have a general duty of care to take reasonable measures to prevent or minimise harm to the River Murray through actions or activities. A breach of this duty does not constitute an offence but the issuing of a Protection Order or Reparation Order can enforce compliance. Information on the enforcement of the general duty of care and actions taken during 2010-11 is provided in section 5.2.

### 5.1 REFERRAL OF MATTERS UNDER THE RELATED OPERATIONAL ACTS

#### 5.1.1 Overview

In 2010-11 there were 542 referrals made to the Minister for the River Murray with the majority of referrals made through the *Development Act 1993* (Refer Table 1 : Referrals in [2010-11](#) ).

Most referrals were for statutory authorisations including approvals for buildings, land sub-division, dredging, mining exploration and leases, aquatic activity and fishery permit exemptions. A smaller number of statutory instruments were also referred including development plan amendments (DPAs) under the *Development Act 1993*.

More detailed information about the relevant referrals under the related operational Acts is provided below.

**Table 1 : Referrals in 2010-11**

	Statutory Authorisations	Statutory Instruments
<i>Development Act 1993</i>	403	64
<i>Mining Act 1971</i>	34	
<i>Harbors and Navigation Act 1993</i>	34	
<i>Fisheries Management Act 2007</i>	7	
<b>Total</b>	<b>478</b>	<b>64</b>

### 5.1.2 Referrals from the *Development Act 1993*

#### **Statutory Authorisations**

A range of applications for statutory authorisations were referred to the Minister for the River Murray including buildings (for example dwellings or sheds), river structures (for example jetties, pontoons, mooring posts, and boat ramps), earthworks within the floodplain, activities requiring River Murray water (for example irrigation, feedlots, or aquaculture) and land divisions. Of these, buildings comprised more than half of the referrals, whilst river structures comprised 10 percent and land divisions 18 percent. All referrals were assessed against the Objects and the ORMs of the *River Murray Act 2003*.

In addition, a number of referrals were a result of the Investigations Unit finding illegal activities occurring along the River Murray such as jetties, moorings and retaining walls. These activities were followed up by liaising with the local council to determine the most appropriate action. In most cases, the issue was resolved by the applicant going through the development application process but in some cases the structures had to be removed immediately. In relation to those that went through retrospective applications, most received approval but often had to modify or amend structures.

Most referrals (403 of a total 422) in 2010-11 were mandatory referrals under Schedule 8 of the *Development Regulations 2008*. All except two of these referrals were responded to within the required statutory time-frames (eight weeks). Nineteen non-mandatory referrals were made to the Minister for the River Murray. In these cases, recommendations were provided to the referring body for consideration in their decision making process.

A formal negotiation process was required for about 15 percent of applications. This included sourcing additional information in some instances. Also, some applications did not meet mandatory requirements and were required to be amended. As per Section 37(2) of the *Development Act 1993*, the processing of these applications was halted until all requested information was received.

Additional information was required for a further 15-20 percent of referrals. This was sought informally via telephone discussions, site visits or email. This ensured that referrals could be assessed against relevant criteria.

Applications were initially reviewed to examine any key issues and decide whether specific advice would be required. Where required, advice on the referrals was sought from a range of



specialist staff and groups both within DFW and externally as a part of the one-stop-shop service (Refer Table 2 : Specialist Groups/Agencies consulted in relation to [referrals](#) ). This advice resulted in referrals being scrutinised in relation to their impact on a range of natural resource assets, for example water resources, environmental flows, vegetation and cultural heritage.

**Table 2 : Specialist Groups/Agencies consulted in relation to referrals**

Referral Type	Percent of applications referred
Aboriginal Heritage (DPC)	70
Native Vegetation and Biodiversity Management (DENR)	24
Crown Lands (DENR)	18
Biosecurity (PIRSA)	15
River Murray works (including Riverbank collapse) (DFW)	11
Transport Safety (DTEI)	9
Shipwrecks (DENR)	6
Water licensing (DFW)	6
State Heritage (DENR)	4
Groundwater and surface water (DFW)	2
Environmental Water Management (DFW)	1
Coastal Conservation/Public Land (DENR)	1

Applicants were also advised of their obligations under other legislation including the *Crown Land Management Act 2009*, the *Natural Resources Management Act 2004* and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

For the majority of mandatory referrals, conditions were attached to the approval. The conditions generally required that during works the site be appropriately maintained, that waste material be properly disposed of and contained, and that the potential for erosion and sedimentation of water resources be minimised through responsible stormwater management.

The majority (94 percent) of mandatory referrals during 2010-11 related to activities occurring within the River Murray Floodplain Area. Just six percent of mandatory referrals related to activities within the River Murray Tributaries Area.

A number of additional activities (primarily land divisions) occurring within the RMPA's or the wider South Australian MDB area were also referred to the Minister for the River Murray as non-mandatory referrals. Applicants were advised of their obligations under relevant legislation and conditions were recommended.

## **Statutory Instruments**

A number of statutory instruments relating to the *Development Act 1993* were referred in 2010-11 to the Minister for the River Murray as required under section 24(3) of the *Development Act 1993*. This included DPAs (36) and Statements of Intent (28) relating to land within the MDB and the RMPA. Such instruments are important in determining future land use, with proposals scrutinised to ensure that any changes of land-use were appropriate in the context of River health. DFW responded to each of these referrals with comments and recommendations.

### **5.1.3 Referrals from the *Mining Act 1971***

A total of 34 mining applications were referred in 2010-11 including exploration licenses, declared equipment use and mining leases in accordance with the *Mining Act 1971*. Of these applications, 30 were for exploration licenses only. In all instances, the Minister for the River Murray concurred with the Minister for Mineral Resources Development regarding the outcome, but provided advice to applicants regarding their obligations on matters such as water use, Branched Broomrape and native vegetation.

### **5.1.4 Referrals from the *Harbors and Navigation Act 1993***

A total of 34 Aquatic Activity Licenses were referred in 2010-11 in accordance with the regulations of the *Harbors and Navigation Act 1993*. Activity licences typically included closing off part of the river for special activities such as rowing, wakeboarding, water ski-ing and swimming competitions, although in 2010-11, two were requested for environmental works. The role of the referral process is to provide education regarding relevant responsibilities to the organisers and the public for protecting the river.

### **5.1.5 Referrals from the *Fisheries Management Act 2007***

Activities that require a licence, permit or an exemption from a licence under the *Fisheries Management Act 2007* must consult with the Minister for the River Murray.

In 2010-11 seven exemptions from the requirement of needing a permit were referred. Six of the exemptions were for projects conducted by research, scientific or conservation agencies that were found to further the Objects and ORMs, whilst one exemption was granted for a recreational activity.

## **5.2 ENFORCEMENT OF GENERAL DUTY OF CARE AND ISSUE OF ORDERS**

The general duty of care principle is defined as:

‘A person must take all reasonable measures to prevent or minimise any harm to the River Murray through his or her actions or activities’.

In 2010/11 the duty of care was primarily enforced through a combination of referrals for new development applications, and a broad scale compliance process. This compliance process included an on-ground presence by authorised officers across the River Murray corridor.

The referral process is important to ensure the duty of care. It places specific and enforceable conditions on activities and developments to ensure that they will not harm the River Murray, either as an individual action or in a cumulative sense. Cumulative impacts are particularly

relevant for issues such as vegetation clearance, water extractions and sand dumping where impacts on site may be minor but can become significant when multiplied overall.

The referral and compliance processes have integrated well in order to support the duty of care principle. Investigation officers remained vigilant to detect any new activities or works along the river and to check that such activities had gone through appropriate approval processes.

Officers continued to provide a presence along the River Murray, albeit a reduced one compared to previous years, as initiatives in drought years to educate and inform the community had been successful. During 2010-11, a period of high flows into the South Australian part of the River Murray, led to a new range of issues, including the submerging of jetties, moorings and other structures, and the isolation of shack areas. In some cases, officers were unable to access areas to investigate and/or assess compliance matters.

Officers continued to work well with local councils and NRM Board staff along the River Murray, with mutual information exchange helping to resolve compliance matters. Issues such as native vegetation clearance, illegal dumping and illegal development continued to be prominent in 2010-11.

Field staff and other agencies continued to pass on relevant issues to investigators. They were able to take photos, fill out incident reports and notify relevant authorities such as the local council. Issues were often resolved through a round table meeting between referral, investigation, local council staff and proponents. The on-ground presence of compliance staff also meant that issues could often be dealt with through consultation and voluntary compliance by the proponent. However, in some instances applicants were required to repair damage caused by a specific activity.

There were also a number of significant government programs implemented to contribute to the duty of care principle. This included re-vegetation, fencing, pest plant and animal control, and control of point and diffuse sources pollution.

In 2010-11, eight investigation officers were authorised under the *River Murray Act 2003* on delegated authority from the Minister for the River Murray (Section 13 provides of the appointment of authorised officers). These officers ensured appropriate compliance with both the general duty of care and relevant referral conditions placed on a range of statutory authorisations. These officers are also trained investigation officers under related operational Acts, such as the *Natural Resources Management Act 2004*, the *Environment Protection Act 1993* and the *Native Vegetation Act 1991* which gives them a broader understanding and capacity to protect River Murray values.

The officers focused on maintaining an on-ground presence along the River Murray to ensure a responsive, thorough and well engaged compliance process. Compliance issues were detected through river surveillance, following up specific complaints and referral from other agencies. This resulted in over 200 compliance matters being raised. Matters are defined as any activity or incident that breaches the *River Murray Act 2003* or other relevant Acts.

Compliance matters found routinely through broad river surveillance were dealt with internally or referred to external agencies. Compliance issues dealt with internally included illegal dumping, damage associated with the effect of higher water levels on illegal structures, damage to native vegetation and uncontrolled riverbank erosion.

A total of 12 matters were reported in relation to activities that were likely to cause damage to the river, including illegal dumping and the construction of structures on the floodplain. In the majority of these cases, reparation was achieved on a voluntary basis through effective negotiation without the need for a River Murray Protection or Reparation Order to be issued, or matters were referred to other agencies. One protection order was issued during 2010-11.

To improve the efficiency and effectiveness of the use of protection orders, a standard Emergency Protection Order book was developed and printed, to enable authorised officers to immediately issue written emergency protection orders when the situation warranted it. This avoided contention about receipt of such an order at a later date.

Matters referred to external agencies included issues such as:

- sand dumping and the dumping of chemicals on the floodplain which were referred to the EPA; and
- illegal developments that were referred to the relevant local councils.

Investigation officers continued to engage closely with landowners and land users about activities that are likely to cause significant harm to the River Murray, and how these can be avoided.

Investigation officers also acted as a conduit between Local Government and State Government regarding actions and conditions placed on developments.

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# **PART 2:**

# **TRIENNIAL REVIEW**

# **2008-09 – 2010-11**

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## 6 INTERACTION BETWEEN THE RIVER MURRAY ACT, RELATED OPERATIONAL ACTS AND ANY OTHER ACT CONSIDERED RELEVANT BY THE MINISTER

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The *River Murray Act 2003* gives the Minister for the River Murray a number of powers designed to ensure the protection of the River. These include the obligations to promote the integration of the *River Murray Act 2003* with other legislation and to have input into statutory instruments (for example plans and policies), and in some cases, provide direction on statutory authorisations (for example licence applications). A number of Acts are identified in the *River Murray Act 2003* as related operational Acts. Activities authorised pursuant to these Acts have the capacity to significantly impact on the health of the River, for both positive and negative outcomes.

The first part of the Triennial Review is an assessment of the interaction between the *River Murray Act 2003* and related operational Acts, and any other Act considered relevant by the Minister for the River Murray.

The related operational Acts are the:

- *Aquaculture Act 2001*
- *Coast Protection Act 1972*
- *Crown Land Management Act 2009*
- *Development Act 1993*
- *Environment Protection Act 1993*
- *Fisheries Management Act 2007*
- *Harbors and Navigation Act 1993*
- *Heritage Places Act 1993*
- *Historic Shipwrecks Act 1981*
- *Irrigation Act 2009*
- *Murray-Darling Basin Act 2008*
- *National Parks and Wildlife Act 1972*
- *Native Vegetation Act 1991*
- *Natural Resources Management Act 2004*
- *South Eastern Water Conservation and Drainage Act 1992*
- any Mining Act<sup>1</sup>

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<sup>1</sup> any Mining Act means the *Mining Act 1971*, the *Opal Mining Act 1995* and the *Petroleum and Geothermal Energy Act 2000*.

The *Aboriginal Heritage Act 1988*, the *Wilderness Protection Act 1992*, and the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999* and *Water Act 2007* were also included within the scope of the review.

