Loxton – Bookpurnong Numerical Groundwater Model 2005

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FOREWORD

South Australia's natural resources are fundamental to the economic and social well-being of the State. One of the State's most precious natural resources, water is a basic requirement of all living organisms and is one of the essential elements ensuring biological diversity of life at all levels. In pristine or undeveloped situations, the condition of water resources reflects the equilibrium between, rainfall, vegetation and other physical parameters. Development of these resources changes the natural balance and may cause degradation. If degradation is small, and the resource retains its utility, the community may assess these changes as being acceptable. However, significant stress will impact on the ability of the resource to continue to meet the needs of users and the environment. Understanding the cause and effect relationship between the various stresses imposed on the natural resources is paramount to developing effective management strategies. Reports of investigations into the availability and quality of water supplies throughout the State aim to build upon the existing knowledge base enabling the community to make informed decisions concerning the future management of the natural resources thus ensuring conservation of biological diversity.

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ACKNOWLEDGEMENT

During the development of the Loxton – Bookpurnong numerical groundwater model numerous discussions were had regarding model fundamentals, technical issues and progress with Mr Don Armstrong of Lisdon Associates, who also undertook a final review of the model and report, and also analysed the uncertainty / likely error limits.

EXECUTIVE SUMMARY

The Loxton and Bookpurnong irrigation areas are located adjacent to the River Murray primarily in the northeast region of the South Australian part of the Murray Basin. Over the past 60 years, concerns have been raised regarding the salt load impacts on the River resulting from the irrigation development. On average 173 tonnes/day of salt enters the river in the Loxton – Bookpurnong area at flows of less than 5000 ML/day, and up to 365 tonnes/day at flows of 20 000–30 000 ML/day. The original pre-development base salt load entering the river is calculated to be 16 tonnes/day. The additional salt load results from the increased flux of saline groundwater that occurs in response to the development of irrigation drainage groundwater mounds.

Numerical groundwater modelling forms a component of the investigation phase of a major program to design and construct a groundwater management scheme (salt interception scheme- SIS) that will control the flux of saline groundwater (and therefore salt load) entering the River Murray.

The Department for Water, Land and Biodiversity Conservation (DWLBC) developed a MODFLOW numerical groundwater flow model for the Riverland area, SA-VIC border to Lock-3 in South Australia in 2003–2004 (Yan et al. 2004). The objectives of the this project were to develop an *impact assessment model of moderate complexity,* capable of simulating the regional aquifer system that could be used to:

1. Estimate the flux of saline groundwater entering the River Murray from the aquifer system, and when combined with groundwater salinities, the salt load entering the river.
2. Predict the flux of saline groundwater and salt load entering the River Murray under different irrigation practices and development scenarios until 2104.
3. Improve the understanding of the hydrogeology of the regional aquifer system and processes in the model area.
4. Assist with broad scale planning of conceptual SIS wellfield designs targeting the Loxton Sands and Monoman Formation, and predict the reduction in the salt load entering the River Murray.
5. Provide a sound technical basis for evaluating salt loads entering the River Murray from the irrigation areas.
6. Assist with the development of management strategies for the Katarapko Island disposal basin.

The model also provides a sound technical basis for evaluating the flux of saline groundwater and salt load entering the River Murray resulting from accountable actions, resulting from existing and future irrigation development and salt interception schemes, in the Loxton – Bookpurnong area.

This model has undergone a significant revision, and been further calibrated in the Bookpurnong (and Loxton) area. The objectives of further modelling were to:

1. Provide additional confidence in the numerical groundwater model and its predictions.
2. Develop a (processing) time efficient model.

This report describes the development, testing and application of the MODFLOW groundwater model that covers the area from the South Australian border to Lock-3. The model is predominantly associated with the River Murray, floodplains and highlands. The model was calibrated to regional potentiometric heads (pre-irrigation) and observed data (between 1970 to 2003, post irrigation development), where available.

A steady state model was initially used to model post-river regulation, but pre-irrigation development conditions. A transient model was then developed and calibrated to the historic period (1955–2004), to investigate the historic potentiometric head changes and flux of saline groundwater and salt load entering the River Murray. The calibrated transient model was then used to predict the response to a number of scenarios for a period of 100 years, to determine the flux of saline groundwater and salt load entering the river, and EC impact at Morgan.

The scenarios and modelled and predicted salt loads entering the River Murray over next 100 years are summarised in Table 1, which indicates that:

Scenario-1: Pre-irrigation development, approximate 10 tonnes/day of salt entered the River Murray from the Loxton area and 16 tonnes/day from Bookpurnong area.

Scenario-2: Post-irrigation development, and the current situation, 93 tonnes/day of salt enters the River Murray from Loxton area and 98 tonnes/day from the Bookpurnong area.

Scenario-3: Pre-1988 irrigation development without improved irrigation practice (IIP) in the 1990s may result in 124 tonnes/day of salt entering the River Murray from Loxton area and 109 tonnes/day from the Bookpurnong area at 2104.

Scenario-4: Pre-1988 irrigation development with IIP may reduce the salt load entering the river to 104 tonnes/day from the Loxton area and 65 tonnes/day from the Bookpurnong area at 2104.

Scenario-5: Pre-1988 irrigation development with IIP and Loxton headworks rehabilitation (RH) commencing in 2002 may reduce the salt load entering the river to 76 tonnes/day from the Loxton area and 63 tonnes/day from the Bookpurnong area at 2104.

Scenario-6: Post-1988 irrigation development with IIP and RH may result in 95 tonnes/day of salt entering the River Murray from Loxton area and 138 tonnes/day from the Bookpurnong area at 2104.

Scenario-7: This is Scenario-5 with the addition of SIS-1 designed for the current recharge conditions. SIS-1 is a conceptual wellfield that includes 27 floodplain and 4 horizontal highland production wells in the Loxton area and 23 floodplain and high land production wells in the Bookpurnong area. SIS-1 may intercept around 80% of the salt load entering the River Murray at 2104.

Scenario-8: This is Scenario-6 with the addition of SIS-2 designed for the maximum recharge conditions. SIS-2 is a conceptual wellfield that includes 27 floodplain and 4 horizontal highland production wells in the Loxton area (pumping at higher rates than SIS-1) and 36 floodplain production wells in the Bookpurnong area. SIS-2 may intercept around 85% of the salt load entering the River Murray at 2104.

The effectiveness of the Loxton – Bookpurnong SIS is dependent on the successful implementation of both conventional tube wells and the horizontal wells. At the 5-year review the SIS needs to be carefully reviewed, and the model re-run with the actual on ground works accurately represented, to ensure that the EC credits presented in this report are being achieved by both SIS schemes.

Table 1 Summary of modelled and predicted salt loads entering the River Murray

Scenario	Model Run	Irrigation development area	IIP	RH	SIS	Loxton (tonnes /day)	Bookpurnong (tonnes/day)
1	Steady State	None	None	None	None	9.59	16.46
2	1945–2004	1945–2004 (from 1945 to current condition)	70–85%	Yes	None	92.97	98.49
3	2004–2104	Pre-1988	70%	None	None	123.54	109.00
4	2004–2104	Pre-1988	85%	None	None	103.54	64.50
5	2004–2104	Pre-1988	85%	Yes	None	75.76	63.08
6	2004–2104	Post-1988*	85%	Yes	None	95.33	137.64
7	2004–2104	Pre-1988	85%	Yes	SIS-1 designed for current recharge condition	18.50	8.76
8	2004–2104	Post-1988*	85%	Yes	SIS-2 designed for post-1988 recharge condition	20.08	14.85

* Post-1988 includes pre-1988 + post-1988 irrigation development

1. INTRODUCTION

The Department for Water, Land and Biodiversity Conservation (DWLBC) developed a numerical MODFLOW groundwater flow model for the Riverland area, SA-VIC border to Lock-3 in South Australia in 2003/4 (Yan et al. 2004). The aim of the project was to provide a management tool for determining salt loads entering the River Murray from the Loxton and Bookpurnong irrigation areas, and to assess Salt Interception Schemes (SIS) concept schemes in these areas. After the model was reviewed by groundwater modelling experts and accredited for the Loxton area by the Murray Darling basin Commission (MDBC), the model could be used to evaluate salt loads resulting from accountable actions, irrigation practice, irrigation area development and SIS.

1.1 POLICY BACKGROUND

In 2001, the Murray Darling Basin Ministerial Council approved the publication of the *Basin Salinity Management Strategy 2001–2015* (BSMS). Similarly, the South Australian Government adopted the *River Murray Salinity Strategy 2001–2015* in 2001. These initiatives followed the adoption of the Ministerial Councils' *Salinity and Drainage Strategy 1988* (S&DS), taking into account the *1999 Basin Salinity Audit* and the *National Land and Water Resources Audit.*

The objectives of the BSMS are to:

1. Maintain water quality of the shared water resources of the River Murray and River Darling.
2. Control the rise in salt loads in all tributary rivers of the Murray-Darling Basin.
3. Control land degradation and protect important terrestrial ecosystems, protect farmland, cultural heritage and built infrastructure.
4. Maximize net benefits from salinity control across the Basin.

Under the S&DS, 1 January 1988 was adopted as a baseline from which any subsequent actions that affected River Murray salinity were the responsibility of the State in which the action occurred. One of the main components carried forward from the S&DS was the system of salinity credits and debits, however changes were made to the manner in which credits and debits were entered on the registers. Under the 1988 Strategy, debits and credits were entered as the impact at 30 years. Within the BSMS, entries onto the register are the average of the 30 years, with the maximum impact in 100 years also recorded. The BSMS allowed for any action resulting in an increase in river salinity, such as new irrigation developments, to occur, provided that salinity credits, gained by contributing to the funding of salt interception schemes or other measures, to offset any salinity debits arising from these accountable actions.

The S&DS has significantly reduced salinity in the River Murray through implementation of salt interception schemes and improved land and water management. The target of restricting river salinity at Morgan below a threshold of 800 EC at least 95% of the time is close to being met. However, the 1999 Salinity Audit highlighted that the future impacts of salt mobilisation, due to further irrigation developments and the effects of dryland salinity, would diminish the achievements of the S&DS unless further action was taken. Consequently, the BSMS commits the partner governments to an initial 7-year investment program of salinity mitigation works and measures to be implemented across the Murray Darling Basin to deliver 61 EC credits to the river and to offset the States accountable actions.

There are currently four operational salt interception schemes within South Australia, all located with in the Woolpunda – Cadell reach of the River Murray (Woolpunda, Waikerie, Waikerie IIA and the Qualco – Sunlands Groundwater Control Scheme). There are a further two schemes currently being investigated in the Woolpunda – Cadell reach (Waikerie IIB and Waikerie IIC) and ongoing investigations for schemes in the Pike River, Murtho and Chowilla areas. In addition to the investigations program, construction has commenced on two schemes at Bookpurnong and Loxton, having been investigated over the past six years and approved by Ministerial Council in 2003 and 2004 respectively.

In presenting both the Bookpurnong and Loxton schemes to Ministerial Council for approval, South Australia proposed a credit allocation and cost-sharing methodology on the basis of the preliminary predicted impacts of the various pre-and post-1988 actions undertaken in each of the areas. The assessment of those impacts is required to be consistent with the reporting requirements of both Schedule 'C' of the *Murray-Darling Basin Agreement 1992* and the *Basin Salinity Management Strategy Operational Protocols 2003.*

1.2 INVESTIGATION BACKGROUND

The Loxton – Bookpurnong irrigation area is located adjacent the River Murray in the northwest region of the Murray Basin (Fig. 1). Figure 1 clearly indicates the location of the project area. The model domain is considerably larger than the actual project area to avoid model boundary effects interfering with model results within the project area. Water bodies and irrigation areas are clearly distinguishable on aerial photography (Fig. 2) which also included Transient Electro-Magnetics (TEM) results discussed later in this report.

A component of the water accession passing the root zone (rainfall infiltration, irrigation drainage, and other associated irrigation losses) recharges the groundwater table in the Loxton Sands and has resulted in the development of groundwater mounds in the both the Loxton and Bookpurnong irrigation areas. These groundwater mounds have significantly increased the flux of saline groundwater, and therefore the salt load entering the River Murray.

Run-of-river salinity surveys indicate that a flux of saline groundwater enters the River Murray in the Loxton – Bookpurnong reach (Table 2). Observations indicate a salt load of 98 tonnes/day entering the river in the Loxton reach (Fig. 1), and 75 tonnes/day entering the river in the Bookpurnong reach at flows of less than 5000 ML/day. The salt load may double (188 tonnes/day Loxton, and 177 tonnes/day Bookpurnong) at flows of 20 000–30 000 ML/day. The construction of SIS has been proposed to intercept the flux of saline groundwater before it enters the river.

Table 2 Run-of-river measured salt load (DWLBC/AWE submission report 2003)

Flow (ML/d)	Salt Load (tonnes/day)	
	Loxton: June 1991 – July 2002 Rilli's floodplain - Habel's landing	Bookpurnong: 1994 – 2002 Lock-4 - Rilli's floodplain
<5000	98	75
5000–10 000	100	102
10 000–20 000	119	126
20 000–30 000	188	177

Australian Water Environments (AWE) undertook preliminary hydrogeological investigations in the Loxton – Bookpurnong area aimed at increasing the knowledge of the hydrogeology in relation to the construction of a SIS in both areas. This work culminated in a submission (DWLBC 2003) to the MDBC High Level Inter-Jurisdictional Working Group on Salt Interception in February 2003 regarding SIS in the Loxton – Bookpurnong area. AWE developed a MODFLOW model of the Loxton – Bookpurnong area in 1999, and developed a more complex model early in 2003 (AWE 2003).

DWLBC commenced further hydrogeological investigations in the Loxton area from mid 2003. One component of these investigations was modelling, and in late 2003 DWLBC took over further development of the AWE 2003 model. The objective of these investigations was to design a SIS and progressing the project to a point where the scheme was construction-ready. The term construction-ready meaning that there is sufficiently detailed knowledge of the hydrogeology of the Loxton area (and that this knowledge has been ground-truthed by in-river salinity methods, drilling, hydrochemistry, geophysics and pumping tests), and confidence in numerical groundwater modelling, so that a SIS can be designed to a point where it is ready for construction with minimal additional investigative work.

The model discussed in this report incorporates both the Loxton and Bookpurnong areas. However, the bulk of the discussion relates to the Loxton area due to the principal role of DWLBC in investigations for the Loxton SIS. AWE had the principal role in the investigations for the Bookpurnong SIS.

Modelling has concentrated on replicating the gradient between the highland and floodplain, potentiometric heads on the floodplain, and the gradient between the floodplain and the River Murray. Based on these results and available salinity data, the salt load entering the river valley and the river can be calculated. This is an appropriate approach for the modelling that has been undertaken.

1.3 SOURCE OF SALINE GROUNDWATER FLUX TO RIVER MURRAY

Prior to designing a SIS the following key issues need to be determined:

1. A clear understanding of the magnitude of the flux of saline groundwater and salt load entering the River Murray.
2. The sections of the river reach in which major flux occurs.
3. The target aquifers.

4. The hydraulic relationships between aquifers.
5. The hydraulic relationship between the aquifers and the river.

1.4 OBJECTIVES

Numerical groundwater flow models enable the creation of a computer based mathematical representation of the conceptual understanding of an aquifer system. The model is a powerful tool for validating the understanding and for predicting the response of the aquifer system to imposed stresses.

The objectives of DWLBC groundwater modelling were to develop an *impact assessment model of moderate complexity* (in the terminology of the Murray Darling Basin Commision (2000)) capable of simulating the regional aquifer system that could be used to:

1. Estimate the flux of saline groundwater entering the River Murray from the aquifer system, and when combined with groundwater salinities, the salt load entering the river.
2. Predict the flux of saline groundwater and salt load entering the River Murray under different irrigation practices and development scenarios until 2104.
3. Improve the understanding of the hydrogeology of the regional aquifer system in terms of:
   a. The groundwater flux within and between aquifers.
   b. Recharge to the Loxton Sands in the Loxton area.
   c. The behaviour of the aquifer system in floodplain areas.
   d. The hydraulic communication between the aquifer system and the surface water system.
4. Assist with broad scale planning of conceptual SIS wellfield designs and predict the reduction in the salt load entering the River Murray. Saline groundwater pumped from SIS will be disposed of to the Noora disposal basin.
5. Assist with the design and location of investigation wells, production wells, and observation wells for pumping tests in the Loxton area.
6. Assist with the development of management strategies for the Katarapko Island disposal basin.

This model has undergone a significant revision with the following improvements being made:

1. The northern model boundary has been extended to Lock-6.
2. The model layers have been simplified from eight to five.
3. The model layer surface elevation has been improved as a result of the existence of data obtained from current investigations.
4. The Calibration in the Bookpurnong (and Loxton) areas has been improved.

The objectives of further modelling were to:

1. Provide additional confidence in the numerical groundwater model and its predictions.

2. Develop a (processing) time efficient model that could be used to further revise salt loads resulting from accountable actions, resulting from existing and future irrigation development and SIS in the Loxton – Bookpurnong area.

The terms *modelled* and *predicted* are used in this report. The term modelled has been used when output from the model (eg a potentiometric head distribution) can be compared to observed data. The term predicted has been used when the calibrated model has been used to determine the future result of particular scenarios.

2. HYDROGEOLOGY AND HYDROLOGY OF THE LOXTON – BOOKPURNONG AREA

2.1 REGIONAL HYDROGEOLOGY

The Murray Basin is a closed groundwater basin containing Cainozoic unconsolidated sediments and sedimentary rock up to 600 m in thickness, and contains a number of regional aquifer systems (Evans and Kellet 1989). The major aquifers within the study area are the Murray Group Limestone, Loxton Sands and Monoman Formation (floodplain only) (Fig. 3) (Yan et al. 2004). Groundwater flow in all of the aquifers is towards the River Murray.

The Loxton Sands forms a regionally extensive unconfined – semi-unconfined aquifer into which the channel of the ancestral River Murray was incised. Within this channel, the Monoman Formation and the overlying Coonambidgal Formation were deposited, and it is within this sequence that the channel of the modern River Murray is incised. The river is a sink for regional groundwater within the Loxton – Bookpurnong area.

Saline groundwater (7000–50 000 mg/L) enters the River Murray by lateral flow from the Loxton Sands and Monoman Formation (Fig. 4), and by slow upward leakage through the Bookpurnong Formation from the underlying confined regional Murray Group Limestone by the following pathways:

1. Direct inflow via seepage from exposed Loxton Sands at or near the base of cliffs adjacent to the River Murray.
2. Discharge from sands of the Monoman Formation that act as a conduit for lateral flow from Loxton Sands (and upward leakage from the Murray Group Limestone) underlying the floodplains.
3. Discharge from sands of the Monoman Formation and localised hypersaline lakes (salinas), often at the back of the floodplain, that deliver high salt loads during and after periods of flood.
4. Slow upward leakage through the Bookpurnong Formation from the underlying confined Upper Mannum Formation.
5. Slow upward leakage from Murray Group Limestone that may be in direct communication with the River Murray due to erosion of the Lower Loxton Clay and Shells and Bookpurnong Formation.

These processes are summarised in an elementary conceptual hydrogeological model (Fig. 5).

The hydraulic communication between the Loxton Sands and Monoman Formation is an important component in controlling the salt movement in the area. The flux of saline groundwater entering the River Murray is dominated by the hydraulic conductivity of the Loxton Sands, and the head difference between the river and nearby groundwater.

As the River Murray is mainly in contact with Loxton Sands and Monoman Formation in the study area, the majority of the salt load entering the river is contributed by these two aquifers that are the targets for salt interception in the Loxton – Bookpurnong area.

A schematic diagram of the conceptual hydrogeological model for the Loxton – Bookpurnong area is given in Figure 5. The figure details the conceptual model of groundwater flow between the aquifers, the broader regional groundwater flow system, inter-aquifer flow and local recharge mechanisms.

2.2 HYDROGEOLOGICAL UNITS

The characteristics of each hydrogeological unit (Fig. 3, Table 3) in the project area are discussed in order of increasing depth below ground surface in the following sections.

Table 3 Hydrogeological units of the Loxton – Bookpurnong area

Hydrogeological Unit		Aquifer / aquitard	Salinity range (mg/L)	Yield (L/s)
Coonambidgal Formation		Clay layer	NA	NA
Monoman Formation		Aquifer unconfined - semi-confined in river valley	7000–60 000	0.5–10
Loxton Sand		Aquifer unconfined to on highland	7000–40 000	0.5–5
Lower Loxton Clay and Shells		Aquitard – clay, shells	NA	NA
Bookpurnong Formation		Aquitard – clay	NA	NA
Murray Group Limestone	Pata Formation	Aquifer (semi-confined upstream of river kilometre 486) limestone	10 000–30 000	0.5–1
	Winnambool Formation	Aquitard – marl	NA	NA
	Glenforslan Formation	Semi-confined aquifer limestone	5000–30 000	0.5–2
	Finniss Formation	Aquitard - marl	NA	NA
	Upper Mannum Formation	Confined aquifer limestone	3000–25 000	5–10
	Lower Mannum Formation	Confined aquifer limestone	NA	NA

2.2.1 COONAMBIDGAL FORMATION

The Coonambidgal Formation clay layer occurs ubiquitously across the floodplain and comprises clay and silts deposited during periods of episodic flooding. This unit is commonly 4–5 m thick in the middle of the respective floodplains, but can vary in thickness from 1–11 m, with the greater thicknesses observed at the break in slope between the floodplain and highland.

2.2.2 MONOMAN FORMATION

The Monoman Formation unconfined – semi-confined aquifer is the primary target for salt interception on the floodplain, where the Loxton Sands cannot be targeted on the highland. This unit consists of relatively clean, fine to coarse grained, fluvial sands deposited as point bar sands within a wide floodplain. This unit occasionally comprises minor clay and silt layers, and occasional lignite bands towards the base of section. The Monoman Formation is commonly 4–10 m thick and is thin to absent at the break in slope. However, it can realise a thickness of up to 25 m in deep incised channels within the meander belt (Fig. 3).

As a consequence of the depositional environment, the Monoman Formation is a highly variable aquifer with yields ranging from 0.5–10 L/s. This variability makes it difficult to predict likely yields across the floodplain, to the extent that production wells separated by 10 m can demonstrate contrasting specific yields.

Due to its semi-unconfined nature, the potentiometric surface for the Monoman Formation for May 2004 has been merged with the Loxton Sands (Fig. 6). Potentiometric heads are up to 2 m above river pool level (~10.0 m AHD) at the break of slope (Loxton Sands / Monoman Formation) on the eastern side of the River Murray. On the western side of the river potentiometric heads are either close to or below river pool level with the exception of a slightly elevated potentiometric head (11 m AHD) in the area of the Katarapko Island disposal basin to which irrigation drainage water from the Comprehensive Drainage System (CDS) network is pumped. Groundwater salinity values in the Monoman Formation are highly variable, possibly as a result of evaporative effects on the floodplain, and range from 25 000–60 000 mg/L.

2.2.3 LOXTON SANDS

The Loxton Sands unconfined aquifer is the primary target for salt interception on the highland, yet poses the most difficulty due to its unpredictable hydraulic nature. In broad terms, the Loxton Sands represents an inverted aquifer, with the most permeable coarse grained and frequently unsaturated sands occurring at the top of the sequence and the least permeable fine sands (and occasional shell hash) at the base of the succession. These sands grade to a low permeability silty clay and shell facies towards the base, referred to in this report as the Lower Loxton Clay and Shells. This upward coarsening sequence represents a shift from offshore to nearshore and back beach / dune depositional environments, reflecting cyclic eustatic sea level drops resulting in progradational clastic packages.

Detailed sedimentological analysis, downhole geophysical logging and airborne electromagnetic (HEM) geophysical surveys (Hill et al. 2004) have helped to unravel the complexity of the Loxton Sands and provide some confidence for predicting suitable facies for salt interception at or below river pool level.

The Loxton Sands have been targeted in the Loxton area for salt interception where no floodplain exists. However, the base of the fine sands and shell hash occurs close to river pool level and accordingly, this has a significant impact on production well spacing in order to achieve effective salt interception. Although the Loxton Sands are commonly up to 25–30 m thick, the permeable basal shell hash and coarse sand unit that occur at the base of the succession in the Loxton area is only 2–3 m thick. Yields up to 1.5 L/s have been observed in production wells completed in the basal shell hash facies. Elsewhere, yields vary from <0.5 L/s in fine-grained sands up to 5 L/s in coarse-grained facies in the area targeted for highland interception in the Bookpurnong area.

The potentiometric surface for the Loxton Sands and Monoman Formation for May 2004 is given in Figure 6. A prominent groundwater mound trending northeast - southwest occurs in the Loxton Sands in the Loxton irrigation area with a maximum height of 26 m AHD, and a smaller mound occurs in the Bookpurnong area.

Groundwater salinity values in the Loxton Sands vary dramatically across the Loxton – Bookpurnong region, reflecting impact of low salinity irrigation recharge on the saline native groundwater. Groundwater salinity data were sourced from pumping tests and HYDROLAB geophysical sonding, the latter demonstrating stratification with the heavier dense saline groundwater underlying fresher irrigation water. For the purposes of predicting salt loads entering the River Murray, the more saline native groundwater values were adopted for various zones along the river ranging from ~5000–40 000 mg/L.

2.2.4 BOOKPURNONG FORMATION

The Bookpurnong Formation aquitard occurs between the Loxton Sands and the underlying Pata Formation. This unit consists of poorly consolidated plastic silts and shelly clays that are differentiated from the Lower Loxton Clays and Shells (grey in colour) on the basis of colour (light to dark khaki) and increased plasticity.

The Bookpurnong Formation reaches a maximum thickness of 15 m in the Loxton area but is highly variable with no discernable trend observed. This unit is thin to occasionally absent on all floodplains in the Loxton area, more likely as a consequence of erosion, but possibly as a result of depositional thinning.

2.2.5 MURRAY GROUP LIMESTONE

Prior to recent subdivision of the Murray Group Limestone reported in Luksik and James (1998), it was accepted that the Bookpurnong Formation was separated from the underlying Murray Group Limestone by the poorly consolidated to plastic marls of the Winnambool Formation.

The recent work has resulted in a more detailed subdivision reflecting a change from predominantly fluvial environments of the Renmark Group to alternating deeper marine and shelf facies resulting in deposition of marl aquitards (Winambool Formation, Finnis Formation, Ettrick Formation), and limestone aquifers (Pata Formation, Glenforslan Formation, Upper and Lower Mannum Formations).

2.2.5.1 Pata Formation

The Pata Formation semi-confined aquifer is a poorly consolidated bryozoal limestone with interbedded friable sand layers that occurs throughout the Loxton – Bookpurnong region. This unit outcrops to the south of Loxton where it is exposed at river pool level downstream from the Loxton Caravan Park, river kilometre 486 (and is dry 5 km to the west). The Pata Formation aquifer dips gently to the northeast to depths ~70 m (-25 m AHD) below ground surface at Bookpurnong. In the Loxton area this unit commonly occurs 35–40 m below ground surface on the highland, but can occur as shallow as 10 m beneath the surface on the floodplains. This unit is typically in the range of 10–15 m in thickness with an observed thickening to the northeast.

Although described as a limestone, the unit represents a poor aquifer due to the presence of marl. Pumping tests conducted by DWLBC at both floodplain and highland sites has returned yields of ~0.5–1 L/s.

The potentiometric surface for the Pata Formation for May 2004 is given in Figure 7. An expression of the Loxton groundwater mound is evident resulting from downward leakage and possible hydraulic loading. The groundwater mound reaches an elevation of 24.7 m AHD and a steep gradient exists towards the River Murray. A maximum 1.7 m positive (downward driving) head difference exists between the overlying Loxton Sands and the Pata Formation at the centre of the groundwater mound, lesser head differences occur elsewhere.

Groundwater salinities in the Pata Formation are uniformly high (up to 30 000 mg/L) on the highland with lower salinities on the floodplain (~10 000 mg/L).

2.2.5.2 Winnambool Formation

The Winnambool Formation aquitard comprises grey to pale green calcareous clay (marl) and silty clay. This unit dips to the northeast, consistent with the regional tilt. To the south of Loxton this formation occurs ~30 m below ground surface, deepening to as much as 85 m below ground surface at Bookpurnong. This unit varies is ~3 m in thickness, with its depocentre located on Katarapko Island, and provides an effective aquitard between the Pata Formation and Glenforslan Formation.

2.2.5.3 Glenforslan Formation

The Glenforslan Formation semi-confined aquifer is a grey sandy limestone that closely resembles the Pata Formation, with the exception that it contains occasional fine-grained, hard bands. This unit has a thickness consistently in the range 20–30 m and dips to the northeast.

The potentiometric surface for the Glenforslan Formation for May 2004 is given in Figure 8. A maximum 5.9 m positive (downward driving) head difference exists between the overlying Pata Foramtion and the Glenforslan Formation at the centre of the groundwater mound, and an approximately -5 m negative (upward driving) head difference occurs on Katarapko Island area.

Groundwater salinity in the Glenforslan Formation ranges from 5000–30 000 mg/L.

2.2.5.4 Finnis Formation

The Finniss Formation aquitard is a thin but persistent grey to dark grey clay with thin sand layers and hard bands separating the Glenforslan Formation and Upper Mannum Formation. This unit has a maximum thickness of 4.5 m but is commonly 1–2 m in thickness.

2.2.5.5 Upper Mannum Formation

The Upper Mannum Formation confined aquifer has only been fully penetrated by a small number of wells in the area. This unit is 25 m thick at Bookpurnong and comprises highly fossiliferous calcarenitic and sandy limestone. This unit dips to the northeast, but is difficult to separate from the underlying Lower Mannum Formation in the Loxton region.

The potentiometric surface for the Upper Mannum Formation for May 2004 is given in Figure 9. There is no discernable expression of the Loxton groundwater mound, although this may be an artefact of poor well coverage. A 0.1 m positive (downward driving) head difference exists between the overlying Glenforslan Formation and the Upper Mannum Formation in the Loxton area.

Groundwater salinity in the Upper Mannum Formation ranges from 3000–25 000 mg/L.

2.2.5.6 Lower Mannum Formation

The Lower Mannum Formation confined aquifer has only been fully penetrated by a small number of wells in the area. This unit has a thickness up to 75 m thick at Bookpurnong. This formation comprises hard, well compacted and moderately to well cemented grey limestone with some evidence of recrystallisation. There is an increase of fine carbonate sand towards the top of the unit.

2.3 CONCEPTUAL INTERACTION BETWEEN THE AQUIFER SYSTEM AND THE RIVER MURRAY

2.3.1 PRE-IRRIGATION DEVELOPMENT GROUNDWATER FLUX TO THE RIVER MURRAY

Post-construction of the locks and weirs on the River Murray in the 1930s (river regulation) and pre-irrigation development around 1945, a flux of saline groundwater entered the river from the Loxton Sands and Monoman Formation driven by the small regional groundwater gradient. The pre-irrigation development base groundwater flux (little different to that occurring pre-river regulation) was small compared with that occurring post-irrigation development.

The pre-irrigation development flux of saline groundwater entered the River Murray by the following mechanisms in the Loxton area:

1. Direct inflow via seepage from exposed Lower Loxton Sands at or near the base of cliffs adjacent to the River Murray.
2. On Rilli’s floodplain (wide), groundwater flowed from the highland into the Monoman Formation (underlying the floodplain) that acts as a conduit for lateral flow from the Loxton Sands to the River Murray. Evapotranspiration resulted in the concentration and storage of salt in the floodplain. This salt was mobilised and flushed by the regular flood events that surcharged the floodplain, and induced a flux of saline groundwater to enter the river.
3. On the southern, narrow floodplain, where evapotranspiration is of less significance, a small hydraulic gradient resulted in the discharge of groundwater to the River Murray.
4. Slow upward leakage through the Bookpurnong Formation from the underlying confined Upper Mannum Formation.
5. Slow upward leakage from Murray Group Limestone where there is direct communication with the River Murray due to erosion of the Lower Loxton Clay and Shells and Bookpurnong Formation.

2.3.2 POST-IRRIGATION DEVELOPMENT GROUNDWATER FLUX TO THE RIVER MURRAY

Post-regulation of the River Murray, pumping of river water for irrigation on the surrounding highlands commenced in the mid 1940s and mid 1950s in the Loxton and Bookpurnong areas respectively. Irrigaition drainage resulted in the development of a groundwater mound in the Loxton area, with an elevation at its centre 16 m above river pool level. This anthropogenic modification of the aquifer system dramatically increased the flux of saline groundwater entering the river. The potentiometric surface of the unconfined aquifer(s) (Fig. 6) indicates steep gradients adjacent the river in the Loxton Sands and Monoman Formation.

The post-irrigation development flux of saline groundwater enters the River Murray by the following mechanisms in the Loxton area:

1. Direct inflow via seepage from exposed Lower Loxton Sands at or near the base of cliffs adjacent to the River Murray.

2. On Rilli's floodplain (wide), a portion of highland groundwater flow discharges via seepage at the break of slope between the highland and floodplain. The remainder of the highland groundwater flows through the Monoman Formation underlying the floodplain and discharges to the River Murray. Evapotranspiration, occurs to the extent that the groundwater table is lower in elevation than the river pool level, resulting in the concentration and storage of salt in the floodplain. The movement of salt from the highlands into the floodplain is greater than that into the river (under non-flooding conditions). During and after the now infrequent flood events, some of this highly concentrated salt is mobilised and flushed to the river.

3. On the southern, narrow floodplain, groundwater flows from the highland into the salinas / wetlands, and into the underlying Monoman Formation. An hydraulic gradient exists in the Monoman Formation towards the River Murray (evapotranspiration is of less significance) resulting in the discharge of groundwater to the river in this area.

4. Slow upward leakage through the Bookpurnong Formation from the underlying confined Murray Group Limestone.

5. Slow upward leakage from Murray Group Limestone where there is direct communication with the River Murray due to erosion of the Lower Loxton Clay and Shells and Bookpurnong Formation.

The elementary conceptual hydrogeological cross-section (Fig. 5) indicates the hydrogeological units, surface water features, and groundwater mound within the Loxton area. Groundwater flow in the aquifer system, including lateral flow from the highland area, discharges to the River Murray and floodplain areas. Upward leakage from Upper Mannum Formation is also indicated.

The conclusions regarding the post-irrigation development flux of saline groundwater entering the River Murray are based on the interpretation of data acquired from numerous methods including run-of-river salinity surveys, TEM, in-stream salinity, hydrochemistry, pumping tests, geology and geophysics. At the time of writing, investigations are nearing conclusion and will be reported separately. However, the following section discusses

TEM, a method that has proved a useful tool for indicating areas where there is potential for flux.

Aside:- The TEM Technique

TEM is a technique that provides a measure of the electrical resistivity (or conversely the electrical conductivity) of the subsurface below a TEM sounding. The TEM results represent a bulk resistivity of the river sediments and river water.

In September 2003, a total of 80 km of data over a 37 km stretch of the River Murray was collected in the Loxton – Bookpurnong area between the Katarapko Island outlet and Lock-4 (Fig. 2A). In order to delineate variations across the river, soundings were conducted every 5 m adjacent to both banks. Inversion of the data typically produces around 10 resistivity depth values (beneath each sounding), between 0 m (river surface) and -30 m.

Subtraction of the nearest river water depth value from the data of each TEM sounding yields the shallowest river sediment resistivity value (Fig. 2A). This data represents the resistivity for the sediments immediately below the water-sediment interface.

Strip plots of the data for both the Katarapko and eastern banks surveys (Fig. 2B) is overlain with river bathymetry data, displayed as a broken black line, which is the interface between the river sediments and river water.

Zones of high conductivity (low resistivity) are indicated in the TEM data. Of greatest interest is the conductivity of the sediments immediately below the river water - sediment interface. This is the zone where potential discharge (or loss from the river to the aquifer) of saline groundwater to the river may be interpreted.

Conductive features (0–5 Ohm.m), seen as reds and oranges can be interpreted as either materials containing more saline groundwater than the surrounding material, or conductive clays, through which water does not move readily. Resistive features (> 10 Ohm.m), seen as green and blues can be interpreted as material containing groundwater of a lower salinity than elsewhere. It is worth noting that variations in formation porosity and connectivity will also affect the resistivity the data. Each situation must be interpreted in the light of local hydrogeology. The correlations between the resistivity and the geology will not be unique and the validity of geophysical interpretations could be checked by drilling.

A comparison with the June 2003 run-of-river salinity survey yields broad but evident correlations with the resistive and conductive anomalies within the shallow sediments. Conductive sediment zones are relatable to increasing run-of-river salt loads and resistive sediment zones are relatable to decreasing run-of-river salt loads.

A noticeable zone of high conductivity sediments (<5.0 Ohm.m) occurs between river kilometre 488 and 506 (Fig. 2A). Within this zone, there are a number of smaller zones with reduced sediment conductivity (river kilometres 496–499 and 501–502.5) that may be attributed to local hydrogeological effects. Other minor conductive zones can be seen immediately downstream of Lock-4 (river kilometre 516) and between river kilometre 510 and 511.

It is evident on a strip plot (Fig. 2B) of the Katarapko Island and the eastern (irrigation) bank surveys that the Katarapko survey is more conductive at depth (-10 and -20 m). Deeper conductive features are not likely to represent salt discharge areas that are more likely to occur in the uppermost part of the river sediments (Fig. 2A). These deeper *features are likely to be related to higher groundwater salinities, but the reduced hydraulic gradients in the Katarapko Island side of the river means that the flux of saline groundwater is likely to be low, except post-flooding, or if disposal of CDS water to the disposal basin is increased.*

The TEM results correspond with the interpretation of the potentiometric surface of the unconfined aquifer(s) that indicates that the majority of the flux of saline groundwater enters the river in the Loxton area in sections of the river where hydraulic gradients are steep, and along the cliffs. Other sections of the river adjacent to the floodplain have a low groundwater flux due to reduced hydraulic gradients.

3. MODEL CONSTRUCTION

3.1 MODFLOW AND VISUAL MODFLOW

MODFLOW is a three-dimensional finite difference mathematical code that was developed by the US Geological Survey (McDonald and Harbaugh 1988). Visual MODFLOW Version 3.1.0.86 was developed by Waterloo Hydrogeologic Inc. in recent years and is a pre-processor for quick generation of data files for MODFLOW.

Visual MODFLOW was used as a tool for generating MODFLOW model grids, boundary conditions, observation well data, production wells and zones for aquifer hydraulic parameters. The software was also used for establishing settings to run the model, and to obtain quick and convenient output results. The PCG2 solver was used for all steady state and transient modelling runs.

3.2 MODEL CONSTRUCTION

3.2.1 MODEL DOMAIN AND GRID

The model domain simulates an area 75 km (east-west) by 78 km (north-south). The bounding AMG coordinates of the model domain are (southwest) E425122 N6160180 and (northeast) E500122 N6233500 (GDA 1994) (Fig. 10).

The selection of a large model domain that incorporates the smaller study area is consistent with good modelling practice. The model domain boundaries are set at a sufficient distance from the study area such that they do not influence the behaviour of the aquifer system in the study area.

The rectangular model grid was divided into 359 rows and 398 columns. The minimum grid size is 125 x 125 m in the Loxton area. The maximum grid size is 250 x 250 m in the remaining model area (Fig. 11).

3.2.2 MODEL LAYERS

MODFLOW layer options are given in Table 4.

Table 4 MODFLOW layer types

Layer type	Aquifer type	Aquifer hydraulic parameters
Type-0	Confined	Transmissivity and storage coefficient (specific storage, S_S) are constant.
Type-1	Unconfined	Transmissivity varies and is calculated from saturated thickness and hydraulic conductivity. The storage coefficient (specific yield, S_Y) is constant. Type-1 is only valid for the uppermost layer of a model.
Type-2	Confined/ Unconfined	Transmissivity is constant - the storage coefficient may alternate between values applicable to the confined (S_S) or unconfined (S_Y) states.
Type-3	Confined/ unconfined	Transmissivity varies and is calculated from the saturated thickness and hydraulic conductivity. The storage coefficient may alternate between values applicable to the confined (S_S) or unconfined (S_Y) state.

Simplifying model geometry by reducing the number of model layers can reduce the huge input data set, help to avoid complications, reduce numerical errors, and speed up the model calculation process. According to McDonald and Harbaugh 1988, aquitards can be simulated as actual layers between aquifers when calculating vertical leakage, or simulated as vertical leakage between aquifers without an actual layer in the model (provided storage in the aquitards is not important). Without an aquitard layer, the vertical leakage will be calculated using the vertical hydraulic conductivity values, and thickness of the overlying and underlying layers. The method of using vertical leakage to simulate aquitards can be used where the aquitard layers are relatively thin and uniformly distributed.

In the model area, the Winnambool Formation aquitard is only ~3 m thick, and the Finnis Formation aquitard is uniformly less than 5 m in thickness. These aquitards can be merged into the underlying aquifers, and vertical hydraulic conductivity values in the aquifer layers can be used to calculate the vertical leakage between the aquifers.

According to modelled and observed data reported in Yan at al. (2004), the head difference between the Upper Mannum Formation and Lower Mannum Formation is very small in the project area. As there are three aquifers (Glenforslan Formation, Pata Formation and Monoman Formation) in the vertical profile between the Mannum Formation and the River Murray, upward leakage from the Mannum Formation will be very similar if the upper and lower components are merged into one layer in the model.

In terms of discussion above, the regional aquifer system in the Loxton – Bookpurnong area was conceptualised as a five layers model, including four aquifer layers and one aquitard layer (Fig. 12, Table 5). The model grid was applied to the five layers resulting in 714 410 finite difference cells.

Table 5 Model layer aquifers and aquitards

Layer No	Hydrogeological unit	Aquifer / aquitard	MODFLOW layer
1	Loxton Sands, Monoman Formation, part Pata Formation	Aquifer	Type-1
2	Lower Loxton Clay and Shells, Bookpurnong Formation, Pata Formation	Aquitard	Type-3
3	Pata Formation	Aquifer	Type-3
	Winnambool Formation	Aquitard	Simulated as leakage
4	Glenforslan Formation	Aquifer	Type-0
	Finnis Formation	Aquitard	Simulated as leakage
5	Mannum Formation	Aquifer	Type-0

3.2.2.1 Ground surface

The Department of Environment and Heritage (DEH) provided regional elevation data. Ground surface elevation is given in Figure 13. The elevation of the floodplain is ~10–12 m AHD. The elevation of the highland is 30–50 m AHD.

3.2.2.2 Layer-1: Loxton Sands, Monoman Formation and part Pata Formation

Layer-1 simulates the Loxton Sands unconfined - semi-unconfined aquifer, the Monoman Formation semi-unconfined – semi-confined aquifer, and part Pata Formation unconfined aquifer:

1. In the highland area the unconfined aquifer is represented by the Loxton Sands. The base of Layer-1 is the base of the Loxton Sands.
2. The Blanchetown Clay has not been modelled as the effect of this aquitard in perching water is accounted for by controlling the time lag and recharge rate to the Loxton Sands groundwater table.
3. The Monoman Formation represents the bulk of the unconfined aquifer in the River Murray valley. In reality, the Monoman Formation occurs in the unconfined – semi-confined state depending on the thickness and competence of the overlying Coonambidgal Formation. The representation of the Monoman Formation in the model as an unconfined aquifer results in the maximum flux of saline groundwater entering the river, and the most conservative wellfield design in terms of production well spacing and pumping rates. Regardless of the actual state of confinement of the Monoman Formation, when production wells are pumped, the aquifer becomes unconfined to some radial distance from the production well. The base of Layer-1 (top of Layer-2) is the base of the Monoman Formation.
4. Downstream of Loxton, the Pata Formation comes into hydraulic communication with the River Murray and forms the unconfined aquifer.
5. Base elevations were determined from geological and geophysical logs and extrapolation of these values. The elevation of the base of Layer-1 (top of Layer-2) occurs from between -20 and 40 m AHD (Fig. 14).
6. The representation of Layer-1 as a Modflow Type-1 layer (unconfined) results in conservative behaviour when concept wellfields are applied in the model.

3.2.2.3 Layer-2: Lower Loxton Clay and Shells, Bookpurnong Formation and part Pata Formation

Layer-2 simulates the Lower Loxton Clay and Shells and Bookpurnong Formation aquitards, and part Pata Formation semi-confined aquifer:

1. In the highland area Layer-2 represents the Lower Loxton Clay and Shells and Bookpurnong Formation. The base of Layer-2 is the base of the Bookpurnong Formation.
2. Due to concerns about the spatial continuity of the Bookpurnong Formation in the Loxton area, this aquitard was removed from the model within the River Murray valley and was replaced with the Pata Formation semi-confined, low permeability aquifer. As a result, the Monoman Formation contiguously overlies the Pata Formation in this area.
3. In the River Murray valley outside of the Loxton area, Layer-2 represents the Bookpurnong Formation. The base of Layer-2 is the base of the Bookpurnong Formation.

4. Base elevations were interpreted from geological and geophysical logs and the extrapolation of these values. Layer–2 has a thickness of 5–30 m. The base elevation of Layer-2 (top of Layer-3) occurs between -50 and 35 m AHD (Fig. 15).

3.2.2.4 Layer-3: Pata Formation

Layer-3 simulates the regionally distributed Pata Formation semi-confined low permeability aquifer. The base elevation of Layer-3 was interpreted from geological and geophysical logs and extrapolation of these values, and by examination of the cross-sections given in Figure 3. Layer-3 has a thickness of 2–10 m. The base elevation of Layer-3 (top of Layer 4) occurs between -60 and 35 m AHD (Fig. 16).

3.2.2.5 Winnambool Formation

The Winnambool Formation vertical hydraulic conductivity was applied to the Pata Formation and the upper part of the Glenforslan Formation to allow calculation of the leakage between these aquifers. This modelling method simulates the effect of the Winnambool Formation.

3.2.2.6 Layer-4: Glenforslan Formation

Layer-4 simulates the regionally distributed Glenforslan Formation semi-confined, low permeability aquifer. Layer-4 thickness of 25 m was taken from AWE (2003). The base elevation of Layer-4 (top of Layer-5) occurs between -85 and 10 m AHD (Fig. 17).

3.2.2.7 Finnis Formation

The Finnis Formation vertical hydraulic conductivity was applied to the lower part of the Glenforslan Formation, and is used with the actual vertical hydraulic conductivity of Mannum Formation, to allow calculation of the leakage between these aquifers. This modelling method simulates the effect of the Finnis Formation.

3.2.2.8 Layer-5: Mannum Formation

Layer-5 simulates the regionally distributed Mannum Formation (semi)-confined moderate permeability aquifer. Layer-5 has a thickness of 80 m. The base elevation of Layer-5 occurs between -180 and -80 m AHD (Fig. 18). The thickness of this layer is different to that reported in Yan at al.(2004) due to requirement to make the transmissivity values consistent with the previous model.

3.2.3 MODEL AQUIFER HYDRAULIC PARAMETERS

It is standard practice, when commencing a modelling project, to initially allocate aquifer and aquitard hydraulic parameters based on previous reported values.

In order to commence model calibration, regional values of aquifer and aquitard hydraulic parameters were derived from previous reports, and reference to current pumping tests.

Some aquifer hydraulic parameters were altered in specific areas during both steady state and transient calibration to achieve the final values required for accurate calibration. The final aquifer and aquitard hydraulic parameters are given in Table 6, with their distribution within each layer given in Figures 19–24.

Table 6 Calibrated aquifer and aquitard hydraulic parameters

Aquifer / aquitard	Layer	Hydraulic conductivity		Storage	
		Kh (m/day)	Kv (m/day)	Sy (-)	Ss(/m)
Loxton Sands	1	0.5–10	0.1	0.15–0.2	
Monoman Formation	1	15	0.15	0.15	
Lower Loxton Clay and Shells, Bookpurnong Formation	2	0.006	0.002		$1x10^{-4}$
Pata Formation	1, 2, 3	0.5	$5x10^{-5}$ – $1x10^{-4}$		$1x10^{-4}$
Winnambool Formation	–		*		
Glenforslan Formation	4	0.5–2	$5x10^{-4}$ – $2x10^{-4}$		$1x10^{-4}$
Finnis Formation	–		*		
Mannum Formation	5	0.5–2	0.2		$5x10^{-5}$

* Vertical Leakance calculated by the model for each cell

3.2.3.1 Loxton area

In the Loxton area calibration resulted in:

1. An horizontal hydraulic conductivity of 15 m/day, and a specific yield of 0.15 for the Monoman Formation. Horizontal hydraulic conductivity values remain very close to (and within the same order of magnitude) as values determined from pumping tests (20–40 m/day). Due to the representation of the Monoman Formation in the model as an unconfined aquifer, storage coefficient values determined from pumping tests are not relevant.

2. Horizontal hydraulic conductivities of 0.5–10 m/day, and a specific yield of 0.15 for the Loxton Sands resulted in the best fit to the observed (historic) potentiometic head data. A horizontal hydraulic conductivity value of 10 m/day is within the order of magnitude of those determined from pumping tests.

In addition:

1. Pata Formation aquifer hydraulic parameters were obtained from reference to current pumping tests (horizontal hydraulic conductivity <0.7 m/day, specific storage $3x10^{-6}$ – $4x10^{-5}$/m).

2. Glenforslan Formation and Upper and Lower Mannum Formation aquifer hydraulic parameters were adopted from AWE (2003), and are generally consistent with the results of pumping tests.

Aquitard hydraulic parameters were applied to control the upward and downward leakage between the Loxton Sands, Monoman Formation, and the Upper Mannum Formation:

1. Bookpurnong Formation vertical hydraulic conductivity was obtained from reference to current pumping tests (vertical hydraulic conductivity range $1x10^{-3}$ – $5x10^{-3}$ m/day).

2. Winnambool Formation vertical hydraulic conductivity was obtained from reference to current pumping tests (vertical hydraulic conductivity range $1x10^{-5}$ – $1x10^{-3}$ m/day).

3. Finnis Formation parameters were adopted from AWE (2003). Current pumping tests indicate the values are conservative (vertical hydraulic conductivity range $1x10^{-5}$ – $1x10^{-4}$ m/day).

3.2.4 MODEL BOUNDARIES

The five-layer model is complex, and different boundary conditions were applied to simulate the aquifer system, River Murray, and their hydraulic communication.

3.2.4.1 Layer-1: Loxton Sands and Monoman Formation and part Pata Formation

The regional groundwater flow is from east to west within the model domain with groundwater flux entering the River Murray. Where the aquifers are laterally adjacent, groundwater flows from the Loxton Sands into the Monoman Formation, and then discharges to the river. The following boundary conditions were applied to Layer-1 (Fig. 25):

1. No-flow boundaries where groundwater flow is parallel to the model edge.
2. General head boundaries and constant head boundaries to simulate groundwater flow on the model edges where flow occurs into and out of the model.
3. Constant head boundaries to simulate hydraulic communication between the Noora evaporation basin and aquifers.
4. Constant head boundary cells to simulate the River Murray (river stage AHD):
   a. 16.30 m upstream Lock-5
   b. 13.2 m Lock-5 to Lock-4
   c. 9.8 m Lock-4 to Lock-3
5. River cells to simulate anabranch creeks on the floodplain.
6. Drainage cells to simulate groundwater seepage from the highland to the floodplain in the Loxton area. The potentiometric heads were set at 11 m AHD, the average ground surface elevation of the northern floodplain.
7. Drainage cells (potentiometric head 27 m AHD) were used in the Loxton area throughout the area where the CDS occurs to control the groundwater table if it rises to the elevation of the CDS.
8. River cells to simulate the Katarapko Island disposal basin.

Aside:- The Loxton Comprehensive Drainage System (CDS)

The CDS was constructed to control the perched groundwater table that developed above the Blanchetown Clay. There is no requirement for the Blanchetown Clay to be simulated in the model for modelling runs to the present, as the effect of this aquitard in perching water is accounted for by controlling the recharge rate and lag times to the Loxton Sands, where the true groundwater table occurs.

However, the model does require control of the groundwater table during predictive modelling runs, to account for the possibility that the groundwater mound in the Loxton Sands reaches an elevation where the CDS would provide control. This control is provided by using drainage cells throughout the area where the CDS occurs to control the groundwater table if it rises to the elevation of the CDS.

3.2.4.2 Layer-2: Lower Loxton Clay and Shells and Bookpurnong Formation and part Pata Formation

Very small volumes of water move laterally into and out of this layer due to its low permeability. The following boundary conditions were applied to Layer-2 (Fig. 26).

1. No-flow boundaries were used at the model edges.
2. Some constant head boundaries were used along the River Murray in areas where the river is in hydraulic communication with the Pata Formation.
3. River cells were used to simulate Lake Bonney.

3.2.4.3 Layer-3: Pata Formation

Regional groundwater flow is from the southeast to northwest within the model domain. The following boundary conditions were applied to Layer-2 (Fig. 27).

1. General head boundaries were used at the model edges to simulate groundwater flow into and out of the model.
2. Constant head boundaries were used in the western area of the model where the River Murray is in hydraulic communication with the Pata Formation.
3. Constant head boundary cells to simulate the River Murray (river stage AHD):
   a. 9.8 m upstream Lock-3
   b. 6.1 m downstream Lock-3

3.2.4.4 Layer-4: Glenforslan Formation

Regional groundwater flow is from the southeast to northwest within the model domain. The following boundary conditions were applied to Layer-2 (Fig. 28).

1. General head boundaries were used at the model edges to simulate groundwater flow into and out of the model.
2. Constant head boundaries were used in the western area of the model where the River Murray is in hydraulic communication with the Glenforslan Formation.
3. Constant head boundary cells to simulate the River Murray (river stage 6.1 m AHD).

3.2.4.5 Layer- 5: Mannum Formation

Regional groundwater flow is from the southeast to northwest within the model domain. General head boundaries were used at the model edges to simulate groundwater flow into and out of the model (Fig. 29).

3.2.5 MODEL RECHARGE

The Loxton – Bookpurnong area has a semi-arid climate with hot dry summers and some rainfall during winter months. The average rainfall is ~400 mm/year with pan evaporation of ~2000 mm/year.

Prior to clearance of the native vegetation on the highland, vertical recharge to the Loxton Sands resulting from rainfall infiltration is believed to have been as low as 0.1 mm/year (Allison et al. 1990). A recharge rate of 0.1 mm/year was applied in the steady state model, and to the non-irrigated areas in the transient model. Recent data obtained by the CSIRO and Department for Environment and Heritage (DEH) indicates increased recharge in the dryland farming areas, and this data will be included in the further modelling.

3.2.5.1 Initial model recharge in Loxton – Bookpurnong area

Initially the recharge zones and recharge rates to the Loxton Sands in the Loxton and Bookpurnong area were adopted from AWE (2003). The following information regarding this issue was provided by AWE:

Recharge zones and rates for Loxton – Bookpurnong irrigation areas to 1997 are derived from detailed crop data and water balances provided by Ken Smith Technical Services. Crop types and hectares under irrigation were assembled on a property-by-property basis. Crop factors, based on work done by AWE for the Bookpurnong Lock-4 Environmental Association in 2002/3, were used to calculate the total application volume in each irrigation zone. The zones are based on cadastral boundaries within the Loxton – Bookpurnong LAP area and GIS coverage. The application volume in each irrigation zone was multiplied by 25% (an estimate of irrigation efficiency of 75%) and lagged for 20 years, a length of time based on the 27 years measured at Clark's floodplain and initial model calibration. Some percentage of the volume was not lagged, but was assumed to reach the aquifer by drain in two special recharge zones. This volume is a fraction of the total recharge volume, the fraction depending on how many wells were believed to be in use at different dates (2% per well to a maximum of 10%). Some scenarios include changes in future recharge due to a predicted expansion in irrigation at Bookpurnong. Likely patterns of growth post 1997 were developed by AWE in consultation with David Ingerson of the LAP Steering Committee with some input from the Bookpurnong and Lock-4 Environmental Group.

It is accepted that the values reported by AWE have had professional judgement applied in their derivation. These recharge zones and recharge rates were modified (Fig. 30, App. A-1 [Loxton] and B-1 [Bookpurnong]) by calibrating the model to match observed potentiometric heads throughout the aquifer system.

The total volume was compared with the total accession volume calculated by Ken Smith Technical Services in 1997 (refer to discussion in calibration section).

3.2.5.2 Modelled recharge in the Loxton area

The following explanation regarding recharge to the Loxton Sands in the Loxton area has been confirmed by Phil Cole (DWLBC).

1. **Ten-year time lag:** Irrigation commenced ~1946 in the Loxton area. Appendix A-1-2c indicates that modelled recharge begins ~1955 and increases rapidly through to 1960. The 10-year time lag between the onset of irrigation and modelled recharge is likely to be due to the installation of widespread drainage wells during the 1950s. These wells directed irrigation drainage water to deeper aquifers (Loxton Sands, Pata Formation and Glenforslan Formation) (DWLBC 2003). If these wells had not been constructed, recharge may not have reached the groundwater table for at least 20 years after the onset of irrigation.
2. **Recharge during the 1950s to 1960s:** The modelled recharge rates in the 1950s and 1960s were high, between 300–600 mm/yr (App. A-1), and are most likely due to

flood irrigation practices and the use of drainage wells delivering water directly to the Loxton Sands. The high total recharge is clearly indicated in Appendix A-1-2c.

3. **Recharge during the 1970s and 1990s:** Reductions in recharge occurred during the 1970s and 1990s, most likely due to the transfer of a portion of the accession water to the Katarapko Island disposal basin via the CDS. The reduced total recharge is clearly indicated in Appendix A-1-2c.
4. **Recharge from the late 1990s:** Further reductions in recharge occurred from the late 1990s due to the introduction of improved irrigation practices (i.e. drip and sprinkler systems). The further reduced total recharge is clearly indicated in Appendix B-1-2c.
5. **Recharge post 2002:** In 2002 recharge was again reduced due to the impact of the Loxton headworks rehabilitation (i.e. upgraded distribution infrastructure).

3.2.5.3 Modelled recharge in the Bookpurnong area

The following explanation regarding recharge to the Loxton Sands in the Bookpurnong area has been confirmed by Phil Cole (DWLBC).

1. **Ten-year time lag**: Irrigation commenced ~1960 in the Bookpurnong area. Appendix B-1-2c indicates that modelled recharge begins ~1970 and increases steadily. The 10-year time lag between the onset of irrigation and modelled recharge is likely to be due to the installation of drainage wells during the 1960s. Woodward-Clyde (1998) data indicates the construction of two drainage wells in 1965 and a further eight bores ~1975. These drainage wells were concentrated in to two locations that are represented in model as recharge zones. The current state of these wells is not known, but based on observed groundwater level data and information provided by Phil Cole (DWLBC) and A Telfer (AWE), it is assumed that the drainage wells are now not in use.
2. **Recharge volume during in 1980s and 1990s**: Recharge steadily increased during the 1980s and 1990s in response to the expansion of the irrigated area. The increasing total recharge is clearly indicated in Appendix B-1-2c.
3. **Recharge from the late 1990s** – Reductions in recharge occurred from the late 1990s in all zones, due to improved irrigation practices. The reduced total recharge is clearly indicated in Appendix B-1-2c.

3.2.5.4 Recharge applied during predictive modelling

The following modifications to model recharge were applied during predictive modelling in the Loxton – Bookpurnong area:

1. Pre-1988 recharge:
   a. Calibrated recharge rates at 1988 were used in predictions for pre-1988 irrigation development areas (representing 70% irrigation efficiency).
   b. Calibrated recharge rates at 2002 were used in predictions for pre-1988 irrigation development areas to represent 85% irrigation efficiency (with improved irrigation practice).
   c. In the Loxton area, calibrated recharge rates at 2004 were used in predictions for pre-1988 irrigation development representing 85% irrigation efficiency (with improved irrigation practice) and rehabilitation.

2. Post-1988 recharge:
   a. A 10-year time lag was required for calibration of the model. This is in the range predicted by SIMPACT of 5–25 years. This 10-year time lag has been applied to all post-1988 irrigation development areas.
   b. The modelled recharge rates (70–120 mm/year) at 2004 are very similar to those predicted by SIMPACT (100 mm/year) (DEH 2001). Therefore, the SIMPACT recharge value of 100 mm/year was used for all irrigation areas developed post 1988 (following a 10-year time lag).

3.2.6 MODEL EVAPOTRANSPIRATION

Evapotranspiration was simulated using ground surface as a control point (evapotranspiration rate 200 mm/year, Holland at al.(2001)) and applying an extinction depth of 1.5 m. Evapotranspiration is most likely to occur on the floodplain and in some areas to the east of the Loxton groundwater mound where a shallow groundwater table exists.

3.2.7 MODEL GROUNDWATER ALLOCATION AND USE

There is no allocation of groundwater or use in the Loxton – Bookpurnong area.

3.2.8 MODEL STRESS PERIOD

The transient model can be used to model the historical period (1945–2004) and for predictions (2004–2104) using a two-year stress period. In the final reporting, the results of predicted salt loads entering the River Murray have been represented from 1945 because irrigation commenced around 1945, but there were no hydraulic changes from 1945–55 due to the time lag associated with recharge.

4. MODEL CALIBRATION

4.1 STEADY STATE MODELS, TRANSIENT MODELS AND CALIBRATION

Steady state models are used to model equilibrium hydrologic conditions and/or conditions when changes in storage are insignificant. Transient models are used to model time dependent stresses and / or where water is released from, or taken into storage.

Calibration of the model with existing data must be conducted in order to have confidence in predictive modelling. Calibration is necessary to demonstrate that the model can replicate the behaviour of the aquifer system for at least one set of conditions. A sensitivity analysis must also be undertaken to determine the relative importance of model parameters (i.e. the system drivers) in achieving calibration.

4.2 STEADY STATE MODEL CALIBRATION

Steady state calibration is undertaken to develop a broad-scale hydraulic conductivity distribution by matching modelled to observed potentiometric heads. Steady state calibration was performed by adjusting hydraulic conductivities (within reasonable limits) and model boundary conditions. Dynamic stresses and storage effects are excluded from steady state calibration.

Due to the absence of pre-irrigation development potentiometric head data, the steady state model was calibrated using a constructed (S Barnett DWLBC) pre-irrigation development potentiometric surface (Fig. 31) that is believed to represent equilibrium hydraulic conditions in the area (note that this is the only available data).

A modelled potentiometric surface was achieved that closely matches the constructed (groundwater table) potentiometric surface (Fig. 31) in the Loxton Sands and Monoman Formation (in the east of the model domain), and the Murray Group Limestone (in the west of the model domain where it is unconfined), at a time post-regulation of the River Murray, but prior to irrigation development and enhanced recharge to the Loxton Sands.

4.3 TRANSIENT MODEL CALIBRATION

Transient calibration is undertaken to calibrate aquifer and aquitard hydraulic parameters, and refine boundary conditions. The potentiometric surface output from the steady state model was used as the starting point for transient model runs up to 2004. The transient model was calibrated through an iterative process that involved adjusting the boundary conditions, recharge rates and aquifer hydraulic parameters. Each time a change to the boundary conditions and aquifer hydraulic parameters was made in the transient model, the steady state model was altered and rerun, with the output being used as the starting point for the transient model.

Model calibration was achieved by the following actions, in accordance with Murray Darling Basin Commission (2000):

1. Qualitative comparison between modelled and observed potentiometric heads.
2. Quantitative comparison between modelled and observed potentiometric heads.
3. Iteration residual error.
4. Using salt load as confirmation (rather than water balance as calibration, as recommended).

4.3.1 TRANSIENT MODEL CALIBRATION - QUALITATIVE COMPARISON OF POTENTIOMETRIC HEADS

Initial qualitative calibration of the transient model was undertaken by simulating the regional potentiometric heads at 2003 and 2004. The modelled and observed potentiometric heads from 2003 and 2004 were compared to determine the accuracy of the calibration.

4.3.1.1 Layer-1: Loxton Sands and Monoman Formation and <u>part</u> Pata Formation

Qualitative comparison between the modelled (Fig. 32) and observed potentiometric heads of the Loxton Sands and Monoman Formation in the Loxton – Bokpurnong area, indicates the modelled distribution closely represents the shape and form of the observed distribution, including the Loxton groundwater mound.

4.3.1.2 Layer-3: Pata Formation

Qualitative comparison between modelled (Fig. 33) and observed potentiometric heads of the Pata Formation indicates the modelled distribution adequately represents the shape and form of the observed distribution, including an expression of the Loxton – Bookpurnong groundwater mound resulting from downward vertical leakage from the Loxton Sands (and possibly hydraulic loading of the aquifer by the mound in the overlying Loxton Sands).

4.3.1.3 Layer-4: Glenforslan Formation

Qualitative comparison between the modelled (Fig. 34) and observed potentiometric heads of the Glenforslan Formation indicates the modelled distribution represents the shape and form of the observed distribution, but with an expression of the Loxton groundwater mound.

Aside:- Calibration of Potentiometric Heads in Deeper Units

Calibration of potentiometric heads in deeper units is hampered by the lack of observed data, particularly prior to the current investigations. The model predicts the downward continuation of the Loxton groundwater mound into the Glenforslan Formation and Upper Mannum Formation, where there is no evidence of mounding.

The model represents a conservative hydraulic scenario, allowing for downward vertical leakage to the Glenforslan Formation and Upper Mannum Formation resulting in an expression of the Loxton groundwater mound, and elsewhere in the model allowing for upward leakage from the Murray Group Limestone. Potential upward leakage was a topic of concern to SA Water, AWE and DWLBC.

Acceptance of this model response recognises the fact that existing aquifer and aquitard hydraulic parameter data are sparse, may be conservative, and have been applied over much larger areas than that actually tested during pumping tests.

This conservative approach to modelling indicates that, regardless of the development of a groundwater mound in the Glenforslan Formation and Upper Mannum Formation, the target aquifers for salt interception are the Monoman Formation and Loxton Sands.

4.3.1.4 Layer-5: Mannum Formation

Qualitative comparison between the modelled (Fig. 35) and observed potentiometric heads of the Mannum Formation indicates the modelled distribution represents the shape and form of the observed distribution, with an expression of the Loxton groundwater mound.

4.3.2 TRANSIENT MODEL CALIBRATION - QUANTITATIVE COMPARISON OF POTENTIOMETRIC HEADS

Due to the fact that the target aquifers for salt interception are the Loxton Sands and Monoman Formation, quantitative calibration was conducted for these aquifers. The lack of observed data from the Pata Formation, Glenforslan Formation and Upper Mannum Formation precludes quantitative calibration for these units.

In the Loxton – Bookpurnong area quantitative comparison between modelled and observed (historical) potentiometric heads of observation wells (locations shown in Fig. 36) completed in the Loxton Sands and Monoman Formation indicates a satisfactory match (Figs 37–51).

One of the stated objectives of the current modelling was to undertake calibration in the Bookpurnong area. Hydrographs of twelve observation wells in the Bookpurnong area have been included in the calibration process (Figs 46–51).

4.3.3 TRANSIENT MODEL CALIBRATION ITERATION RESIDUAL ERROR

The iteration residual error, between modelled and observed potentiometric heads of the Loxton Sands and Monoman Formation in the Loxton area was calculated using data from Loxton 1976, 1990 and 2004 and Bookpurnong 2004 (years for which more data was available). The calculations (Figs 52–55) indicate a normalised root mean square value for (Loxton) 1976 (5.2%), 1990 (3.6%) and model validation in 2004 (5.2%) and for Bookpurnong 2004 (7.8%). These values are less than, or close to, the 5% recommended by MDBC (2000).

4.3.4 MODEL CONFIRMATION – COMPARISON OF SALT LOAD

4.3.4.1 Loxton area

Groundwater salinity values in the Loxton Sands vary dramatically across the Loxton – Bookpurnong region, reflecting the impact of low salinity irrigation drainage water on the saline native groundwater. Groundwater salinity data were sourced from pumping tests and HYDROLAB geophysical sonding, the latter demonstrating stratification with the heavier dense saline groundwater underlying low salinity irrigation water.

For the purposes of predicting salt load entering the River Murray, professional judgement was applied to available groundwater salinity data to arrive at values considered to be representative of various zones along the river (Fig. 4). The more saline native groundwater values (7000–40 000 mg/L) were adopted for these zones.

The salt load entering the River Murray in the Loxton – Bookpurnong area was calculated by converting the modelled groundwater flux by applying relevant values of groundwater salinity for a number of model flow budget zones along the river (Fig. 4 respectively). The salinity for each zone and the resulting calculations of the salt load are given in Appendix A-2 [Loxton] and B-2 [Bookpurnong].

In the Loxton area confirmation that the modelled (calculated) salt load entering the River Murray matched the salt load observed during run-of-river salinity surveys (that can have a wide range depending on river flows) was achieved by comparing the modelled and observed values. The modelled salt load values of ~120 tonnes/day is quite acceptable when compared to the run-of-river data that indicates 100–120 tonnes/day (Table 7), and this provides additional confidence in the model.

Table 7 Comparison between modelled salt load and run-of-river salinity data in the Loxton – Bookpurnong area

Year 2002	Salt load (tonnes/day) at flow rates of 5000–20 000 ML/day			
	Modelled			Run-of-river salinity data
	Eastern side Irrigation Area	Western side Katarapko Island (disposal basin)	Total	
Loxton	94	28*	122	100–119
Bookpurnong	103	–	103	82–104

* The salt load from western side of the River Murray (Katarapko Island) only occurs in the Loxton area - the value is same as that given in Yan at al.(2004).

Aside:- Salt load from Katarapko Island

The flux of saline groundwater from the western side of the River Murray is driven by the operation of the Katarapko Island disposal basin. When this basin has been operated with a high water level a flux of saline groundwater is induced towards the river. Due to the fact that no basin waterlevel data was available, an estimated high water level was applied in the model, consistent with maximum observed (historical) potentiometric heads in the surrounding aquifer. This modelling approach results in a maximum flux entering the river that may be greater than that currently occurring.

Note regarding Bookpurnong area

In the Bookpurnong area, the modelled salt load of ~100 tonnes/day closely matches the run-of-river salt load in 2002 of 80–100 tonnes/day given in AWE (2003).

4.3.5 MODEL CONFIRMATION – COMPARISON OF RECHARGE VOLUME

The input recharge zones and recharge rates (AWE 2003) were modified by calibrating the model to provide a best match with potentiometric heads in the aquifers. The total volume of recharge applied in the model was then compared with the calculated total accession volume from Smith (1997) (Fig. 58).

The total recharge volume to the Loxton Sands in Bookpurnong area was compared with the predicted values given in AWE (2003). Figure 59 indicates that the modelled values show a similar trend to the AWE predicted values, but the recharge occurs 10 year earlier than the AWE predictions.

The calculated total accession (Smith) took into account rainfall infiltration, total application, irrigation efficiency and other associated irrigation losses. The modelled recharge volume (which was adjusted during the calibration process) was less than or equal to the calculated accession volume. Any difference is most certainly due to the calculated volume including water perched above the Blanchetown Clay, inaccuracies in records of pumped volumes, and assumptions made regarding losses. The close similarity in the values gives confidence that the total recharge applied in the model is satisfactory.

4.3.6 MODEL CONFIRMATION – COMPARISON BETWEEN MODEL RESULTS AND TEM

The modelling discussed in this report confirms that the sections of the River Murray where the salt load entering the river is greatest (Figs 58 and 59) is relatively consistent with potential discharge zones indicated by the TEM data (Fig. 2).

5. MODELLING RUNS AND PREDICTIVE MODELLING RUNS

Once satisfactory calibration of the model has been achieved, the transient model provides a useful predictive tool to quantify fluxes of saline groundwater, and the impacts of specific pumping stresses on potentiometric heads, over periods that may range from tens to hundreds of years.

In particular, the model can predict the:

1. Lateral flux of saline groundwater and (by using appropriate salinity values) salt load, entering the River Murray from the Loxton Sands and Monoman Formation in the Loxton – Bookpurnong area.

2. Vertical leakage and (by using appropriate salinity values), salt load from the Murray Group Limestone into the overlying Pliocene Sands.

3. Impact of SIS on the flux of saline groundwater and salt load entering the River Murray.

Note that all predictions are for the eastern side of the River Murray.

5.1 SCENARIOS

The scenarios summarised in Table 8, and detailed below, were requested to be run by DWLBC Murray Darling Basin Division and are designed to:

1. Determine the relative impact of the various pre-and post-1988 actions undertaken in the Loxton – Bookpurnong area.

2. Determine the impacts of improved irrigation efficiency, and distribution system rehabilitation on the flux of saline groundwater and salt load entering the River Murray.

3. Determine the accountability for cost sharing.

4. Satisfy the reporting requirements of both Schedule ‘C’ of the Murray-Darling Basin Agreement 1992 and the Basin Salinity Management Strategy Operational Protocols 2003.

The scenarios include the application (or not) of the following important conditions:

1. Improved irrigation practices (IIP) commencing in the late 1990s when furrows were replaced by sprinklers, thus increasing irrigation efficiency from 75–85%. Recharge zones are given in Figure 30 and recharge rates are given in Appendix A-1-4 [Loxton] and B-1-4 [Bookpurnong] a significant reduction of recharge rates after 1998 is assumed to be due to the (IIP).

2. Loxton headworks rehabilitation (RH), ie replacement of concrete distribution channels with pipelines, commencing in 2002, resulted in reduced transportation losses which are reflected in reduced recharge rates. Recharge zones are given in Figure 30 and recharge rates are given in Appendix A-1-5 [Loxton].

3. Construction of SIS.

Table 8 Summary of modelled scenarios and conditions

Scenario	Model Run	Irrigation development area	IIP	RH	SIS
1	Steady State	None	None	None	None
2	1945–2004	1945–2004 (from 1945 to current condition)	70–85%	Yes	None
3	2004–2104	Pre-1988	70%	None	None
4	2004–2104	Pre-1988	85%	None	None
5	2004–2104	Pre-1988	85%	Yes	None
6	2004–2104	Post-1988*	85%	Yes	None
7	2004–2104	Pre-1988	85%	Yes	SIS-1 designed for current recharge condition
8	2004–2104	Post-1988*	85%	Yes	SIS-2 designed for post-1988 recharge condition

* Post-1988 includes pre-1988 + post-1988 irrigation development

5.1.1 SCENARIO-1: STEADY STATE (PRIOR TO 1945)

Scenario-1 provides the base groundwater flux and salt load entering the River Murray post-regulation and prior to irrigation development.

5.1.1.1 Scenario-1: Conditions

The following conditions were applied in the steady state model in the Loxton – Bookpurnong area:

1. Post-regulation of the River Murray.
2. Pre-irrigation development.

5.1.1.2 Scenario-1: Modelling results

The results for Loxton and Bookpurnong, given in Table 9, indicate that of the 10 tonnes/day salt load entering the River Murray in the Loxton area, 6% enters by vertical leakage from underlying aquifers, the remaining 94% enters by lateral flow. In the Bookpurnong area, of the 16 tonnes/day salt load entering the River Murray, 4% enters by vertical leakage from underlying aquifers, the remaining 96% enters by lateral flow.

Table 9 Scenario-1 predicted groundwater flux and salt load from eastern side of river

	Loxton			Bookpurnong		
	Lateral	Upward	Total	Lateral	Upward	Total
Flux (ML/day)	0.59	0.03	0.62	0.58	0.02	0.61
Salt load (Tonnes/day)	9.04	0.54	9.59	15.85	0.61	16.46

5.1.2 SCENARIO-2: HISTORICAL 1945–2004

Transient Scenario-2 models the hydrological changes that occurred in the Loxton area, due to historical irrigation development from 1945 to 2004, and groundwater flux and salt load entering the River Murray. The model results are identical to those resulting from model calibration, and represent the historical on-ground situation.

5.1.2.1 Scenario-2: Conditions

The following conditions were applied in the transient model in the Loxton – Bookpurnong area:

1. Irrigation activity commencing in the Loxton area in 1945 and running until 2004.
2. A total area under irrigation that increases from 1945–2004.
3. Recharge rates applied to meet that required for calibration commencing from 1955 (due to the application of a 10 year lag time).
4. Improved irrigation practices commencing in the late 1990s with furrows being replaced by sprinklers.
5. Loxton headworks rehabilitation of the distribution network commencing in 2002.

5.1.2.2 Scenario-2: Modelling results

The results of the predicted flux of saline groundwater and salt load entering the River Murray are given in Appendix A-2 [Loxton] and B-2 [Bookpurnong].

The results for Loxton and Bookpurnong for 2004, given in Table 10, indicate the salt load entering the River Murray under current conditions. Of the 93 tonnes/day salt load in the Loxton area, 3% enters by vertical leakage from underlying aquifers, the remaining 97% enters by lateral flow. Of the 98 tonnes/day salt load in the Bookpurnong area, 3% enters by vertical leakage from underlying aquifers, the remaining 97% enters by lateral flow.

Table 10 Scenario-2 predicted groundwater flux & salt load at 2004 from eastern side of river

	Loxton			Bookpurnong		
	Lateral	Upward	Total	Lateral	Upward	Total
Flux (ML/day)	5.05	0.14	5.19	2.85	0.07	2.92
Salt load (Tonnes/day)	89.91	3.07	92.97	96.70	1.82	98.49

5.1.3 SCENARIO-3: PRE-1988 IRRIGATION DEVELOPMENT WITH NO MITIGATION

Transient Scenario-3 predicts the hydrological changes, and groundwater flux and salt load entering the River Murray, that would be expected to occur in the Loxton area from 1988 until 2104 under pre-1988 irrigation development with no mitigation.

5.1.3.1 Scenario-3: Conditions

The following conditions were applied in the transient model in the Loxton – Bookpurnong area:

1. The potentiometric surface output from Scenario-2, at 1988, was used as the starting point for a prediction run until 2104.

2. Irrigation operating at 70% efficiency from 1988–2104 on pre-1988 irrigation development areas.

The following conditions represented in Scenario-2 were NOT activated:

1. Improved irrigation practices commencing in the late 1990s with furrows being replaced by sprinklers.
2. Loxton headworks rehabilitation of the distribution network commencing in 2002.
3. Post-1988 irrigation development area.

5.1.3.2 Scenario-3: Prediction results

The results of the predicted flux of saline groundwater and salt load entering the River Murray are given in Appendix A-3 [Loxton] and B-3 [Bookpurnong].

The results for Loxton and Bookpurnong for 2104, given in Table 11, indicate the predicted maximum salt load entering the River Murray. Of the 124 tonnes/day salt load in the Loxton area, 3% enters by vertical leakage from underlying aquifers, the remaining 97% enters by lateral flow. Of the 109 tonnes/day salt load in the Bookpurnong area, 2% enters by vertical leakage from underlying aquifers, the remaining 98% enters by lateral flow.

Table 11 Scenario-3 predicted groundwater flux & salt load at 2104 from eastern side of river

	Loxton			Bookpurnong		
	Lateral	Upward	Total	Lateral	Upward	Total
Flux (ML/day)	6.77	0.18	6.95	3.73	0.08	3.81
Salt load (Tonnes/day)	120.05	3.49	123.54	106.88	2.12	109.00

5.1.4 SCENARIO-4: PRE-1988 IRRIGATION DEVELOPMENT + IIP

Transient Scenario-4 predicts the hydrological changes, and groundwater flux and salt load entering the River Murray, that would be expected to occur in the Loxton area from 2002 until 2104 under pre-1988 irrigation development with IIP. This scenario tests the reduction in salt load resulting from the implementation of IIP.

5.1.4.1 Scenario-4: Conditions

The following conditions were applied in the transient model in the Loxton – Bookpurnong area:

1. The potentiometric surface output from Scenario-2, at 2002, was used as the starting point for a prediction run until 2104.
2. Irrigation operating at 85% efficiency (the result of IIP) from 2002–2104 on pre-1988 irrigation development areas.

The following conditions represented in Scenario-2 were NOT activated:

1. Loxton headworks rehabilitation of the distribution network commencing in 2002.
2. Post-1988 irrigation development area.

5.1.4.2 Scenario-4: Prediction results

The results of the predicted flux of saline groundwater and salt load entering the River Murray are given in Appendix A-4 [Loxton] and B-4 [Bookpurnong].

The results for Loxton and Bookpurnong for 2104, given in Table 12, indicate the predicted salt load reduction to the River Murray, in comparison to Scenario-3. Of the 104 tonnes/day salt load in the Loxton area, 3% enters by vertical leakage from underlying aquifers, the remaining 97% enters by lateral flow. Of the 65 tonnes/day salt load in the Bookpurnong area, 2% enters by vertical leakage from underlying aquifers, the remaining 98% enters by lateral flow. The implementation of IIP reduces the salt load (with respect to Scenario-3) by 20 tonnes/day in the Loxton area and by 45 tonnes/day in the Bookpurnong area.

Table 12 Scenario-4 predicted groundwater flux & salt load at 2104 from eastern side of river

	Loxton			Bookpurnong		
	Lateral	Upward	Total	Lateral	Upward	Total
Flux (ML/day)	5.64	0.16	5.80	2.24	0.06	2.30
Salt load (Tonnes/day)	100.59	2.96	103.54	62.92	1.58	64.50

5.1.5 SCENARIO-5: PRE-1988 IRRIGATION DEVELOPMENT + IIP + RH

Transient Scenario-5 predicts the hydrological changes, and groundwater flux and salt load entering the River Murray, that would be expected to occur in the Loxton area from 2002 until 2104 if the CURRENT RECHARGE conditions remain unchanged into the future. This scenario assumes pre-1988 irrigation development with IIP + RH. This scenario tests the reduction in salt load resulting from the implementation of RH.

5.1.5.1 Scenario-5: Conditions

The following conditions were applied in the transient model in the Loxton – Bookpurnong area:

1. The potentiometric surface output from Scenario-2, at 2002, was used as the starting point for a prediction run until 2104.
2. Irrigation operating at 85% efficiency (the result of IIP) from 2002–2104 on pre-1988 irrigation development areas.
3. Loxton headworks rehabilitation of the distribution network commencing in 2002.
4. Recharge from post-1988 irrigation development area was NOT included.

5.1.5.2 Scenario-5: Prediction results

The results of the predicted flux of saline groundwater and salt load entering the River Murray are given in Appendix A-5 [Loxton] and B-5 [Bookpurnong].

The results for Loxton and Bookpurnong for 2104, given in Table 13, indicate the predicted salt load reduction to the River Murray, in comparison to Scenario-4. Of the 76 tonnes/day salt load in the Loxton area, 3% enters by vertical leakage from underlying aquifers, the remaining 97% enters by lateral flow. Of the 63 tonnes/day salt load in the Bookpurnong area, 2% enters by vertical leakage from underlying aquifers, the remaining 98% enters by lateral flow. The implementation of RH reduces the salt load (with respect to Scenario-4) by 28 tonnes/day in the Loxton area and by 1 tonne/day in the Bookpurnong area.