The interaction between the *River Murray Act 2003* and the related operational Acts varies. Some provisions were activated immediately when the *River Murray Act 2003* became operational. Other related operational Acts can enact provisions, in particular referrals, relating to the *River Murray Act 2003* through regulations under the related operational Act. Another opportunity to improve efficiency and effectiveness of the interaction between the *River Murray Act 2003* and related Acts is through inclusion of the administrators of these Acts in the one-stop shop process where the delegates of the Minister for the River Murray seek input from external agencies and consolidate agency responses in referral responses. In some cases, coordinated education, awareness raising and compliance activities take place between authorised officers under the *River Murray Act 2003* and a related operational Act. Other Acts, while not being a related operational Act, have complementary objectives that promote the outcomes sought by the *River Murray Act 2003*.

Table 3 : [Interaction between the River Murray Act 2003 and other legislation](#) outlines the interaction between the *River Murray Act 2003* and other legislation. It outlines for each Act:

- Whether it is a related operational Act or not;
- Whether related provisions were enacted automatically as a result of the *River Murray Act 2003*;
- Whether there are referrals to the Minister for the River Murray or the Minister for the River Murray is consulted on activities under the Act;
- Whether administrators of the Act are included in the one-stop-shop mechanism; and
- Whether there are joint education and compliance programs.

In addition to requiring consultation with, or referral to, the Minister for the River Murray, most Acts contain provisions requiring the Objects and the ORMs of the *River Murray Act 2003* to be taken into account or furthered in activities related to the administration of the Act.

A further factor in the interaction between Acts is that investigations officers administering compliance powers under the *River Murray Act 2003* often also simultaneously administer compliance powers under other Acts including the *Natural Resources Management Act 2004*, the *Environment Protection Act 1993* and the *Native Vegetation Act 1991*. Other agencies such as local councils, PIRSA, the EPA and the SA MDB NRM Board also exercise compliance and enforcement powers to help to protect the River Murray and its natural resources under related relevant legislation.

Detailed information regarding the legislative provisions that support the interaction between the *River Murray Act 2003* and other Acts is set out in the Triennial Review for the period 2005-08. Any relevant changes to the interaction with the *River Murray Act 2003* during 2008-11 are outlined for each Act below.

**Table 3 : Interaction between the *River Murray Act 2003* and other legislation**

<b>Legislation</b>	<b>Related operational Act</b>	<b>Consultation with/ Referrals to Minister for River Murray</b>	<b>Part of one-stop shop</b>	<b>Awareness Raising/ compliance</b>
<i>Aboriginal Heritage Act 1988</i>	No	No	Yes	No
<i>Aquaculture Act 2001</i>	Yes	Yes (policies)	Yes	No
<i>Coast Protection Act 1972</i>	Yes	Yes (management plans)	Yes	No
<i>Crown Land Management Act 2009</i>	Yes	No	Yes	No
<i>Development Act 1993</i>	Yes	Yes (development plan amendments and development applications)	Yes	Yes
<i>Environment Protection Act 1993</i>	Yes	No	Yes	Yes
<i>Environment Protection and Biodiversity Act 1999 (Cth)</i>	No	No	No	No
<i>Fisheries Management Act 2007</i>	Yes	Yes (licences, permits, registrations and exemptions)	No	No
<i>Harbors and Navigation Act 1993</i>	Yes	Yes (licences)	No	Yes
<i>Heritage Places Act 1993</i>	Yes	No	Yes	No
<i>Historic Shipwrecks Act 1981</i>	Yes	No	Yes	No
<i>Irrigation Act 2009</i>	Yes	No	No	No
<i>Mining Act 1971</i>	Yes	Yes (licences and leases)	No	No
<i>Murray-Darling Basin Act 2008</i>	Yes	No	No	No



<b>Legislation</b>	<b>Related operational Act</b>	<b>Consultation with/ Referrals to Minister for River Murray</b>	<b>Part of one-stop shop</b>	<b>Awareness Raising/ compliance</b>
<i>Native Vegetation Act 1991</i>	Yes	Yes (delegations, fire management plans, guidelines, clearance applications)	Yes	Yes
<i>Natural Resources Management Act 2004</i>	Yes	No	Yes	Yes
<i>Opal Mining Act 1995</i>	Yes	Yes ( declarations)	No	No
<i>Petroleum and Geothermal Energy Act 2000</i>	Yes	Yes (statements of environmental objectives and licences)	No	No
<i>South Eastern Water Conservation and Drainage Act 1992</i>	Yes	Yes (management plan review)	No	No
<i>Water Act 2007 (Cth)</i>	No	No	No	No
<i>Wilderness Protection Act 1972</i>	No	No	No	No

## 6.1 ABORIGINAL HERITAGE ACT 1988

The referral mechanism under the *River Murray Act 2003* has enabled the identification and protection of a number of Aboriginal sites and provides an important safety net in terms of helping to implement appropriate management regimes through development planning processes. This has helped to prevent inadvertent damage to aboriginal heritage sites through applicants being made aware of the presence of artifacts and sacred sites in the vicinity of their proposed development.

Development applications referred to the Minister for the River Murray for assessment that refer to land located up to 200 metres beyond the 1956 floodplain level (approximately 72 percent of all applications) are passed on to the Department of the Premier and Cabinet Aboriginal Affairs and Reconciliation Division (DPC-AARD) for advice. The Division checks the *Register of Aboriginal Sites and Objects* to see whether a particular site will be impacted by a proposed development and may consult with the Aboriginal heritage committee, relevant Aboriginal organisations, traditional owners and Aboriginal persons for input.

A notification is provided if a registered site is recorded at the proposed development site and the applicant is given contact details as to where to apply for a determination to ensure that damage is prevented or minimised in undertaking the development. The applicant is also advised of relevant obligations under the *Aboriginal Heritage Act 1988*. This notification is included in the Minister for the River Murray's response to the planning authority as a part of the one-stop-shop service, which is then passed on to the applicant.

Since the last Triennial Review was published in 2008, the DFW and DPC-AARD have negotiated to extend the zone for matters to be considered by DPC-AARD from 200 metres from the river bank to 200 metres from the 1956 floodplain level due to some instances of damage to Aboriginal sites or artifacts during the excavation of development sites. This demonstrates the safety net role of the *River Murray Act 2003* in complementing the Objectives of the *Aboriginal Heritage Act 1988*, and in improving the scope for assessment and protection of Aboriginal Heritage sites. There is scope to strengthen this safety net mechanism through triggering notification to DPC-AARD when instances of damage to the river are reported due to the potential for this to coincide with damage to an Aboriginal site, object or remains.

## 6.2 AQUACULTURE ACT 2001

In the reporting period, one referral of an aquaculture policy relating to aquaculture zoning within the MDB area was received by the Minister for the River Murray, to which advice was provided. No relevant development applications relating to aquaculture activities have been received by the Minister for the River Murray in the reporting period.

The Minister for the River Murray released an *Aquaculture Referral Assessment Policy* in October 2008 which provides decision-making guidance to the Minister for the River Murray and the Minister's delegates in assessing applications for authorisations that involve aquaculture activities. The Minister for the River Murray's role is to build on the assessments made by PIRSA Aquaculture to develop protection and enhancement measures tailored to the unique needs of the River Murray, and to ensure that the Objects and ORMs of the *River Murray Act 2003* are taken into account.

The Department of Planning and Local Government has produced an Aquaculture Policy as a part of the Better Development Planning Policy initiatives undertaken as a part of the South Australian Planning Strategy. This policy complements principles of the *River Murray Act 2003* to provide for best practice principles of ecologically sustainable development to be built in to Council Development Plans in relation to aquaculture activities. This policy also provides guidance in relation to when referral to the Minister for the River Murray will be required.

The *Aquaculture Act 2001* and *Aquaculture Regulations 2005* are currently under review. No direct or indirect changes to the interaction with the *River Murray Act 2003* are expected as a result of these reviews.

## 6.3 COAST PROTECTION ACT 1972

No management plans under the *Coast Protection Act 1972* that required consultation with the Minister for the River Murray were prepared in the reporting period. There have, however, been some major projects in the RMPA that have involved interaction between the two Acts and the agencies administering them. For example, DFW and the Public Land and Coastal Conservation Branch of DENR have worked cooperatively on the Coorong Connect Drainage System project to divert water that currently drains from the South East catchment to the ocean, into the South Lagoon of the Coorong. Further detail can be found in Section 2.1 of the Supporting Document.

## 6.4 CROWN LAND MANAGEMENT ACT 2009

In 2009 the *Crown Land Management Act 2009* replaced the *Crown Lands Act 1929*, however, the *River Murray Act 2003* does not yet reflect this. Arrangements have been made to pass on all referrals of licence applications relating to the bed or banks of the River Murray that are on Crown land or adjoin Crown land, to DENR for assessment. Approximately 20 percent of all applications are passed on to DENR in this way. This has resulted in improvements to auditing of licensing for occupation of Crown land. The *River Murray Act 2003* one-stop-shop mechanism has also become a primary mechanism to advise the public of their obligation to obtain a licence to occupy Crown land through advice on development application responses.

The new *Crown Land Management Act 2009* has a greater focus on environmental protection than its predecessor. This will increase the capacity to restore floodplain and riparian areas of the River Murray, as a significant proportion of these are on Crown land. These changes have also brought the Act in line with complementary principles of the *River Murray Act 2003* to achieve ecologically sustainable land management and a balance between the social, economic and environmental needs of the community.

## 6.5 DEVELOPMENT ACT 1993

The number of development applications referred to the Minister for the River Murray pursuant to the *Development Regulations 2008* peaked in 2007-08 at 686 mandatory referrals. Since that time, the number of development application referrals has declined by 40 percent to 554 in 2008-09, 429 in 2009-10 and 403 mandatory referrals in 2010-11.

This 40 percent reduction can, in part, be attributed to a natural decline as a result of the drought, low water levels below Lock 1, development saturation and economic uncertainty from the Global Financial Crisis.

DFW has also identified opportunities to streamline and reduce referrals under the *River Murray Act 2003* in consultation with relevant development and planning agencies as a part of the South Australian Planning Strategy.

DFW compliance officers assist in the administration of the *Development Act 1993* by notifying councils of incidents and helping to negotiate suitable resolutions to breaches of the *River Murray Act 2003* and *Development Act 1993*. In particular, during the drought, compliance officers were instrumental in running educational and awareness raising campaigns on specific issues such as illegal developments, riverbank collapse, sand dumping and alleged breaches of water restrictions, where liaison with councils and relevant agencies helped to ensure that residents were informed of their responsibilities and how to minimise harm to themselves and the River.

### **Planning Reforms**

In June 2008, the State Government embarked on a wide reaching program to reform the planning and development system. Relevant elements of the Planning Strategy include the development of new planning strategies for all areas of the State, streamlining zoning and state significant development processes, and achieving faster assessments and approvals. Seven volumes of the Planning Strategy have been completed to date including the Planning Strategy for Greater Adelaide and the Murray and Mallee Regional Plan.

A major focus of the review is to achieve the reduction in referral of development applications with a 35 per cent cutback target by December 2008 and further reductions thereafter. For the operation of the *River Murray Act 2003*, the main implications of the Planning Strategy relate to informal and Schedule 8 referrals, reduction of statutory timeframes and the potential relaxation of development controls in zones adjacent to the River.

DFW has identified opportunities to streamline and reduce referrals under the *River Murray Act 2003* through two primary reform processes that are subject to final approvals and regulatory frameworks being put in place. These initiatives are to:

1. Remove referral triggers through a review of the Schedule 8 criteria relating to the *River Murray Act 2003* under the *Development Regulations 2008*; and
2. Explore opportunities to exempt specific zones and activities from the requirement to refer development applications to the Minister for the River Murray.

In addition to the potential exemption of certain zones and policy areas, some anomalies in relation to existing zones and policy areas exempt from the requirement for referral to the Minister for the River Murray have been identified. Addressing these anomalies has been pursued to remove referrals that would otherwise be improperly referred to the Minister for the River Murray. For example, during 2010-11, workshops were held on the Development Plan Alignment Project for the Riverland area with the Riverland Futures Taskforce, a working group of Riverland councils, and other development and government agencies, to achieve consensus on expanded townships and new zoning nominations.

### ***South Australian Planning Policy Library***

The Better Development Policy Library (Version 5.0) now includes policies for the River Murray Flood Zone and River Murray Fringe Zone which contain principles relating to the river health, environmental flows, water quality and human dimension ORMs of the *River Murray Act 2003*. The Planning Policy Library has been introduced to increase certainty and consistency for Councils by providing best practice policy modules for amending Development Plans. This has created greater efficiency for the Minister for the River Murray in assessing DPAs as these policy modules have already been consulted on, and take into account the Objects and ORMs of the *River Murray Act 2003*.

### ***Residential Development Code***

The Residential Development Code, which came into effect in stages commencing in March 2009, applies in designated residential zones for major alterations and additions to existing homes and for new dwellings which meet the Residential Development Code. As a result, a range of developments no longer require planning approval.

The object of the Residential Development Code is to purge the system of minor development applications and to expedite the process for types of development that fit the criteria of the Residential Development Code. The operation of the Code specifically excludes development on land in Watercourse or Flood Zones and on Floodplains.

Further reform of the Residential Development Code has recently been announced and is expected to commence in late 2011. Among the areas targeted for change are the provision of improved infrastructure planning and regulation of rezoning of land near Mt Barker, which is located in the River Murray Tributaries Area. Further changes to the Residential Development Code will aim to simplify requirements and streamline approvals, including the removal of Major Project status to facilitate urban development.

### ***Other initiatives***

Several initiatives have been progressed that are aimed at refining and improving the interaction between the Acts:

- A *Notice of Exemption* pursuant to section 22(18) of the *River Murray Act 2003* was issued in May 2005 to streamline processes and reduce unnecessary referrals and is still in place. The *Notice of Exemption* outlines criteria that, if met, can exempt certain development applications for outbuildings and farm buildings from referral.
- A *Notice of Exemption* was issued on 21 December 2006 to allow the temporary exemption of referrals for the extension or relocation of pumping infrastructure as a drought relief measure. The exemption was also informally extended to provide for temporary installation of riverbank stabilisation measures. These measures were put in place to fast track assessments and provide financial relief for irrigators adversely affected by drought. The exemption was revoked on 3 February 2011.
- The *Guide for Marina and Moorings Structure Development along the River Murray in South Australia* was finalised and released in June 2011. The guide will assist to improve infrastructure and facilities for the rivercraft industry and rivercraft users by providing advice for developers, councils and the community regarding where and how marinas and other mooring structures should be built and used, whilst protecting the amenity values of the river. The *Guide for Marina and Moorings Structure Development along the River Murray in South*

*Australia* sets out principles for marina and mooring structure development which include reference to minimising environmental harm and abiding with the duty of care and the ORMs of the *River Murray Act 2003*.

- The Murray and Mallee Regional Plan includes planning related priorities, principles and policies to guide the development of Council Management and Development Plans, land-use planning and development practices and ongoing policy development. The Plan incorporates principles that complement the *River Murray Act 2003* Objects and ORMs so that these principles underlie development and planning processes for the Murray and Mallee Regional area.
- Proposed changes to the Mid-Murray Council Development Plan as a result of interagency consultation will help the Plan to better reflect the Objects and ORMs of the *River Murray Act 2003*. A proposed amendment to the *Tourism and Recreation Policy Areas* of the River Murray Flood Zone of the Mid-Murray Council Development Plan has been developed, and is due to be released for public consultation late in 2011. The River Murray Zone (and Policy Areas) of the Mid-Murray Council Development Plan has also been reviewed, resulting in a draft Statement of Intent being developed. This will ensure that development assessment practices and outcomes are compatible with best practice natural resources management practices, and help to improve zoning and land use policies and general provisions dealing with climate change.

## 6.6 ENVIRONMENT PROTECTION ACT 1993

A *State of the Environment* report including a specific River Murray section was released, in November 2008. As *State of the Environment* reporting occurs on a five-yearly basis, the next *State of the Environment Report* is due for release in November 2013. Interaction between the *River Murray Act 2003* and the *Environment Protection Act 1993* has resulted in the development of closer links between agencies. This interaction particularly supports the water quality and river health ORMs of the *River Murray Act 2003* which are complementary principles of both Acts.

Relevant initiatives in relation to the interaction of the Acts for the triennial period 2008-2011 include:

- The development by the EPA of a *Code of Practice for Vessel and Facility Management (Marine and Inland Waters)* to encourage the introduction of greywater management systems to river craft on the River Murray.
- A coordinated process between the Drought Initiative Emergency Moorings program, administered by DFW, and the Emergency Drought Dredging program, administered by the EPA, whereby the assessment process for development applications involving the extension and/or relocation of pumping infrastructure was fast tracked and fees were waived. This assisted communities and helped to facilitate continued access to River Murray water during the drought.
- The 2009 EPA Board amended the boundary of the River Murray Water Protection Area, proclaimed under the *Environment Protection Act 1993*, to be consistent with that of the River Murray Floodplain Area, proclaimed under the *River Murray Act 2003*. The realignment corrected anomalies where the River Murray Water Protection Area was slightly wider than the River Murray Floodplain Area in the upper reaches of the Murray but excluded a large part of

the Lower Lakes. The realignment means that all non complying development in the River Murray Water Protection Area now automatically falls within the River Murray Floodplain Area, thereby ensuring that the EPA has the power of direction for such developments.

The *River Murray Act 2003* has facilitated increased EPA input into planning decisions. The EPA receives referrals under Item 10 of Schedule 8 of the *Development Regulations 2008* relating to non-complying development and activities of environmental significance. When a referred development falls within the RMPA, the EPA must have regard to the Objects and ORMs of the *River Murray Act 2003* in its assessment, and has the power of direction. For the period 1 July 2008 to 30 June 2011, approximately 13 percent of all development applications referred to the EPA were development applications that fell within the RMPA under the *River Murray Act 2003*.

There is on-going cooperation between officers of the DFW and the EPA regarding compliance actions. For example, the EPA initiated a sand dumping campaign that has been actively supported by DFW. This coordinated program responded to increased instances of sand dumping by landholders on the riverbank during the drought. This practice had the potential to cause harm to the River and breach the *Environment Protection (Water Quality) Policy 2003*. EPA and DFW officers worked together to educate residents of the potentially harmful consequences of the practice and advise of legal obligations and penalties applicable for breaches.

## 6.7 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

Within the RMPA, there are three sites that have been nominated as 'Wetlands of International Importance' under the Ramsar Convention on Wetlands (Iran, 1971); the Riverland Ramsar Site, Banrock Station and the Coorong and Lakes Alexandrina and Albert Wetland. These sites support threatened species and communities, and migratory species protected under the *Environment Protection and Biodiversity Conservation Act 1999*.

In 2008, record low river flows to the CLLMM region occurred due to the drought and over-allocation across the MDB. This resulted in a range of environmental and community issues affecting the region, in addition to ongoing long-term issues. In particular, the water levels of Lake Alexandrina and Lake Albert fell to unprecedented levels, exposing thousands of hectares of actual and potential acid sulfate soils.

In order to manage or prevent the acidification risk, a number of projects were undertaken including the application of limestone to acid sulfate soils to help natural bioremediation and the installation of temporary flow regulators in the Goolwa Channel and the mouth of Currency Creek. Several of these projects required approval under the *Environment Protection and Biodiversity Conservation Act 1999* as the activities were deemed likely to have a significant impact on the sites. These activities also required relevant development approvals under the *Natural Resources Management Act 2004*, *River Murray Act 2003* or *Development Act 1993* and therefore were consistent with relevant principles of environmental and river management under this legislation.

The South Australian Government has developed a long-term plan for the CLLMM region with input from the local and indigenous communities, scientists, industry and government. This plan was completed in June 2010. It aims to secure a future for the region as a healthy, productive and resilient wetland system of international importance. The long-term plan for the CLLMM

region acknowledges the ORMs of the *River Murray Act 2003* as important guiding principles for managing the site.

A Management Plan for the Riverland Ramsar Site has been released for the management of the site between 2010-2015. This plan recognises that the Riverland Ramsar Site, as part of the MDB, is an area of great environmental and economic significance to South Australia and specifically commits to furthering the Objects of the *River Murray Act 2003* as a measure in protecting and managing the site.

## 6.8 FISHERIES MANAGEMENT ACT 2007

In the period 2008-11, 38 exemptions from the requirement for having a fisheries permit have been referred to the Minister for the River Murray. Applications have been for activities including removing carp, introducing exotic fingerlings for later capture, and scientific research on fish populations. In all cases, the Minister for the River Murray has assessed these activities against the River Murray Objects and ORMs and given support and input where relevant.

In addition, in the period 2008-11, PIRSA Fisheries consulted the Minister for the River Murray on approximately 62 occasions regarding fish related research projects to ensure they furthered the Objects and ORMs of the *River Murray Act 2003*.

During the drought and the period emerging from drought, there has been a significant amount of activity relating to fish management in the MDB.

- Relevant agencies have been working together through many non-statutory mechanisms such as the *Murray-Darling Basin Commission's Native Fish Strategy 2003-2013*. This strategy aims to ensure that viable fish communities and populations are sustained throughout the rivers of the MDB. It is now administered by the MDBA and an Implementation Working Group made up of MDB jurisdictions, including South Australia.
- A review of the Lakes and Coorong Fishery Management Plan was completed during 2009 to enable complementary management factors and performance indicators to be applied to minimise external impacts on fish stocks. A Ministerial exemption for the taking of fish for research purposes has been developed.
- PIRSA has undertaken ongoing research projects to monitor and investigate the impacts on fisheries and fish species during and after the drought. PIRSA is currently in the process of undertaking a review of the South Australian policy on stock enhancement, specifically for Murray Cod. This will assess the environmental risks and benefits with regard to stocking Murray Cod into the South Australian waters of the River Murray. After announcing closure of the Murray Cod fishery during 2010, PIRSA has opened a catch-and-release recreational fishing program from 1 January to July 31 2011 following extensive public consultation with the South Australian public.



## 6.9 HARBORS AND NAVIGATION ACT 1993

In the period 2008-11, 81 applications for aquatic licenses were referred. This is a significant increase from the previous 2005-08 reporting period where only 11 applications were referred. The increase is attributable to improved education and systems management, which has assisted marine safety officers to be aware of their obligations to refer applications to the Minister for the River Murray.

Activity licences referred included closing part of the river for special activities such as rowing, wakeboarding, water skiing and swimming competitions. The role of the Minister for the River Murray in the referral process is to provide education regarding relevant responsibilities to the organisers and the public for protecting the River Murray when undertaking these activities. The Minister for the River Murray aims to strike a balance between minimising negative impacts such as riverbank erosion while also taking into account the human dimension ORMs to facilitate long-established community events that are of benefit to the community and local economies.

The referral provisions are working satisfactorily. Opportunities to improve effectiveness and efficiencies are sought on an ongoing basis.

## 6.10 HERITAGE PLACES ACT 1993

Approximately 55 development applications relating to State heritage places and historic shipwrecks were referred to the Minister for the River Murray in the period 2008-11.

Reports from DENR indicate that the interaction between the two Acts is considered positive. It has resulted in increased awareness within Government and the community about protecting State heritage places.

The protection of heritage values is identified in the Implementation Strategy as one of the four priorities in achieving the Objects and ORMs of the *River Murray Act 2003*. The Minister for the River Murray released a Referral Assessment Policy Special Provision relating to Heritage during October 2008. This is designed to provide guidance to the Minister for the River Murray's delegates in assessing referrals relating to sites of heritage significance and provides specific principles relating to activities involving heritage sites, places or objects, as well as Aboriginal heritage.

The *Development Act 1993* enables councils to identify and list places of local heritage value in Development Plans. Heritage policies may also be introduced in Development Plans for both local and state heritage places and areas, and Councils must align with the goals of the Planning Strategy when formulating their development policies. Heritage values, including the identification and protection of places of heritage and cultural significance, are identified in plans such as the Murray and Mallee Region Plan, and align with principles of the *River Murray Act 2003* and its implementation strategy.

The Mid Murray Council has undertaken a heritage review of its Council area and is preparing an amendment to its Development Plan, including a list of places of local heritage value and policies to manage those places. The heritage review was completed in May 2009 and a Heritage DPA is currently being progressed.

## 6.11 HISTORIC SHIPWRECKS ACT 1981

Under the provisions of the *Development Act 1993*, developments within the River Murray Floodplain Area that are undertaken within 500 metres of a historic shipwreck are referred to the Minister for the River Murray. All developments that take place in or over the water are referred to the Heritage Branch of DENR who provide advice in relation to impacts on historic shipwrecks, as well as State heritage places. Approximately 55 development applications relating to State heritage places and historic shipwrecks were referred in the period 2008-11.

## 6.12 IRRIGATION ACT 2009

The *Irrigation Act 2009* replaced the *Irrigation Act 1994* and continues to require that an irrigation trust must not breach a duty or requirement under the *River Murray Act 2003*, in determining terms and conditions on the supply or drainage of water.