Table 13 Scenario-5 predicted groundwater flux & salt load at 2104 from eastern side of river

	Loxton			Bookpurnong		
	Lateral	Upward	Total	Lateral	Upward	Total
Flux (ML/day)	4.17	0.13	4.30	2.18	0.06	2.24
Salt load (Tonnes/day)	73.34	2.42	75.76	61.61	1.47	63.08

5.1.6 SCENARIO-6: 'POST-1988' IRRIGATION DEVELOPMENT

Transient Scenario-6 predicts the hydrological changes, and MAXIMUM groundwater flux and salt load entering the River Murray, that would be expected to occur in the Loxton area from 2002 until 2104 under the MAXIMUM RECHARGE conditions. This scenario assumes pre-1988 irrigation development with IIP + RH, and post-1988 irrigation development with IIP ('POST-1988' irrigation development). This scenario tests the increase in salt load resulting from post-1988 irrigation development.

5.1.6.1 Scenario-6: Conditions

The following conditions were applied in the transient model in the Loxton – Bookpurnong area:

1. The potentiometric surface output from Scenario-2, at 2002, was used as the starting point for a prediction run until 2104.
2. Irrigation operating at 85% efficiency (the result of IIP) between 2002–2104 on pre-1988 irrigation development areas.
3. Loxton headworks rehabilitation of the distribution network commencing in 2002.
4. The expected increasing recharge to the Loxton Sands (after 2004) resulting from the post-1988 irrigation development areas operating at 85% efficiency.

5.1.6.2 Scenario-6: Prediction results

The results of the predicted flux of saline groundwater and salt load entering the River Murray are given in Appendix A-6 [Loxton] and B-6 [Bookpurnong].

The results for Loxton and Bookpurnong for 2104, given in Table 14, indicate the predicted maximum salt load entering the River Murray, in comparison to Scenario-5. Of the 95 tonnes/day salt load in the Loxton area, 3% enters by vertical leakage from underlying aquifers, the remaining 97% enters by lateral flow. Of the 138 tonnes/day salt load in the Loxton area, 2% enters by vertical leakage from underlying aquifers, the remaining 98% enters by lateral flow. The post-1988 irrigation development increases the salt load (with respect to Scenario-5) by 20 tonnes/day in the Loxton area and by 75 tonnes/day in the Bookpurnong area.

Table 14 Scenario-6 predicted groundwater flux & salt load at 2104 from eastern side of river

	Loxton			Bookpurnong		
	Lateral	Upward	Total	Lateral	Upward	Total
Flux (ML/day)	5.22	0.16	5.38	4.93	0.11	5.03
Salt load (Tonnes/day)	92.22	3.11	95.33	134.96	2.68	137.64

5.1.7 SCENARIO-7: PRE-1988 IRRIGATION DEVELOPMENT + IIP + RH + SIS-1

Transient Scenario-7 predicts the hydrological changes, and groundwater flux and salt load entering the River Murray, that would be expected to occur in the Loxton area from 2002 until 2104 if the CURRENT RECHARGE conditions remain unchanged into the future (ie Scenario-5). This scenario assumes pre-1988 irrigation development with improved IIP + RH + SIS-1. This scenario tests the reduction in salt load resulting from the construction of SIS-1.

5.1.7.1 Scenario-7: Conditions

The following conditions were applied in the transient model in the Loxton – Bookpurnong area:

1. The potentiometric surface output from Scenario-2, at 2002, was used as the starting point for a prediction run until 2104.
2. Irrigation operating at 85% efficiency (the result of IIP) from 2002–2104 on pre-1988 irrigation development areas.
3. Loxton headworks rehabilitation of the distribution network commencing in 2002.
4. Construction of a SIS-1 in 2004.

Recharge from post-1988 irrigation development area was NOT included.

5.1.7.2 Scenario-7: Prediction results

The results of the predicted flux of saline groundwater and salt load entering the River Murray are given in Appendix A-7 [Loxton] and B-7 [Bookpurnong].

The results for Loxton and Bookpurnong for 2104, given in Table 15, indicate the predicted salt load reduction to the River Murray, in comparison to Scenario-5. The construction of SIS-1 reduces the salt load (with respect to Scenario-5) by 57 tonnes/day in the Loxton area and by 54 tonnes/day in the Bookpurnong area.

Table 15 Scenario-7 predicted groundwater flux & salt load at 2104 from eastern side of river

	Loxton			Bookpurnong		
	Lateral	Upward	Total	Lateral	Upward	Total
Flux (ML/day)	1.18	0.08	1.26	0.33	0.02	0.35
Salt load (Tonnes/day)	17.10	1.40	18.50	8.20	0.56	8.76

5.1.7.3 Scenario-7: Loxton SIS-1 scheme concept design

Modelling of Scenario-5 (the current situation continuing unchanged until 2104) indicates the salt load entering the River Murray in the Loxton area at 2104 is 76 tonnes/day. This salt load results in a 19 EC disbenefit (using a conversion of 4.55 tonnes of salt per EC) being observed in-river at Morgan.

The objective of the Loxton SIS is to intercept 80 - 85% of the total flux of groundwater (and salt load) entering the River Murray along the Loxton reach.

The conceptual curtain wellfield SIS-1 for the Loxton area has been developed using the groundwater model. The concept SIS-1 (Fig. 60a), composed of 50 production wells pumping at 0.5–2 L/s plus four horizontal wells (represented in the model by drain cells set at the elevation of the river pool level) is intended to intercept the flux of saline groundwater that enters the River Murray from the eastern side between river kilometre 486 and 502. The saline groundwater will be transmitted to the Noora evaporation disposal basin.

Note re horizontal wells

At the time of the writing, a trial horizontal well is about to be drilled in the Loxton area. Successful interception in the highland areas is dependent on the success of this technology.

The concept SIS-1 will reduce the 2104 salt load of 76 tonnes/day entering the River Murray in the Loxton area to 19 tonnes/day, a reduction of 75%. This represents an in-river benefit at Morgan of 14 EC.

The DWLBC preferred interception option and logic for SIS-1 includes:

1. The majority of the post-irrigation development flux of saline groundwater enters the River Murray directly from the Loxton Sands, and from the Loxton Sands via the Monoman Formation, from the eastern side of the river.

2. Ideally the Loxton Sands should be targeted to prevent discharge into the Monoman Formation and seepage at the edge of the floodplain. Pumping the Loxton Sands is preferable, as this results in a lesser volume of high salinity groundwater requiring disposal, in comparison to pumping from the Monoman Formation. The Monoman Formation should be targeted in areas where there is significant discharge from the floodplain into the River Murray. However, investigations have revealed that well construction problems force the movement of production wells to the floodplain where it exists.

3. Note that pumping from the highland controls the groundwater flux entering the floodplain, but response in the River Murray may be slow. Pumping from the floodplain may result in a more rapid in-river response, but this results primarily in removing saline groundwater in storage, rather than controlling the flux of saline groundwater entering the floodplain. It should be noted that (in general) pumping should not occur around the exterior of wide floodplains directly adjacent to the river as the hydraulic gradient is likely to be away from the river towards the centre of the floodplain.

4. The construction of SIS-1 involving a curtain of production wells is expected to result in rapid in-river EC benefits. Production wells will be required to reduce the groundwater table to river pool level at the mid-point between any two wells.

5. Controlling post-flood recession discharge from the floodplain areas is not considered.

6. SIS-1 assumes the use of conventional production wells that are not as effective as required in the Loxton Sands due to the base of he aquifer being close to river pool level. Note that Scenario-8 SIS-2 assumes that the potentiometric head can be reduced to river pool level and is therefore more efficient.

Note regarding Bookpurnong area

- In the Bookpurnong area, numbers and locations of the 23 production wells, and pumping rates were provided by AWE in June 2005.
- The concept SIS-1 will reduce the 2104 salt load of 63 tonnes/day entering the River Murray to 9 tonnes/day, a reduction of 86%. This represents an in-river benefit at Morgan of 14 EC.

Aside:- Operation of the Katarapko Island Disposal Basin

Development of the CDS commenced in 1952 and was commissioned in 1964 to intercept excess irrigation water for transport to the Katarapko Island disposal basin. The CDS network comprises tile drains distributed throughout the Loxton irrigation region, connected to 14 large concrete caissons from which water is pumped to the Katarapko Island disposal basin. The CDS was designed to control the perched groundwater table at a depth exceeding 1.4 m below ground surface in the Loxton irrigation area. The CDS has successfully achieved this objective, with the exception of overflow areas where the water not intercepted by the CDS recharges the groundwater mound.

Prior to 1964, the potentiometric head in the Monoman Formation on Katarapko Island occurred at ~9.8 m AHD (0.2 m below river pool level) resulting in a small gradient away from the river. Although operational strategies prepared in 1976 and 1985 recommended restricting the water level in the basin to 11 m AHD, the volume being delivered to the disposal basin in the 1970s and 1980s resulted in elevation of the potentiometric head near the basin up to 11.5 m AHD.

While the water level in the basin has reduced as a result of improved irrigation practices and headworks rehabilitation, two small groundwater mounds still exist that exhibit a potentiometric head up to 1 m above river pool level, thus driving saline groundwater into the river. This influence is reflected in higher conductivities observed in TEM data. Observation well hydrographs indicate that fluctuations in potentiometric head up to 1 m can occur rapidly over a 6–12 month period.

The flux of saline groundwater entering the River Murray from the western side of the river is driven by the operation of the Katarapko Island disposal basin. When this basin has been operated with a high water level a flux of saline groundwater is induced to the river. Due to the fact that no basin water level data was available, an estimated high basin water level was applied in the model, consistent with maximum observed (historical) potentiometric heads in the surrounding aquifer. This modelling approach results in a maximum flux that may be greater than that currently occurring.

Historically, discharge to the Katarapko Island disposal basin has been as high as ~6000 ML/yr, peaking in 1994. In recent years, the need for the disposal basin has been reduced due to the irrigation efficiency measures implemented in the Loxton area resulting in ~2000 ML/year being pumped to the basin since 2001 (Fig. 61).

Modelling indicates that:

1. *The flux of saline groundwater entering the River Murray from the western side is mobilized by the disposal of CDS irrigation drainage water to the Katarapko Island disposal basin.*
2. *Under 2002 conditions (Table 7) the salt load entering the River Murray from the western side of the river was 28 tonnes/day.*
3. *When the disposal basin is removed from the model, and replaced with evapotranspiration simulating what is believed to be the natural floodplain conditions on Katarapko Island, the salt load entering the River Murray from the western side reduces to zero.*

5.1.8 SCENARIO-8: 'POST-1988' IRRIGATION DEVELOPMENT + SIS-2

Transient Scenario-8 predicts the hydrological changes, and MAXIMUM groundwater flux and salt load entering the River Murray, that would be expected to occur in the Loxton area from 2002 until 2104 under the MAXIMUM RECHARGE conditions in the future (Scenario-6). This scenario assumes pre-1988 irrigation development with IIP + RH, and post-1988 irrigation development with IIP ('POST-1988' irrigation development), plus SIS-2 (Fig. 60b). This scenario tests the reduction in salt load resulting from the construction of SIS-2.

5.1.8.1 Scenario-8: Conditions

The following conditions were applied in the transient model in the Loxton – Bookpurnong area:

1. The potentiometric surface output from Scenario-6, at 2004, was used as the starting point for a prediction run until 2104.
2. Irrigation operating at 85% efficiency (the result of IIP) from 2002–2104 on pre-1988 irrigation development areas.
3. Loxton headworks rehabilitation of the distribution network commencing in 2002.
4. The expected increasing recharge to the Loxton Sands (after 2004) resulting from the post-1988 irrigation development areas operating at 85% efficiency.
5. Construction of SIS-2 in 2004 to intercept 100% salt load entering the River Murray at 2104.

5.1.8.2 Scenario-8: Prediction results

The results of the predicted flux of saline groundwater and salt load entering the River Murray are given in (App. A-8 [Loxton] and B-8 [Bookpurnong]).

The results for Loxton and Bookpurnong for 2104, given in Table 16, indicate the predicted salt load reduction to the River Murray, in comparison to Scenario-6. The construction of SIS-2 reduces the salt load (with respect to Scenario-6) by 75 tonnes/day in the Loxton area and by 122 tonnes/day in the Bookpurnong area.

Table 16 Scenario-8 predicted groundwater flux & salt load at 2104 from eastern side of river

	Loxton			Bookpurnong		
	Lateral	Upward	Total	Lateral	Upward	Total
Flux (ML/day)	1.20	0.10	1.30	0.47	0.06	0.54
Salt load (Tonnes/day)	18.11	1.98	20.08	13.33	1.53	14.85

5.1.8.3 Scenario-8: Loxton SIS-2 scheme concept design

Modelling of Scenario-6 indicates the salt load entering the River Murray in the Loxton area at 2104 is 95 tonnes/day. This salt load results in a 24 EC disbenefit being observed in-river at Morgan.

The objective of the Loxton SIS is to intercept 80 - 85% of the total flux of groundwater (and salt load) entering the River Murray along the Loxton reach.

Modelling indicates that the additional flux of saline groundwater (over that of Scenario-7) can be intercepted by increasing pumping rates (within the range 0.5–3 L/s) rather than by installing extra production wells in the Loxton area (App. A-8) to achieve lowering the groundwater table to the pool level. The model indicates that a total volume (the interception flux) of 10.6 ML/day (123 L/s) must be pumped, which is twice the current flux (5.4 Ml/day) of saline groundwater entering the River Murray. The interception flux may reduce towards 5.4 ML/day (63 L/s) after several years.

It should be noted that although increased pumping rates can be applied to production wells in the model, it is possible that increased pumping rates will not be able to be applied to actual constructed wells.

The concept SIS-2 will reduce the 2104 salt load of 95 tonnes/day entering the River Murray to 20 tonnes/day, a reduction of 79%. This represents an in-river benefit at Morgan of 19 EC.

Note regarding Bookpurnong area

- In the Bookpurnong area, the installation of an extra 13 production wells (in SIS-2) was required to intercept the additional flux over that of Scenario-7 (App. B-8).
- The concept SIS-2 will reduce the 2104 salt load of 138 tonnes/day entering the River Murray to 15 tonnes/day, a reduction of 89%. This represents an in-river benefit at Morgan of 31 EC.

5.1.9 COMPARISON OF PREDICTION RESULTS OF SALT LOADS ENTERING THE RIVER MURRAY FOR ALL SCENARIOS

The biannual prediction results of salt loads entering the River Murray for all scenarios for Loxton and Bookpurnong (Figs 62 and 63 respectively) indicate the trends for each scenario.

These trends clearly indicate that the maximum benefit is rapidly achieved in Scneario-7 and Scenario-8 at both Loxton and Bookpurnong.

The SIS-2 that operates in Scenario-8 requires increasing pumping rates that may not be achievable. However, regardless of pumping rates, the outcome will be the same if the drawdown target of river pool level between production wells is achieved.

6. MODEL SENSITIVITY ANALYSIS

6.1 SENSITIVITY ANALYSIS

Sensitivity analysis is a procedure for quantifying the impact of an incremental variation in aquifer hydraulic parameters, or a stress, on an aquifers modelled response. The purpose of the sensitivity analysis is to identify the drivers in the system.

The transient model has been calibrated for aquifer hydraulic parameters and recharge, and only requires sensitivity testing of issues of major concern and to comply with the Murray Darling Basin Modelling Guideline (2000). In the Loxton area there is some uncertainty regarding the:

1. Nature and extent of the aquitards, ie the existence of low vertical hydraulic conductivity between the aquifers. In particular, the frequent absence of the Bookpurnong Formation on the floodplain, and the relatively thin nature of the Finnis Formation, raises doubts as to the effectiveness of the confinement of the Upper Mannum Formation.
2. River pool level that influences the flux of saline groundwater to the River Murray.
3. The magnitude of groundwater flux from the Loxton Sands to the Monoman Formation, and the River Murray where the Monoman Formation does not exist that is controlled by the aquifer hydraulic parameters.

Sensitivity testing of the previous three issues is discussed in detail in Yan at al.(2004). The following issues required retesting as a part of the current modelling.

1. The impact of variations in the aquifer hydraulic parameters of the Loxton Sands on the magnitude of salt load from the Loxton Sands to the Monoman Formation.
2. The impact of variations in the vertical hydraulic conductivity of the Bookpurnong Formation on the magnitude of salt load entering the River Murray from the Pata Formation. Note that Yan at al.(2004) tested the extreme case of the removal of all aquitards in the model.

6.2 TRANSIENT MODEL SENSITIVITY ANALYSIS

6.2.1 SENSITIVITY TEST-1: VARIATION OF LOXTON SANDS AQUIFER HYDRAULIC PARAMETERS BY INCREASING / DECREASING BY +/- 15%

This sensitivity test was conducted to test the impact of variations in the aquifer hydraulic parameters of the Loxton Sands on the magnitude of salt load from the Loxton Sands to the Monoman Formation, and the River Murray where the Monoman Formation does not exist.

6.2.1.1 Sensitivity test-1: Conditions

Scenario-6 (‘post-1988’ irrigation development) was selected for sensitivity testing, as it is a worst-case scenario of full future irrigation development in Loxton area. Sensitivity testing was conducted by varying the Loxton Sands component of Layer-1 aquifer hydraulic parameters by ~+/-15% of the predominant calibrated value (hydraulic conductivity (of the major zones) = 3.5 and 10 m/day, specific yield = 0.15) in accordance with MDBC (2000), and running the model 100 years into the future.

6.2.1.2 Sensitivity test-1: Results

Sensitivity test results (Table 17) indicate that:

1. Changes of +/-15% to the calibrated Loxton Sands hydraulic conductivity results in a maximum of 6 tonnes/day change in the salt load entering the Monoman Formation and River Murray 100 years into the future, which is insignificant in comparison to the total salt load of 95 tonnes/day (a 6% change).
2. Changes of ~=+/- 15% to the calibrated Loxton Sands specific yield results in a maximum 1 tonne/day change in the salt load entering the Monoman Formation and River Murray 100 years into the future, which is insignificant.

The results given in Table 17 indicate that the salt load from the Loxton Sands to the Monoman Formation and River Murray is only slightly affected by changes in aquifer hydraulic parameters, and this provides confidence in extrapolating the calibrated values at sites near Loxton to other areas.

6.2.2 SENSITIVITY TEST-2: VARIATION OF BOOKPURNONG FORMATION VERTICAL HYDRAULIC CONDUCTIVITY INCREASING / DECREASING BY +/- 15%

This sensitivity test was conducted to test the impact of variations in the vertical hydraulic conductivity of the Bookpurnong Formation on the magnitude of salt load entering the River Murray from the Pata Formation.

6.2.2.1 Sensitivity test-2: Conditions

Scenario-6 (‘post-1988’ irrigation development) was selected for sensitivity testing, as it is a worst-case scenario of full future irrigation development in Loxton area. Sensitivity testing was conducted by varying the vertical hydraulic conductivity of the Bookpurnong Formation (Layer-2) directly below the River Murray by ~+/-15% of the calibrated value of 0.002 m/day in accordance with MDBC (2000), and running the model 100 years into the future.

6.2.2.2 Sensitivity test-2: Results

Sensitivity test results (Table 17) indicate that:

- Changes of +/-15% to the calibrated Bookpurnong Formation vertical hydraulic conductivity results in a maximum of 0.5 tonnes/day (Table 17) change in the salt load entering the River Murray from the Pata Formation 100 years into the future, which is insignificant in comparison to the total salt load of 95 tonnes/day (a 0.5% change).

Table 17 Results of sensitivity testing of variation in aquifer and aquitard hydraulic parameters - predicted salt load entering River Murray 100 years into the future

Loxton	Kh (m/day) Loxton Sands			Sy Loxton Sands			Kv (m/day) Bookpurnong Formation		
Parameters value	-15%	0.5–10	+15%	-15%	0.15–0.2	+15%	-15%	0.0020	+15%
Loxton results									
Predicted salt load tonnes/day)	88.0	95.3	100.9	99.3	95.3	91.0	95.8	95.3	95.0
Difference (tonnes/day)	7.3	–	5.6	4.0	–	4.3	0.5	–	0.3
Bookpurnong results									
Predicted salt load (tonnes/day)	131.6	137.6	143.3	138.7	137.6	136.3	138.1	137.6	137.4
Difference (tonnes/day)	6.0	–	5.7	1.1	–	1.3	0.5	–	0.2

7. MODEL UNCERTAINTIES / LIKELY ERROR LIMITS

The following factors may lead to uncertainty being associated with the groundwater fluxes to the River Murray (and indirectly the salt loads) resulting from modelling.

7.1 HYDROGOLOGICAL (LITHOLOGICAL / STRATIGRAPHIC) SET-UP OF THE MODEL

The hydrogeology of the highland and floodplain areas are considered to be well understood and well represented in the model with a confidence limit of better than 90%. However, the detailed salt movement of the floodplains is less well known, and the model representation is a broad generalisation, which serves well the estimation of fluxes passing from the highland irrigation areas to the River Murray. Although a *subjective* confidence limit of 90% may be assigned to the model representation of the floodplain hydrogeology, as far as transmission of salt loads from the floodplain to the river, a confidence limit of 60% would be appropriate.

7.2 LOXTON SANDS AND BOOKPURNONG FORMATION HYDRAULIC PARAMETERS

The percentage change in the model salt loads entering the River Murray, that is attributable to variations in aquifer and aquitard hydraulic parameters, are shown graphically in Figures 64–67.

The greatest change in the model salt load entering the River Murray of 8% occurs when hydraulic conductivity of the Loxton Sands in the Loxton area is reduced by 15%. When the changes in both the Loxton and Bookpurnong areas are combined (Fig. 4), this reduces to less than 6%. The maximum range of the %Change in salt load is +5% to –6%, falling into an envelope of +/- 6%, for a hydraulic conductivity variation of +/-15%.

Horizontal hydraulic conductivities of 0.5–10 m/day, and a specific yield of 0.15, for the Loxton Sands resulted in the best fit to the observed (historic) potentiometic head data.

It should noted that the aquifer and aquitard hydraulic parameters are considered to be reasonable, and should only be changed beyond 15%, if significant new information indicates a large difference to the values used in the modelling.

7.3 GROUNDWATER SALINITY

Groundwater salinity ranges between 7000–40 000 mg/L in the project area. The values given in Figure 4 (which were used in the calculation of predicted salt load for each of the zones) were analysed to determine the frequency distribution of salinities in the model budget zone (Fig. 68). The median value was found to be 26 200 mg/L and the mean 23 400 mg/L.

If predicted salt loads entering the River Murray had been modelled using the median salinity value of 26 200 mg/L, the salt load would have been over-estimated by 15% compared with the present model predictions presented in this report.

The groundwater salinity values, and zones to which they apply, represent the best understanding of the groundwater salinity distribution and compare favourably with salt load observed in the River Murray.

As a check, all relevant salinity values available from the floodplains and near-river highlands (84 samples) were extracted from the available databases and analysed to determine their statistical distribution. The distribution of values is shown as a histogram (Fig. 69) and as a percentile distribution (Fig. 70). The median value for the whole population is 28 336 mg/L and the mean is 25 648 mg/L. There is an indication of the mixing of two populations as can be seen from the two peaks in the histogram.

It should be noted that the median value of the full dataset is only 2% greater than the median of the zone value applied in the model, which serves to increase the level of confidence in the selected zone salinity. ***Further, it should be noted that groundwater salinity may change in the future in response to accessions from irrigation development and the effects of groundwater pumping from SIS.***

7.4 RECHARGE (ACCESSION TO THE GROUNDWATER TABLE)

There is high confidence (better than 90%) in the recharge values used in the *historical* modelling. The applied recharge values not only considered irrigation surveys from AWE, and from total accession volumes calculated by Ken Smith Technical Services in 1997, but also observed groundwater level data (hydrographs). The recharge values are similar to the SIMPACT predicted recharge values.

There is less confidence in the recharge values used in the *predictive* modelling, especially in the new irrigation areas. The SIMPCT predicted recharge values and proposed irrigation areas were used for the post-1988 predictions. It is highly likely that there will be changes in irrigation efficiency (that will affect recharge-accession) and therefore deviations from the predicted development sequence in the future. These factors will certainly affect the predicted salt load entering the River Murray.

Model recharge rates and areas in the future are considered to be the largest contributors to model uncertainty. However, the scenarios tested in the predictive modelling were worst-case which serves to account for some of the uncertainty.

8. MODEL LIMITATIONS

Hugh Middlemis (lead author Murray Darling Basin Commission 2000 Groundwater Modelling Guideline) stated in 2004 that: *It is important to recognise that there is no such thing as a perfect model, and all models should be regarded as works in progress of continuous improvement as hydrogeological understanding and data availability improves. By definition, model limitations comprise relatively negative statements, and they should not necessarily be viewed as serious flaws that affect the fitness for purpose of the model, but rather as a guide to where improvements should be made during work.*

The following limitations of the model may lead to a component of error being associated with the results of the predictive modelling:

1. The model layers are a simplified representation of the natural aquifers and aquitards thickness and hydraulic parameters, and may not reflect the natural conditions with sufficient accuracy.
2. Daily pool level fluctuation were not simulated in the model, which results in average values of salt load entering the River Murray.
3. Flood events were not simulated in the model.
4. The proposed SIS is based on generalised aquifer hydraulic parameters and the production well spacing is conservative (close). It is likely that the final production well spacing will be different to that modelled.
5. Due to the fact that no Katarapko Island disposal basin water level data was available, an estimated high basin water level was applied in the model, consistent with maximum observed (historical) potentiometric heads in the surrounding aquifer. This modelling approach results in a maximum flux of saline groundwater entering the River Murray from the western side that may lead to a potential over-estimate of salt load.

9. CONCLUSION

DWLBC has significantly revised and further calibrated the numerical groundwater flow model reported in Yan at al.(2004). The model is capable of simulating the regional aquifer system in the Loxton – Bookpurnong area. This model is an impact assessment model in the terminology of the MDBC (2002) and is of moderate complexity. The model accommodates the Loxton – Bookpurnong area within a broad regional context. The model also accounts for the hydraulic interaction of the sediments with the deeper confined Mannum Formation.

The model has been accurately calibrated for the Loxton and Bookpurnong areas using observed (historical) potentiometric heads. Sensitivity analysis, in terms of some major uncertainties, has been undertaken for transient conditions.

The Loxton – Bookpurnong model reported in Yan at al.(2004) was accredited by the MDBC in 2004 for the Loxton area, but not the Bookpurnong area (as the calibration process was not completed in the Bookpurnong area). The previous model has been significantly improved by the following actions:

1. The northern model boundary has been extended to Lock-6.
2. The model layers have been simplified from eight to five.
3. The model layer surface elevation has been improved as a result of the existence of data obtained form current investigations.
4. The Calibration in Bookpurnong and Loxton areas has been improved.

9.1 GENERAL MODELLING RESULTS

The modelling that has been undertaken has resulted in an improved understanding of the hydrogeology of the regional aquifer system and the flux of saline groundwater and salt load entering the River Murray in the Loxton – Bookpurnong area and its source aquifers.

In particular modelling indicates that for the Loxton -Bookpurnong area:

1. Irrigation development in the Loxton area resulted in the salt load entering the River Murray increasing from the natural base salt load of 10 tonnes/day to 94 tonnes/day (2002) following irrigation development and enhanced recharge to the Loxton Sands.
2. Irrigation development in the Bookpurnong area resulted in the salt load entering the River Murray increasing from the natural base salt load of 16 tonnes/day to 103 tonnes/day (2002).
3. If a SIS is not constructed in the Loxton – Bookpurnong area, the model predicts the salt load entering the River Murray will increase to 95 tonnes/day in the Loxton area and 138 tonnes/day in the Bookpurnong area by 2104 (Scenario-6).
4. The lateral flux of saline groundwater entering the River Murray in the Loxton – Bookpurnong areas dominates the vertical flux, and comprises ~97% of the total flux to the river.

5. The target aquifers for salt interception in the Loxton – Bookpurnong area are the Loxton Sands and Monoman Formation.
6. The lateral flux of saline groundwater that enters the River Murray from the western side is mobilized by the disposal of irrigation drainage water to the Katarapko Island disposal basin. When the disposal basin is removed from the model, and replaced with evapotranspiration simulating what is believed to be the natural floodplain conditions on Katarapko Island, the salt load from the western side reduces to zero.

9.2 GROUNDWATER MANAGEMENT SCHEMES

At the time of writing, the Loxton – Bookpurnong SIS is under investigation, and the full details of this scheme will be reported separately. In general terms, this scheme involves the construction of a curtain of production wells completed within the Loxton Sands and Monoman Formation on the eastern side of the River Murray to control the flux of saline groundwater.

Scenario-8 indicates that the concept SIS-2 will reduce the 2104 salt load of 95 tonnes/day entering the River Murray to 20 tonnes/day, a reduction of 79% in the Loxton Area. This represents an in-river benefit at Morgan of 19 EC. The concept SIS-2 will reduce the 2104 salt load of 138 tonnes/day entering the River Murray to 15 tonnes/day, a reduction of 89% in the Bookpurnong area. This represents an in-river benefit at Morgan of 31 EC.

9.3 MODEL PREDICTIONS OF SALT LOAD ENTERING THE RIVER MURRAY

The pre-1988 irrigation development area predictions for salt loads entering the River Murray in the Loxton – Bookpurnong area from 1945–2104 (Fig. 71, App. C) clearly indicates the benefits to the river that result from intervention.

The post-1988 irrigation development area predictions for the salt loads entering the River Murray in the Loxton – Bookpurnong area (Fig. 72) from 1988–2104 indicates:

- ~20 additional tonnes/day in the Loxton area.
- ~75 additional tonnes/day in the Bookpurnong area.

Note:

The model predicted salt load results entering the River Murray for all scenarios in the Loxton area are very similar to those reported in Yan at al.(2004).

In the Bookpurnong area, prediction results for Scenario-1 to Scenario-5 salt loads entering the River Murray are very similar to those reported in Yan at al.(2004).

The model prediction results for Scenario-6 salt load entering the River Murray in the Bookpurnong area is far less than predicted in Yan at al.(2004). The reason for the difference is due to the use of the different recharge rates in the zones where the drainage wells occur. Yan at al. (2004) used recharge rates in the zones where drainage wells occur that were reported in AWE (2003). The AWE value for these zones included *ongoing operation of the drainage wells that are known to have ceased operating in recent years.*

The maximum predicted impact of the construction of SIS-2 on salt loads entering the River Murray in Loxton – Bookpurnong area from 2004–2104 is indicated in Figure 73.

The average annual impact, in terms of salt load entering the River Murray in the Loxton – Bookpurnong area in tonnes/year and EC/year for the forthcoming thirty years (as required in *Schedule 'C', Murray Darling Basin Agreement 1992* and the *Basin Salinity Management Strategy Operational Protocols 2003*) are given in Tables 18 and 19 respectively.

9.4 RECOMMENDATIONS

The following work is recommended to address some of the model limitations:

1. More accurate representation of the operation of the Katarapko Island disposal basin to determine the effect on the salt load entering the River Murray.
2. Application of the recently acquired recharge data for the dryland farming areas obtained by CSIRO and DEH.

The effectiveness of the Loxton – Bookpurnong SIS is dependent on the successful implementation of both conventional tube wells and the horizontal wells. At the 5-year review the SIS needs to be carefully reviewed, and the model re-run with the actual on ground works accurately represented, to ensure that the EC credits presented in this report are being achieved by both SIS schemes.

Table 18 Predicted salt load entering the River Murray at Loxton and in-river EC benefit at Morgan

Year (start)	Year (end)	Mallee (SST)	Pre88-IIP-RH (S5–S1)	RH on Pre88 (S4–S5)	IIP on Pre88 (S3–S4)	Post88 (S6–S5)	SIS-2 (S6–S8)
30 year averages (tonnes/day) – Loxton Area							
2004	**2034**	9.5	73.5	12.7	19.5	2.0	60.2
2009	**2039**	9.5	71.3	15.6	20.2	3.1	65.5
2014	**2044**	9.5	69.8	18.0	20.5	4.5	65.9
2019	**2049**	9.5	68.7	19.9	20.6	6.1	66.4
2024	**2054**	9.5	67.9	21.4	20.7	7.6	67.1
2029	**2059**	9.5	67.3	22.6	20.6	9.1	67.9
2034	**2064**	9.5	66.9	23.7	20.6	10.5	68.7
2039	**2069**	9.5	66.6	24.5	20.5	11.8	69.5
2044	**2074**	9.5	66.4	25.1	20.5	13.0	70.2
2049	**2079**	9.5	66.3	25.7	20.4	14.0	71.0
2054	**2084**	9.5	66.2	26.1	20.4	15.0	71.6
2059	**2089**	9.5	66.1	26.5	20.3	15.8	72.3
2064	**2094**	9.5	66.1	26.8	20.2	16.6	72.9
2069	**2099**	9.5	66.1	27.1	20.2	17.3	73.4
2074	**2104**	9.5	66.1	27.3	20.1	17.9	73.9
Morgan in-river EC (Loxton Area)							
2004	**2034**	2.1	16.2	2.8	4.3	0.4	13.3
2009	**2039**	2.1	15.7	3.4	4.4	0.7	14.4
2014	**2044**	2.1	15.4	4.0	4.5	1.0	14.5
2019	**2049**	2.1	15.1	4.4	4.5	1.3	14.6
2024	**2054**	2.1	14.9	4.7	4.5	1.7	14.8
2029	**2059**	2.1	14.8	5.0	4.5	2.0	14.9
2034	**2064**	2.1	14.7	5.2	4.5	2.3	15.1
2039	**2069**	2.1	14.7	5.4	4.5	2.6	15.3
2044	**2074**	2.1	14.6	5.5	4.5	2.9	15.5
2049	**2079**	2.1	14.6	5.7	4.5	3.1	15.6
2054	**2084**	2.1	14.6	5.8	4.5	3.3	15.8
2059	**2089**	2.1	14.5	5.8	4.5	3.5	15.9
2064	**2094**	2.1	14.5	5.9	4.5	3.7	16.0
2069	**2099**	2.1	14.5	6.0	4.4	3.8	16.1
2074	**2104**	2.1	14.5	6.0	4.4	3.9	16.3

Table 19 Predicted salt load entering the River Murray at Bookpurnong and in-river EC benefit at Morgan

Year (start)	Year (end)	Mallee (SST)	Pre88-IIE (S4–S1)	IIE on Pre88 (S3–S4)	Post 88 (S6–S4)	SIS-2 (S6–S8)
30 year averages (tonnes/day)-Bookpurnong Area						
2004	**2034**	16.5	50.9	36.5	31.9	82.5
2009	**2039**	16.5	47.8	40.7	41.0	94.2
2014	**2044**	16.5	47.1	42.1	49.7	101.5
2019	**2049**	16.5	46.9	42.9	56.5	107.3
2024	**2054**	16.5	46.9	43.3	61.1	111.3
2029	**2059**	16.5	47.0	43.6	64.2	114.1
2034	**2064**	16.5	47.1	43.8	66.5	116.2
2039	**2069**	16.5	47.2	44.0	68.2	117.8
2044	**2074**	16.5	47.3	44.1	69.5	118.9
2049	**2079**	16.5	47.4	44.2	70.4	119.8
2054	**2084**	16.5	47.5	44.2	71.1	120.6
2059	**2089**	16.5	47.6	44.3	71.6	121.1
2064	**2094**	16.5	47.7	44.3	72.1	121.5
2069	**2099**	16.5	47.8	44.4	72.4	121.9
2074	**2104**	16.5	47.8	44.4	72.6	122.2
Morgan in-river EC (Bookpurnong Area)						
2004	**2034**	3.6	11.2	8.0	7.0	18.2
2009	**2039**	3.6	10.5	9.0	9.0	20.7
2014	**2044**	3.6	10.4	9.3	10.9	22.3
2019	**2049**	3.6	10.3	9.4	12.4	23.6
2024	**2054**	3.6	10.3	9.5	13.4	24.5
2029	**2059**	3.6	10.3	9.6	14.1	25.1
2034	**2064**	3.6	10.4	9.6	14.6	25.6
2039	**2069**	3.6	10.4	9.7	15.0	25.9
2044	**2074**	3.6	10.4	9.7	15.3	26.2
2049	**2079**	3.6	10.4	9.7	15.5	26.4
2054	**2084**	3.6	10.4	9.7	15.6	26.5
2059	**2089**	3.6	10.5	9.7	15.8	26.6
2064	**2094**	3.6	10.5	9.8	15.9	26.7
2069	**2099**	3.6	10.5	9.8	15.9	26.8
2074	**2104**	3.6	10.5	9.8	16.0	26.9

SHORTENED FORMS

Units of measurement commonly used (SI and non-SI Australian legal)

Name of unit	Symbol	Definition in terms of other metric units	Quantity
day	d	24 h	time interval
gigalitre	GL	10^6 m^3	volume
gram	g	10^{-3} kg	mass
hectare	ha	10^4 m^2	area
hour	h	60 min	time interval
kilogram	kg	base unit	mass
kilolitre	kL	1 m^3	volume
kilometre	km	10^3 m	length
litre	L	10^{-3} m^3	volume
megalitre	ML	10^3 m^3	volume
metre	m	base unit	length
microgram	µg	10^{-6} g	mass
microlitre	µL	10^{-9} m^3	volume
milligram	mg	10^{-3} g	mass
millilitre	mL	10^{-6} m^3	volume
millimetre	mm	10^{-3} m	length
minute	min	60 s	time interval
second	s	base unit	time interval
tonne	t	1000 kg	mass
year	y	356 or 366 days	time interval

δD	hydrogen isotope composition
$\delta^{18}O$	oxygen isotope composition
^{14}C	carbon-14 isotope (percent modern carbon)
CFC	chlorofluorocarbon (parts per trillion volume)
DWLBC	Department of Water, Land and Biodiversity Conservation
EC	electrical conductivity (µS/cm)
pH	acidity
ppm	parts per million
ppb	parts per billion
TDS	total dissolved solids (mg/L)

GLOSSARY

Act. The *Water Resources Act 1997* (South Australia).

Adaptive management. A management approach, often used in natural resource management, where there is little information and/or a lot of complexity and there is a need to implement some management changes sooner rather than later. The approach is to use the best available information for the first actions, implement the changes, monitor the outcomes, investigate the assumptions and regularly evaluate and review the actions required. Consideration must be given to the temporal and spatial scale of monitoring and the evaluation processes appropriate to the ecosystem being managed.

Algal bloom. A rapid accumulation of algal biomass (living organic matter) which can result in deterioration in water quality when the algae die and break down consuming the dissolved oxygen and releasing toxins.

Ambient. The background level of an environmental parameter (e.g. a background water quality like salinity).

Anabranch. A branch of a river that leaves the main stream.

Annual adjusted catchment yield. Annual catchment yield with the impact of dams removed.

Aquifer. An underground layer of rock or sediment which holds water and allows water to percolate through.

Aquifer, confined. Aquifer in which the upper surface is impervious and the water is held at greater than atmospheric pressure. Water in a penetrating well will rise above the surface of the aquifer.

Aquifer, storage and recovery (ASR). The process of recharging water into an aquifer for the purpose of storage and subsequent withdrawal.

Aquifer test. A hydrological test performed on a well, aimed to increase the understanding of the aquifer properties, including any interference between wells, and to more accurately estimate the sustainable use of the water resource available for development from the well.

Aquifer, unconfined. Aquifer in which the upper surface has free connection to the ground surface and the water surface is at atmospheric pressure.

Aquitard. A layer in the geological profile that separates two aquifers and restricts the flow between them.

Arid lands. In South Australia arid lands are usually considered to be areas with an average rainfall of less than 250 mm and support pastoral activities instead of broad acre cropping.

Artesian. Under pressure such that when wells penetrate the aquifer water will rise to the ground surface without the need for pumping.

Artificial recharge. The process of artificially diverting water from the surface to an aquifer. Artificial recharge can reduce evaporation losses and increase aquifer yield. *(See recharge, natural recharge, aquifer.)*

Barrage. Specifically any of the five low weirs at the mouth of the River Murray constructed to exclude seawater from the Lower Lakes.

Baseflow. The water in a stream that results from groundwater discharge to the stream. (This discharge often maintains flows during seasonal dry periods and has important ecological functions.)

Basin. The area drained by a major river and its tributaries.

Benchmark condition. Points of reference from which change can be measured.

Biological diversity (biodiversity). The variety of life forms: the different life forms including plants, animals and micro-organisms, the genes they contain and the *ecosystems (see below)* they form. It is usually considered at three levels — genetic diversity, species diversity and ecosystem diversity.

Biota. All of the organisms at a particular locality.

Bore. *See well.*

Buffer zone. A neutral area that separates and minimises interactions between zones whose management objectives are significantly different or in conflict (e.g. a vegetated riparian zone can act as a buffer to protect the water quality and streams from adjacent land uses).

Catchment. A catchment is that area of land determined by topographic features within which rainfall will contribute to runoff at a particular point.

Catchment water management board. A statutory body established under Part 6, Division 3, s. 53 of the Act whose prime function under Division 2, s. 61 is to implement a catchment water management plan for its area.