The *Irrigation Act 2009* was also amended to allow transparency in pricing and to facilitate water trade. Similar requirements and amendments also operate under the *Renmark Irrigation Trust Act 2009*.

Trusts are generally aware of their legislative responsibilities and contribute on an ongoing basis to projects that seek to further the Objects and ORMs of the *River Murray Act 2003*.

## 6.13 MINING ACT 1971

In the period 2008-11, 97 referrals were made pursuant to the *Mining Act 1971*, the majority of these being for exploration licences. Other applications were generally renewals of extractive mineral leases. PIRSA submits a report to the Minister for the River Murray for extractive mineral lease renewals confirming that the site has been visited and the operator has not breached licence conditions, which includes not having caused harm to the River Murray system.

## 6.14 MURRAY-DARLING BASIN ACT 2008

The *Murray-Darling Basin Act 2008* made amendments to the *River Murray Act 2003* when it came into operation.

These amendments gave the Minister for the River Murray powers to do anything necessary, expedient or incidental to furthering the Objects of the *Murray-Darling Basin Act 2008* or giving effect to the terms or requirements of the MDB Agreement.

## 6.15 NATIONAL PARKS AND WILDLIFE ACT 1972

To date, interaction between the two Acts has been limited to the Minister administering the *River Murray Act 2003* being consulted when a plan of management is being prepared for a reserve located within the MDB. In the period 2008-11, no such management plans have been referred for assessment against the Objects and ORMs of the *River Murray Act 2003*.

## 6.16 NATIVE VEGETATION ACT 1991

Through the one-stop-shop service, DFW seeks comments on relevant referred development applications from the Native Vegetation and Biodiversity Management Unit of DENR. From 2008 to 2011 approximately 30 percent of referrals to the Minister for the River Murray were sent to this unit for comment.

Where relevant, conditions or comments from DENR are included in the response from the Minister for the River Murray to the Planning Authority. These comments are passed on to the proponent and may include reference to obligations to consult with the Native Vegetation Council regarding requirements for formal approval. Applicants may also be encouraged to incorporate locally indigenous plant species into landscaping, screen planting or re-vegetation activities to enhance the natural character of the locality, stabilise soils and provide habitat for native species.

The Native Vegetation Council also refers development applications under the *Development Act 1993* and applications for clearance of vegetation under the *Native Vegetation Act 1991* to the Minister for the River Murray to assess against the Objects and ORMs of the *River Murray Act 2003*.

In 2009-10, the *Native Vegetation Regulations 2003* were reviewed and modified in order to implement new policies in relation to clearance for fire protection and the Minister for the River Murray provided comments to ensure that principles of the *River Murray Act 2003* were built into the amendments. This achieved integration of legislative regimes through requiring a fire management plan applying within the River Murray Protection (Floodplain) Area to be referred to the Minister for the River Murray before being approved by the Native Vegetation Council. A new requirement was also included in the Schedule of the Principles of Clearance of Native Vegetation, that vegetation should not be cleared if it would cause significant harm to the River Murray. In particular, prescribed native vegetation may not be cleared in prescribed circumstances in the 1956 floodplain of the River Murray, other than where the vegetation is within the area of a city or township. The Regulations also provide special protection status to River Red Gums.

## 6.17 NATURAL RESOURCES MANAGEMENT ACT 2004

A fact sheet *Water Licenses for Marinas, Canal Estates and Other Artificial Water Bodies* was released by the DFW in September 2008 to provide guidance regarding licensed water allocations, exemptions and the determination of volumes of allocated water for artificial water bodies. This followed a decision by the Minister for the River Murray that all new approved artificial water bodies that take water after 11 February 2008 would require a water licence under the *Natural Resources Management Act 2004*. The need for this policy was driven by involvement in large-scale development projects through the *River Murray Act 2003*.

The River Murray Water Allocation Plan was amended in 2009 to provide for unbundling of water rights, however, a new plan is currently in development and is expected to be released in 2014. A Concept Statement which will guide the development of the Water Allocation Plan was released and extensively consulted on during 2009. The plan will also be informed by the Basin Plan when completed, which will provide for the integrated and sustainable management of the River Murray in South Australia.

The Water Allocation Plan for the Marne Saunders Prescribed Water Resources Area was adopted in 2010 and includes innovative policies to ensure environmental water provisions are made, while balancing this with social and economic needs.

The EMLR Water Allocation Plan was developed in draft form and consultation commenced in 2011. This Water Allocation Plan builds on the lessons learned from the Marne Saunders plan to ensure sustainable water resource management for this large region. Comment was provided to ensure alignment with the *River Murray Act 2003*.

The Water Allocation Plan for the Peake Roby and Sherlock Prescribed Wells Area was adopted in 2011 and sets sustainable diversion limits for groundwater in this area.

The Water Allocation Plan for the Mallee Prescribed Wells Area was developed in draft form and consulted on during 2010. This plan provides for a move to volumetric allocations and alignment with the permissible annual volumes under the *Groundwater (Border Agreement) Act 1985*.

With the impact of low inflow conditions and protracted drought, River Murray water allocations were restricted from the period 2003-04 to 2009-10. The 2010-11 year saw the return to entitlement flow conditions, but full allocations could not be provided, because of carryover of allocations from the previous water use year.

Under the provisions of the *Development Act 1993*, development within the River Murray Floodplain Area, including an activity for which a permit would be required under the *Natural Resources Management Act 2004*, is referred to the Minister for the River Murray.

Development applications referred to the Minister for the River Murray are assessed to determine if they are located within a Branched Broomrape zone and applicants are made aware of the relevant protocols and provided with a free decontamination service. All applications that fall within the Branched Broomrape Containment Area are referred to Animal and Plant Control officers, with notes or conditions placed on the response. In the 2008-11 period, approximately 10-15 percent of such applications have been referred to Animal and Plant Control officers, resulting in the applicant being advised as to the serious threat to South Australian agriculture posed by Branched Broomrape.

Compliance officers administering powers under the *River Murray Act 2003* also administer powers under the *Natural Resource Management Act 2004* and support Natural Resource Management Boards in administering compliance powers.

## **6.18 PETROLEUM AND GEOTHERMAL ENERGY ACT 2000**

In the reporting period 2008-11, two relevant petroleum exploration licences have been granted and one statement of environmental objectives was renewed following referral to the Minister for the River Murray. *River Murray Act 2003* Objects and ORMS are further upheld as licensees are required to submit an annual report detailing how they have achieved the objectives of the statement of environmental objectives.

## 6.19 SOUTH EASTERN WATER CONSERVATION AND DRAINAGE ACT 1992

A proposed new Act, the draft *South East Drainage System Operations and Management Bill*, is currently being developed and consulted on to replace the *South Eastern Water Conservation and Drainage Act 1992* and the *Upper South East Dryland Salinity and Flood Management Act 2002*. It is expected that this will be introduced into Parliament in 2011-2012. The *South East Drainage System Operations and Management Bill* will assist in the future operation, management and maintenance of both the Upper South East and Lower South East drainage systems. This may promote river health in the RMPA by helping to address salinity and flooding issues and benefiting the region's valuable wetlands and agricultural productivity.

Provisions similar to those in the *South Eastern Water Conservation and Drainage Act 1992* will be enacted into the *South East Drainage System Operations and Management Bill* to promote compliance with the Objects and ORMs of the *River Murray Act 2003*.

## 6.20 WATER ACT 2007 (CTH)

The key feature of the *Water Act 2007* is the requirement for a new, five-member MDBA to prepare a basin-wide water management plan. The Basin Plan, a draft of which is due in the near future, will set long-term SDLs for all MDB water resources – surface water and groundwater – limiting the quantity of water that may be taken from those resources. *A Guide to the proposed Basin Plan* was released in 2010.

The Basin Plan will also include –

- an environmental watering plan (intended to safeguard existing environmental water, plan for recovering additional water, and coordinate the management of existing and new environmental water);
- a water quality and salinity management plan; and
- rules for trading water rights within the Basin.

The Plan as adopted by the Commonwealth Minister will be an enforceable legal instrument. All Basin States must give effect to the main elements of the Plan that includes the SDLs, environmental watering and water quality provisions and trading rules, through their own water management plans. State water management plans will be accredited by the Commonwealth Minister provided they are consistent with the Basin Plan.

The *River Murray Act 2003* provides the Minister for the River Murray with powers to do anything necessary, expedient or incidental to furthering the purposes of the Basin Plan under the *Water Act 2007* (Cth). This may include carrying out projects in relation to the River Murray (including projects that are relevant to the implementation or operation of the Basin Plan). This may also include entering into a contract, agreement or arrangement; acquiring or otherwise dealing with real or personal property; providing for the care, control, management, conservation or preservation of any land within the MDB; or acting in conjunction with any other person or authority.

The Basin Plan's SDLs will have a significant impact on determining the future long term health of the River Murray system and the quality and quantity of water that flows into South Australia.

It is possible that reforms in water resources management required under the new Basin Plan will lead to structural adjustment or new requirements within the South Australian MDB. The *River Murray Act 2003* may be the best mechanism to ensure that any adjustment process leads to sustainable outcomes for the River Murray.

## 6.21 WILDERNESS PROTECTION ACT 1992

The *Wilderness Protection Act 1992* provides for the protection of wilderness and the restoration of land to its condition before European colonisation. The *Wilderness Protection Act 1992* is not a related operational Act for the purposes of the *River Murray Act 2003*, however, the Act has complementary principles in terms of requiring a Wilderness Code of Management to be prepared to set out policies that should be implemented in the management of wilderness protection areas and zones. These provide for the preservation of wildlife and ecosystems, and Aboriginal sites and Aboriginal objects, amongst other things, that are complementary principles to the *River Murray Act 2003*.

While the Acts are not related as such, the *Wilderness Protection Act 1992* is administered correspondingly with the *National Parks and Wildlife Act 1972* which requires all reserve management plans within the MDB to promote the Objects and ORMs of the *River Murray Act 2003*.

DENR has committed to harmonising the management principles in wilderness management plans with the Objects and ORMs of the *River Murray Act 2003*. Pursuant to this, draft wilderness management plans prepared for Billiatt and Danggali Wilderness Protection Areas have had regard to the Objects and ORMs of the *River Murray Act 2003*.

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## 7 STATE OF RIVER MURRAY

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The River Murray is one of South Australia's most important water resources. It provides water for important regional irrigation and manufacturing industries, local communities that rely on those industries for their prosperity, water for the city of Adelaide, growing industries in the Barossa and Clare Valleys, and the northern regional centres of Whyalla, Port Augusta, Port Pirie and numerous small townships in between.

The River Murray is more than a source of water for consumptive use. It is the life source for a range of diverse environmental features whose survival depends on sufficient flows coming down the river at particular times of year. These features include the internationally significant Riverland and Coorong, Lakes Alexandrina and Albert Ramsar sites. The River is also of substantial cultural importance to Aboriginal and non-Aboriginal people.

The *River Murray Act 2003* is one of the key policy and legislative instruments that contributes to efforts to protect, restore and enhance the River Murray and its natural resources, as well as ensuring that the River and its natural resources are used and managed in a sustainable way. The *River Murray Act 2003* ORMs are aligned with and contribute to key targets for South Australia's Strategic Plan (SASP) and State Natural Resources Management Plan 2006.

A key target in SASP, to increase environmental flows by 500 GL in the River Murray by 2009 as a first step towards improving sustainability in the MDB, has been met during the reporting period, providing significant benefits for the health of the River Murray. As of 27 May 2011, an estimated total of 486 GL was recovered under TLM 'first step' measures. South Australia finalised its listing in 2009-2010 and was the first jurisdiction to secure its target of 35 GL. It has since exceeded its indicative share by providing an estimated 41.5 GL of environmental flows for the River Murray. This total volume has been acquired through purchases from willing sellers in South Australia and government owned licences.

The Minister for the River Murray is required under the *River Murray Act 2003* to provide an assessment of the state of the River Murray, taking into account the ORMs, every three years in the Triennial Review. This reporting requirement is distinct from the five yearly assessments of the state of the River Murray that are included in the State of the Environment Report, published five yearly by the EPA. The next of these reports will be published in 2013.

A general overview of the state of the River Murray (as defined in the *River Murray Act 2003*) during the period 2008-2011, taking into account the ORMs, is provided below based on current available information. It is difficult to isolate the extent to which the *River Murray Act 2003* specifically has contributed to restoring river health compared to a range of other efforts, as there are multiple interacting factors that affect the health of the River Murray. However, DFW intends to investigate over the coming year the possibility of developing performance indicators for the *River Murray Act 2003* to enable assessment of the contribution of the *River Murray Act 2003* to improving the health of the River Murray.