Catchment water management plan. The plan prepared by a CWMB and adopted by the Minister in accordance with Part 7, Division 2 of the Water Resources Act 1997.

Codes of practice. Standards of management developed by industry and government, promoting techniques or methods of environmental management by which environmental objectives may be achieved.

Cone of depression. An inverted cone-shaped space within an aquifer caused by a rate of groundwater extraction which exceeds the rate of recharge. Continuing extraction of water can extend the area and may affect the viability of adjacent wells, due to declining water levels or water quality.

Conjunctive use. The utilisation of more than one source of water to satisfy a single demand.

Council of Australian Governments (COAG). A council of the Prime Minister, State Premiers, Territory Chief Ministers and the President of the Australian Local Government Association which exists to set national policy directions for Australia.

CWMB. Catchment Water Management Board.

Dams, off-stream dam. A dam, wall or other structure that is not constructed across a watercourse or drainage path and is designed to hold water diverted, or pumped, from a watercourse, a drainage path, an aquifer or from another source. Off-stream dams may capture a limited volume of surface water from the catchment above the dam.

Dams, on-stream dam. A dam, wall or other structure placed or constructed on, in or across a watercourse or drainage path for the purpose of holding and storing the natural flow of that watercourse or the surface water.

Dams, turkey nest dam. An off-stream dam that does not capture any surface water from the catchment above the dam.

Diffuse source pollution. Pollution from sources such as an eroding paddock, urban or suburban lands and forests; spread out, and often not easily identified or managed.

Domestic purpose. The taking of water for ordinary household purposes and includes the watering of land in conjunction with a dwelling not exceeding 0.4 hectares.

Domestic wastewater. Water used in the disposal of human waste, for personal washing, washing clothes or dishes, and swimming pools.

DSS (decision support system). A system of logic or a set of rules derived from experts, to assist decision making. Typically they are constructed as computer programs.

EC. Abbreviation for electrical conductivity. 1 EC unit = 1 micro-Siemen per centimetre (µS/cm) measured at 25 degrees Celsius. Commonly used to indicate the salinity of water.

Ecological processes. All biological, physical or chemical processes that maintain an ecosystem.

Ecological values. The habitats, the natural ecological processes and the biodiversity of ecosystems.

Ecologically sustainable development (ESD). Using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.

Ecology. The study of the relationships between living organisms and their environment.

Ecosystem. Any system in which there is an interdependence upon and interaction between living organisms and their immediate physical, chemical and biological environment.

Effluent. Domestic wastewater and industrial wastewater.

EIP. Environment improvement program.

Entitlement flows. Minimum monthly River Murray flows to South Australia agreed in the Murray-Darling Basin Agreement 1992.

Environmental values. The uses of the environment that are recognised as of value to the community. This concept is used in setting water quality objectives under the Environment Protection (Water Quality) Policy, which recognises five environmental values — protection of aquatic ecosystems, recreational water use and aesthetics, potable (drinking water) use, agricultural and aquaculture use, and industrial use. It is not the same as ecological values, which are about the elements and functions of ecosystems.

Environmental water provisions. Those parts of environmental water requirements that can be met, at any given time. This is what can be provided at that time with consideration of existing users' rights, social and economic impacts.

Environmental water requirements. The water regimes needed to sustain the ecological values of aquatic ecosystems, including their processes and biological diversity, at a low level of risk.

EPA. Environment Protection Agency.

Ephemeral streams / wetlands. Those streams or wetlands that usually contain water only on an occasional basis after rainfall events. Many arid zone streams and wetlands are ephemeral.

Erosion. Natural breakdown and movement of soil and rock by water, wind or ice. The process may be accelerated by human activities.

ESD. Ecologically sustainable development *(see above for definition)*.

Estuaries. Semi-enclosed waterbodies at the lower end of a freshwater stream that are subject to marine, freshwater and terrestrial influences and experience periodic fluctuations and gradients in salinity.

Eutrophication. Degradation of water quality due to enrichment by nutrients (primarily nitrogen and phosphorus), causing excessive plant growth and decay. *(See algal bloom).*

Evapotranspiration. The total loss of water as a result of transpiration from plants and evaporation from land, and surface waterbodies.

Fishway. A generic term describing all mechanisms that allow the passage of fish along a waterway. Specific structures include fish ladders (gentle sloping channels with baffles that reduce the velocity of water and provide resting places for fish as they 'climb' over a weir) and fishlifts (chambers, rather like lift-wells, that are flooded and emptied to enable fish to move across a barrier).

Floodplain. Of a watercourse means: (a) the floodplain (if any) of the watercourse identified in a catchment water management plan or a local water management plan; adopted under Part 7 of the Water Resources Act 1997; or (b) where paragraph (a) does not apply — the floodplain (if any) of the watercourse identified in a development plan under the Development Act 1993, or (c) where neither paragraph (a) nor paragraph (b) applies — the land adjoining the watercourse that is periodically subject to flooding from the watercourse.

Flow bands. Flows of different frequency, volume and duration.

GAB. Great Artesian Basin.

Gigalitre (GL). One thousand million litres (1 000 000 000).

GIS (geographic information system). Computer software allows for the linking of geographic data (for example land parcels) to textual data (soil type, land value, ownership). It allows for a range of features, from simple map production to complex data analysis.

GL. *See gigalitre.*

Greenhouse effect. The balance of incoming and outgoing solar radiation which regulates our climate. Changes to the composition of the atmosphere such as the addition of carbon dioxide through human activities, have the potential to alter the radiation balance and to effect changes to the climate. Scientists suggest that changes would include global warming, a rise in sea level and shifts in rainfall patterns.

Greywater. Household wastewater excluding sewage effluent. Wastewater from kitchen, laundry and bathroom.

Groundwater. *See underground water.*

Habitat. The natural place or type of site in which an animal or plant, or communities of plants and animals, lives.

Heavy metal. Any metal with a high atomic weight (usually, although not exclusively, greater than 100), for example mercury, lead and chromium. Heavy metals have a widespread industrial use, and many are released into the biosphere via air, water and solids pollution. Usually these metals are toxic at low concentrations to most plant and animal life.

Hydrogeology. The study of groundwater, which includes its occurrence, recharge and discharge processes and the properties of aquifers. *(See hydrology.)*

Hydrography. The discipline related to the measurement and recording of parameters associated with the hydrological cycle, both historic and real time.

Hydrology. The study of the characteristics, occurrence, movement and utilisation of water on and below the earth's surface and within its atmosphere. *(See hydrogeology.)*

Hyporheic zone. The wetted zone among sediments below and alongside rivers. It is a refuge for some aquatic fauna.

Indigenous species. A species that occurs naturally in a region.

Industrial wastewater. Water (not being domestic wastewater) that has been used in the course of carrying on a business (including water used in the watering of irrigation of plants) that has been allowed to run to waste or has been disposed of or has been collected for disposal.

Infrastructure. Artificial lakes; or dams or reservoirs; or embankments, walls, channels or other works; or buildings or structures; or pipes, machinery or other equipment.

Integrated catchment management. Natural resources management that considers in an integrated manner the total long-term effect of land and water management practices on a catchment basis, from production and environmental viewpoints.

Intensive farming. A method of keeping animals in the course of carrying on the business of primary production in which the animals are confined to a small space or area and are usually fed by hand or by mechanical means.

Irrigation. Watering land by any means for the purpose of growing plants.

Irrigation season. The period in which major irrigation diversions occur, usually starting in August–September and ending in April–May.

Lake. A natural lake, pond, lagoon, wetland or spring (whether modified or not) and includes: part of a lake; and a body of water declared by regulation to be a lake; a reference to a lake is a reference to either the bed, banks and shores of the lake or the water for the time being held by the bed, banks and shores of the lake, or both, depending on the context.

Land. Whether under water or not and includes an interest in land and any building or structure fixed to the land.

Land capability. The ability of the land to accept a type and intensity of use without sustaining long-term damage.

Leaching. Removal of material in solution such as minerals, nutrients and salts through soil.

Licence. A licence to take water in accordance with the Water Resources Act 1997. *(See water licence.)*

Licensee. A person who holds a water licence.

Local water management plan. A plan prepared by a council and adopted by the Minister in accordance with Part 7, Division 4 of the Act.

Macro-invertebrates. Animals without backbones that are typically of a size that is visible to the naked eye. They are a major component of aquatic ecosystem biodiversity and fundamental in food webs.

MDBC. Murray-Darling Basin Commission.

Megalitre (ML). One million litres (1 000 000).

ML. *See megalitre.*

Model. A conceptual or mathematical means of understanding elements of the real world which allows for predictions of outcomes given certain conditions. Examples include estimating storm runoff, assessing the impacts of dams or predicting ecological response to environmental change.

Mount Lofty Ranges Watershed. The area prescribed by Schedule 1 of the regulations.

Natural recharge. The infiltration of water into an aquifer from the surface (rainfall, streamflow, irrigation etc.) *(See recharge area, artificial recharge.)*

NHMRC. National Health and Medical Research Council.

NHT. Natural Heritage Trust.

Occupier of land. A person who has, or is entitled to, possession or control of the land.

Owner of land. In relation to land alienated from the Crown by grant in fee simple — the holder of the fee simple; in relation to dedicated land within the meaning of the *Crown Lands Act 1929* that has not been granted in fee simple but which is under the care, control and management of a Minister, body or other person — the Minister, body or other person; in relation to land held under Crown lease or licence — the lessee or licensee; in relation to land held under an agreement to purchase from the Crown — the person entitled to the benefit of the agreement; in relation to any other land — the Minister who is responsible for the care, control and management of the land or, if no Minister is responsible for the land, the Minister for Environment and Heritage.

Palaeochannels. Ancient buried river channels in arid areas of the state. Aquifers in palaeochannels can yield useful quantities of groundwater or be suitable for ASR.

Pasture. Grassland used for the production of grazing animals such as sheep and cattle.

Percentile. A way of describing sets of data by ranking the data set and establishing the value for each percentage of the total number of data records. The 90th percentile of the distribution is the value such that 90% of the observations fall at or below it.

Permeability. A measure of the ease with which water flows through an aquifer or aquitard.

Personal property. All forms of property other than real property. For example, shares or a water licence.

Phreaphytic vegetation. Vegetation that exists in a climate more arid than its normal range by virtue of its access to groundwater.

Phytoplankton. The plant constituent of organisms inhabiting the surface layer of a lake; mainly single-cell algae.

PIRSA. (Department of) Primary Industries and Resources South Australia.

Pollution, diffuse source. Pollution from sources that are spread out and not easily identified or managed (e.g. an eroding paddock, urban or suburban lands and forests).

Pollution, point source. A localised source of pollution.

Potable water. Water suitable for human consumption.

Potentiometric head. The potentiometric head or surface is the level to which water rises in a well due to water pressure in the aquifer.

Precautionary principle. Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

Prescribed area, surface water. Part of the State declared to be a surface water prescribed area under the Water Resources Act 1997.

Prescribed lake. A lake declared to be a prescribed lake under the Water Resources Act 1997.

Prescribed water resource. A water resource declared by the Governor to be prescribed under the Act, and includes underground water to which access is obtained by prescribed wells. Prescription of a water resource requires that future management of the resource be regulated via a licensing system.

Prescribed watercourse. A watercourse declared to be a prescribed watercourse under the Water Resources Act 1997.

Prescribed well. A well declared to be a prescribed well under the Water Resources Act 1997.

Property right. A right of ownership or some other right to property, whether real property or personal property.

Proponent. The person or persons (who may be a body corporate) seeking approval to take water from prescribed water.

PWA. Prescribed wells area.

PWCA. Prescribed watercourse area.

PWRA. Prescribed water resource area.

Ramsar Convention. This is an international treaty on wetlands titled The Convention on Wetlands of International Importance Especially as Waterfowl Habitat. It is administered by the International Union for Conservation of Nature and Natural Resources. It was signed in the town of Ramsar, Iran in 1971, hence its common name. The Convention includes a list of wetlands of international importance and protocols regarding the management of these wetlands. Australia became a signatory in 1974.

Recharge area. The area of land from which water from the surface (rainfall, streamflow, irrigation, etc.) infiltrates into an aquifer. *(See artificial recharge, natural recharge.)*

Reclaimed water. Treated effluent of a quality suitable for the designated purpose.

Rehabilitation (of waterbodies). Actions that improve the ecological health of a waterbody by reinstating important elements of the environment that existed prior to European settlement.

Remediation (of waterbodies). Actions that improve the ecological condition of a waterbody without necessarily reinstating elements of the environment that existed prior to European settlement.

Restoration (of waterbodies). Actions that reinstate the pre-European condition of a waterbody.

Reticulated water. Water supplied through a piped distribution system.

Riffles. Shallow stream section with fast and turbulent flow.

Riparian landholder. A person whose property abuts a watercourse or through whose property a watercourse runs.

Riparian rights. These were old common law rights of access to, and use of water. These common law rights were abolished with the enactment of the Water Resources Act 1997, which now includes similar rights under s. 7. Riparian rights are therefore now statutory rights under the Act. Where the resource is not prescribed (Water Resources Act 1997, s. 8) or subject to restrictions (Water Resources Act 1997, s. 16), riparian landholders may take any amount of water from watercourses, lakes or wells without consideration to downstream landholders, if it is to be used for stock or domestic purposes. If the capture of water from watercourses and groundwater is to be used for any other purpose then the right of downstream landholders must be protected. Landholders may take any amount of surface water for any purpose without regard to other landholders, unless the surface water is prescribed or subject to restrictions.

Riparian zone. That part of the landscape adjacent to a water body, that influences and is influenced by watercourse processes. This can include landform, hydrological or vegetation definitions. It is commonly used to include the in-stream habitats, bed, banks and sometimes floodplains of watercourses.

Seasonal watercourses or wetlands. Those watercourses and wetlands that contain water on a seasonal basis, usually over the winter/spring period, although there may be some flow or standing water at other times.

State water plan. The plan prepared by the Minister under Part 7, Division 1, s. 90 of the Act.

Stock Use. The taking of water to provide drinking water for stock other than stock subject to intensive farming (as defined by the Act).

Stormwater. Runoff in an urban area.

Surface water. (a) water flowing over land (except in a watercourse), (i) after having fallen as rain or hail or having precipitated in any another manner, (ii) or after rising to the surface naturally from underground; (b) water of the kind referred to in paragraph (a) that has been collected in a dam or reservoir.

Taxa. General term for a group identified by taxonomy — which is the science of describing, naming and classifying organisms.

To take water. From a water resource includes (a) to take water by pumping or syphoning the water; (b) to stop, impede or divert the flow of water over land (whether in a watercourse or not) for the purpose of collecting the water; (c) to divert the flow of water in a watercourse from the watercourse; (d) to release water from a lake; (e) to permit water to flow under natural pressure from a well; (f) to permit stock to drink from a watercourse, a natural or artificial lake, a dam or reservoir.

Total kjeldhal nitrogen (TKN). The sum of aqueous ammonia and organic nitrogen. Used as a measure of probable sewage pollution.

Transfer. A transfer of a licence (including its water allocation) to another person, or the whole or part of the water allocation of a licence to another licensee or the Minister under Part 5, Division 3, s. 38 of the Act. The transfer may be absolute or for a limited period.

Underground water (groundwater). Water occurring naturally below ground level or water pumped, diverted or released into a well for storage underground.

Volumetric allocation. An allocation of water expressed on a water licence as a volume (e.g. kilolitres) to be used over a specified period of time, usually per water use year (as distinct from any other sort of allocation).

Wastewater. *See domestic wastewater, industrial wastewater.*

Water affecting activities. Activities referred to in Part 4, Division 1, s. 9 of the Act.

Water allocation. (a) in respect of a water licence means the quantity of water that the licensee is entitled to take and use pursuant to the licence; (b) in respect of water taken pursuant to an authorisation under s. 11 means the maximum quantity of water that can be taken and used pursuant to the authorisation.

Water allocation, area based. An allocation of water that entitles the licensee to irrigate a specified area of land for a specified period of time usually per water use year.

Water allocation plan. A plan prepared by a CWMB or water resources planning committee and adopted by the Minister in accordance with Division 3 of Part 7 of the Act.

Water licence. A licence granted under the Act entitling the holder to take water from a prescribed watercourse, lake or well or to take surface water from a surface water prescribed area. This grants the licensee a right to take an allocation of water specified on the licence, which may also include conditions on the taking and use of that water. A water licence confers a property right on the holder of the licence and this right is separate from land title.

Water plans. The State Water Plan, catchment water management plans, water allocation plans and local water management plans prepared under Part 7 of the Act.

Water service provider. A person or corporate body that supplies water for domestic, industrial or irrigation purposes or manages wastewater.

Waterbody. Waterbodies include watercourses, riparian zones, floodplains, wetlands, estuaries, lakes and groundwater aquifers.

Watercourse. A river, creek or other natural watercourse (whether modified or not) and includes: a dam or reservoir that collects water flowing in a watercourse; and a lake through which water flows; and a channel (but not a channel declared by regulation to be excluded from the this definition) into which the water of a watercourse has been diverted; and part of a watercourse.

Water-dependent ecosystems. Those parts of the environment, the species composition and natural ecological processes, which are determined by the permanent or temporary presence of flowing or standing water, above or below ground. The in-stream areas of rivers, riparian vegetation, springs, wetlands, floodplains, estuaries and lakes are all water-dependent ecosystems.

Water-use year. The period between 1 July in any given calendar year and 30 June the following calendar year. This is also called a licensing year.

Well. (a) an opening in the ground excavated for the purpose of obtaining access to underground water; (b) an opening in the ground excavated for some other purpose but that gives access to underground water; (c) a natural opening in the ground that gives access to underground water.

Wetlands. Defined by the Act as a swamp or marsh and includes any land that is seasonally inundated with water. This definition encompasses a number of concepts that are more specifically described in the definition used in the Ramsar Convention on Wetlands of International Importance. This describes wetlands as areas of permanent or periodic/intermittent inundation, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tides does not exceed six metres.

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FIGURES

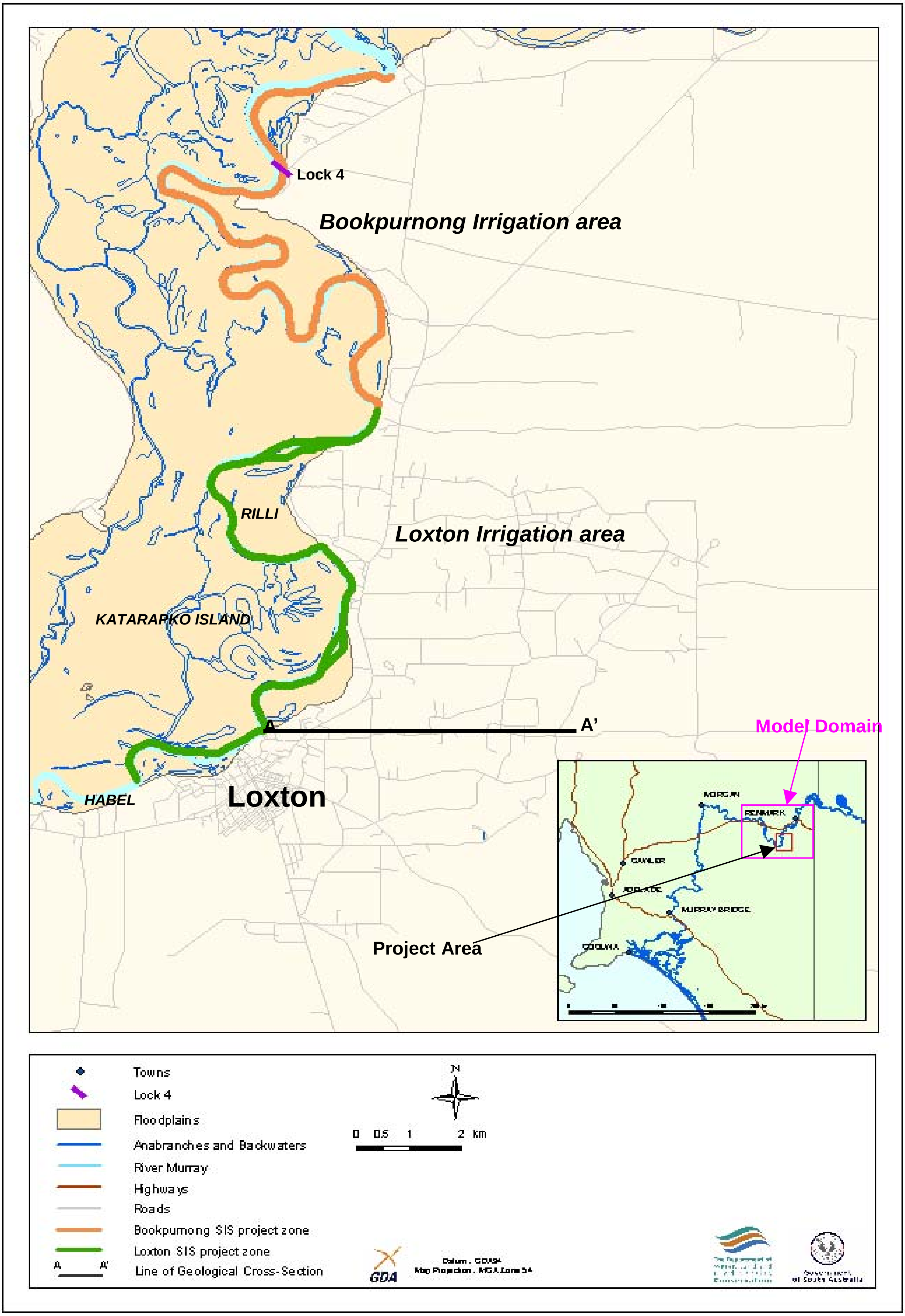


Figure 1: Location of project area and project site map

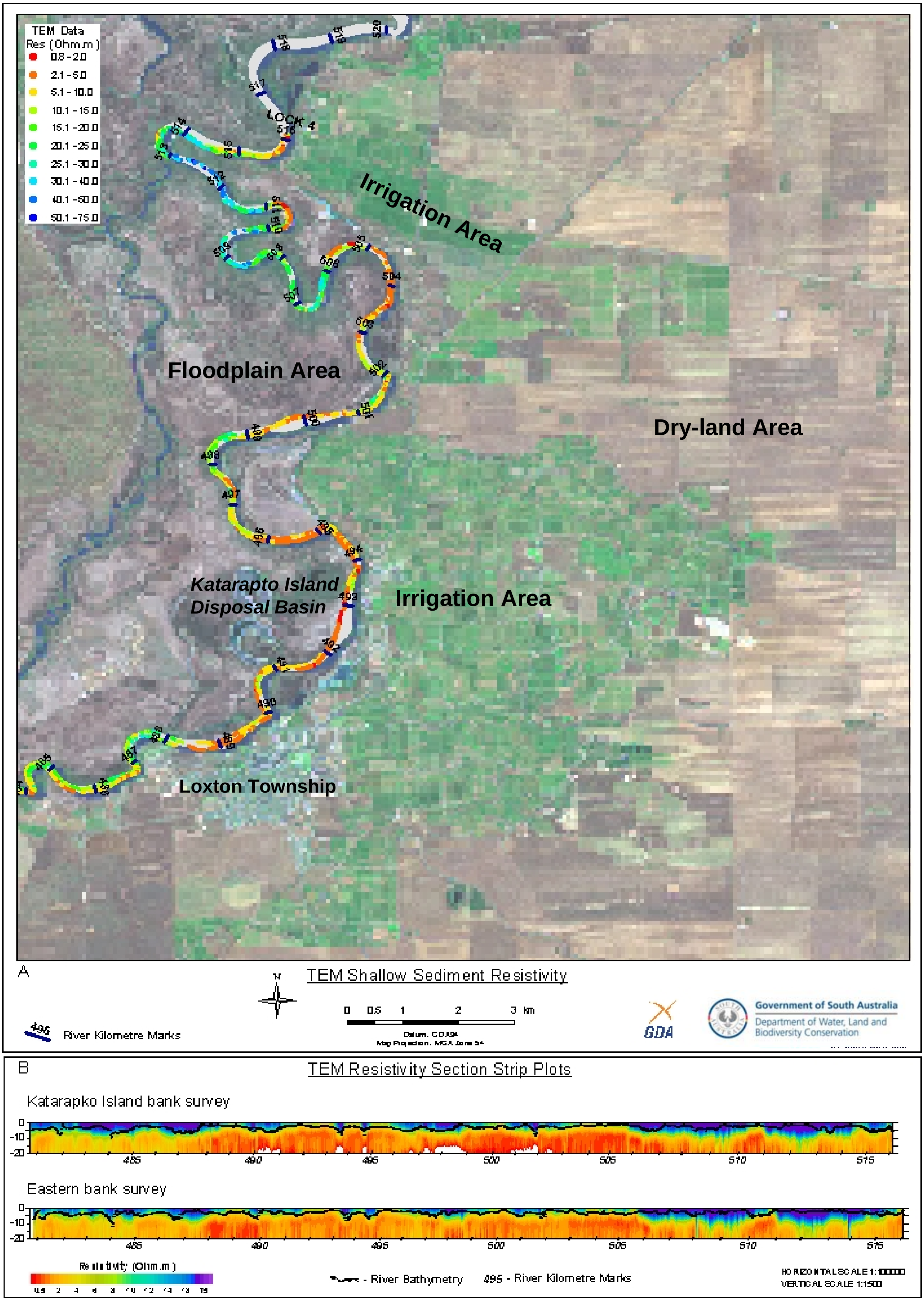


Figure 2: Aerial photography and transient electro-magnetics results

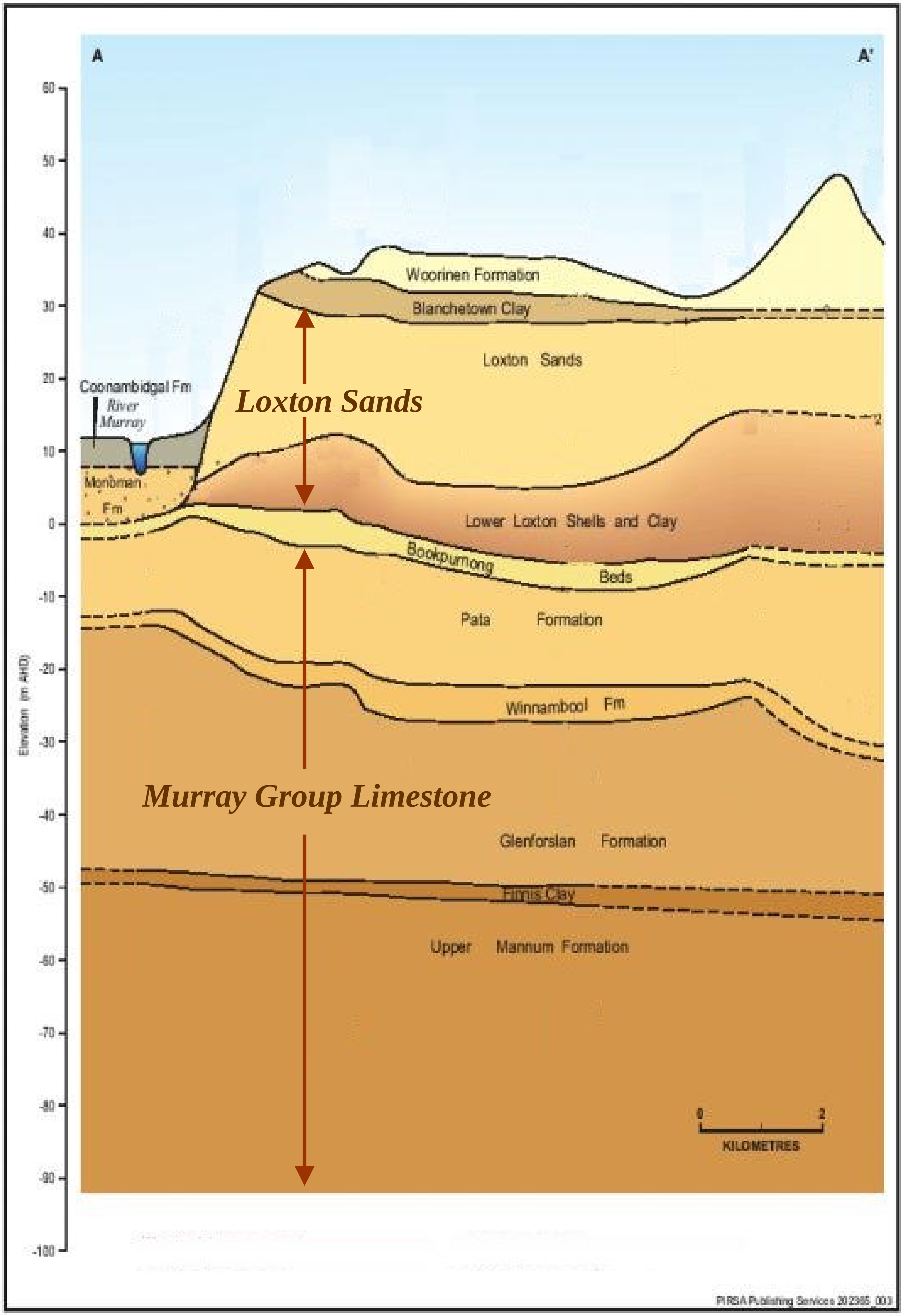


Figure 3: Hydrogeological cross-section (See Figure 1 for line of section)

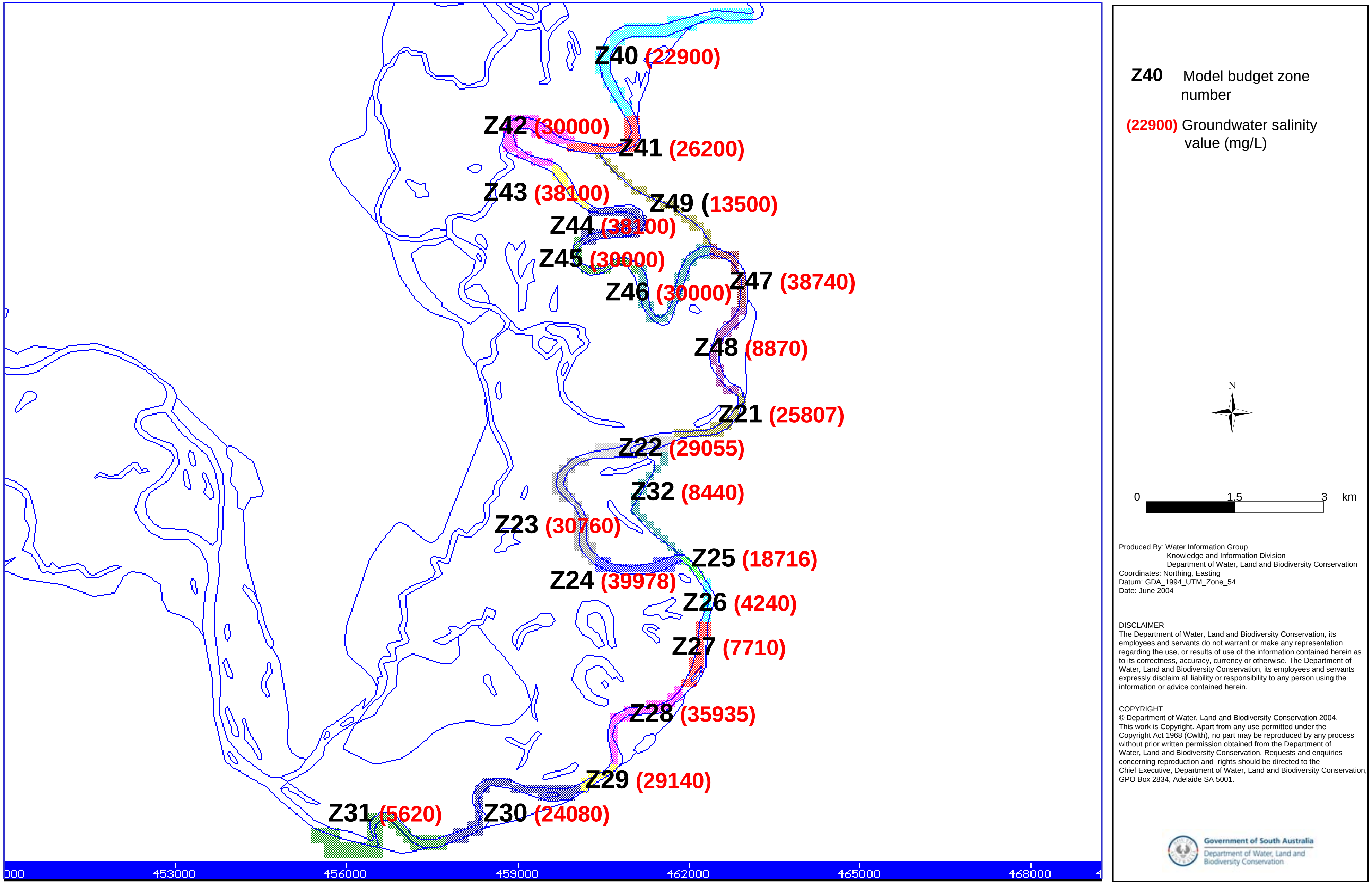


Figure 4: Flow budget zones in model Layer-1 (Loxton Sands) and groundwater salinity values (TDS mg/L) in project area

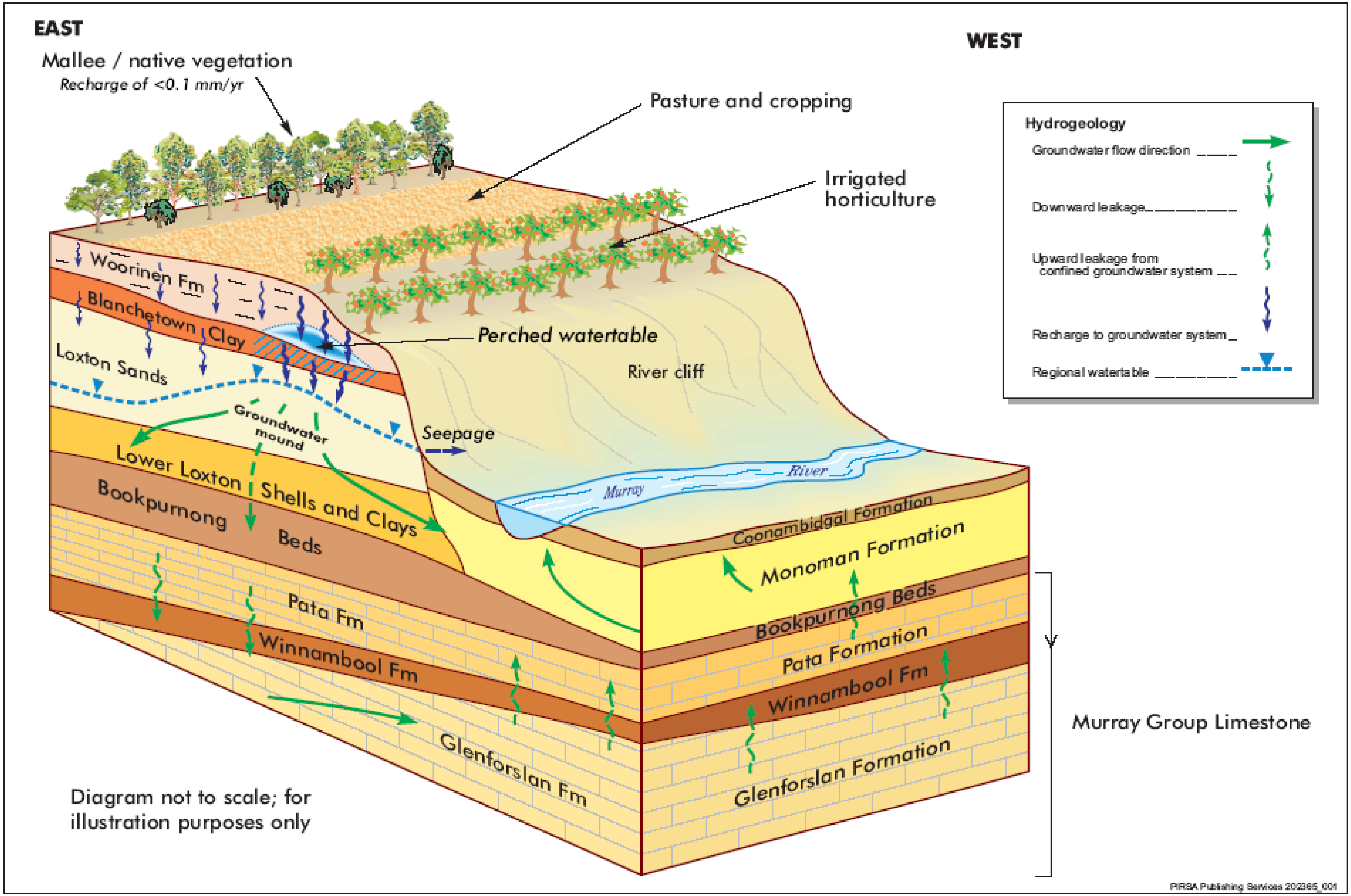


Figure 5: Elementary conceptual hydrogeological model

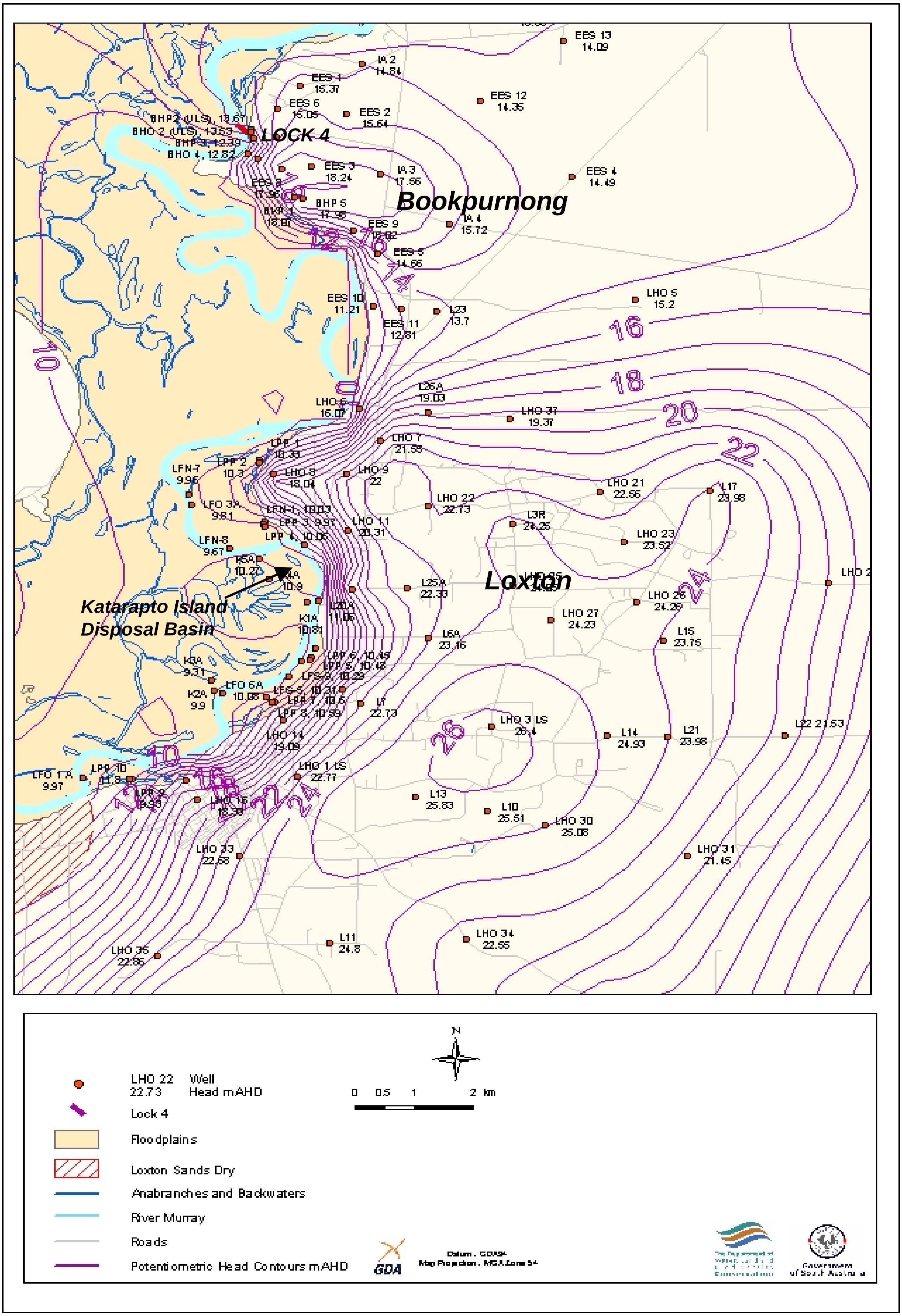


Figure 6: Loxton Sands and Monoman Formation potentiometric surface, May 2004

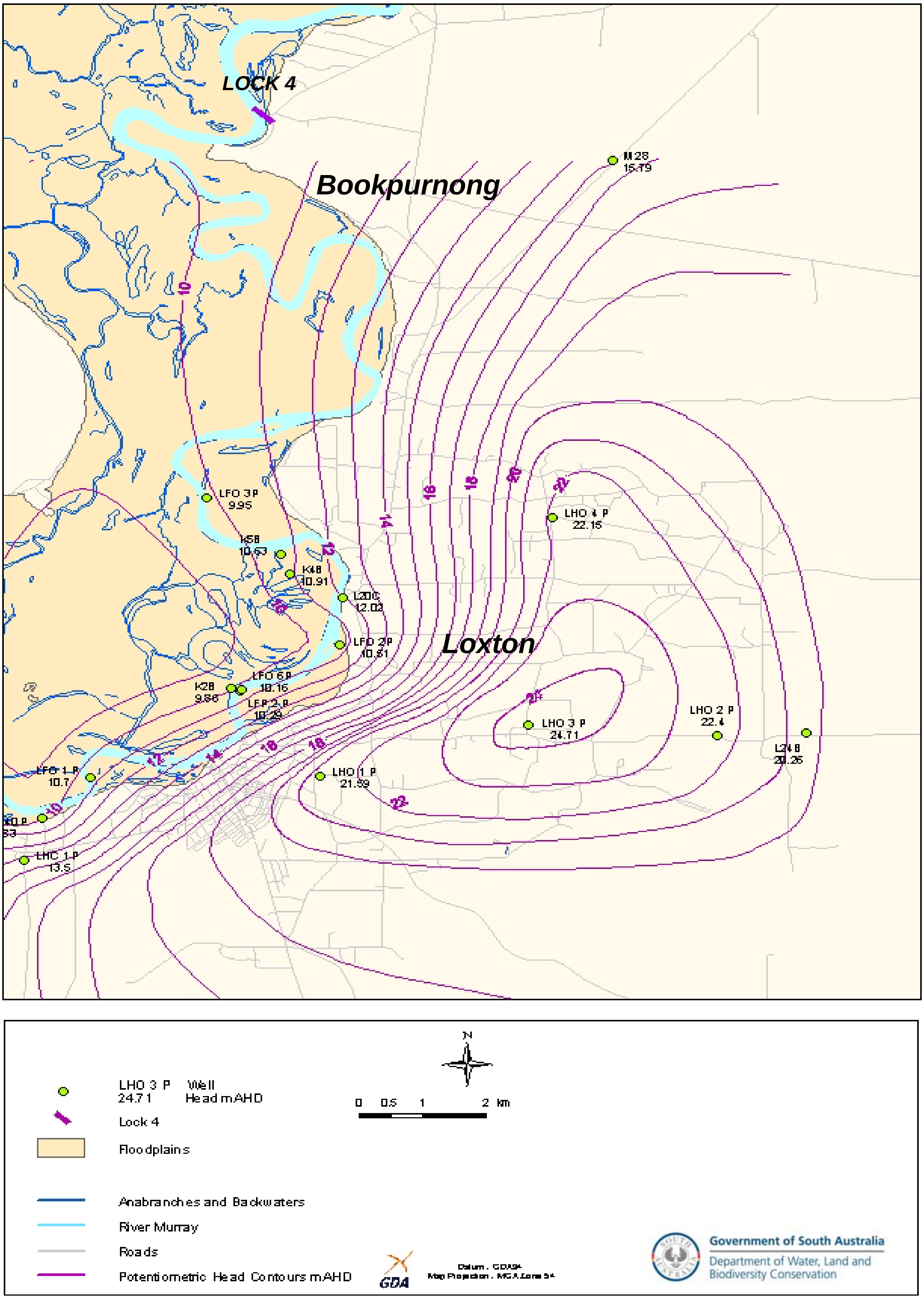


Figure 7: Pata Formation potentiometric surface, May 2004

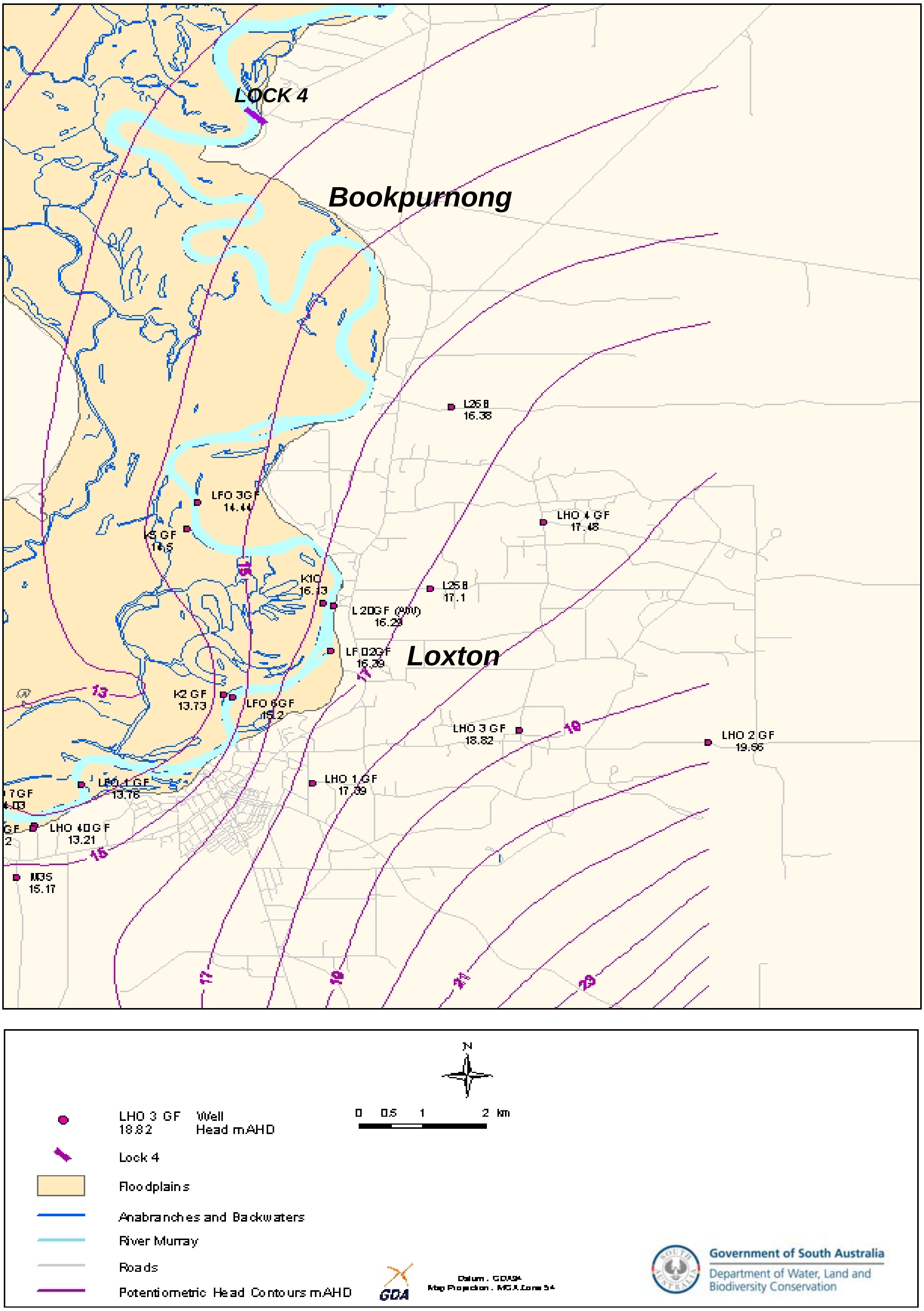


Figure 8: Glenforslan Formation potentiometric surface, May 2004

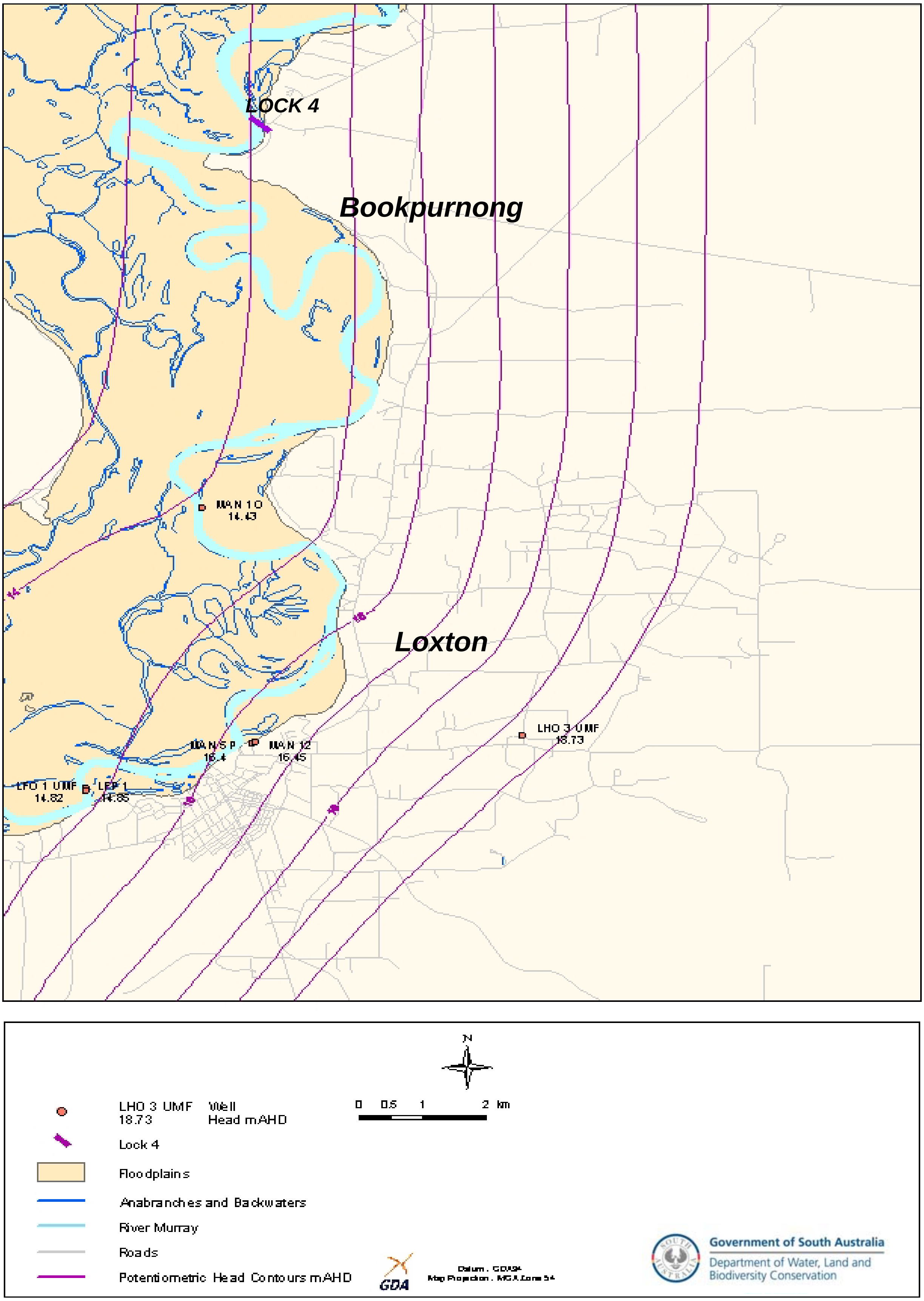


Figure 9: Upper Mannum Formation potentiometric surface, May 2004

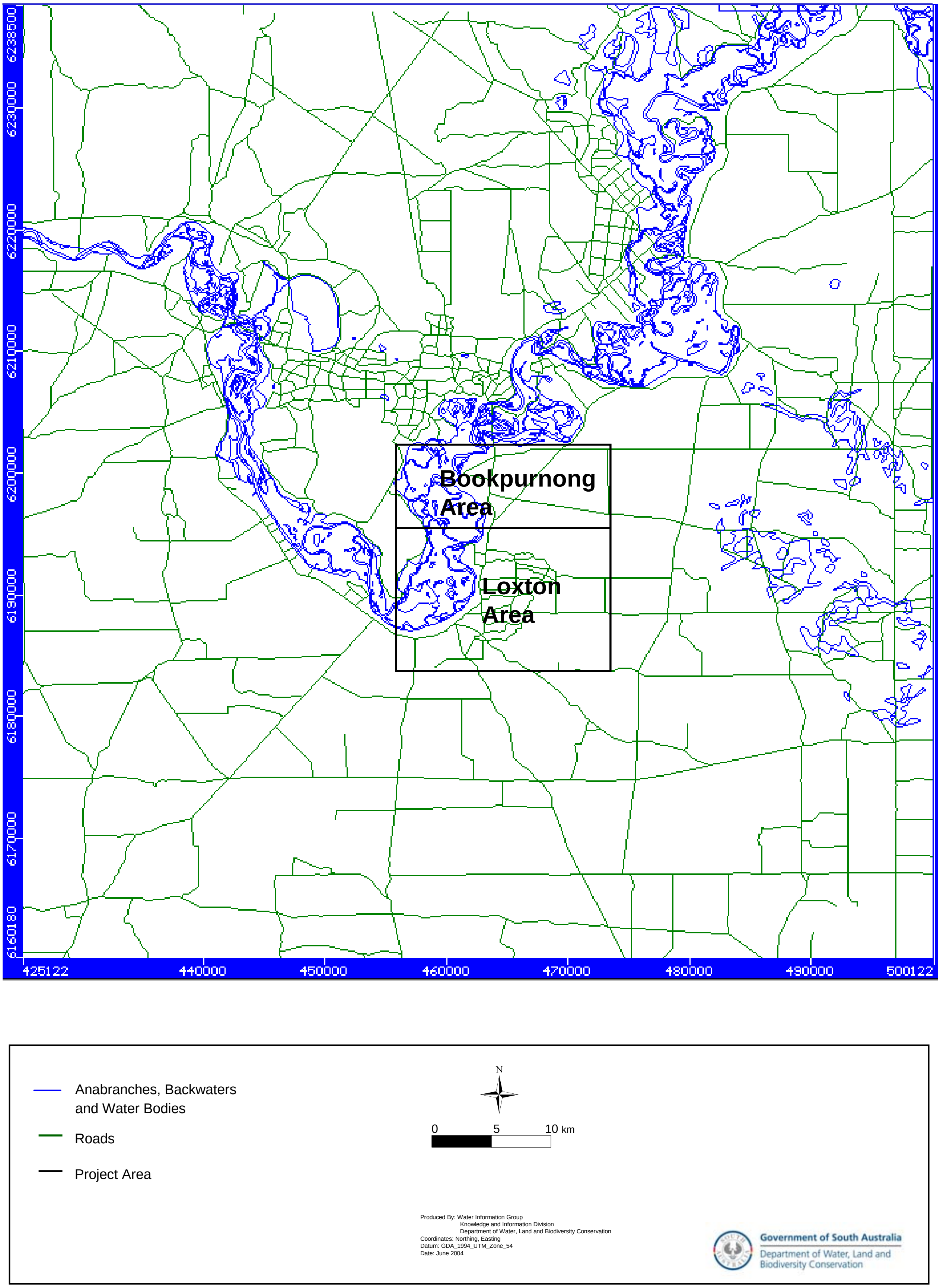


Figure 10: Regional model domain and project area

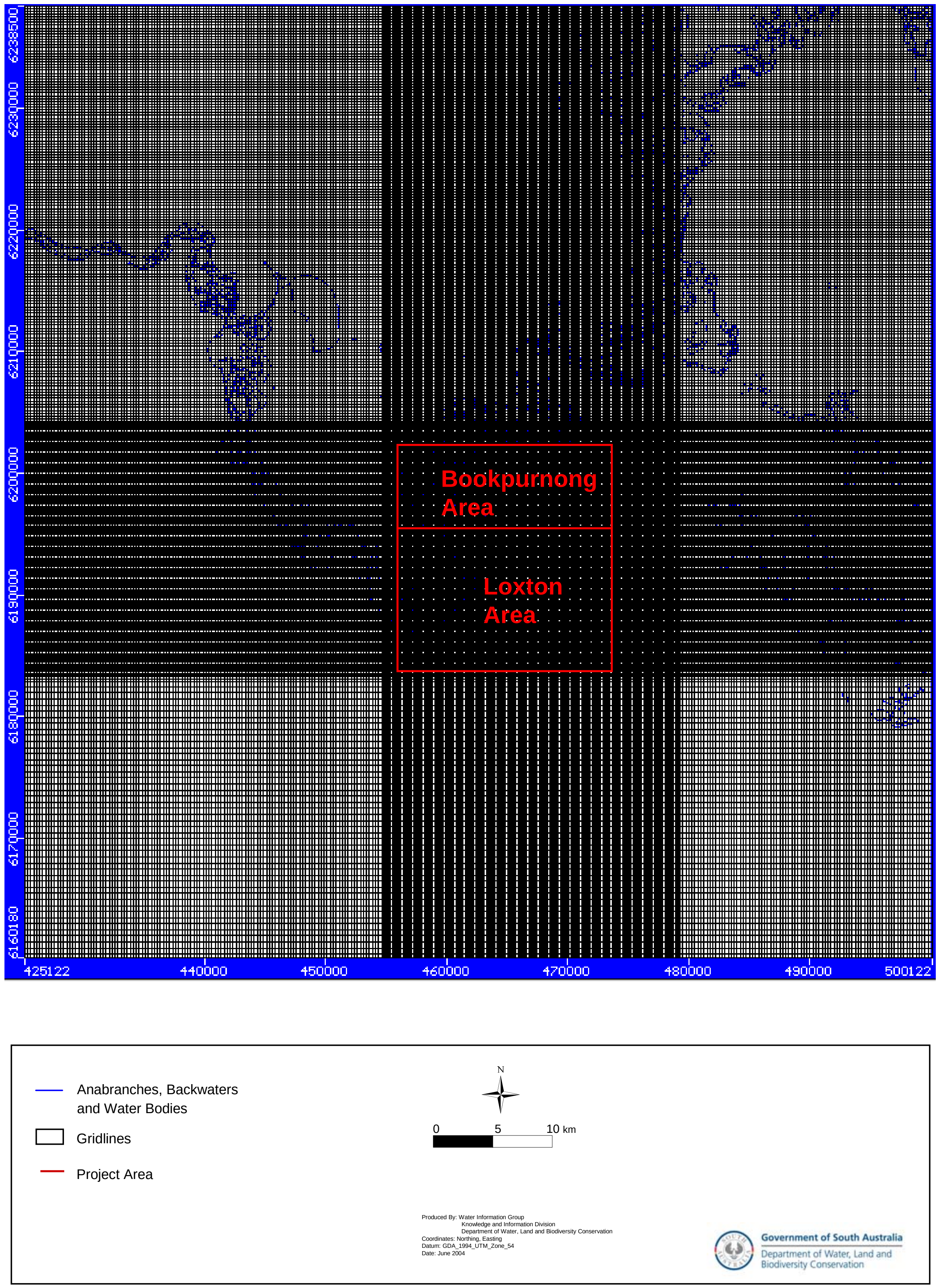


Figure 11: Model grids

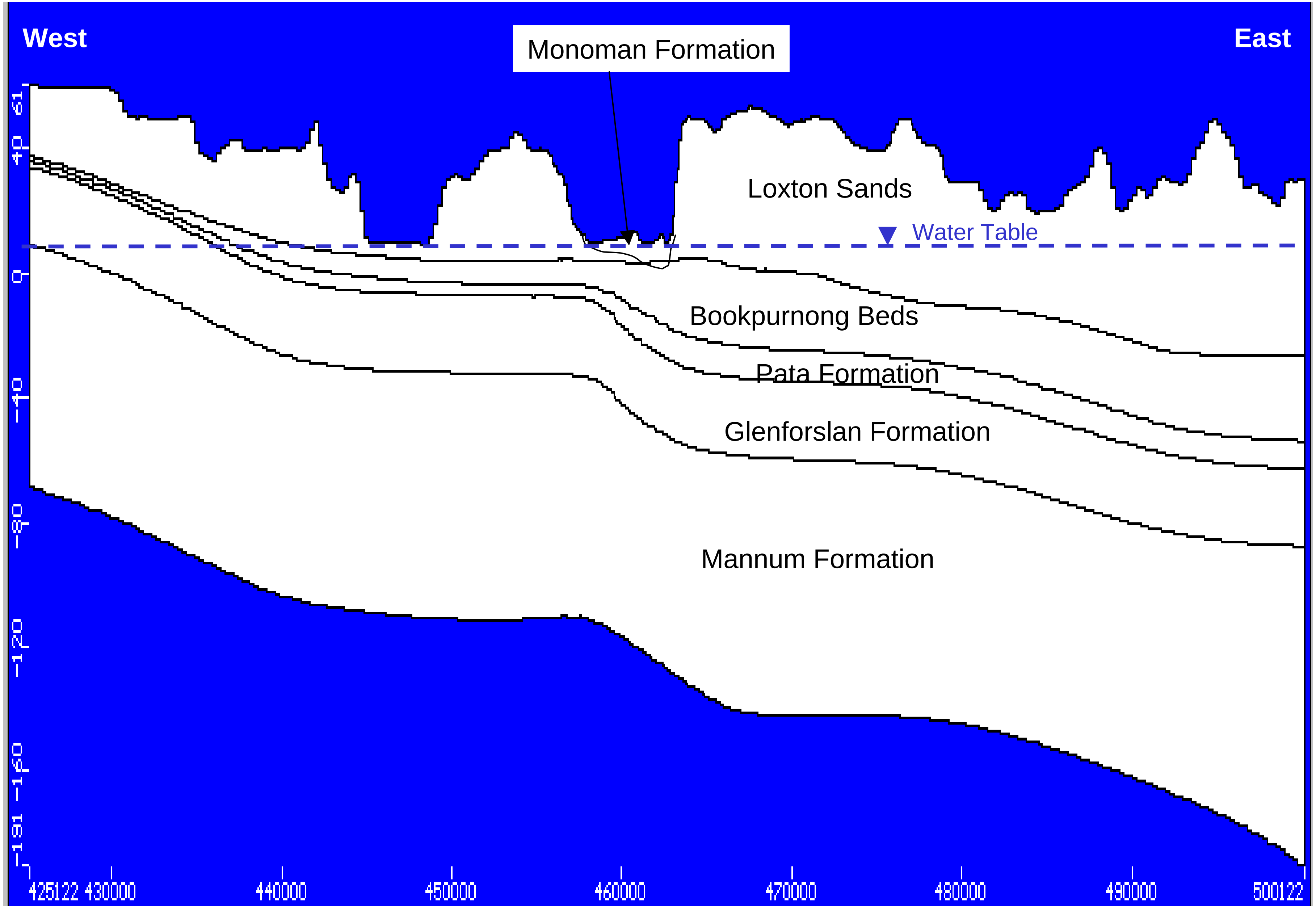


Figure 12: Model layers

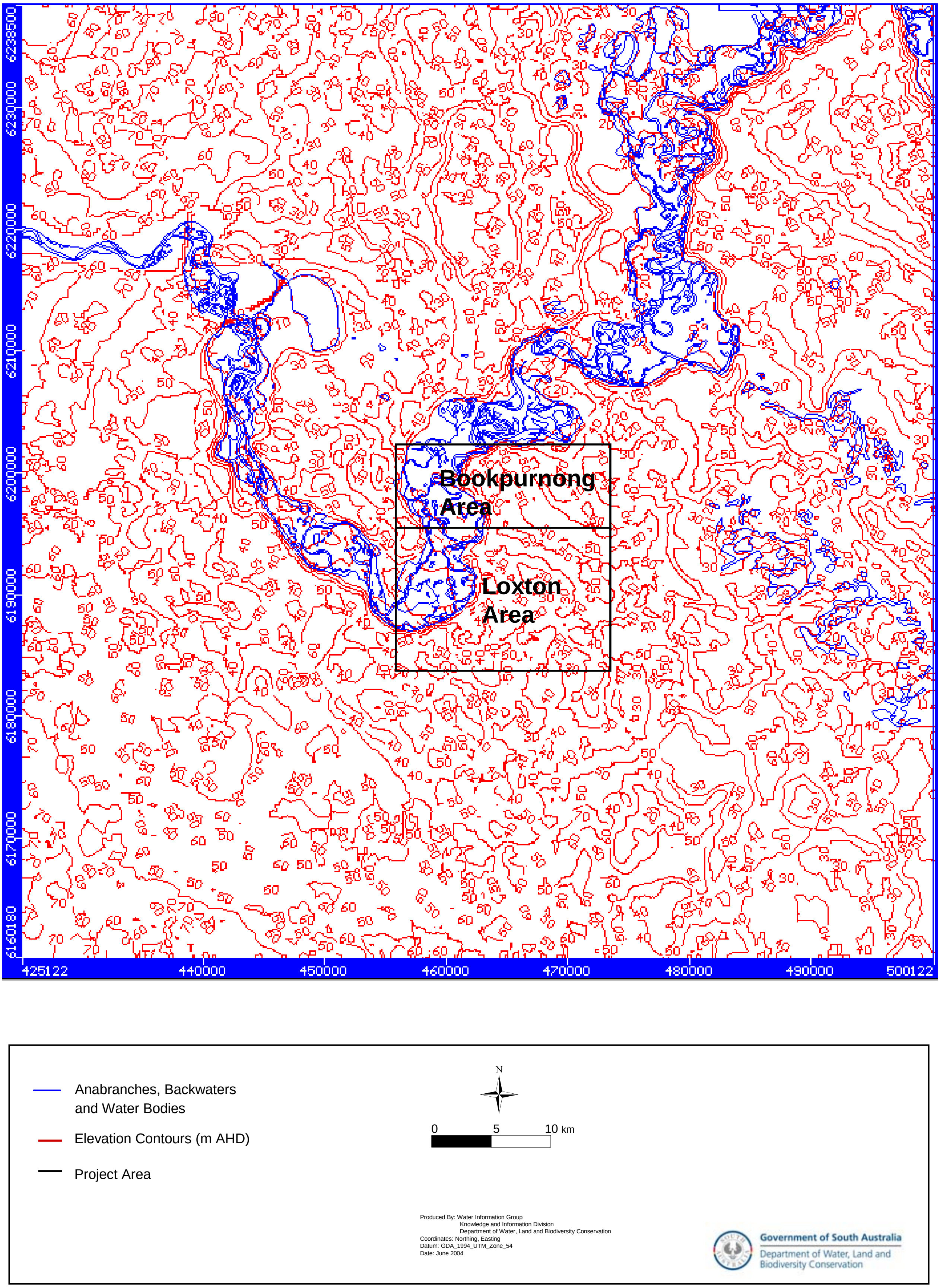


Figure 13: Ground surface elevation contours (m AHD)

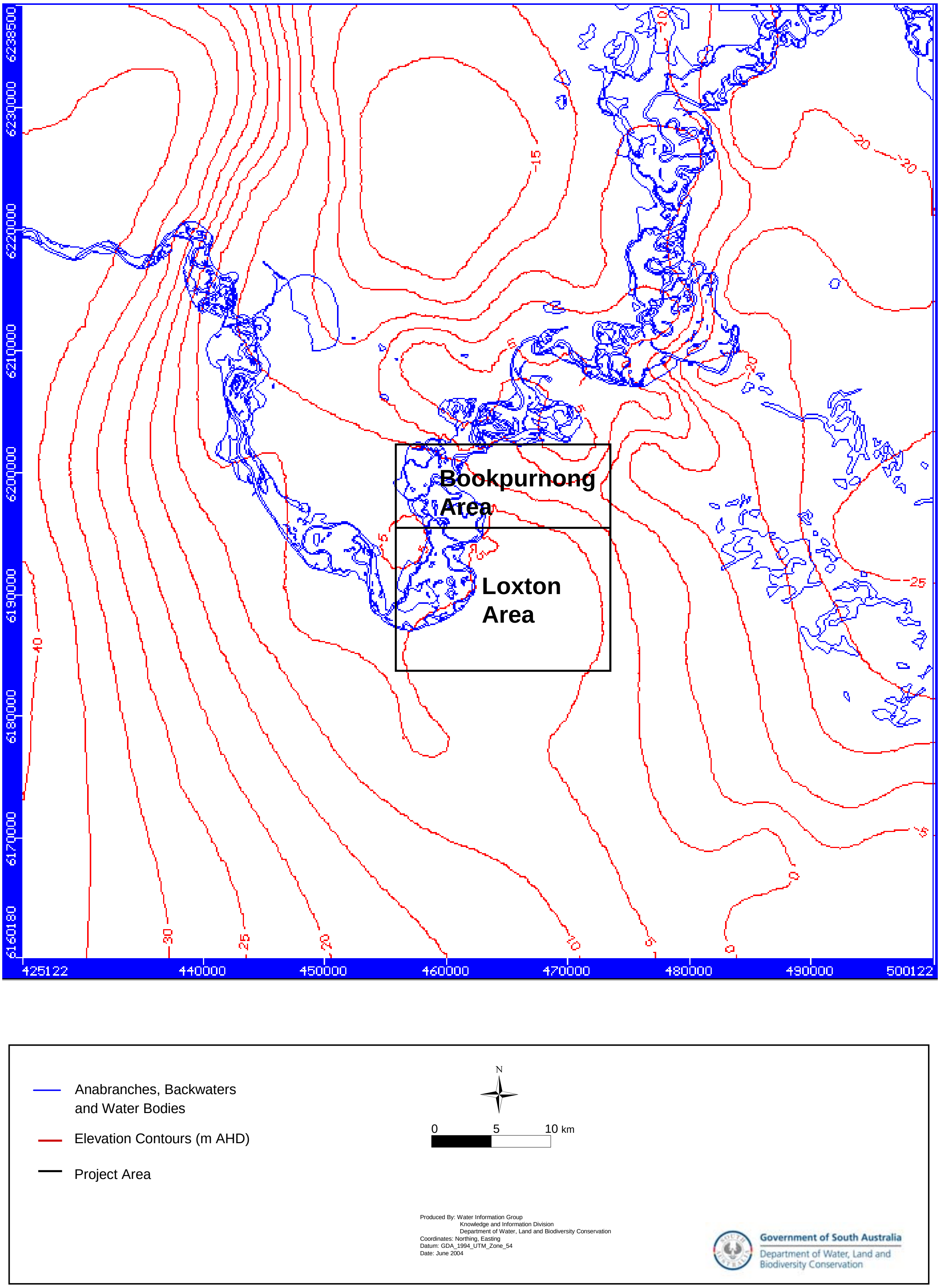
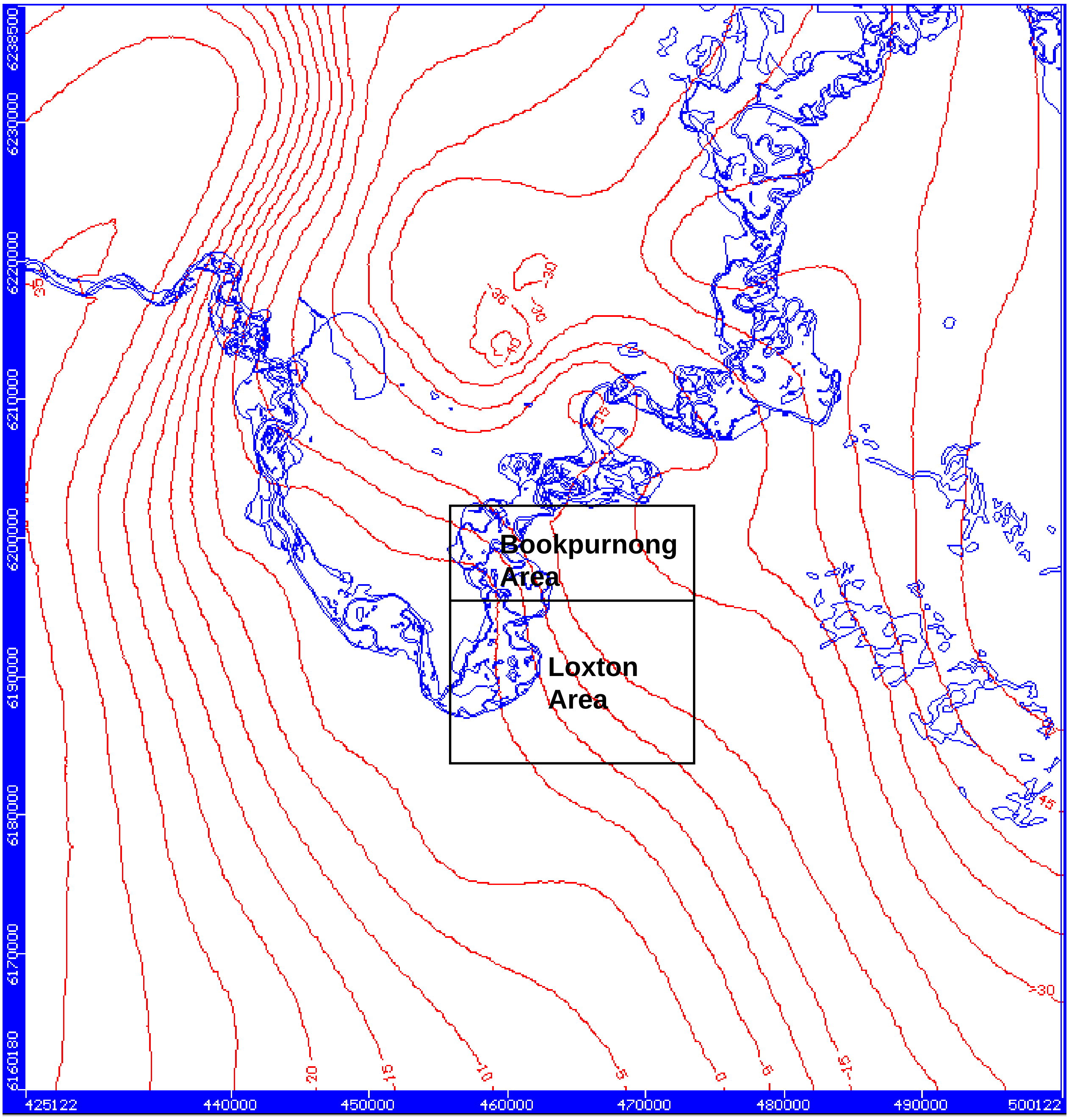


Figure 14: Top of model layer-2 elevation contours (m AHD)



Anabranches, Backwaters and Water Bodies

Elevation Contours (m AHD)

Project Area

N

0 5 10 km

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Figure 15: Top of model layer-3 elevation contours (m AHD)

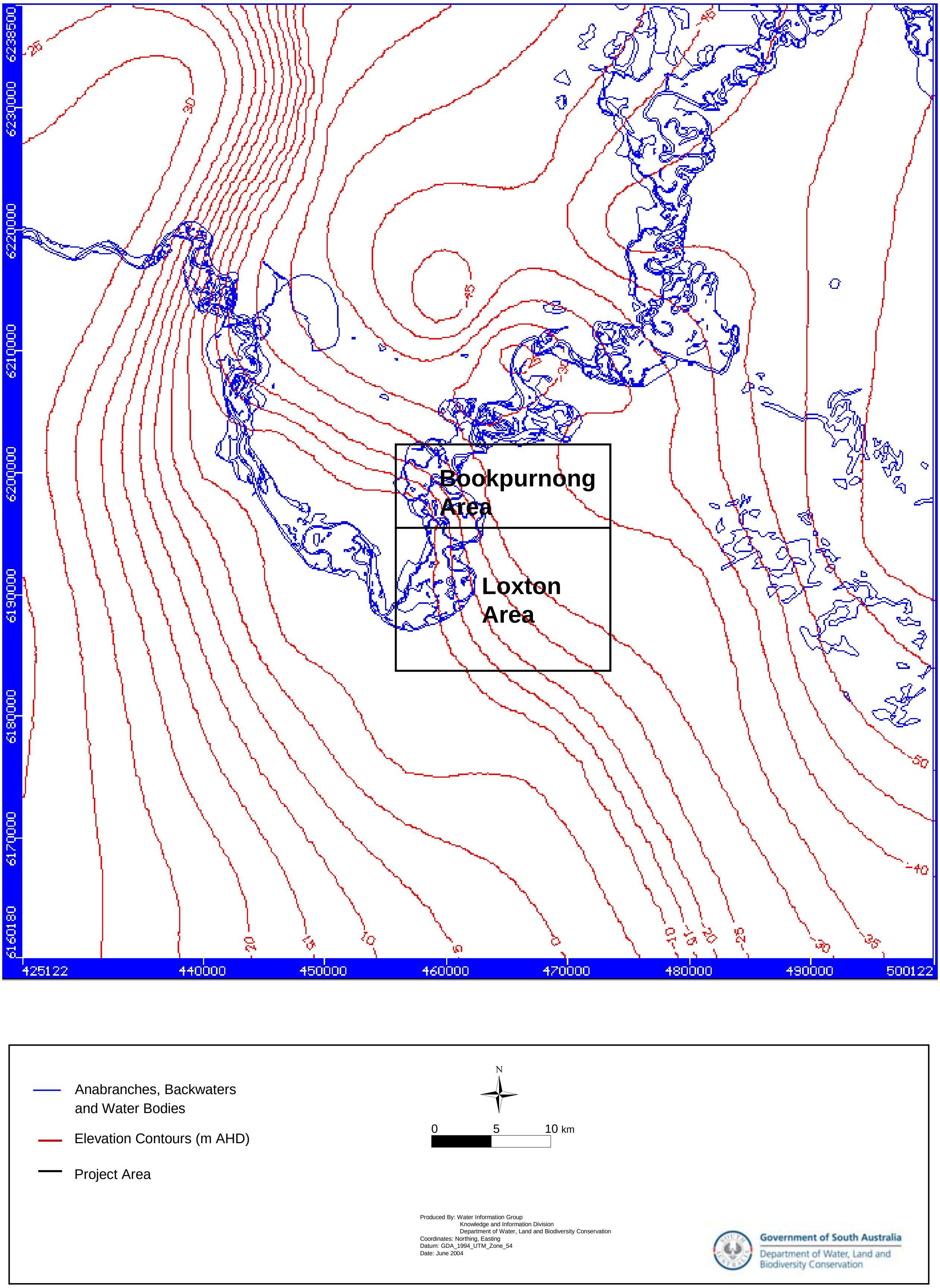

Figure 16: Top of model layer-4 elevation contours (m AHD)

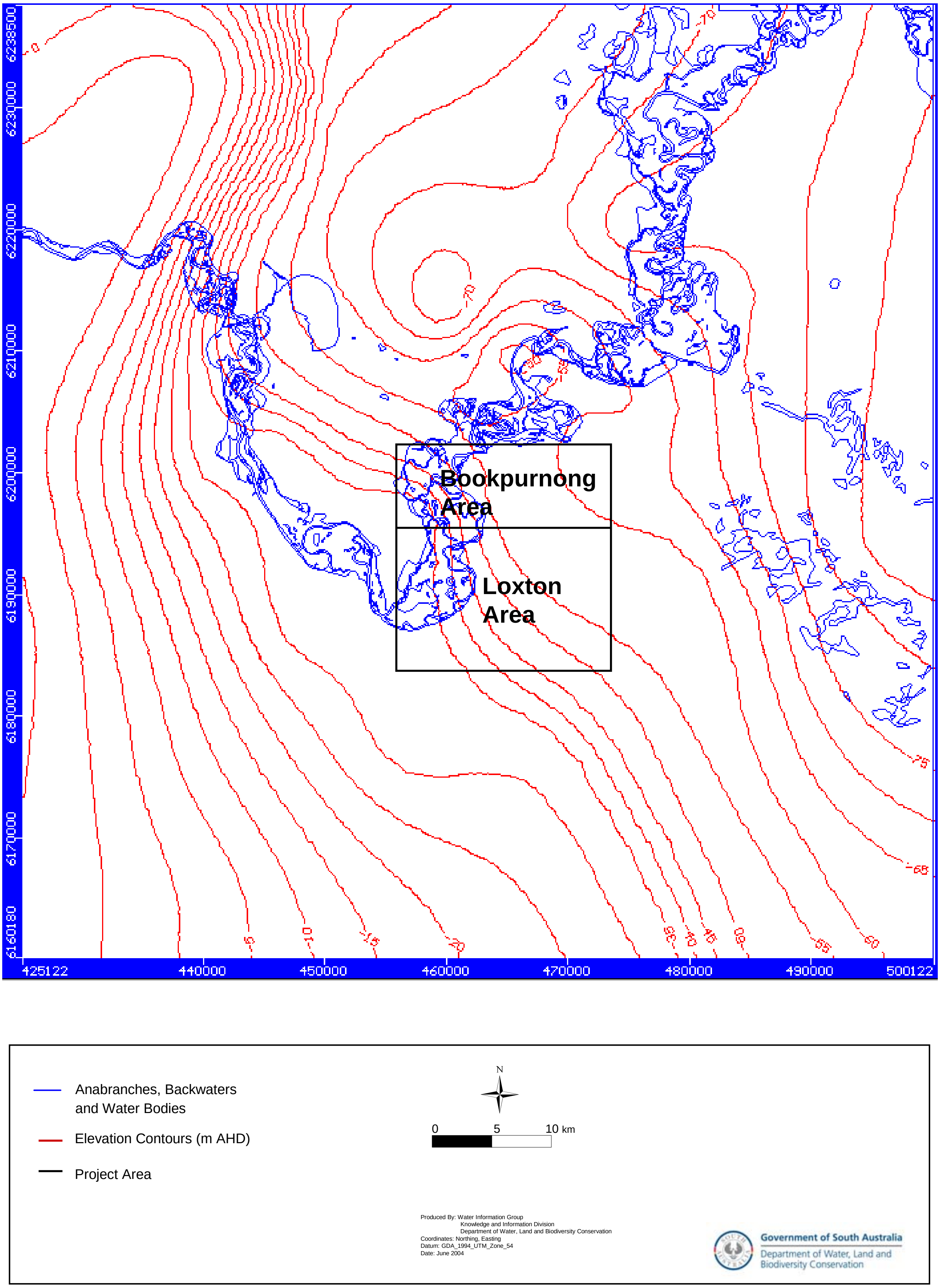

Figure 17: Top of model layer-5 elevation contours (m AHD)