## 7.1 STATE OF THE RIVER MURRAY: TRENDS FOR 2008-2011

The state of the River Murray system has undergone significant change over the period 2008-2011. A severe drought impacted the system from 2008-2010, with reduced flows placing pressure on the River and the communities and natural resources dependent on it. Water allocations were substantially reduced, obtaining water for critical human water needs became a priority, local communities faced social and economic pressures and the environment was significantly impacted. Responding to these pressures was an important focus for the South Australian Government during this period.

In 2010-11, sustained higher rainfall in the upper catchments of the MDB, led to higher inflows into South Australia and the breaking of the drought. With these higher flows, the focus of the South Australian Government shifted from drought response to the management of high flow in the River Murray. By early 2011 these conditions resulted in the highest River Murray flow for about 18 years and returned much-needed life to the river and its ecosystems.

Whilst the higher inflows have been welcome, they have brought with them a series of challenges requiring management, including failure of levy banks and management of existing acid sulfate soils under higher river conditions. In addition, one good year of flow does not undo the years of damage caused by drought and the South Australian Government recognises that the health of the river depends on continuing its work on a number of programs aimed at reducing and managing salinity, protecting the environment, sensibly managing available water and diversifying the state's water sources.

## 7.2 SUMMARY OF THE STATE OF THE RIVER AGAINST THE ORMs

### 7.2.1 River Health Objectives

During 2008-2010, ongoing severe drought threatened the survival of plants and animals dependent on the River Murray and led to dire predictions about the future of the region's ecology. Evidence suggests that native ecosystem condition in the River Murray system is declining and is below the required level to sustain its purpose.

Monitoring undertaken during the drought, including during 2008-2010 showed decline in the presence and abundance of key native plants and animals, including many native fish species and the Southern Bell Frog. Monitoring undertaken by DENR of a sample of 45,000 fish in 2008 and 2009 found that the interplay of drought conditions and significant water use across the EMLR had serious impacts on fish communities and ecological assets.

Due to difficulties in access, monitoring activities since the drought have been limited. However, the monitoring that has taken place suggests that some plants and animals are responding to the increased inflows and are increasing in numbers and/or distribution. Other plants and animals, however, have not re-colonised areas and/or increased in abundance, suggesting that recovery to pre-drought communities may not occur, that multiple years of high water levels and flushing flows may be required and/or that other factors may be important in maintaining particular species within the landscape.



Despite the dire situation facing the River Murray during the drought, there were successes in efforts to prevent extinction and barriers to migration of species. In 2008 a population of more than 500 Murray Hardyhead in Boggy Creek on Hindmarsh Island was isolated as a result of drought conditions. Approximately 200 fish were removed and maintained in captivity before the site dried completely in February 2009. Half of these fish were released back to Boggy Creek in April 2009 after the site received environmental water through TLM Program. This watering intervention has resulted in a successful 2009-2010 breeding season.

Water recovered under TLM 'first step' measures was used to achieve ecological results at South Australian River Murray Icon sites including the Chowilla Floodplain and Lindsay-Wallpolla Islands site, the CLLMM site, and the River Murray Channel during the drought based on the relevant management plans for the sites. In particular, environmental flows were used for pumping into wetlands to provide vital flows to improve vegetation condition and provide a drought refuge for threatened species.

### **7.2.2 Environmental Flow Objectives**

In the 2010-11 water year, a large area of the MDB received its highest rainfall on record; rapidly reversing the extreme dry conditions experienced since 2003; with floods occurring in all major rivers and tributaries across the River Murray, Murrumbidgee, Barwon-Darling and southern Queensland catchments.

About 15,140 GL flowed into South Australia in 2010-11, which was the largest flow since 1975-76. All regulating structures (locks and weirs) were inundated downstream of Lock 15 resulting in a free flowing river down to the barrages. The high flow also resulted in a significant proportion of the floodplain being watered, providing water-dependent vegetation communities with the largest watering event in 35 years. Unregulated flow to South Australia commenced in early September 2010 and continues into 2011-12. Additional dilution flows are anticipated to continue until November 2011. The flow to South Australia peaked at 93 GL/day in mid February 2011.

Connectivity of environments in the River Murray system was severely affected during the drought. A number of wetlands connected at pool level to the River Murray were disconnected from the main channel of the River, and at the height of the drought, structures were installed in the Lower Lakes to disconnect Lake Albert from Lake Alexandrina, and to isolate Currency Creek and the Finnis River from Lake Alexandrina. The Murray Mouth was kept open only via dredging to maintain connectivity between the ocean and the Coorong. Environments within the River were maintained to the greatest extent possible within this disconnected state.

The higher inflow conditions during 2010-11 have generated greater benefits for the riverine environment than in the previous two years, when environmental water availability was limited. Approximately 170 GL of water was provided to the Lower Lakes from late 2009 to early 2010, fulfilling a commitment from the South Australian Government. These flows, together with improved system inflows, meant that work to re-connect Lake Albert to Lake Alexandrina, and the tributaries to Lake Alexandrina, could commence. Wetlands previously disconnected from the River Murray were gradually re-connected. Dredging of the Murray Mouth was halted for the first time since 2002 and water flowed over the barrages for the first time in three years. In a very brief time interval, the river in South Australia went from being a series of connected, and in some cases, disconnected pools, to a fully connected system.

### 7.2.3 Water Quality Objectives

During the drought years of 2008-2010, salinity levels below Lock 1 were high, with Lake Alexandrina recording salinity levels of 5700 EC and Lake Albert 16000 EC in February 2010. Salinity levels above Lock 1 were generally low, whilst salinity levels in the South Coorong remained very high.

Following the breaking of the drought, salinity levels below Lock 1 decreased rapidly, from 3500 EC in Lake Alexandrina and 12500 EC in Lake Albert by September 2010, to less than 500 EC in Lake Alexandrina and approximately 5500 EC in Lake Albert in spring 2011. Water levels and barrage releases are being managed to draw salinity out of Lake Albert.

The exposure of acid sulfate soils to air during the drought, and their subsequent inundation following higher flows has been, and continues to be, a significant management challenge along the River Murray in South Australia, particularly for the Lower Lakes and Tributaries area.

Flows recovered under the TLM 'first step' measures were provided for the Lower Lakes to respond to water quality challenges associated with salinity and acid sulfate soils. Regular monitoring of affected acid sulfate soils areas is continuing to minimise impacts on the River's ecology, and has shown that higher water levels have diluted previously acidic hotspots, so that pH levels are within Australia and New Zealand Environment and Conservation Council water quality guidelines (pH between 6.5 and 9). Despite this, some areas are still at risk around the lake margins and these continue to be monitored.

A key water quality concern during 2010-11 was a large blackwater event from upstream that affected the River and Lake Alexandrina from January-April 2011. Dissolved oxygen levels dropped to below 4mg/l, close to the 2mg/l level that poses a significant risk to fish and other organisms.

### 7.2.4 Human Dimension Objectives

Whilst the River health, environmental flow and water quality ORMs relate specifically to the state of the River Murray, the human dimension ORMs relate to the ways in which the South Australian Government and community facilitate a healthy River Murray (as per the broad definition included in the *River Murray Act 2003*) and communicate progress in achieving this, as well as the policy and legal frameworks implemented to achieve a healthy River.

A wide range of initiatives to facilitate a healthy River Murray have been progressed by the South Australian Government over the period 2008-2011. These initiatives have been undertaken at all levels of Government and have included:

- providing a comprehensive response to *the Guide to the proposed Basin Plan*, released by the MDBA in 2010;
- supporting the Goyder Institute in the recent release of a report detailing the implications of the three environmental water recovery scenarios posed in the *Guide to the proposed Basin Plan*, and providing a copy of the report to the Australian Government to inform the Basin Plan;
- developing and utilising a Water Allocation Decision Framework to optimise the allocation and use of River Murray water as it becomes available to South Australia. The framework supports the long-term sustainability and viability of South Australian communities reliant on the River Murray for critical human water needs, irrigation and industrial use, and was particularly important during the recent drought, when limited water was available;

- undertaking, in conjunction with local communities, two large projects to improve riverine health from the South Australian border to the Murray Mouth. The Riverine Recovery project applies to the river and its environs from the South Australian border to Wellington, whilst the CLLMM project is centred on the Coorong and Lakes Alexandrina and Albert Ramsar wetland. Monitoring activities undertaken as part of these projects will provide a large body of information in future years on the health of the River Murray in South Australia;
- engaging with the indigenous community on a wide range of projects and issues, including the CLLMM Project, and the Working on Country Program;
- ensuring the safety of the community through notifying the community of the dangers associated with acid sulfate soils, the collapse of banks along the river, and of high water levels. Information has been primarily disseminated through internet and email networks, as well as meetings with interested community and stakeholder groups;
- providing support to community groups, including 11 Local Action Planning Groups and Friends of Parks groups and to community projects, such as Community Wetland Monitoring. Working with these community volunteers establishes collaborative working relationships and promotes the health and proper management of the River Murray system by harnessing and promoting the community's knowledge and understanding of the system;
- working to ensure that management of the river is adaptive and informed by the best available science; and
- delivery of a range of education programs, such as the WaterWise Communities program.

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## 8 KEY FINDINGS AND RECOMMENDATIONS OF THE IMPLEMENTATION STRATEGY REVIEW

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A review of the *River Murray Act 2003 Implementation Strategy* (the Implementation Strategy) was undertaken in 2010-11. This section summarises the key findings and recommendations from that review.

The review used a number of sources of information:

- an analysis of key developments, plans, policies and strategies introduced for the River Murray since 2006 that have influenced the priorities and focus for implementation of the *River Murray Act 2003*;
- an internal DFW review of key learnings from the five years of *River Murray Act 2003* policy development and administration; and
- feedback from stakeholder consultation.

Consultation on the review of the Implementation Strategy took place between April and May 2011. Various consultation methods were used to promote the review and seek written and verbal input from key stakeholders and the public. These include:

- letters to key stakeholders inviting them to have input by completing a questionnaire;
- workshops with targeted stakeholders to discuss issues relevant to the review;
- online consultation page and survey on the Water for Good website ([www.waterforgood.sa.gov.au](http://www.waterforgood.sa.gov.au));
- emails sent to a subscriber list and other known stakeholders to promote the survey and invite responses via the DFW Consultation mailbox; and
- presentations at key stakeholder forums to promote the review, provide background information on the Implementation Strategy, and invite input through the online survey.

A total of 37 questionnaires, survey responses and other comments were received and 14 agencies participated in workshops conducted in Adelaide, Murray Bridge and Berri. Overall, over 100 stakeholder groups were targeted for consultation including prescribed bodies under the *River Murray Regulations 2003*.<sup>2</sup>

### 8.1 KEY ACHIEVEMENTS OF THE RIVER MURRAY ACT 2003

Input and information was analysed to identify key achievements relating to the administration of the *River Murray Act 2003* and its Implementation Strategy. These comprise powers and functions of the Act that are performing well and achieving outcomes for the River Murray.

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<sup>2</sup> Regulation 5 prescribes bodies for consultation which are the Local Government Association of South Australia; the Murray and Mallee Local Government Association; the Southern Hills LGA; the SA MDB regional NRM Board; the Aboriginal Heritage Committee established under the Aboriginal Heritage Act 1988; and the Aboriginal Legal Rights Movement.

### 8.1.1 Awareness Raising

The referral process under the *River Murray Act 2003* has helped to raise the awareness of developers and planning organisations of environmental issues and legal obligations to minimise potential adverse effects of developments and other activities on the River. This arises through the Minister for the River Murray's power of direction to refuse or amend proposals to minimise harm to the River Murray. It also arises through the provision of comments and notes on development approvals which advise of legal obligations and approval requirements under other related operational Acts that are raised by agencies through the one-stop-shop service.

Community awareness of River Murray protection issues has been raised through education campaigns undertaken by investigations officers under the *River Murray Act 2003* and through interagency programs, particularly during the drought. Investigations officers have been instrumental in promoting community education of the duty of care requirements under the *River Murray Act 2003* and in acting as a conduit between community and development planning agencies to manage issues affecting the River. Awareness raising has also occurred through individual site visits and negotiations with residents, the delivery of public meetings and the provision of best practice information to respond to challenges associated with drought.

Joint and complementary programs between DFW and other agencies such as the EPA have helped to raise public awareness of negative impacts associated with sand dumping and to facilitate community access to water through the Emergency Drought dredging program.