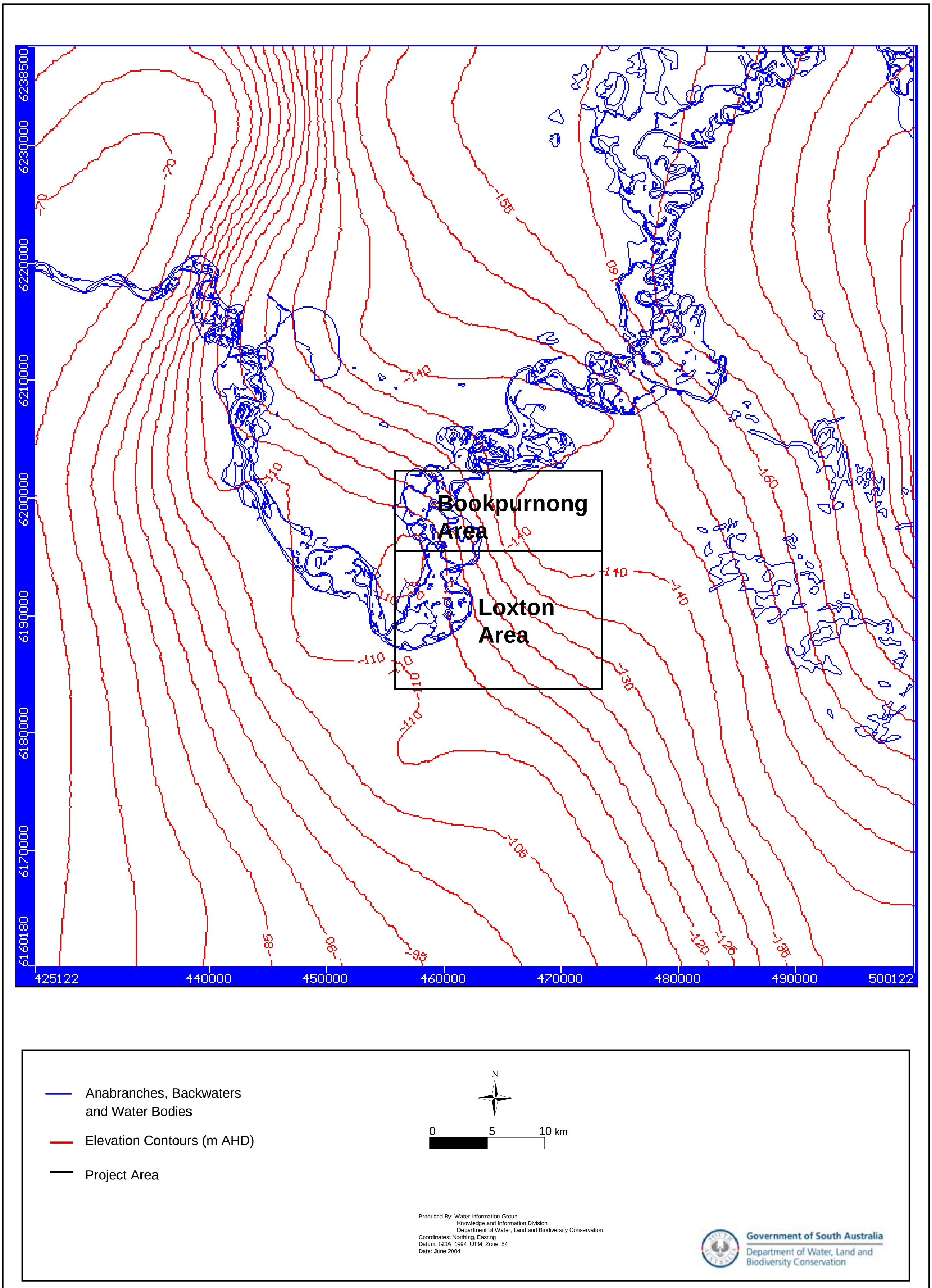

Figure 18: Base of model layer-5 elevation contours (m AHD)

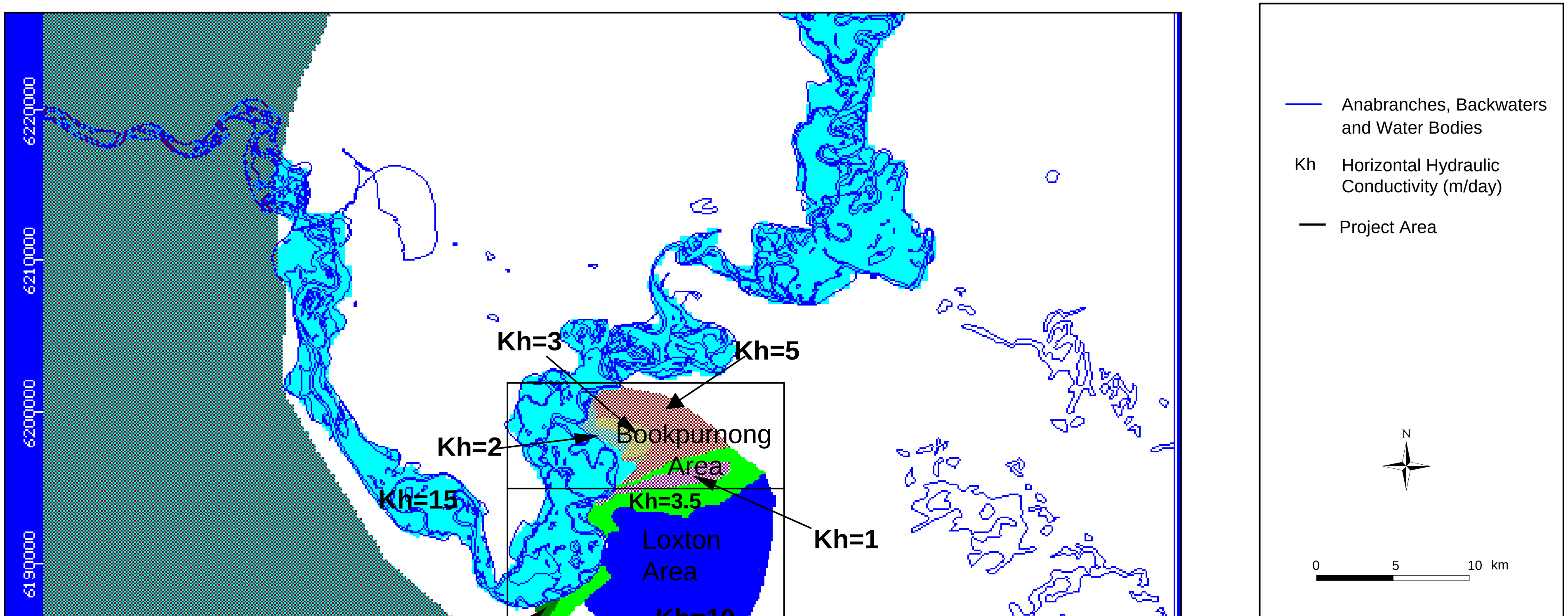

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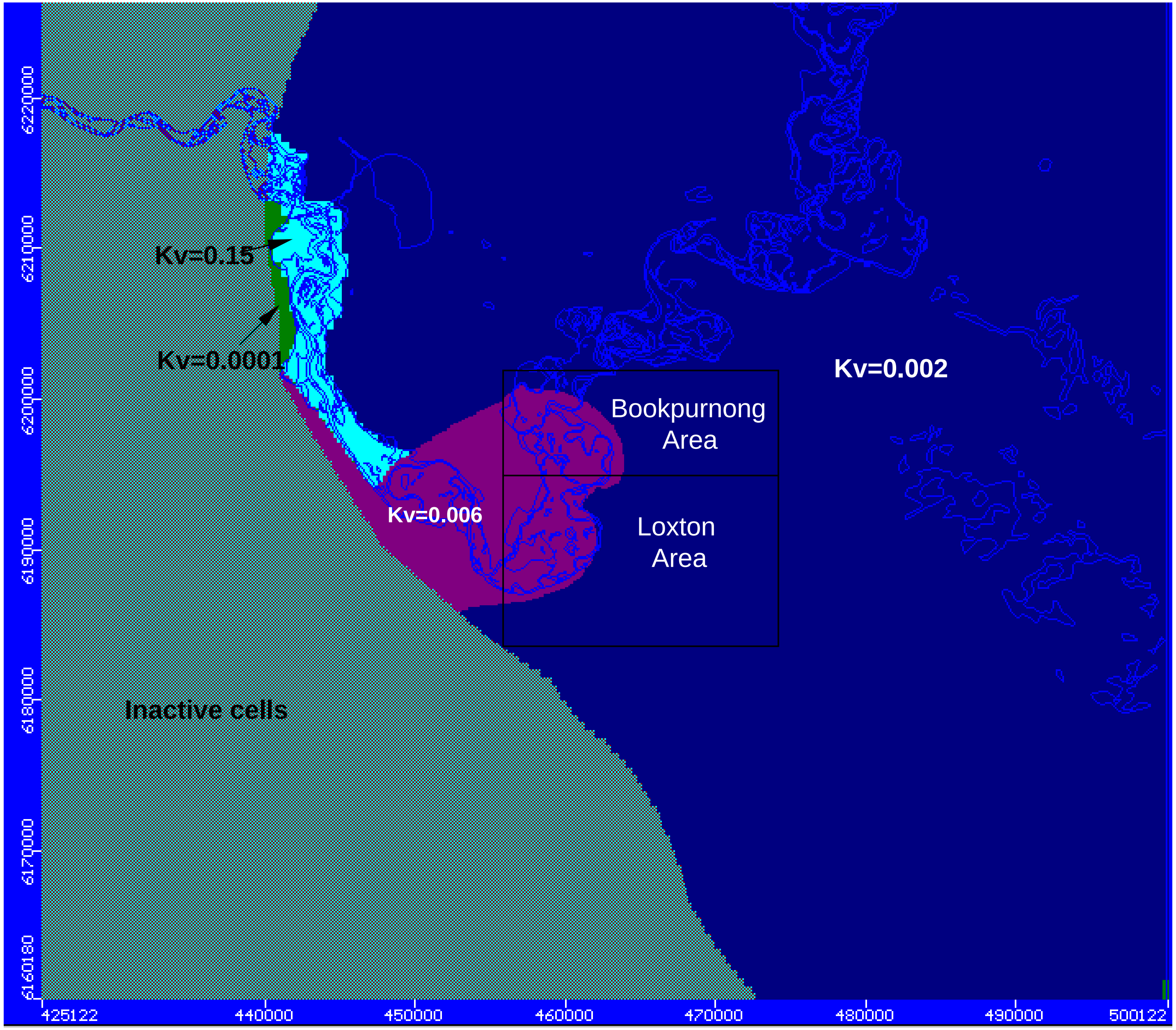
Figure 19: Model hydraulic conductivity zones and values (Layer-1)



Anabranches, Backwaters and Water Bodies

Kv Vertical Hydraulic Conductivity (m/day)

Project Area

N

0 5 10 km

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Figure 20: Model hydraulic conductivity zones and values (Layer-2)

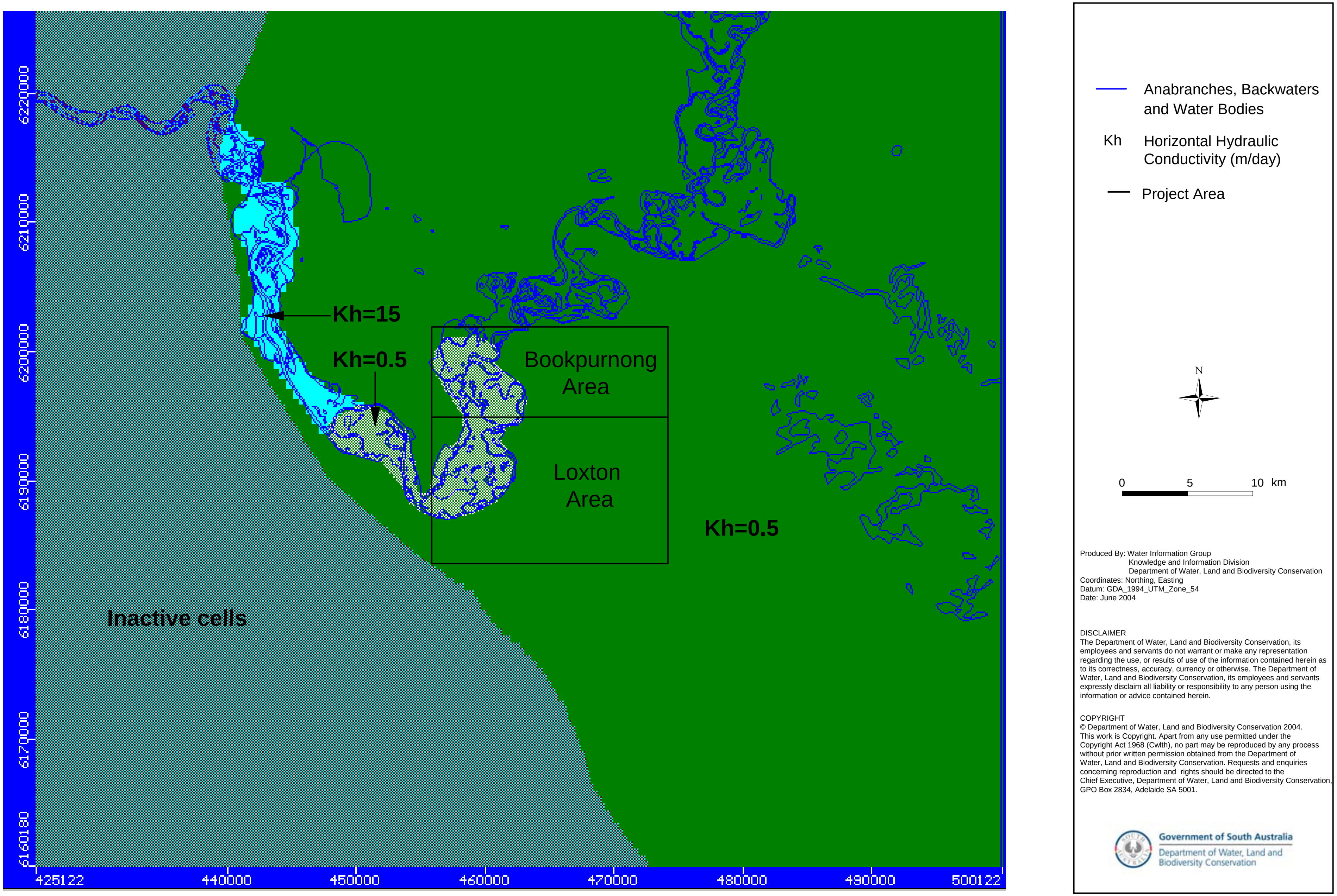


Figure 21: Model hydraulic conductivity zones and values (Layer-3)

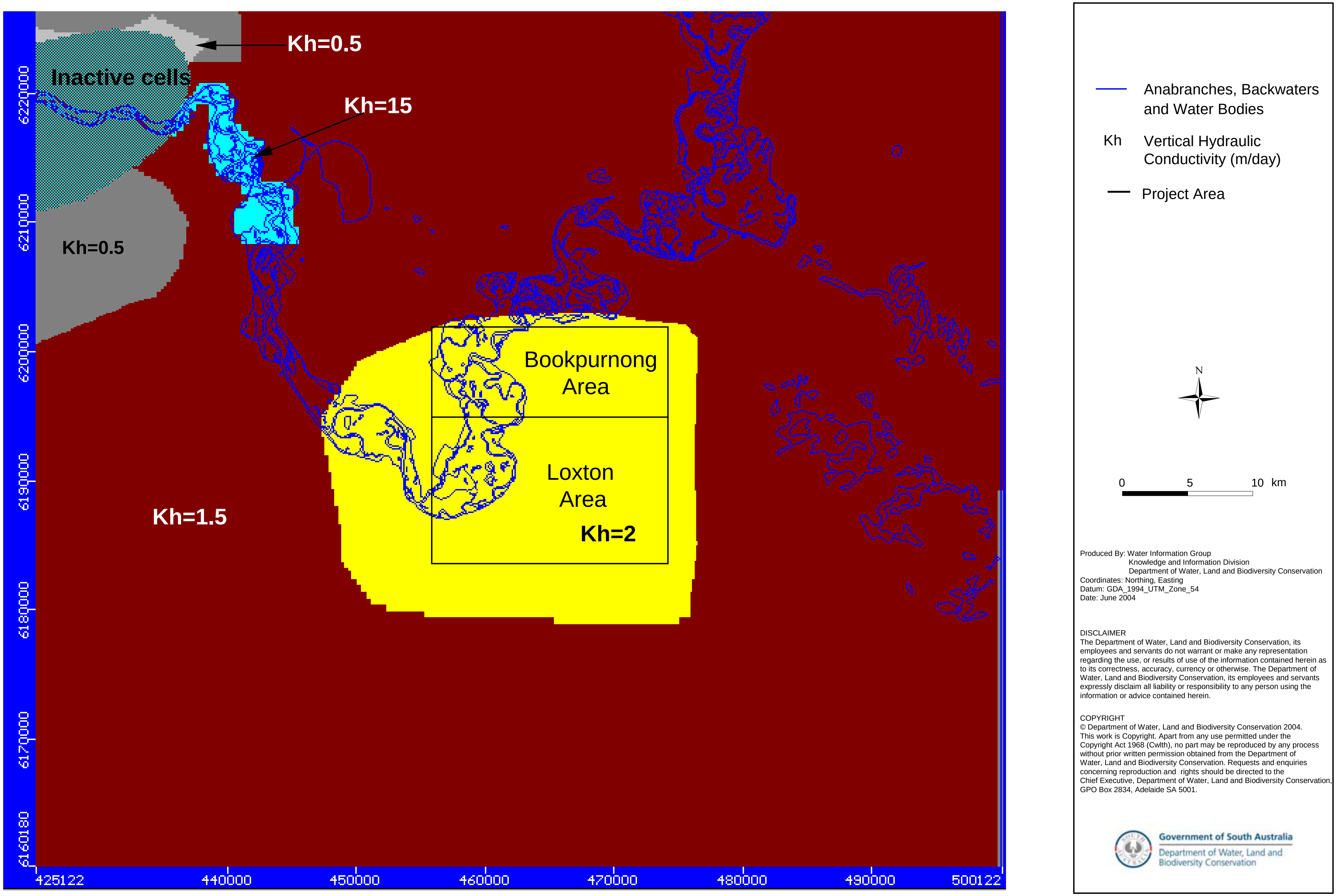


Figure 22: Model hydraulic conductivity zones and values (Layer-4)

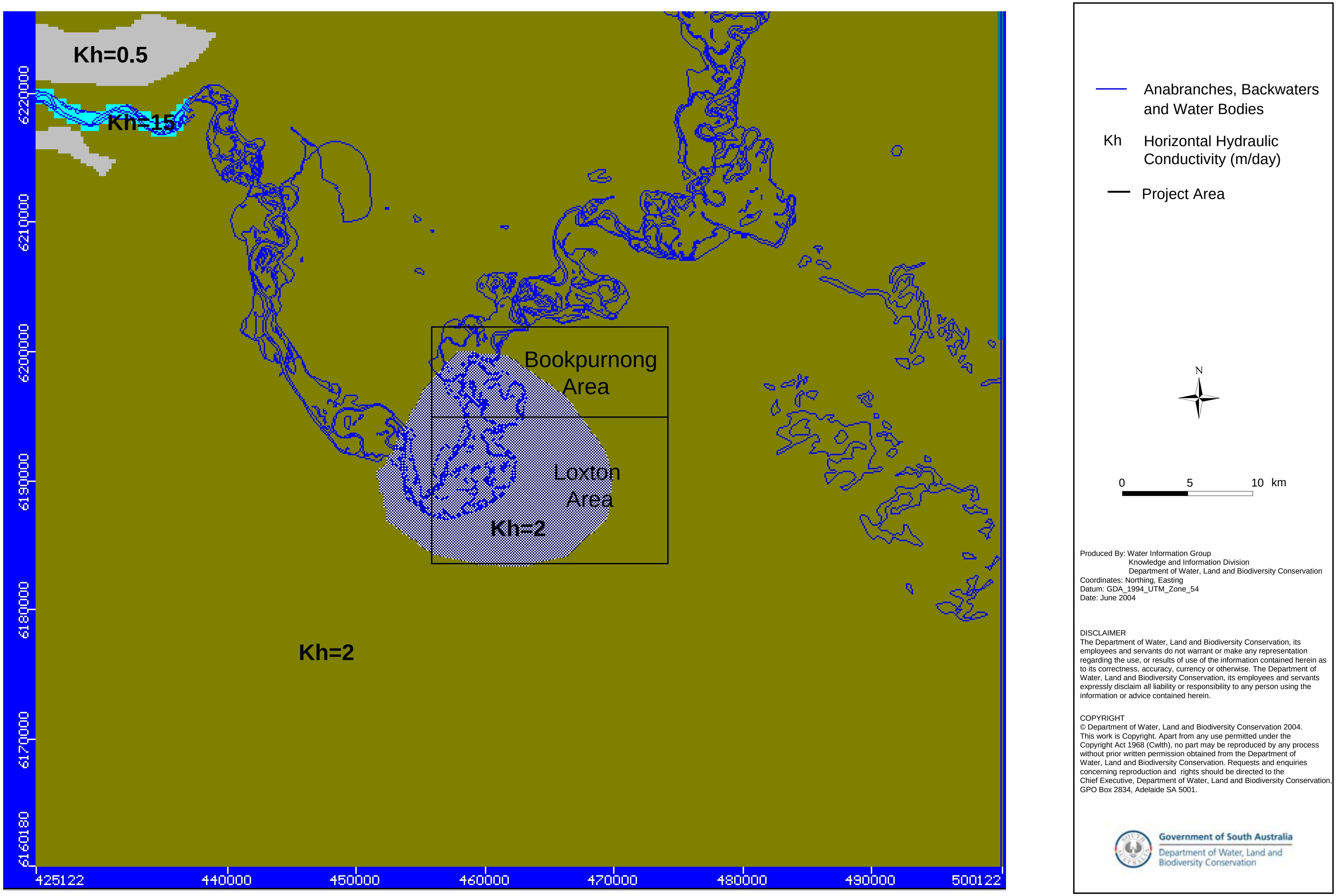
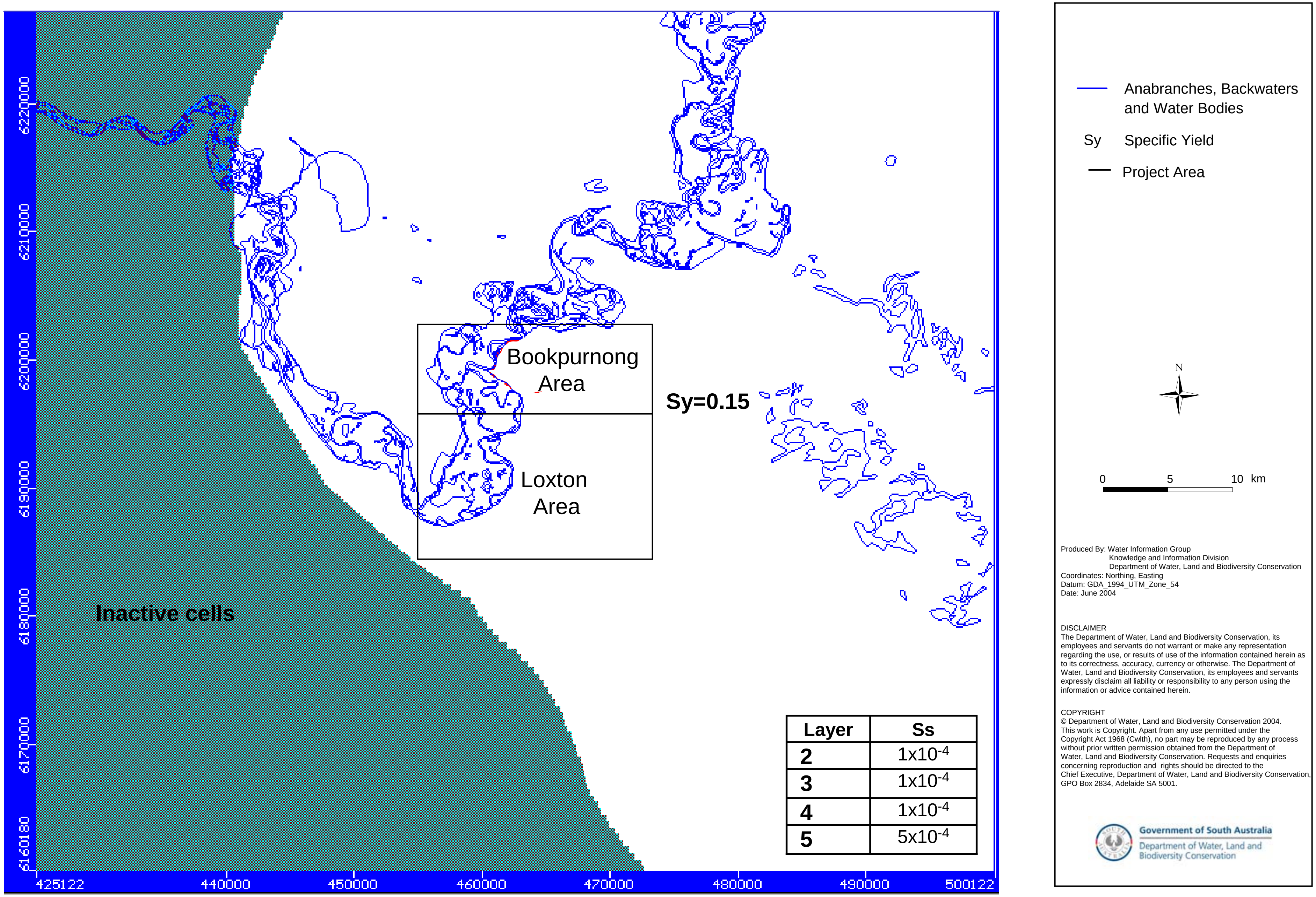


Figure 23: Model hydraulic conductivity zones and values (Layer-5)



Layer	Ss
2	$1x10^{-4}$
3	$1x10^{-4}$
4	$1x10^{-4}$
5	$5x10^{-4}$

Figure 24: Model specific yield zones and values (Layer-1) (Table gives Specific Storage [S_S] in lower layers)

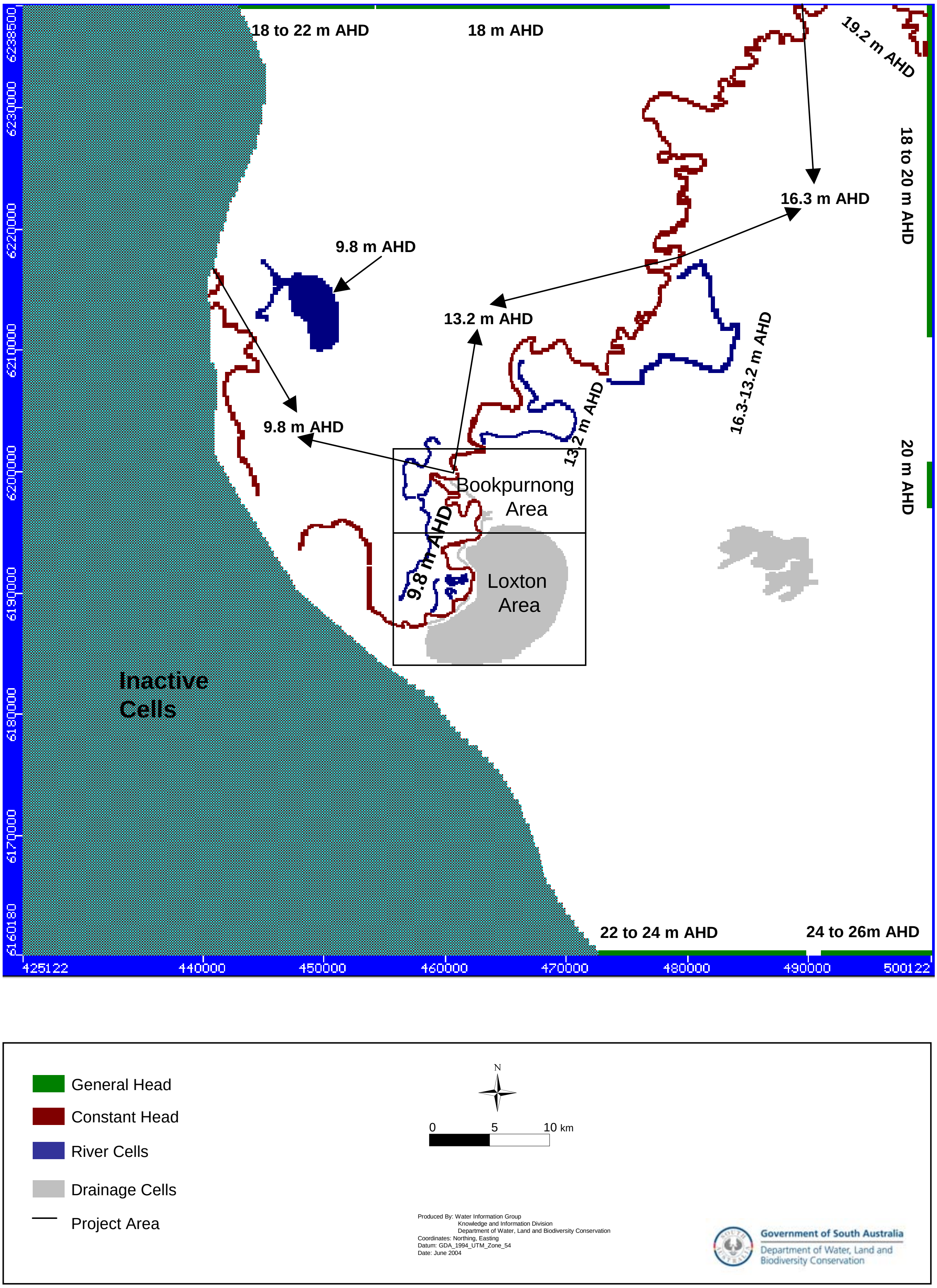


Figure 25: Model boundary conditions (layer-1)

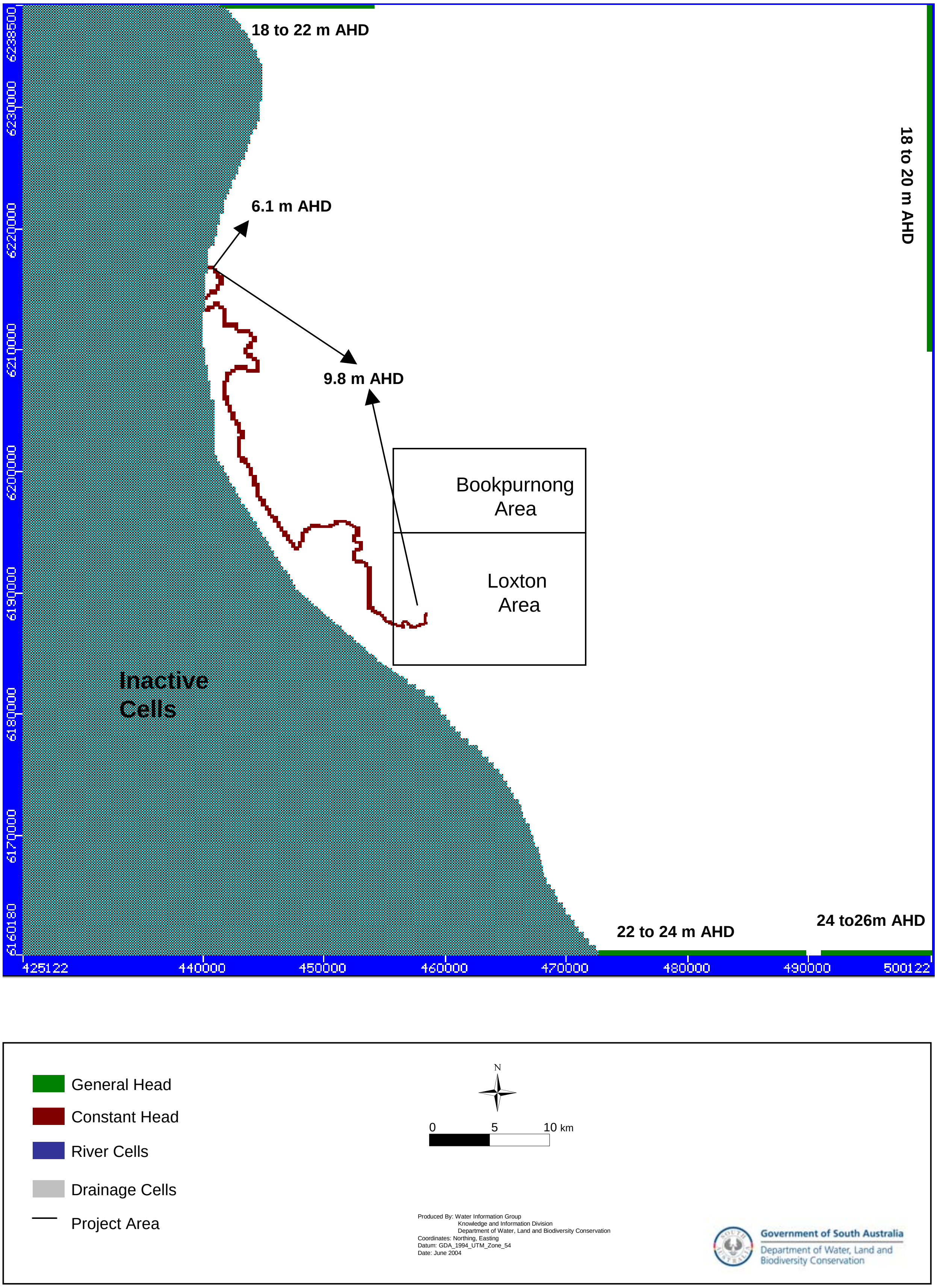


Figure 26: Model boundary conditions (layer-2)

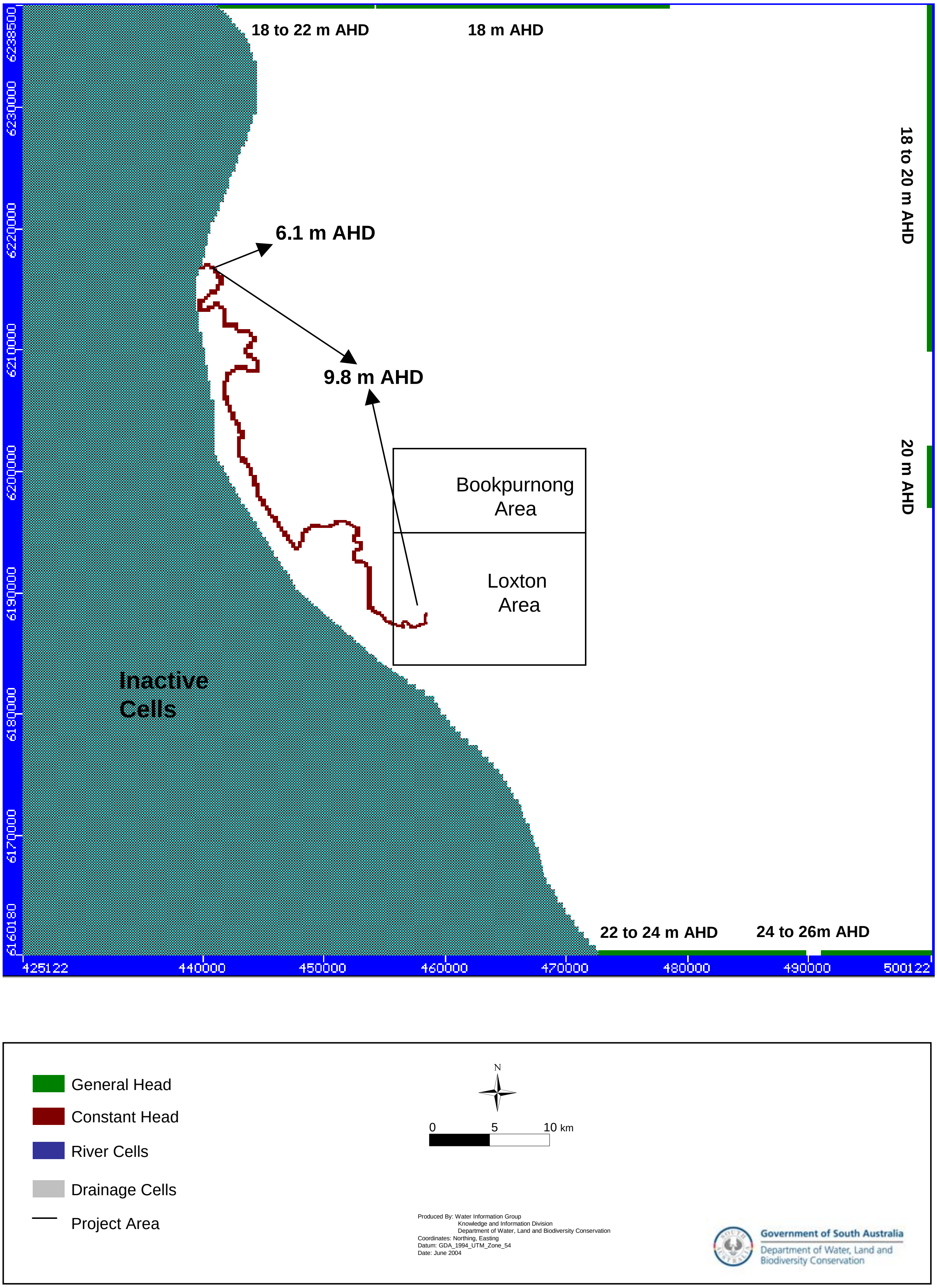


Figure 27: Model boundary conditions (layer-3)

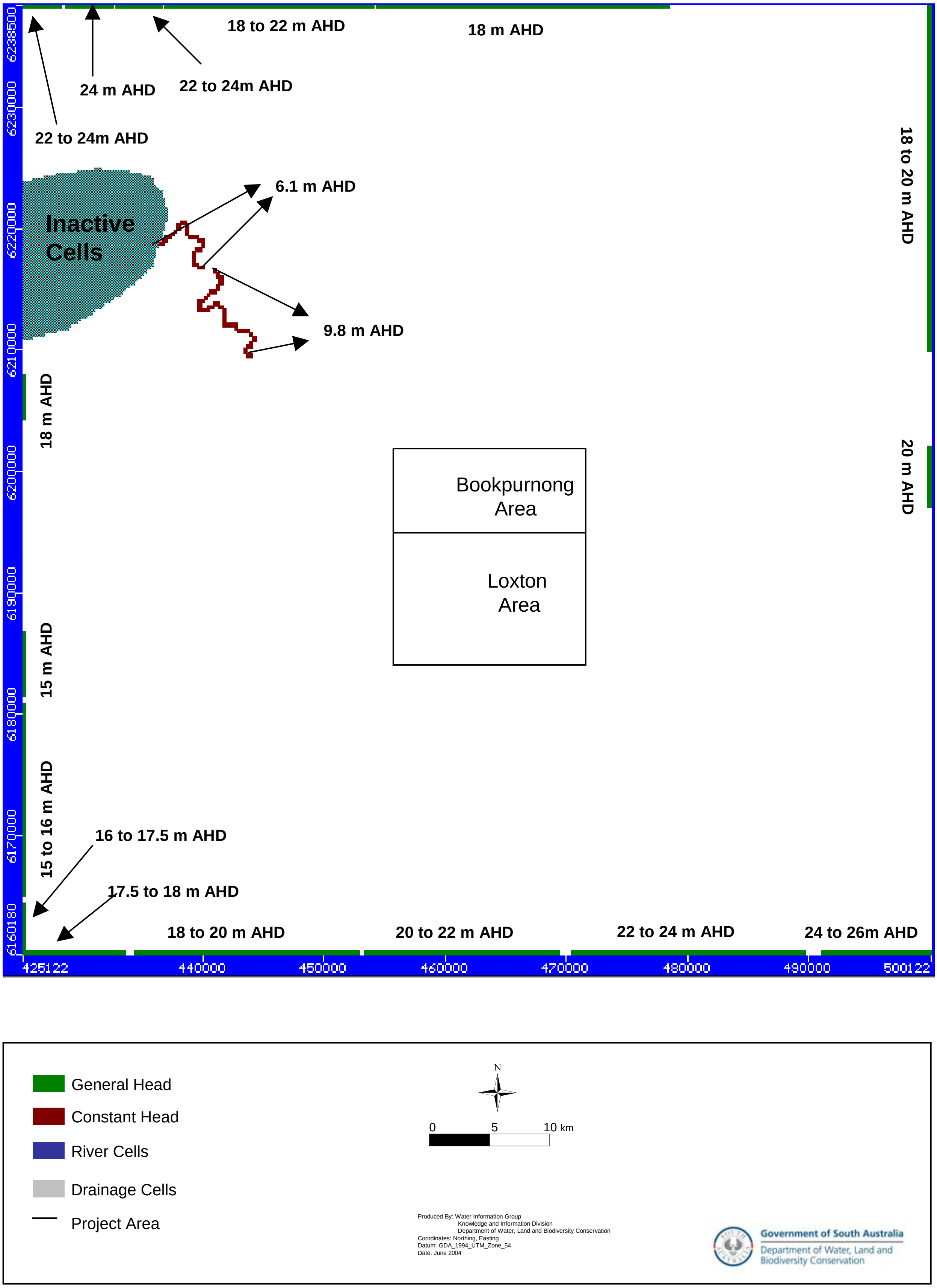


Figure 28: Model boundary conditions (layer-4)

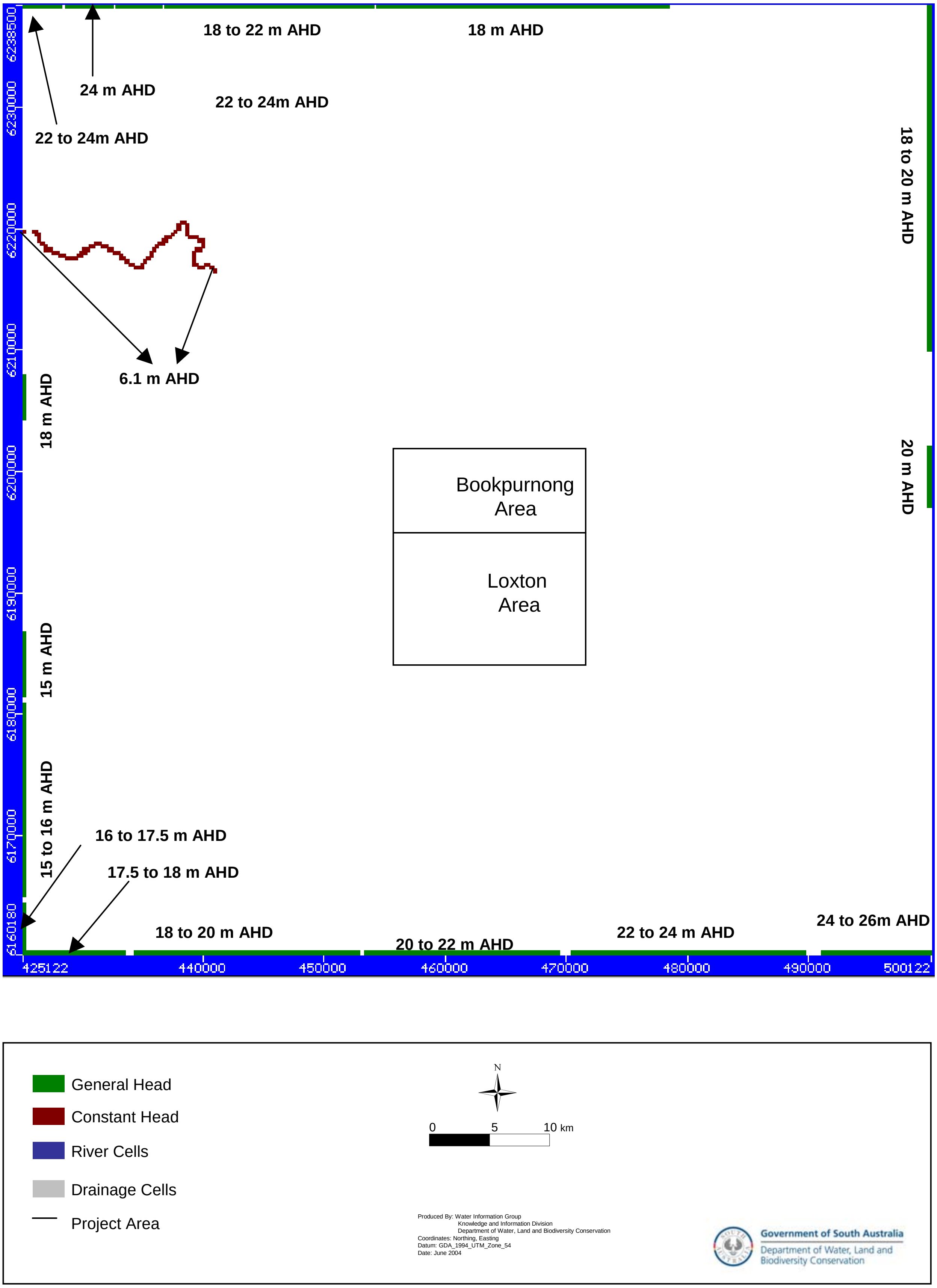


Figure 29: Model boundary conditions (layer-5)

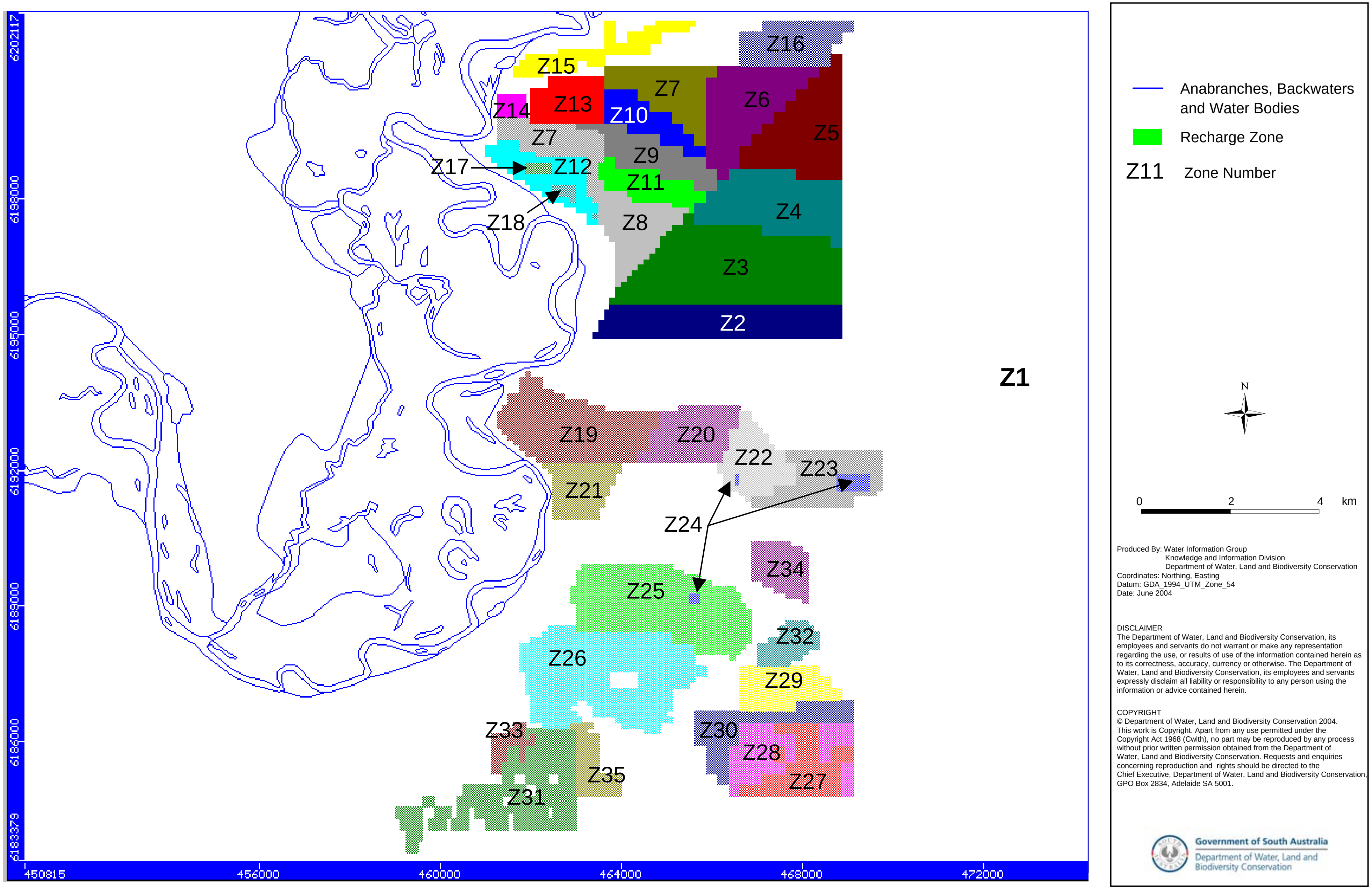


Figure 30: Model recharge zones in project area (recharge rates in each zone against time are listed in the appendix A1 and B1)

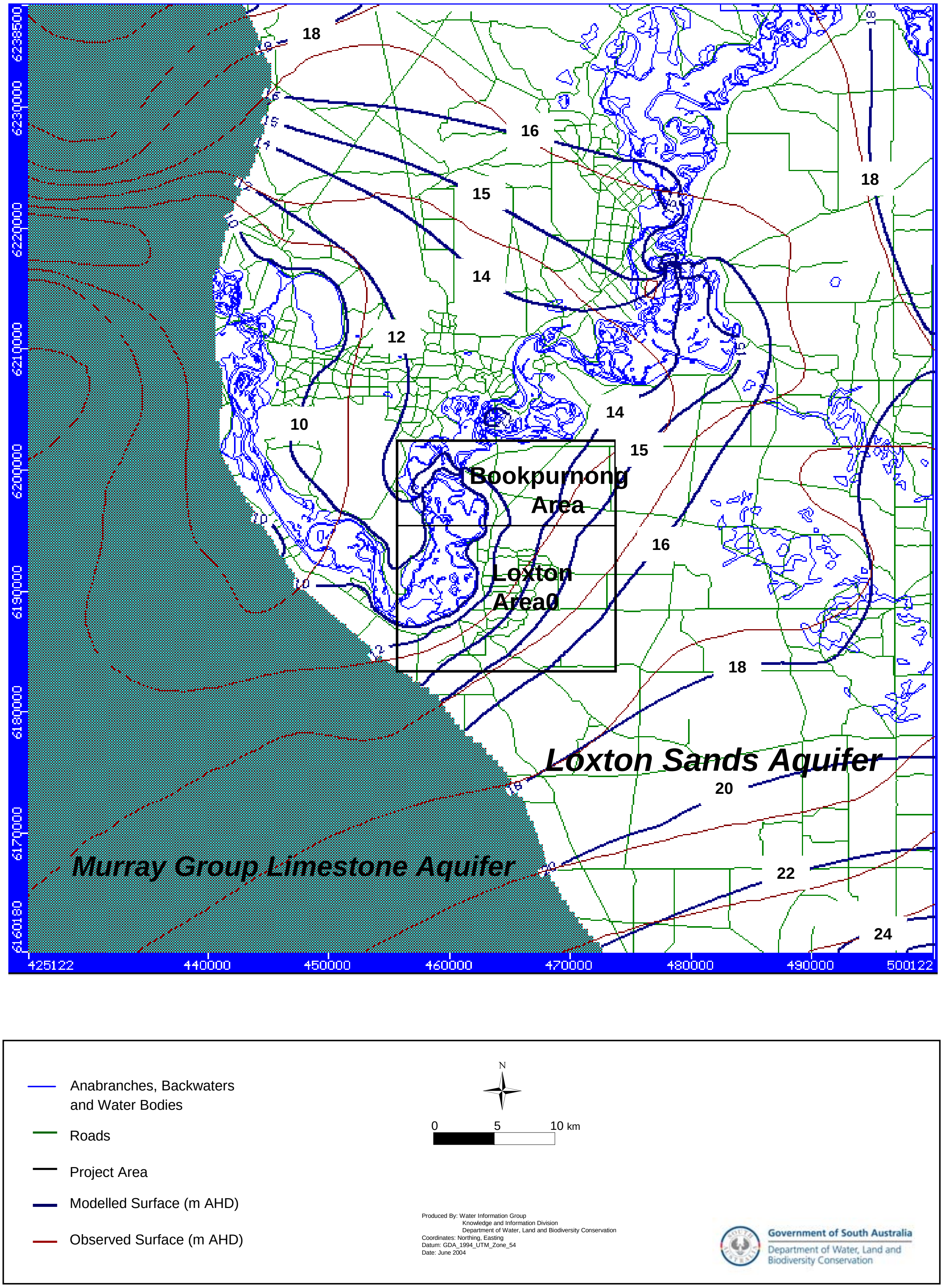


Figure 31: Comparison pre-Irrigation development potentiometric surface (Barnett 2003) and modelled post-regulation of the River Murray and pre-irrigation development potentiometric surface Layer-1

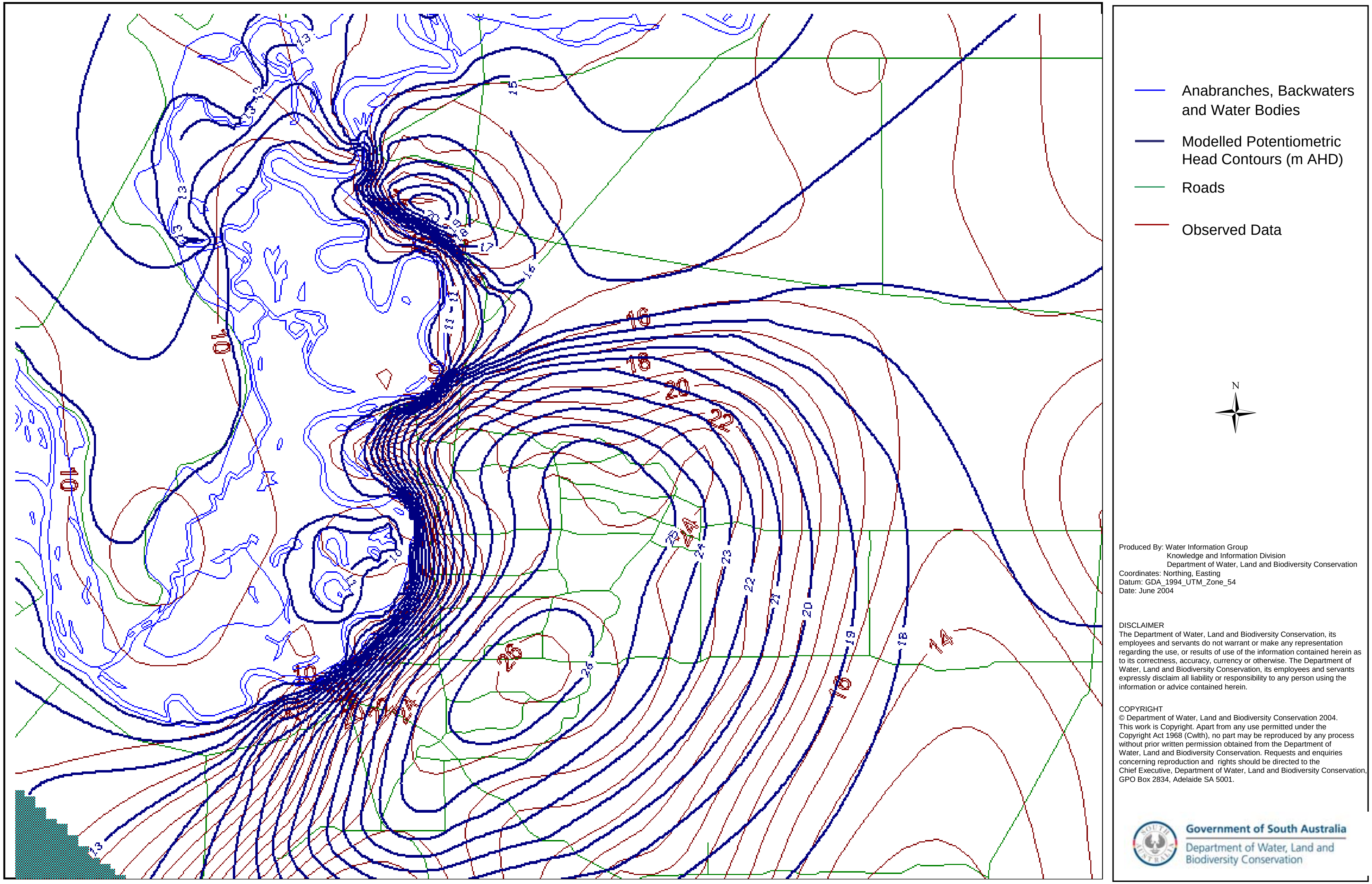


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Figure 32: Comparison observed and modelled 2004 potentiometric surface in project area (Layer-1 Loxton Sands)

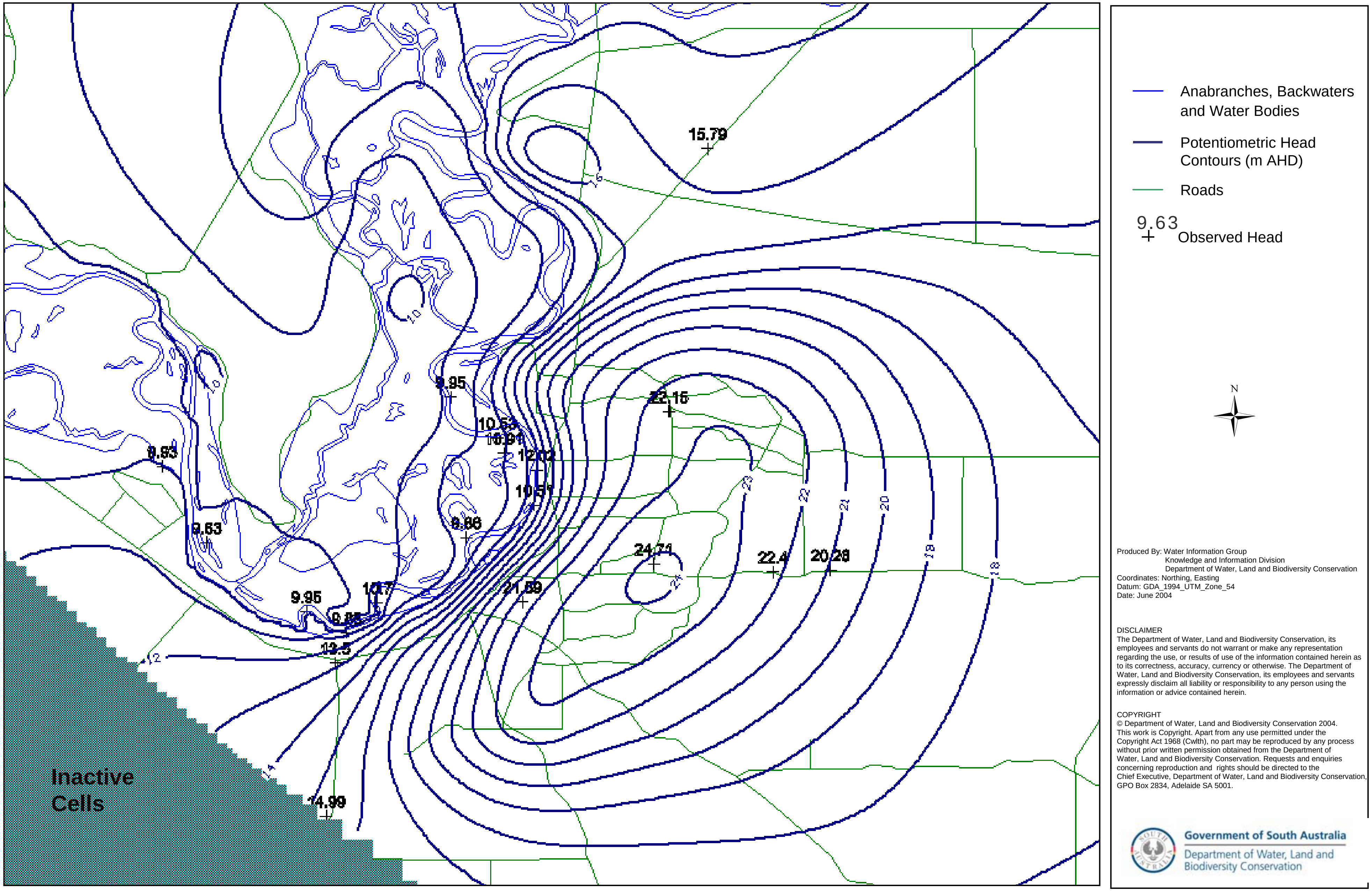


Figure 33: Comparison observed and modelled 2004 potentiometric surface in project area (Layer-3 Pata Formation)

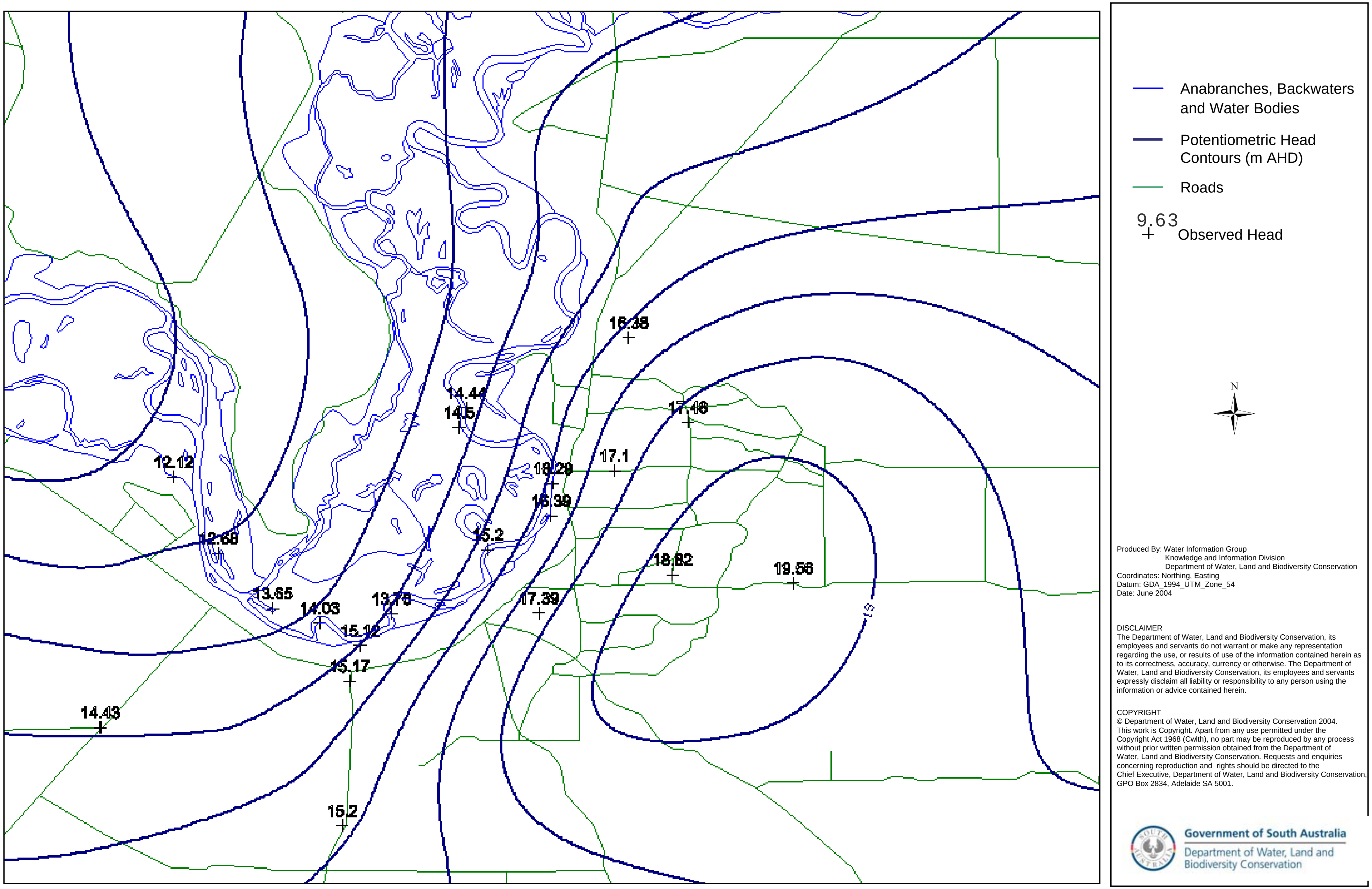


Figure 34: Comparison observed and modelled 2004 potentiometric surface in project area (Layer-4 Glenforslan Formation)

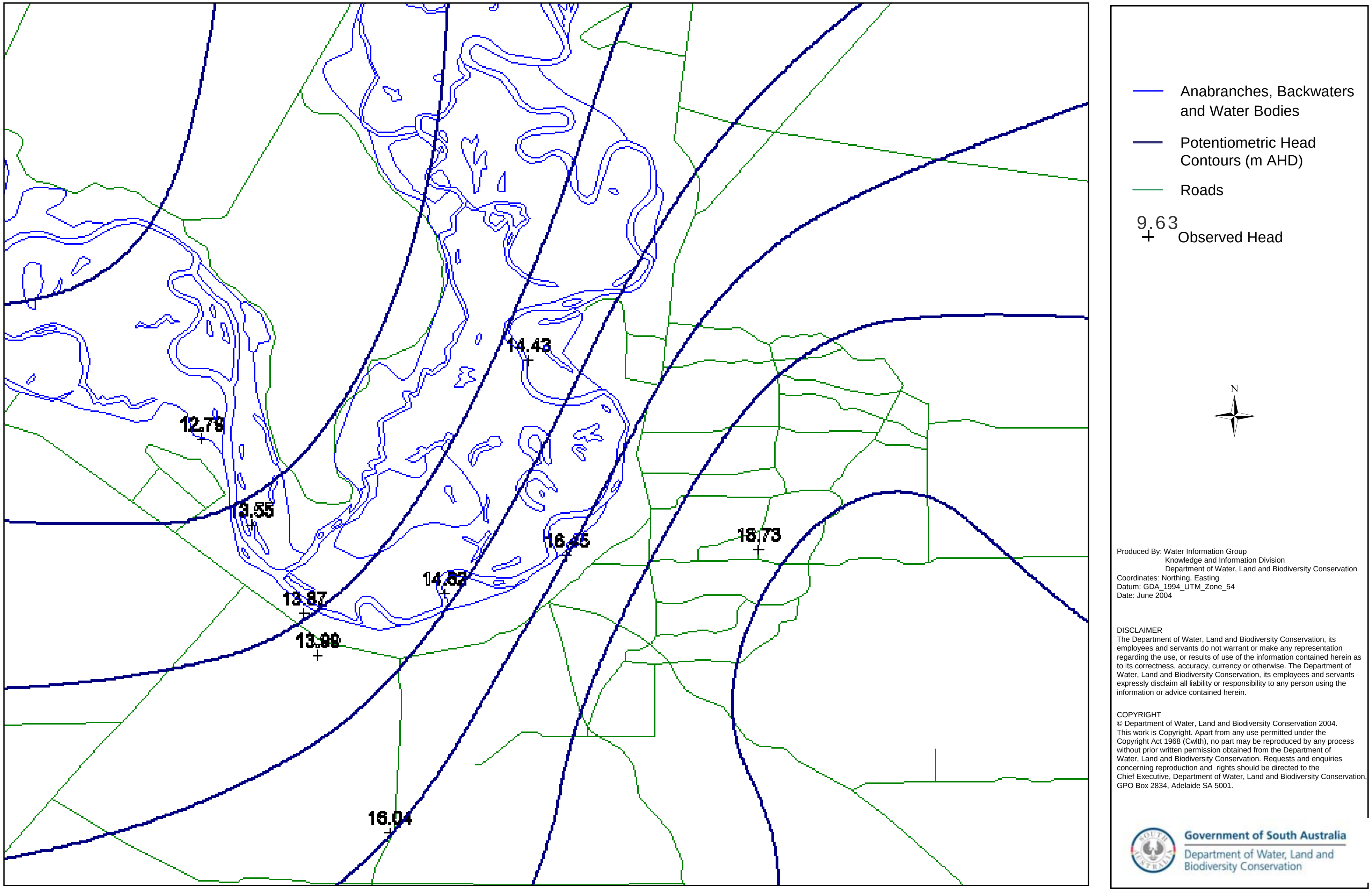


Figure 35: Comparison observed and modelled 2004 potentiometric surface in project area (Layer-5 Mannum Formation)

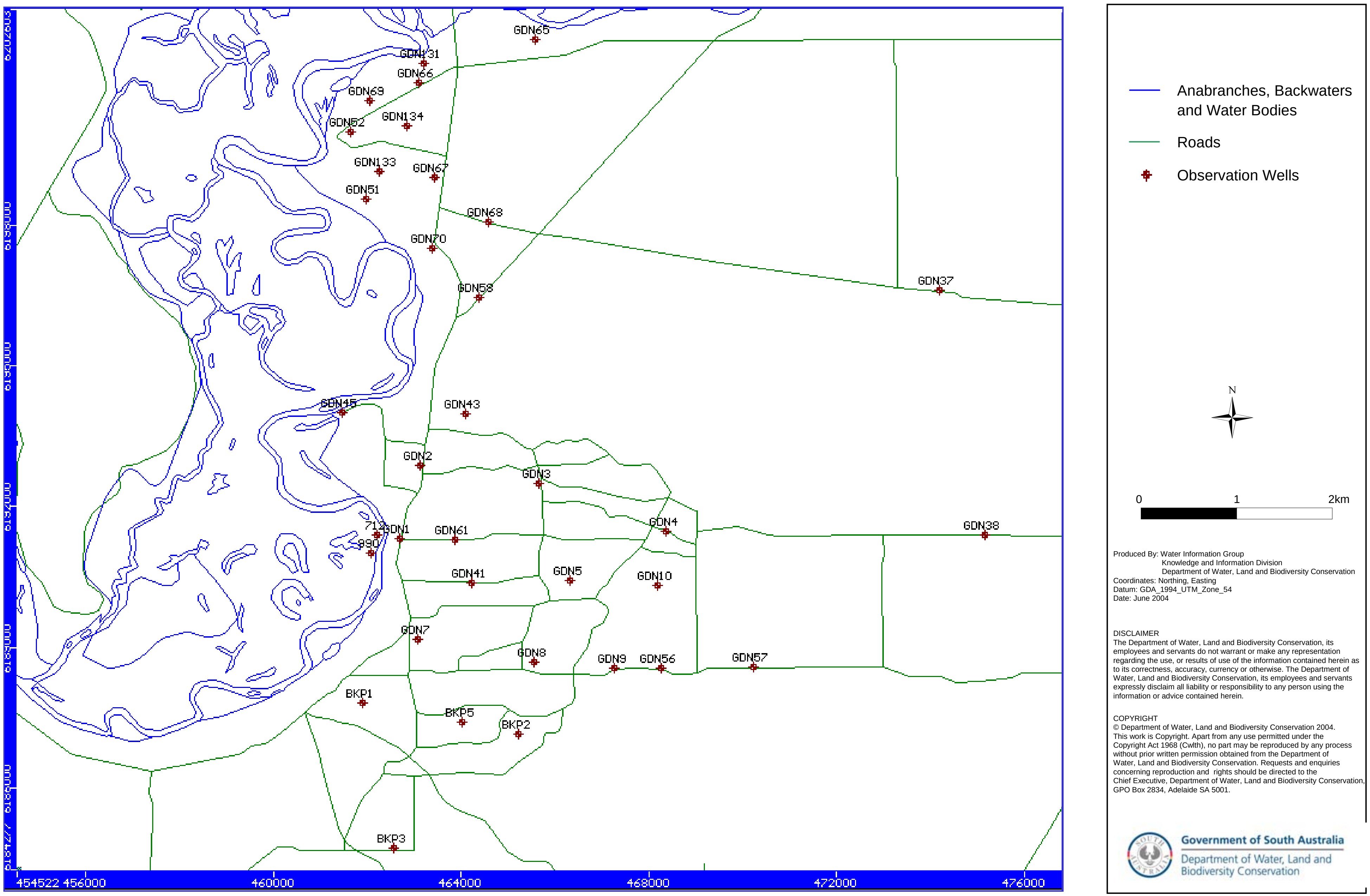
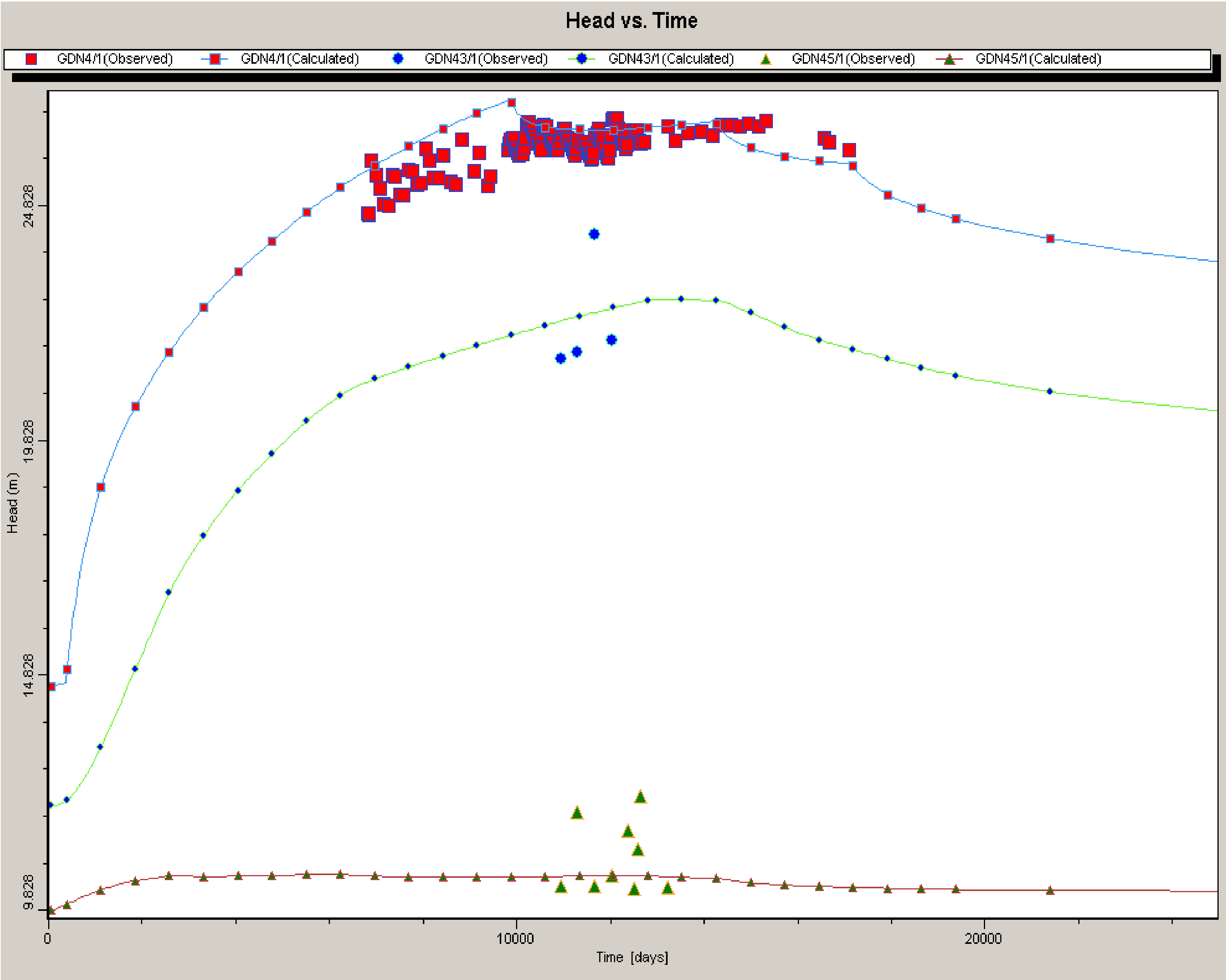


Figure 36: Loxton - Bookpurnong area location of long term monitored observation wells on project area (only in Loxton Sands)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN4, GDN43 and GDN45

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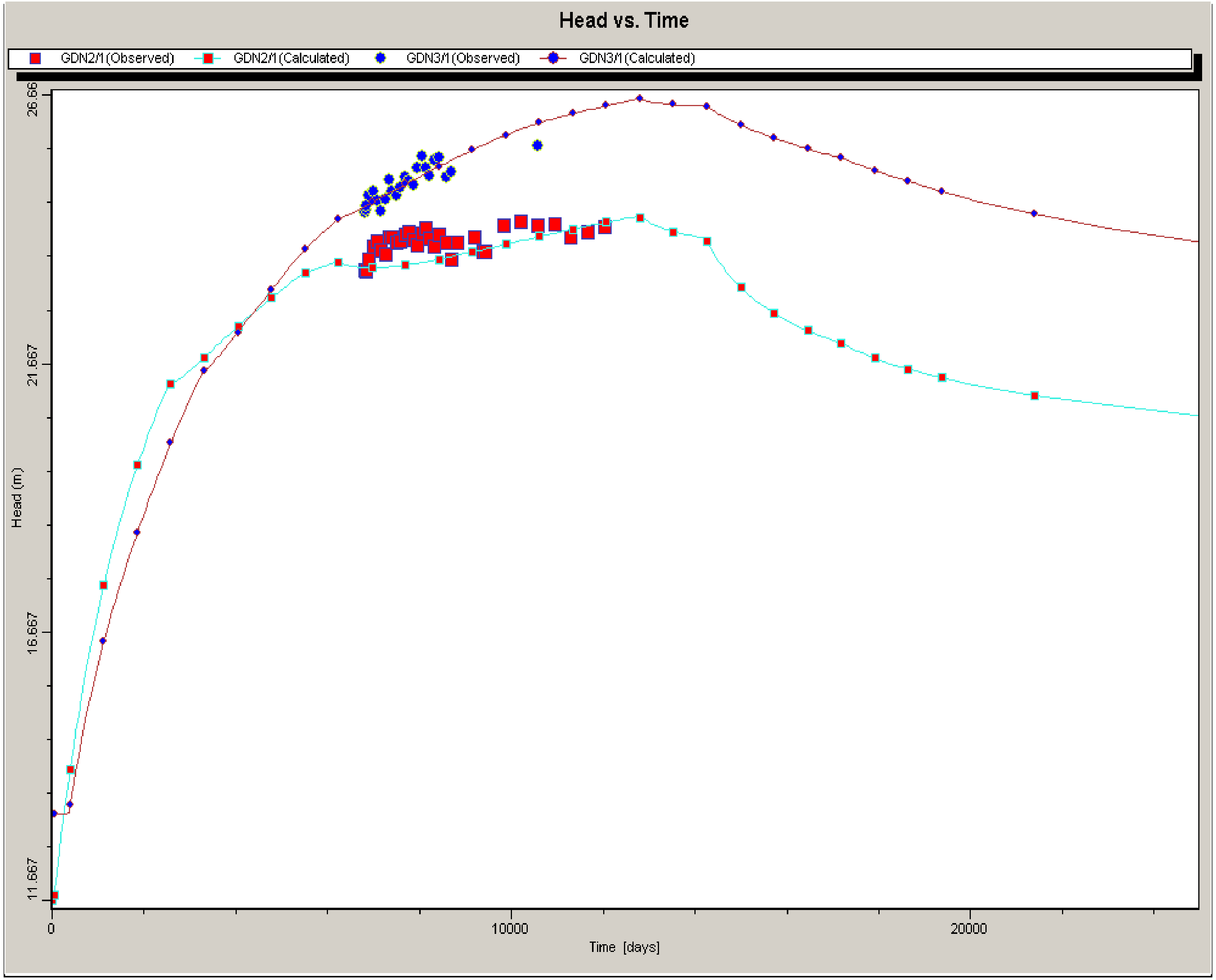
Figure 37: Loxton calibration results – Modelled and observed potentiometric heads (Observation wells GDN4, GDN43 and GDN45)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN2 and GDN3