### 8.1.2 Special protection for the River Murray

The *River Murray Act 2003* provides special protection for the River Murray through its broad definition of the River Murray and its natural resources, and through the wide scope of its Objects and ORMs. This capacity, supported by the referral function of the Minister for the River Murray, helps to regulate developments and activities affecting the River so as to minimise potential harm. In particular, these functions of the *River Murray Act 2003* have achieved special protection for the River Murray through:

- Regulating activities and environmental issues that fall outside the scope of other Acts, such as protecting amenity and State and cultural heritage values, in development planning processes; and
- Promoting policy outcomes as a result of referral assessments and the Minister for the River Murray's power of direction. Some primary examples are managing the water resource impacts of plantation forests, accounting for the filling and evaporative losses from artificial water bodies, which resulted in the development of the *Fact Sheet: Water licences for marinas, canal estates and other artificial water bodies*, and preventing pollution entering waterways as a consequence of mining activities, which resulted in the development of the EPA's *Guideline for Tailings and Tailings Storage Facilities*.

The compliance and enforcement functions of the *River Murray Act 2003* have also helped to identify and respond to instances of harm and provide special protection to the River through the patrol ability and responding to complaints.

### 8.1.3 Adding efficiency and value to the development planning process

The operation of the one-stop-shop service has added value and created efficient development planning processes for planning authorities. This occurs where input from multiple agencies is sought and provided to the relevant planning agency through one referral process to the

Minister for the River Murray. The work of DFW delegates of the Minister for the River Murray was commended in developing networks and expanding the scope of the one-stop-shop service so that it includes a comprehensive range of policy and legislative requirements from relevant agencies which are included in detailed responses.

#### **8.1.4 Implementation of legislative and policy regimes**

The referral process has achieved interagency coordination of development planning in the River Murray and has promoted integrated and consistent policies, programs and regulatory frameworks as they relate to the River Murray. Statutory instruments such as Council DPAs, regional plans and planning strategies have been assessed and amended to align with the *River Murray Act 2003* Objects and ORMs.

Legislation and other regulatory arrangements have also been assessed to ensure administrative consistency and coordination in the application of principles relating to the River Murray. For example, the regulatory boundary of the River Murray Water Protection Area proclaimed under the *Environment Protection Act 1993* was amended to be consistent with the River Murray Protection (Floodplain) Area, resulting in one common boundary for development and planning agencies to apply when making referrals. Integration of regulatory frameworks is supported by interagency networks and coordinated programs supported through the *River Murray Act 2003*.

## **8.2 OPPORTUNITIES FOR IMPROVEMENT**

Despite these achievements, several opportunities for improvement were recognised in relation to the *River Murray Act 2003* and its Implementation Strategy. These opportunities have been used to devise recommendations for the future improvement of the Act and Implementation Strategy.

#### **8.2.1 More policy guidance and information resources needed**

Respondents desired the provision of best practice guidelines to councils and applicants. These guidelines would provide development standards or principles to comply with the requirements of the *River Murray Act 2003* for certain minor structures and standard developments, managing vessel impacts, water quality issues, and for activities affecting land and the riverbank. This information would help to raise awareness as to how to minimise detrimental impacts of certain developments and help developers effectively plan proposals, thus minimising cost and effort in development planning processes.

Agencies requested more specific criteria or indicators for achieving the Objects and ORMs as these could be incorporated into their plans and policies to provide direction and measure achievements. The *River Murray Act 2003* Annual report has also been identified as an opportunity to set an annual plan for the achievement of priorities and strategies of the Implementation Strategy and report against these indicators to ensure longer term targets and measurable outcomes are achieved.

#### **8.2.2 Opportunities to streamline referrals**

Respondents were supportive of proposals to exempt specific areas such as townships and remove certain triggers for referral where little value is added or appropriate protection for the River is in place through other processes. These initiatives are being pursued through the South Australian Planning Review.

Respondents also supported the review of the exemption for referrals for outbuildings and sheds as the criteria in terms of size, appearance and siting were seen to be too onerous in light of the needs of many rural properties.

Further opportunities to streamline referrals were linked to the provision of additional policy guidance to planning authorities and applicants regarding certain minor or standard developments. Respondents highlighted that, due to red tape faced in relation to gaining approval for certain minor structures, some applicants had chosen to pursue development without the necessary development approvals. This highlights the need to make application processes more accessible and user-friendly. The provision of additional policy guidance may help to increase complying developments, thus removing the need for referral in some cases where criteria are satisfied. In turn, this would help to minimise cumulative impacts and target referral assessments to high risk matters.

### **8.2.3 Compliance and enforcement effort**

Respondents were supportive of greater clarification and guidance being provided in relation to the hierarchy of powers and division of responsibilities between different Acts and agencies administering compliance and enforcement powers under different legislation. Issues have arisen due to powers being administered simultaneously by DFW, the EPA, NRM Boards and Local Councils under their respective Acts. The integrative functions of the *River Murray Act 2003* may make it an appropriate mechanism to coordinate and clarify these issues.

Respondents voiced concerns regarding the reduction in compliance staff following drought recovery as these officers are seen to play a vital role in educating residents, identifying and notifying councils of incidents, and working to negotiate suitable outcomes. Agencies showed a great capacity to work collaboratively to achieve significant outcomes during the drought and it is important that the momentum resulting from the drought in terms of integrated, coordinated and effective delivery is not lost. The enhancement of the patrol ability specifically focussed on river issues was supported for compliance purposes.

## **8.3 ASSESSMENT OF PRIORITIES AND STRATEGIES**

The current priorities of the Implementation Strategy were assessed to identify if they are reflective of current and projected future threats to the sustainable use and management of the River Murray. There were 177 relevant comments received from survey and questionnaire responses and from input from workshops. While water quality remained a high priority issue for respondents, other priority areas (abate the clearance of native vegetation, achieve an environmental flow regime, and conserving and protecting heritage values) were ranked as lower concerns or identified to be primarily regulated through other regulatory arrangements.

The key issues raised by respondents in order of priority were:

- development issues and practices - 24 percent of respondents raised concerns such as illegal development, replacement dwellings, riverfront development, irrigation and farming practices, and amenity values.
- water quality issues - 14 percent of respondents raised concerns such as managing salinity, wastewater, stormwater runoff, and pollution.

- sustainability, climate variability and drought legacy issues - 11 percent of respondents raised concerns such as managing future flood and drought events, variable water levels and water availability in the future, potential flow on effects to regional communities and economies, the need for structural adjustment, and accurate data to plan effectively.
- erosion and bank stability – 9 percent of respondents raised concerns such as river bank collapse and damage to river banks from recreational activities.

Although several respondents identified that the current priorities of the Implementation Strategy were not their primary concerns, any revision of the priorities of the Implementation Strategy should not only reflect key threats and emerging issues facing the river, but also align with the powers and functions of the *River Murray Act 2003* and particularly, its role in regulating issues that are not regulated by other legislation. This input will be used to revise priorities for the new Implementation Strategy, to be developed during 2012.

Current and emerging key plans and programs were noted which may guide and present opportunities to align the policy direction of the *River Murray Act 2003* and influence its priorities. The Basin Plan will be a crucial vehicle to progress the Objects and ORMs of the *River Murray Act 2003*, and the *River Murray Act 2003* may be a key instrument for implementing structural adjustment and managing infrastructure that could be triggered by the Basin Plan. The review of the State NRM Plan 2006 and River Murray Water Allocation Plan present opportunities to align with the Implementation Strategy to further best practice natural resource management. Programs such as *Water for the Future* and *Tackling Climate Change: South Australia's Greenhouse Strategy (2007-2020)* are also relevant in achieving the Objects and ORMs of the *River Murray Act 2003* and help to manage key threats facing the River Murray.

The strategies were also reviewed to see that they align with the powers and functions of the *River Murray Act 2003*. While most strategies have been utilised to achieve priority outcomes, some strategies have had limited use, for example:

- management agreements under the *River Murray Act 2003*
- referrals under other relevant operational Acts.

These will be discussed further in Section 9.

In addition, the review found that the policy outcomes against some of the strategies are now outdated, for example the water recovery targets under the TLM initiative have now been achieved and therefore the outcome no longer provides guidance for implementation. There is also room to clarify certain strategies to link them to measurable outcomes. These improvements will be pursued in the development of the new Implementation Strategy.

## 8.4 THE RECOMMENDATIONS OF THE IMPLEMENTATION STRATEGY REVIEW

1. Develop a new Implementation Strategy in light of the findings of the review in 2012. This could include an assessment of the:
  - Priorities in light of an analysis of the key threats and emerging issues; and
  - Strategies to represent key powers and functions utilised under the *River Murray Act 2003*.



2. Consider inclusion of specific measurable outcomes and key performance indicators in the new Implementation Strategy.
3. Assess the potential to implement new initiatives and reforms based on findings of the review.
4. Assess the potential to cease or reduce current initiatives or programs that are assessed as adding limited value.

The recommendations for implementation and revision of initiatives under the *River Murray Act 2003* are based on the opportunities for improvement highlighted above. Section 9 of this report regarding the review of powers and functions of the *River Murray Act 2003* also contains some relevant investigation of potential initiatives under the *River Murray Act 2003*. Some key recommendations were to investigate:

- Opportunities to activate unused or under-utilised powers of the *River Murray Act 2003*, such as regulation of specific activities;
- Alignment of the use of powers with emerging initiatives and challenges such as the Basin Plan, variable climate conditions, and infrastructure management;
- Opportunities to achieve greater streamlining of the referral process through the provision of more policy guidance to planners and applicants in relation to minor structures and the exemption or removal of referral triggers;
- Providing criteria relating to what constitutes a healthy River Murray and indicators to gauge the achievement of the Objects and ORMs of the Act and the priorities and strategies of the Implementation Strategy; and
- Reviewing the existing patrol capability, procedures and other compliance activities under the *River Murray Act 2003*, with a focus on negotiation and providing education.

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## 9 REVIEW OF THE ACT

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### 9.1 CONTEXT AND SCOPE FOR LEGISLATIVE REVIEW

The 2010-11 reporting period presented a unique opportunity to undertake a substantial review of the *River Murray Act 2003* due to the Implementation Strategy review, Triennial Review and Annual Report falling in the same period. As a part of the review, initiatives to activate or align key powers of the *River Murray Act 2003* were investigated and assessed. Initiatives were identified through preliminary research and evaluation of the performance of the *River Murray Act 2003*. Respondents to the questionnaire and survey (see section 8) were also asked to respond to questions relating to the powers and functions of *River Murray Act 2003* to inform this legislative review.

The referral and compliance mechanisms of the *River Murray Act 2003* are the primary areas where powers have been utilised, and protection and enhancement of the River achieved. The preliminary investigation also identified that there are other powers and functions of *River Murray Act 2003* that have been unused or under-utilised in light of the original intention of *River Murray Act 2003* when it passed through Parliament. The investigation identified that there are opportunities to strengthen the protection and enhancement of the River Murray through the activation or alignment of powers where valuable outcomes could be achieved. This is further discussed in section 9.2.

The overlap of the *River Murray Act 2003* with other relevant legislation also must be weighed into any assessment of activating or aligning powers. Acts such as the *Natural Resources Management Act 2004* and the *Environment Protection Act 1993* are similar in terms of their powers and functions as they relate to the River Murray in managing natural resources and promoting the principles of ecologically sustainable development. In light of this overlap, there are some instances where the powers and functions of the *River Murray Act 2003* have been sufficiently addressed under other Acts, thus negating the need to activate such powers under the *River Murray Act 2003*. Where overlap of powers and functions currently operate under both Acts, there may be opportunities to align and streamline effort. Where remaining opportunities to activate powers are identified under *River Murray Act 2003*, an assessment of the best mechanism to undertake this in terms of the regulatory alternatives, resources and desired outcomes will be required.

Options to integrate the *River Murray Act 2003* into other legislation were considered, particularly in light of the current review of the *Natural Resources Management Act 2004*. This option has not been further pursued for several reasons including that:

- The *River Murray Act 2003* provides special protection and gives legislative recognition to the importance of the River Murray for South Australia. The broad definition of the River Murray and its natural resources contained in the *River Murray Act 2003* is a precedent for a number of other Acts and helps to regulate matters that may not be regulated through other Acts; and
- The *River Murray Act 2003* has a distinctive function of regulating development and other activities affecting the River Murray, and integrates and creates efficiency in the development planning system through the referral and one-stop-shop service.

## 9.2 REVIEW OF POWERS AND FUNCTIONS OF THE RIVER MURRAY ACT 2003

In light of the context and scope for legislative review and as a result of the review of the Implementation Strategy, a number of initiatives have been identified to improve the administration of the *River Murray Act 2003* and achieve positive outcomes for the River Murray. Many of these initiatives require further investigation to determine the capacity, value and scope for implementation.

Respondents were asked which powers and functions of the *River Murray Act 2003* they considered to have the potential to be the most effective in addressing priority challenges for the River Murray including:

1. Imposing conditions on statutory authorisations such as development, licence and permit applications (including refusal of the application);
2. Providing input into development plans and/or other agencies' policies;
3. Issuing protection or reparation orders, or restraining orders to prevent activities that will or have the potential to cause harm to the River Murray;
4. Negotiating with landowners to secure compliance or protect against harm;
5. Undertaking education and awareness raising activities;
6. Issuing policies, guidelines and factsheets;
7. Entering management agreements with landowners to require activities to be undertaken in a specified way, or require water or other natural resources of the river to be managed in a specified way;
8. Using bonds to insure against any harm caused to the river by certain activities;
9. Requiring landowners to off-set any harmful impacts of their activities;
10. Prohibiting or restricting specified activities in the RMPAs;
11. Prescribing requirements or conditions on specified activities in the RMPAs; and
12. Designating the RMPAs for different purposes or for purposes under other Acts.

The majority of powers and functions were seen to be effective in addressing priority challenges for the River Murray. Some powers and functions that have not yet been activated received less support from respondents, because there is no proof of their effectiveness, such as offsets and bonds to insure against harm to the River Murray as a result of activities. Other powers and functions that are currently not utilised received a high level of support, and were considered to have good potential, in particular management agreements, and restricting, prohibiting or regulating activities.

### 9.2.1 Currently Administered Powers

Currently administered powers have been subject to review pursuant to the review of the Implementation Strategy and recommendations have been given as to potential improvements and initiatives. Initiatives such as providing additional policy guidance for certain minor structures and standard developments, introducing exemptions, and providing criteria and indicators for a healthy River Murray and the achievement of the Objects and ORMs of the *River*

*Murray Act 2003*, while being identified on a general level, require further investigation to determine project parameters. Performing a review of compliance powers under the *River Murray Act 2003* and other Acts will require assessment of powers and significant consultation and engagement with agencies to clarify roles and responsibilities and to develop an agreement or guidelines.

DFW will engage stakeholders who provided input in relation to the proposed initiatives to clarify priorities for policy guidance, indicator development and alignment of compliance powers. Relevant issues investigated as a part of the Implementation Strategy review such as sustainability, climate variability and drought legacy issues, and emerging policy drivers such as the Basin Plan will also be taken into account. These initiatives will be further consulted on before they are formalised to ensure they meet the needs of stakeholders.

## **9.2.2 Opportunities to Align, Streamline and Activate Powers**

### ***Management Agreements***

Management agreements are provided for under section 18 of the *River Murray Act 2003* and are included as a mechanism to achieve the Strategy 5.3 “Undertaking or Promoting Programs” in the Implementation Strategy. Agencies that administer management agreements were specifically asked whether this is a useful regulatory mechanism and whether they felt that greater use of this mechanism under the *River Murray Act 2003* could lead to beneficial outcomes or duplicate mechanisms under other Acts. Provisions for management or similar agreements currently operate under the *Development Act 1993*, *Native Vegetation Act 1991*, *Environment Protection Act 1993*, *Heritage Places Act 1993* and *Natural Resources Management Act 2004*.

All agencies that provided feedback in relation to management agreements indicated that they are a useful regulatory mechanism and have been successful in managing development activities and helping to preserve environmental and heritage values. Certain administrative issues were noted however such as the need for certainty in their terms and tenure, the need for consistency with other plans and policies, resource costs and the need for enforcement. Given the use of management agreements under various Acts and for different purposes, there was no specific call for greater use of this power under the *River Murray Act 2003*. Given the “safety net” role of the *River Murray Act 2003* however, the option to use management agreements should remain where the *River Murray Act 2003* can help to regulate matters that cannot be regulated through other mechanisms.

### ***Regulation of Activities within the RMPAs***

The regulation of specific activities within the RMPAs has not yet been undertaken under the *River Murray Act 2003* except through the individual assessment of referrals and the compliance functions of *River Murray Act 2003*. All respondents to the Implementation Strategy review felt that the RMPAs target the priority areas and activities for the River Murray. There are broader general powers to prohibit or restrict specified activities, prescribe requirements or conditions on specified activities or to designate the RMPAs for different purposes or for purposes under other Acts. These powers may help to target, prioritise and regulate activities that cause harm and in turn, help to streamline referral processes. These powers could be administered through the creation of new regulations under the *River Murray Regulations 2003* or pursuant to sections 4 and 22 of the *River Murray Act 2003* relating to the designation of the RMPAs and

development of policies relating to assessment of statutory authorisations respectively. Respondents to the Implementation Strategy review indicated general support for the use of these powers under *River Murray Act 2003*.

The RMPAs span a large area with no distinction provided between the degrees of environmental risk or protection needs for specific areas. The result is that all relevant referrals within the RMPAs are referred to the Minister for the River Murray regardless of the scale or magnitude of the development or vulnerability of the development site, with a few exceptions as a result of exemptions. While protection of the Tributary areas is important to protect flows running into the River Murray, the protection priorities relating to development along a small creek may differ from those adjacent to the river bank. Similarly, while the 1956 floodplain level provides an important precedent for the protection area, there are sites within this zone such as cliffs, escarpments and other slopes that lie above the flood level and do not face the same risks as potential inundation areas. Some potential revision and refinement of the RMPAs may be worthwhile to target the referral and regulation effort to high risk areas and to identify situations where risks and protection priorities are less significant or manageable in alternative ways. In this way vulnerable sites may have enhanced levels of protection than other sites through the prohibition of certain activities and requirement for certain types of development to be assessed.

There are many options for the use of powers under *River Murray Act 2003* ranging from regulating minor and standard developments, to prohibiting existing and new activities in designated areas within the RMPA.

Powers to prohibit or regulate access to sites may be particularly useful in managing risks associated with riverbank collapse along the river. There are significant public health and safety issues associated with river bank collapse and the need to prevent access to dangerous sites. Also future development may need to be prevented or controlled in dangerous sites. Management agreements may also be a useful regulatory mechanism in this regard.

One model used in other jurisdictions that could be applied within the RMPAs involves the identification and classification of river management areas. Management areas could then be declared with general requirements for each class. For example, the management area classes could include a high preservation area, preservation area, floodplain management area, designated urban area, and nominated waterways. Once a management area is declared, certain types of new development and other activities within the River catchment and its major tributaries will be prohibited while other types must be assessed against rules for development. The rules for development would be aimed at achieving outcomes that minimise the negative impacts of development activities on the natural values of the management area.

Currently, there are specific guidelines and policies for assessment of development and other activity referrals under the *River Murray Act 2003*. The River Murray Referral Assessment Policy – Overview and General Provisions and the Neutral and Beneficial Effects Guidelines provide the neutral or beneficial effect test which requires a proponent to demonstrate that each potential impact of a proposed activity will have a neutral or beneficial effect on the River Murray. They also set out matters that should be considered in assessing the impact that an activity or the implementation of a statutory policy has on the River. Specific activities and areas have policies to guide referral assessment such as coasts, heritage, wetlands and floodplains and aquaculture.

Providing guidelines for specific developments or activities has caused challenges under the *River Murray Act 2003* due to difficulties in formulating catch all provisions applicable to all types of

development or activity. The referral exemption for sheds and outbuildings demonstrates this as feedback from the Implementation Strategy review consultation indicated that the criteria is too onerous, and often referrals occur due to the development proposal falling outside these. Some supplement to the policy framework may be worthwhile to provide proponents with guidance on required outcomes from specific activities to minimise negative impacts rather than specifications for compliance. This guidance could be supplemented by best practice guidance for certain high risk or standard types of development and activities.

Regulation of existing activities will need careful consideration and a targeted approach. The potential exists in the *River Murray Act 2003* and consultation indicates support for activation of such powers. The lessons learned from the referral process can assist in designing fit for purpose policies for high risk activities.

### ***Referrals from other related operational Acts***

While the mechanism exists under most of the related operational Acts to enact regulations to ensure specific approvals or plans under that Act are referred to the Minister for the River Murray, very few have been enacted. Feedback indicates that the one-stop-shop mechanism, where DFW refers development applications to administrators of the other Acts is considered valuable and ensures sufficient streamlining and alignment with the *River Murray Act 2003* Objects and ORMs. The activation of referrals from other Acts to the Minister for the River Murray is not considered to add sufficient value.

### ***Bonds and Off-sets***

There are various mechanisms within the *River Murray Act 2003* including authorised officer powers, policies or regulations to take bonds or require landowners to offset any harmful impacts of activities. The value of these provisions is that they can provide protection to the River Murray by providing mechanisms to remedy harm as a result of a development or other activities. Consultation input from the Implementation Strategy review indicated that use of these powers were the least supported options out of the powers listed above, however, 55 percent of recipients still indicated that they thought these powers would be effective in addressing priority challenges for the River Murray.

Preliminary work to investigate the development of an offset policy under the *River Murray Act 2003* was undertaken during 2008 but was not progressed further due to the changing focus of priorities during the drought. Offsets policies or procedures have been implemented or are in development in Queensland, Northern Territory, Western Australia, New South Wales, Victoria and at the Commonwealth level. It is a contemporary strategy for achieving a balance between social, economic and environmental needs and may be a useful mechanism in regulating activities.

### ***Other Statutory Matters***

The Implementation Strategy consultation process has highlighted that some revision of the prescribed bodies for consultation under the *River Murray Regulations 2003* is needed. In particular, since the *River Murray Regulations 2003* came into effect, South Australian Native Title Services has separated from the Aboriginal Legal Rights Movement and is now the relevant body to consult with. Other consultation bodies may also wish to reconsider their consultation responsibilities or whether other bodies are now more relevant to perform this function.

The reporting obligations of the *River Murray Act 2003* overlap with other statutory requirements and some review of the most suitable and efficient reporting mechanism is recommended. The *River Murray Act 2003* amended the *Environment Protection Act 1993* so that the *State of the Environment* report now includes a specific assessment of the State of the River Murray, especially taking into account the ORMs. The Triennial Review required under section 11 of the *River Murray Act 2003* also requires an assessment of the state of the River Murray, especially taking into account the ORMs. While the *State of the Environment* report is required five-yearly, the report under the *River Murray Act 2003* is required every three years. There is a clear overlap in the content in these reports and the timeframes for reporting have given rise to difficulties in aligning and streamlining the reporting. It is proposed that this duplication of reporting be revised and delegated to one agency.

Duplication in reporting also occurs between the Save the River Murray Fund annual report and the *River Murray Act 2003* annual report. Both report on key achievements of a number of projects and programs that further the achievement of the ORMs, and all of the programs funded by the Save the River Murray Fund will contribute to achievement of the ORMs. Within DFW, processes and procedures are being put in place to streamline processes as much as possible.

### **9.2.3 Conclusions**

The legislative review has highlighted a number of conclusions and potential initiatives which will be subject to further investigation to determine the capacity, value and scope for implementation.

- The option of use of management agreements will be preserved in the *River Murray Act 2003* as a safety net measure, recognising that it is unlikely to be used extensively.
- Refinement of the referral system and the RMPAs, as well as development of policies for proposed and existing activities will be further considered.
- Referrals from other related operational Acts are unlikely to be activated in the near future, as the mechanisms of the one-stop-shop provide sufficient alignment between the River Murray Act 2003 and the related operational Acts.
- The use of offsets and bonds will be further explored in light of the successful use of these types of powers elsewhere in Australia.
- Revision of the prescribed bodies for consultation under the *River Murray Regulations 2003* may be investigated if the opportunity arises in consultation with relevant bodies.
- There will be continued effort to further streamline reporting, recognising that there is an inherent duplication in reporting requirements between the *River Murray Act 2003* and other legislation.

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## 10 DRIVERS FOR SETTING NEW DIRECTIONS

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The context for management of the River Murray is constantly evolving and a number of major changes have occurred in the triennial review period 2008-2011 and/or are currently in development, providing future drivers for change.

### 10.1 DROUGHT AND CLIMATE VARIABILITY

As outlined in Section 7 of this report regarding the State of the River Murray, an unprecedented period of low rainfall and low flow affected the MDB in the period 2008 to 2010. In 2010-11, sustained higher rainfall in the upper catchments of the MDB, led to higher inflows into South Australia and the breaking of the drought. These variable conditions have had a significant impact on how the *River Murray Act 2003* was administered and have changed the focus of its implementation.

The drought resulted in the need for specific programs to prevent irreversible damage to ecological processes such as vegetation patterns and native species reproduction, and posed major challenges for environmental flows and water quality programs. Combined with the Global Financial Crisis, the drought undoubtedly had a major impact on the level and rate of development in the region.

The period of higher inflows has brought some welcome relief, however, poses a new series of challenges requiring management, including failure of levy banks and management of existing acid sulfate soils under higher river conditions. There is also a significant way to go in undoing the years of damage caused by drought which will require the South Australian Government's continued commitment to programs and regulatory frameworks focussed on River Murray management.

These recent experiences of climatic variability raise important questions of how the South Australian MDB area will respond to a future with variable water levels and potentially less water for consumptive use, both in terms of potential reductions in water availability as a result of climate change and also as a result of the SDLs under the Basin Plan. Development of a new operating context that addresses the climatic variability of the MDB needs to draw on these experiences and be built into the future implementation of the *River Murray Act 2003*.

### 10.2 WATER ACT 2007 AND THE BASIN PLAN

The *Water Act 2007* (Cth) sets out the broad framework for the management of South Australia's water resources within the MDB and is central to all work relating to the River Murray within the State. It established the MDBA, which was tasked with developing the Basin Plan, a draft of which is due for release in the near future. A *Guide to the proposed Basin Plan* was released in 2010.

The Basin Plan will incorporate both an Environmental Watering Plan, to ensure that the best use is made of water available for environmental purposes, and a Water Quality and Salinity Management Plan, that will set water quality and salinity objectives for the MDB. The SDLs will set limits on the quantities of surface water and groundwater that can be taken from the Basin



water resources and have a significant impact on determining the future long term health of the River Murray system and the quality and quantity of water that flows into South Australia.

The framework that evolves from the Basin Plan may necessitate changes to the *River Murray Act 2003* and associated documents such as the Implementation Strategy in the future. It is possible that reforms in water resources management required under the new Basin Plan will lead to structural adjustment within the South Australian MDB. The *River Murray Act 2003* and its integrated approach to assessing development activities and plans may be the best mechanism to ensure that these changes deliver sustainable outcomes for the River Murray system.

## 10.3 THE STATE PLANNING REVIEW

In June 2008 the Minister for Urban Development and Planning released the *Final Report of the Planning and Development Review Steering Committee*. This report reviewed South Australia's planning system and made a number of recommendations including to reduce referrals under Schedule 8 of the *Development Regulations 2008* by 35 percent. As Schedule 8 contains several referral triggers to the Minister for the River Murray under the *River Murray Act 2003* DFW has been working on reducing referral numbers towards achieving this target.

Development referrals to the Minister for the River Murray under the *River Murray Act 2003* have declined by 45 percent between 2008 and 2011. This has been a natural reduction that can be attributed, in part, to impacts of the drought, low water levels below Lock 1, development saturation and economic uncertainty during the Global Financial Crisis.

Further opportunities to streamline and reduce referrals have been targeted pursuant to the *State Planning Review* in consultation with relevant development and planning agencies. This has mandated referral reductions through two primary reform processes that are subject to final approvals and regulatory frameworks being put in place. These initiatives are to:

1. Remove referral triggers through a review of the Schedule 8 criteria relating to the *River Murray Act 2003* under the *Development Regulations 2008*; and
2. Explore opportunities to exempt specific areas and activities from the requirement to refer development applications to the Minister for the River Murray.

## 10.4 STATE NATURAL RESOURCES MANAGEMENT PLAN 2006

The State NRM Plan 2006 makes observations relating to salinity levels, other water quality and water use from the River Murray, listing these issues as 'cause for concern'.

The strategies outlined in the State NRM Plan 2006 are relevant to the achievement of the ORMs and priorities of the Implementation Strategy, particularly those relating to water quality, environmental flows and integrating natural resources management into development planning and assessment processes. The State NRM Plan 2006 is being reviewed in 2011 and there may be opportunities to align future implementation strategies for the *River Murray Act 2003* to this process.

## 10.5 SA MDB NRM BOARD REGIONAL NRM PLAN 2009-2019

The SA MDB NRM Board Regional NRM Plan 2009-2019 contains goals relating to managing natural resources to ecologically sustainable limits in an integrated way which are consistent with the Objects and ORMs of the *River Murray Act 2003*.

There are opportunities to work with the SA MDB NRM Board to further align projects and policies relating to the *River Murray Act 2003*.

In addition, Water Allocation Plans have been developed in draft or adopted for most of the prescribed water resources in the RMPA and there are opportunities to align policies and implementation effort between the *River Murray Act 2003* and these Water Allocation Plans.

The River Murray Water Allocation Plan is currently being reviewed and will need to align with the Basin Plan and the SDL requirements. This will present a major opportunity to align and streamline water resource management.

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## 11 SUMMARY

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The *River Murray Act 2003* has been in place for eight years. The 2010-11 year was a unique period for the *River Murray Act 2003*, because the review of the Implementation Strategy and the Triennial Review occurred at the same time, providing an opportunity to comprehensively review the *River Murray Act 2003* and its implementation.

It was also the year that saw higher inflows into the River Murray after many years of drought, and the release of the *Guide to the proposed Basin Plan* which have major impacts for the River Murray and the wider South Australian MDB.

The Annual Report 2010-11 demonstrates a continuing coordinated effort of programs and projects to ensure that South Australia continues to have a healthy working River Murray and that progress is made against the Objects and ORMs of the *River Murray Act 2003*.

The referral mechanism, the one-stop shop and the duty of care arrangements continued to work effectively during 2010-11.

Information provided by the agencies administering the related operational Acts indicates that the interaction between Acts is continuing to operate well.

The *River Murray Act 2003* ORMs of river health, environmental flow, water quality and human dimensions are aligned with and contribute to key targets for the SASP and *State NRM Plan 2006*. A general overview of the state of the River Murray, taking account of the ORMs, is provided as part of this Triennial Review, based on current available information. This will be complemented by the State of the Environment Report, which will be prepared by the EPA in 2013.

The review of the Implementation Strategy identified that the *River Murray Act 2003* and its implementation have been particularly successful in raising awareness, providing special protection for the River Murray, adding value and efficiency to the development planning process and promoting integration and coordination between legislation, policy and programs.

Opportunities for improvement were flagged in areas such as policy guidance, streamlining referrals and clarification and guidance in relation to compliance and enforcement.

Emerging issues and drivers, such as the Basin Plan, climate variability, drought legacy and erosion and bank stability were identified to set a future direction for implementation of the *River Murray Act 2003*, as well as ongoing concerns around water quality and illegal or inappropriate development along the River Murray.

The legislative review indicated that there are opportunities for refinement in the use of existing powers, as well as opportunities in activating some currently unused powers in the *River Murray Act 2003*.

The *River Murray Act 2003* is well placed to continue to add value in light of drivers for new directions, such as the Basin Plan, the State Planning Review, and responding to the drought legacy and impacts of climate change and increased climate variability. There are opportunities to continue to support meeting key SASP targets and State NRM Plan objectives.

The *River Murray Act 2003* remains an effective instrument in delivering on its key Objects and ORMs which are ultimately to protect and enhance the health of the River Murray for all South Australians.

## LIST OF ACRONYMS

AARD	Aboriginal Affairs and Reconciliation Division, Department of Premier and Cabinet (Government of South Australia)
CLLMM	Coorong, Lower Lakes and Murray Mouth
DENR	Department of Environment and Natural Resources (Government of South Australia)
DPA	Development Plan Amendment
DPC	Department of Premier and Cabinet (Government of South Australia)
DFW	Department for Water (Government of South Australia)
DTEI	Department of Transport, Energy and Infrastructure (Government of South Australia)
EPA	Environment Protection Authority (Government of South Australia)
GL	Gigalitre
MDB	Murray-Darling Basin
MDBA	Murray-Darling Basin Authority
NRM	Natural resources management
ORM	Objective(s) for a Healthy River Murray
PIRSA	Primary Industries and Resources South Australia (Government of South Australia)
RMPA	River Murray Protection Area
SA MDB NRM	South Australian Murray-Darling Basin Natural Resources Management
SASP	South Australia's Strategic Plan
SDL	Sustainable Diversion Limit(s)
SIS	Salt Interception Scheme
TLM	The Living Murray

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## APPENDIX 1 - CONTRIBUTORS

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Department for Transport, Energy and Infrastructure

Department of Environment and Natural Resources

Department of Planning and Local Government

Department of the Premier and Cabinet

Department of Trade and Economic Development

Environment Protection Authority

Primary Industries and Resources South Australia

SA Water

South Australian Murray-Darling Basin Natural Resources Management Board

South Australian Tourism Commission

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## APPENDIX 2 – OBJECTS AND OBJECTIVES FOR A HEALTHY RIVER MURRAY (ORMS)

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### Objects

The *River Murray Act 2003* is guided by a set of Objects or guiding principles to ensure adequate protection of River Murray values.

- i. to ensure that all reasonable and practicable measures are taken to protect, restore and enhance the River Murray in recognition of its critical importance to the South Australian community and its unique value from environmental, economic and social perspectives and to give special acknowledgement to the need to ensure that the use and management of the River Murray sustains the physical, economic and social well being of the people of the state and facilitates the economic development of the state; and
- ii. to provide mechanisms to ensure that any development or activities that may affect the River Murray are undertaken in a way that provides the greatest benefit to, or protection of, the River Murray while at the same time providing for the economic, social and physical well being of the community; and
- iii. to provide a mechanism so that development and activities that are unacceptable in view of their adverse effects on the River Murray are prevented from proceeding, regulated or brought to an end; and
- iv. to promote the principles of ecologically sustainable development in relation to the use and management of the River Murray; and
- v. to ensure that proper weight is given to the significance and well being of the River Murray when legislative plans and strategies are being developed and implemented; and
- vi. to respect the interests and aspirations of Indigenous peoples with an association with the River Murray and to give due recognition to the ability of those Indigenous people to make a significant contribution to the promotion of the principles of ecologically sustainable development in relation to the use and management of the River Murray; and
- vii. to respect the interests and views of other people within the community with an association with the River Murray and to give due recognition to the ability of those people to make a significant contribution to the promotion of the principles of ecologically sustainable development in relation to the use and management of the River Murray, and
- viii. otherwise to ensure the future health, and to recognise the importance, of the River Murray.

### Objectives for a Healthy River Murray (ORMs)

The *River Murray Act 2003* also sets out a list of Objectives for a Healthy River Murray (ORMs). The ORM's were developed by the MDB Commission and endorsed by the MDB Ministerial Council. They outline some of the specific improvements being sought for the River Murray.

#### RIVER HEALTH OBJECTIVES

There are four river health Objectives collectively covering the issues of:

- maintenance, protection and restoration of key habitats and ecological processes;
- protection and restoration of River Murray environments, particularly high-value floodplains and wetlands of national and international importance;
- prevention of native plant and animal extinctions; and
- avoiding and overcoming barriers to the migration of native animal species.

### **ENVIRONMENTAL FLOW OBJECTIVES**

Three environmental flow Objectives address the matters of:

- reinstatement and maintenance of ecologically significant elements of the River Murray system natural flow regime;
- keeping open the Murray mouth in order to maintain navigation and fish passage and to enhance the health of the River Murray system and Coorong; and
- significantly improving connectivity between and within the environments constituted by the River Murray system.

### **WATER QUALITY OBJECTIVES**

The four water quality Objectives seek to:

- improve water quality within the River Murray system to a level that sustains the ecological processes, environmental values and productive capacity of the system;
- minimise the impact of salinity on the ecological processes and productive capacity of the River Murray system;
- manage nutrient levels within the River Murray system so as to prevent or reduce the occurrence of algal blooms, and to minimise other nutrient related impacts; and
- minimise the impact of potential pollutants, such as sediment and pesticides, on the environments within the River Murray system.

### **HUMAN DIMENSION OBJECTIVES**

The human dimension Objectives aim to:

- implement a responsive and adaptable approach to the management of the River Murray System, taking into account ecological outcomes, community interests and new information as it comes to hand;
- promote the health and proper management of the River Murray system by gathering, considering and disseminating the community's knowledge and understanding of the system;
- take into account the interests of the community by recognising indigenous and other cultural and historical relationships with the River Murray environs, and by ensuring appropriate participation in processes associated with the management of the system; and
- recognise the importance of a healthy river to the economic, social and cultural prosperity of communities along the length of the river, and the community more generally.