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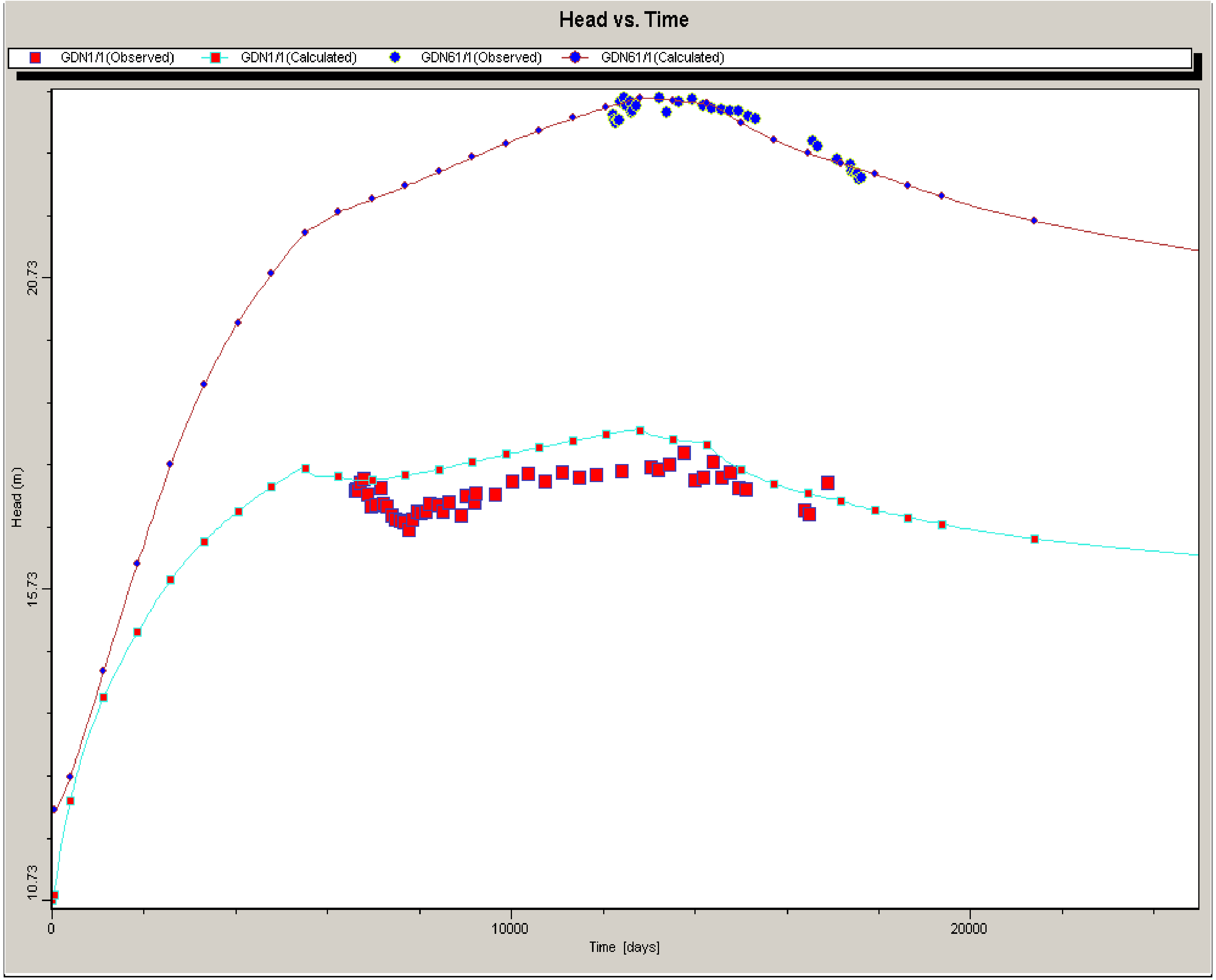
Figure 38: Loxton calibration results – Modelled and observed potentiometric head (Observation wells GDN2 and GDN3)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN1 and GDN61

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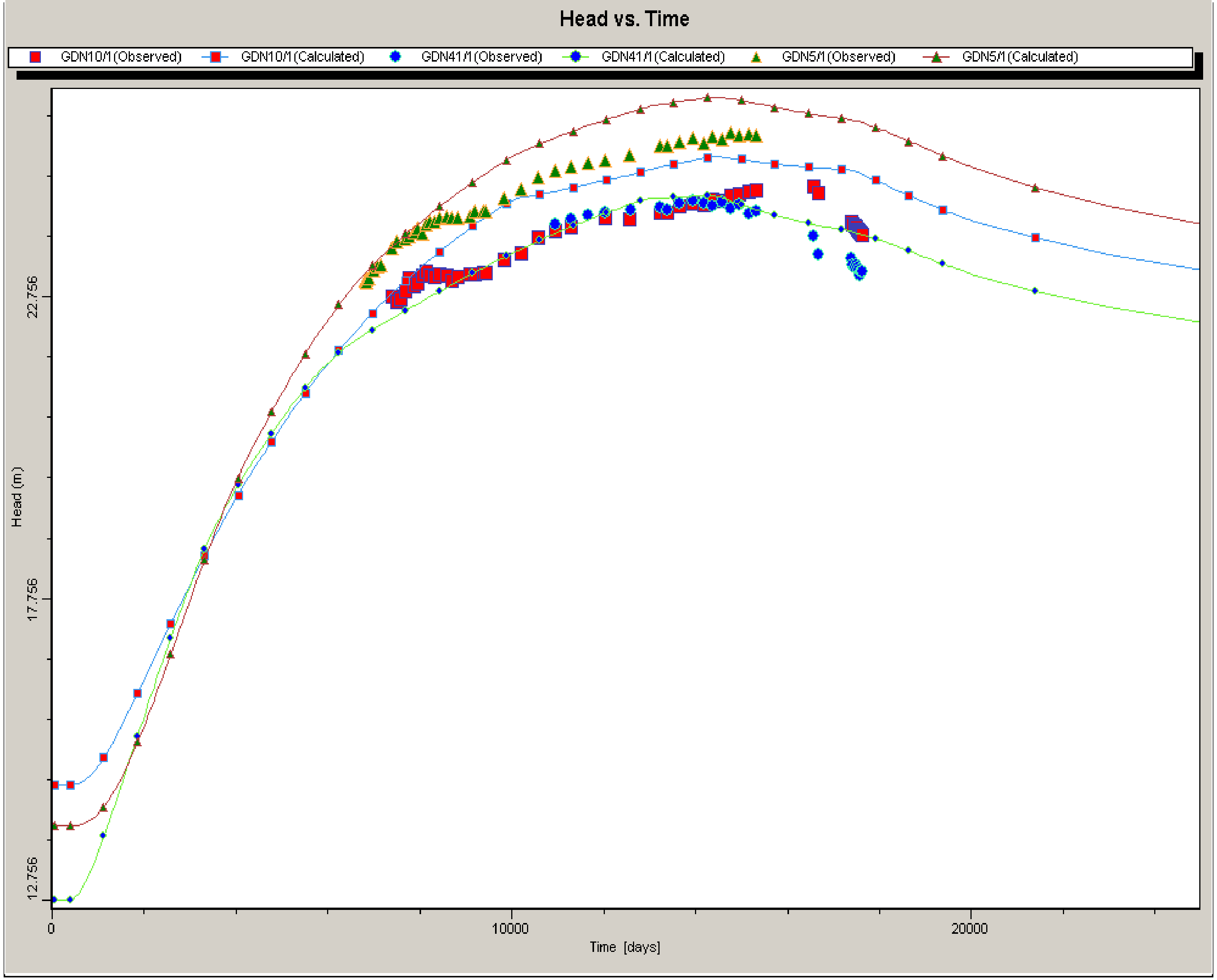
Figure 39: Loxton calibration results – Modelled and observed potentiometric heads (Observation wells GDN1, GDN61)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN41, GDN5 and GDN10

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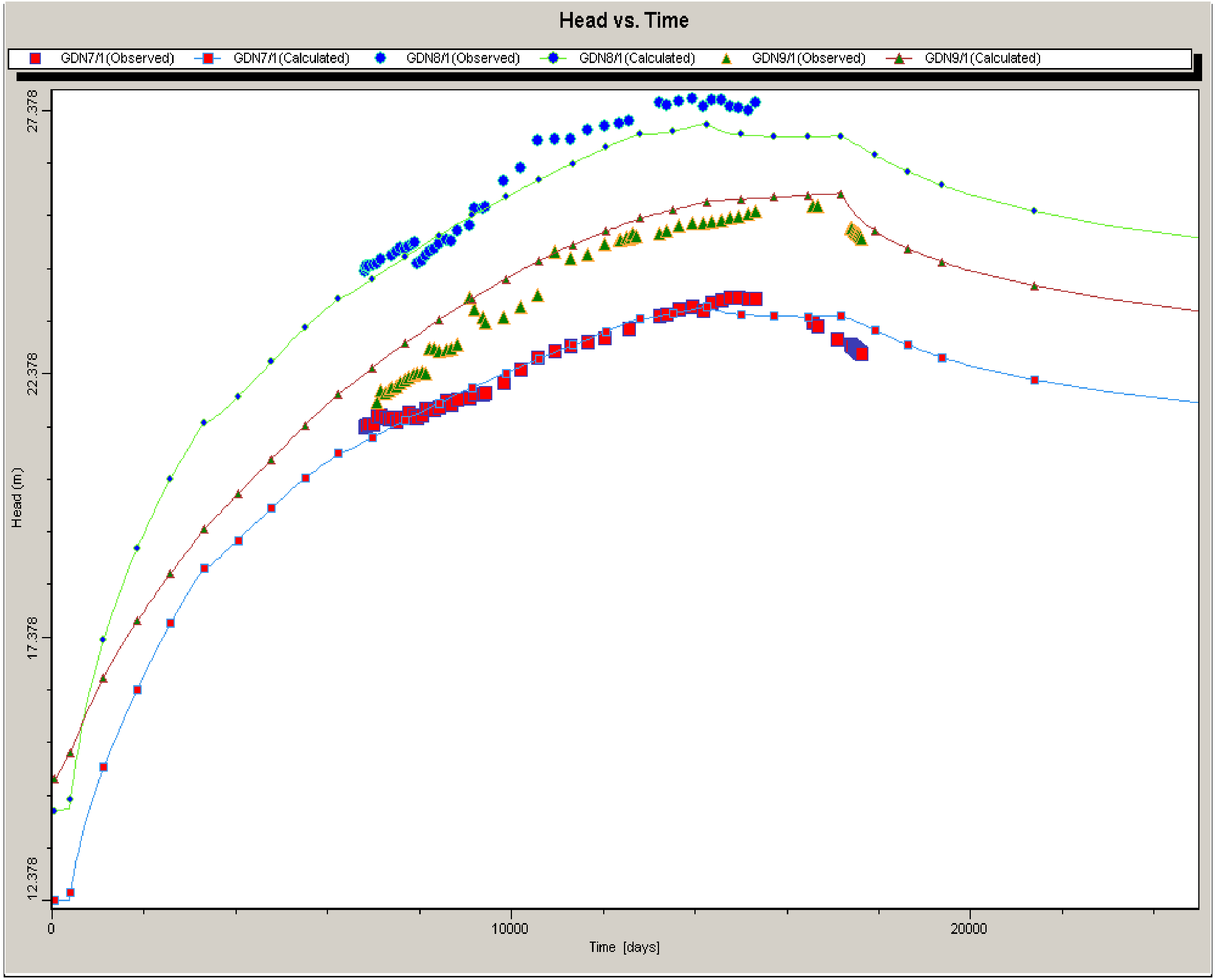
Figure 40: Loxton calibration results – Modelled and observed potentiometric heads (Observation wells GDN41, GDN5 and GDN10)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN7, GDN8 and GDN9

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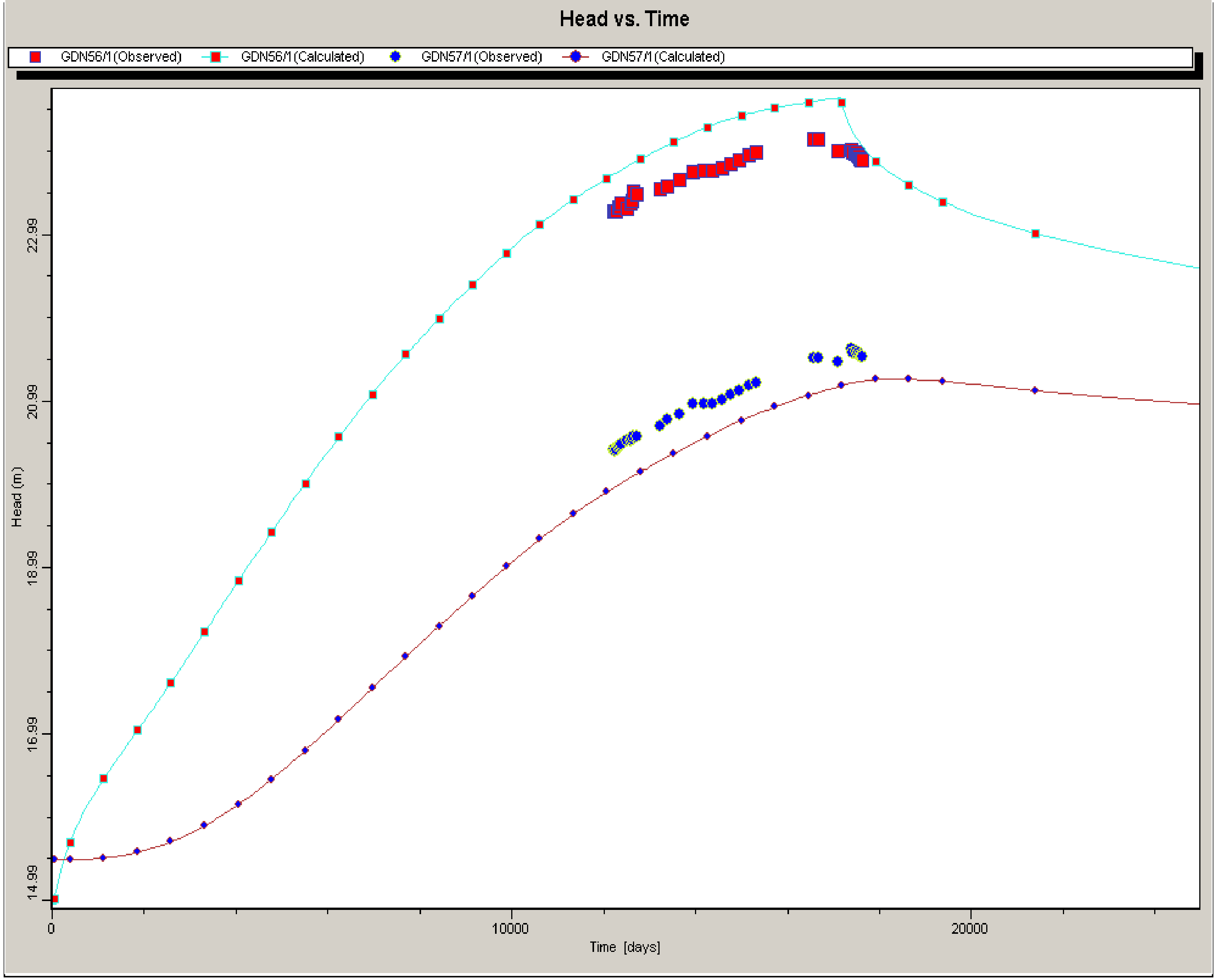
Figure 41: Loxton calibration results – Modelled and observed potentiometric heads (Observation wells GDN7, GDN8 and GDN9)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN56 and GDN57

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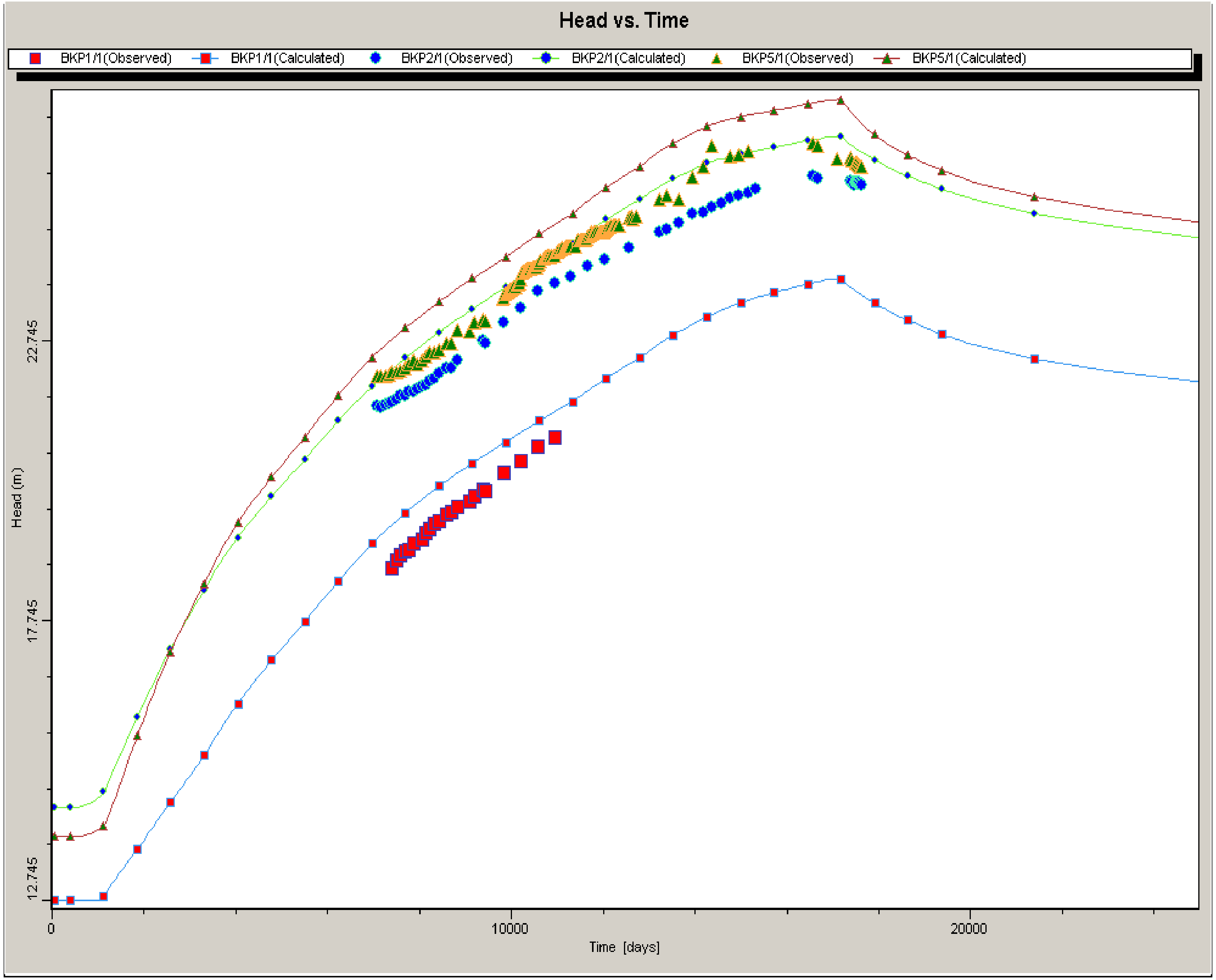
Figure 42: Loxton calibration results – Modelled and observed potentiometric heads (Observation wells GDN56 and GDN57)



Modelled and observed potentiometric heads (m AHD)

-Observation wells BKP1, BKP2 and BKP5

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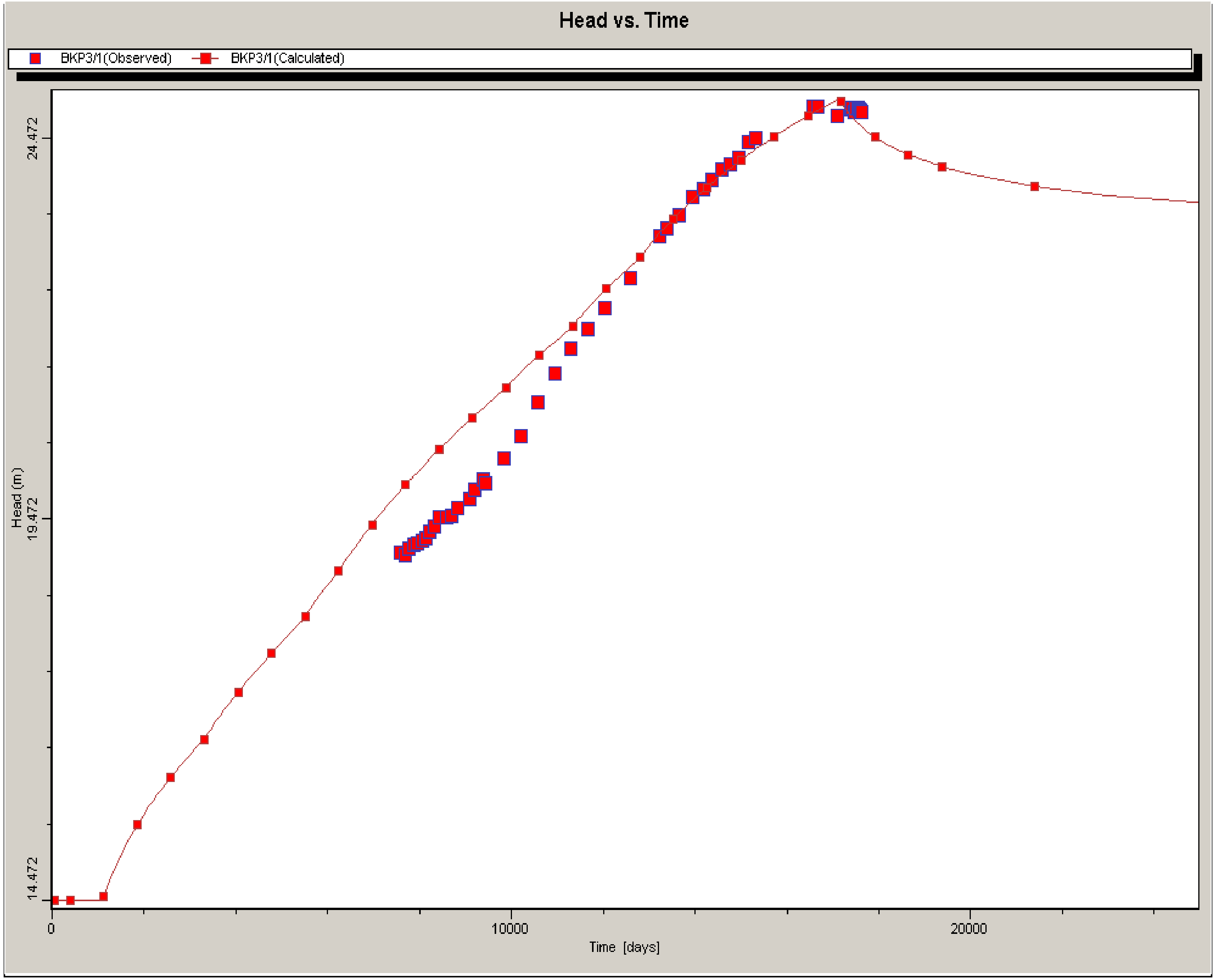
Figure 43: Loxton calibration results – Modelled and observed potentiometric heads (Observation wells BKP1, BKP2 and BKP5)



Modelled and observed potentiometric heads (m AHD)

-Observation well BKP3

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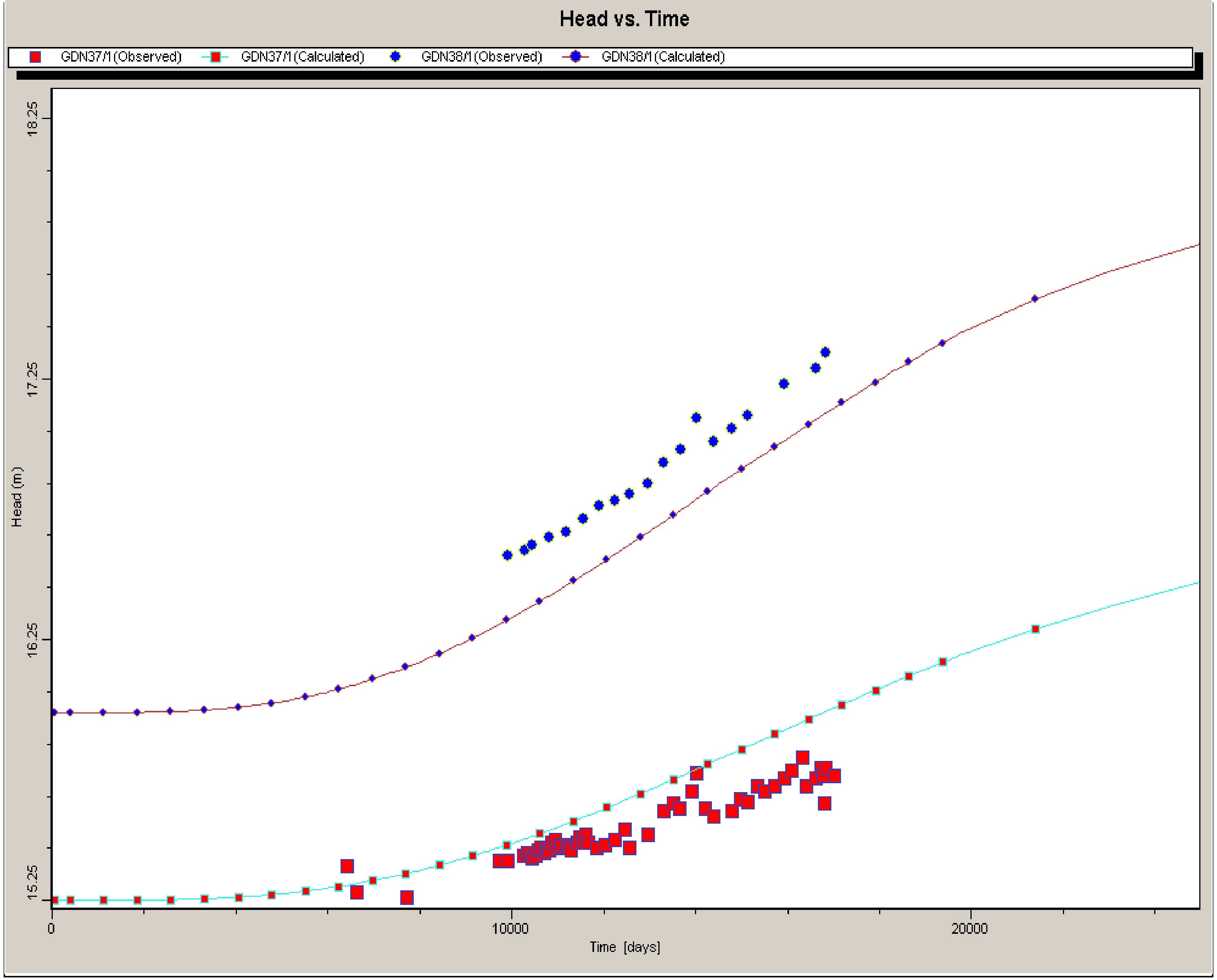
Figure 44: Loxton calibration results – Modelled and observed potentiometric heads (Observation well BKP3)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN37 and GDN38

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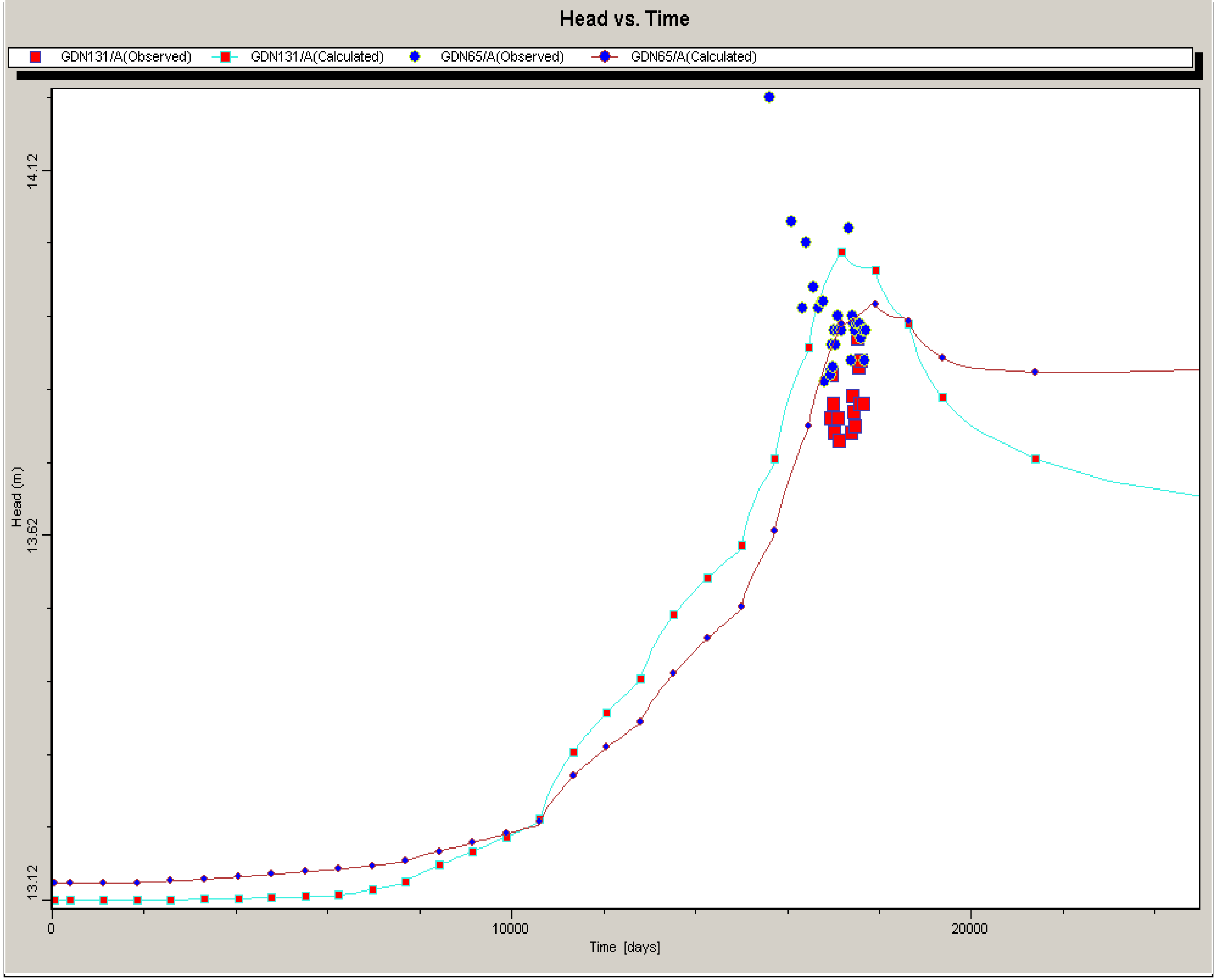
Figure 45: Loxton calibration results – Modelled and observed potentiometric heads (Observation wells GDN37 and GDN38)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN131 and GDN65

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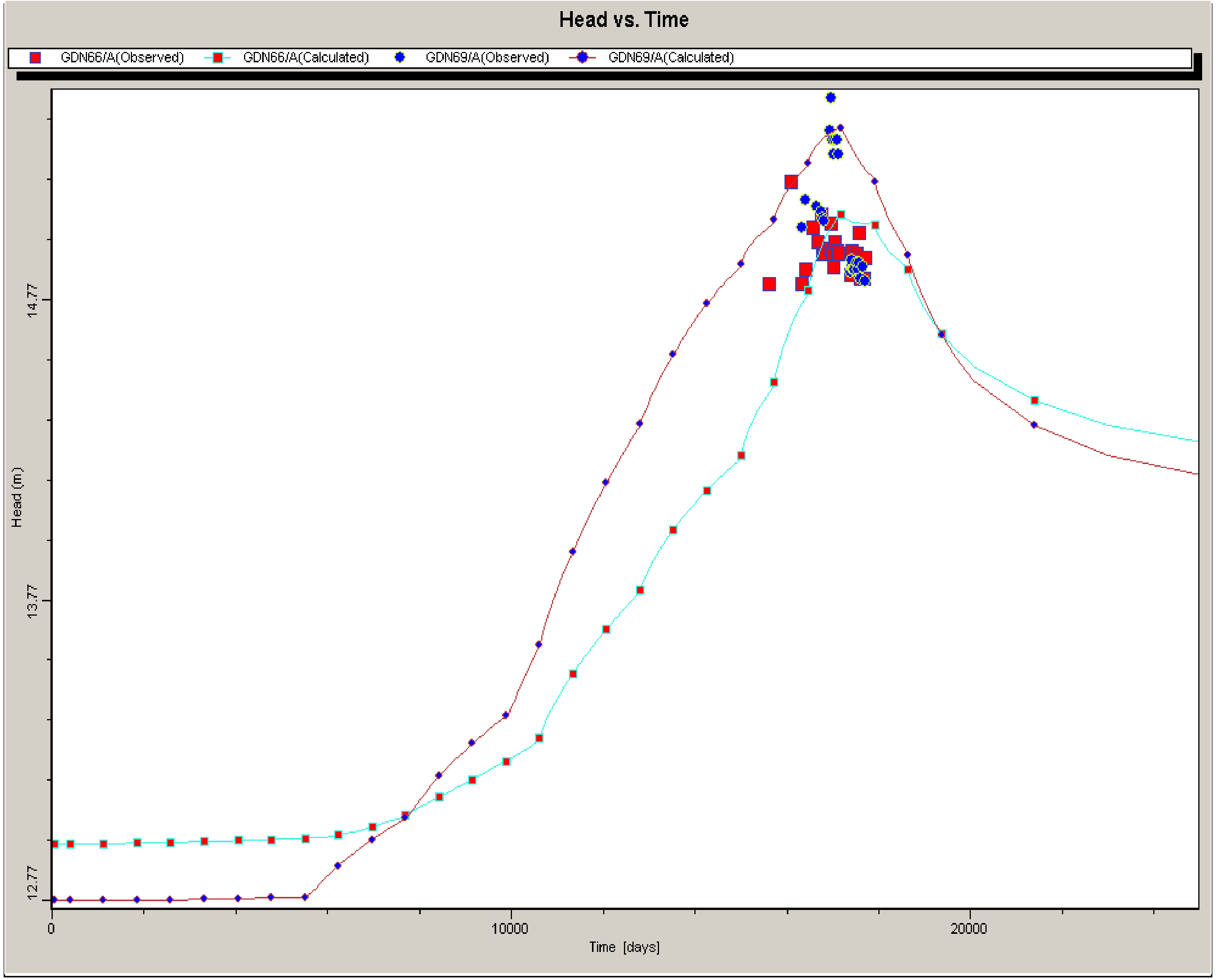
Figure 46: Bookpurnong calibration results – Modelled and observed potentiometric heads (Observation wells GDN131 and GDN65)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN66 and GDN69

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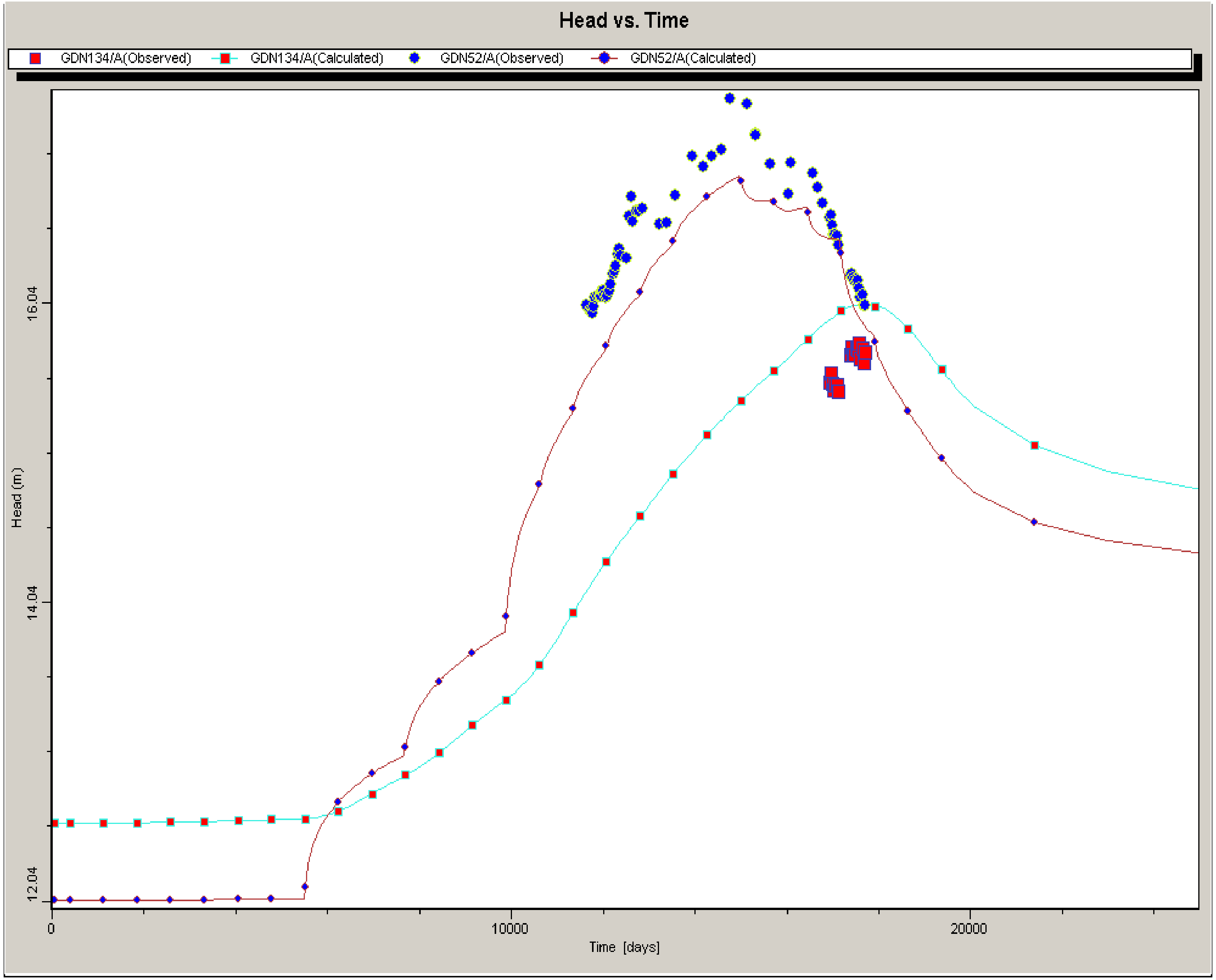
Figure 47: Bookpurnong calibration results – Modelled and observed potentiometric heads (Observation wells GDN66 and GDN69)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN134 and GDN52

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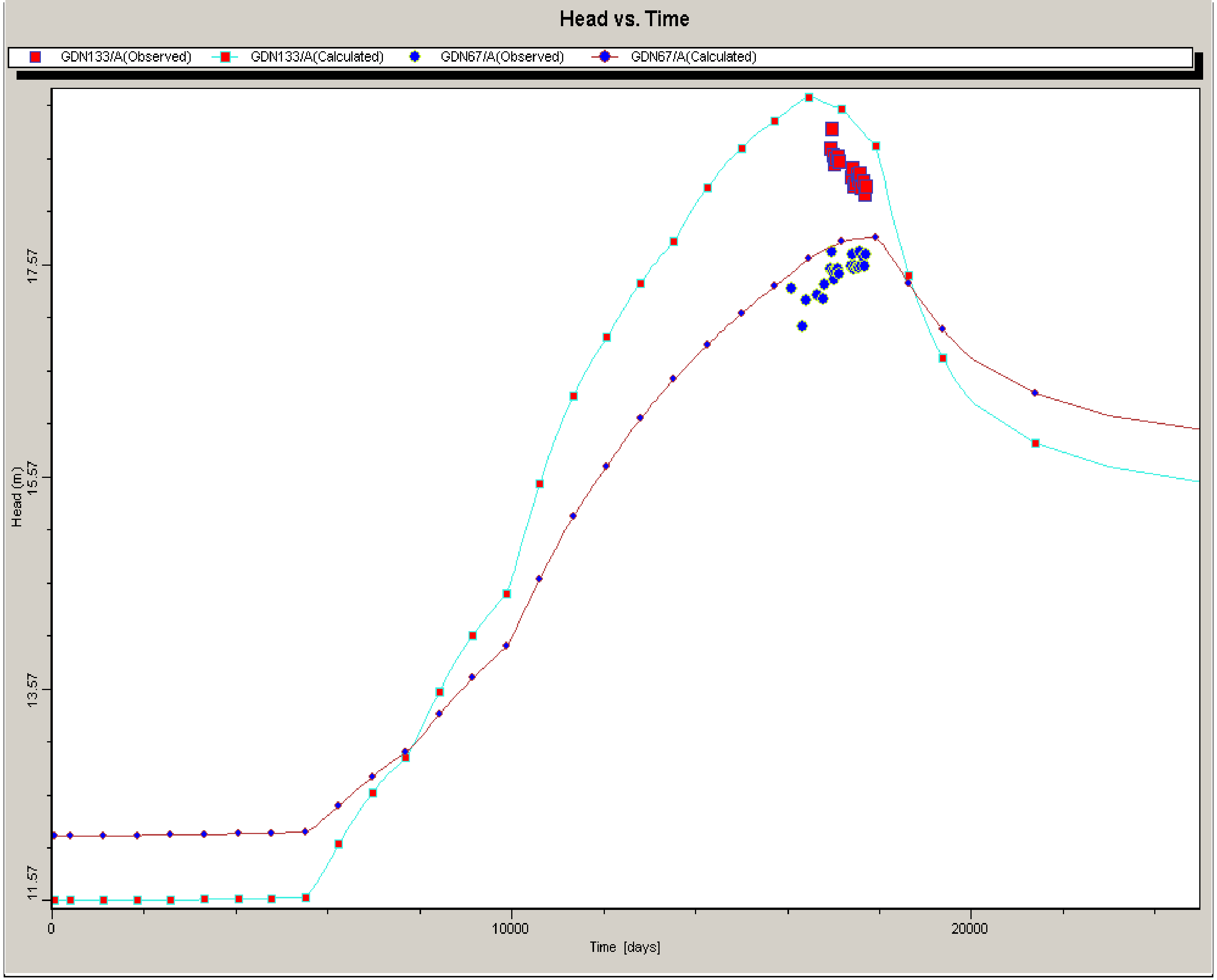
Figure 48: Bookpurnong calibration results – Modelled and observed potentiometric heads (Observation wells GDN134 and GDN52)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN133 and GDN67

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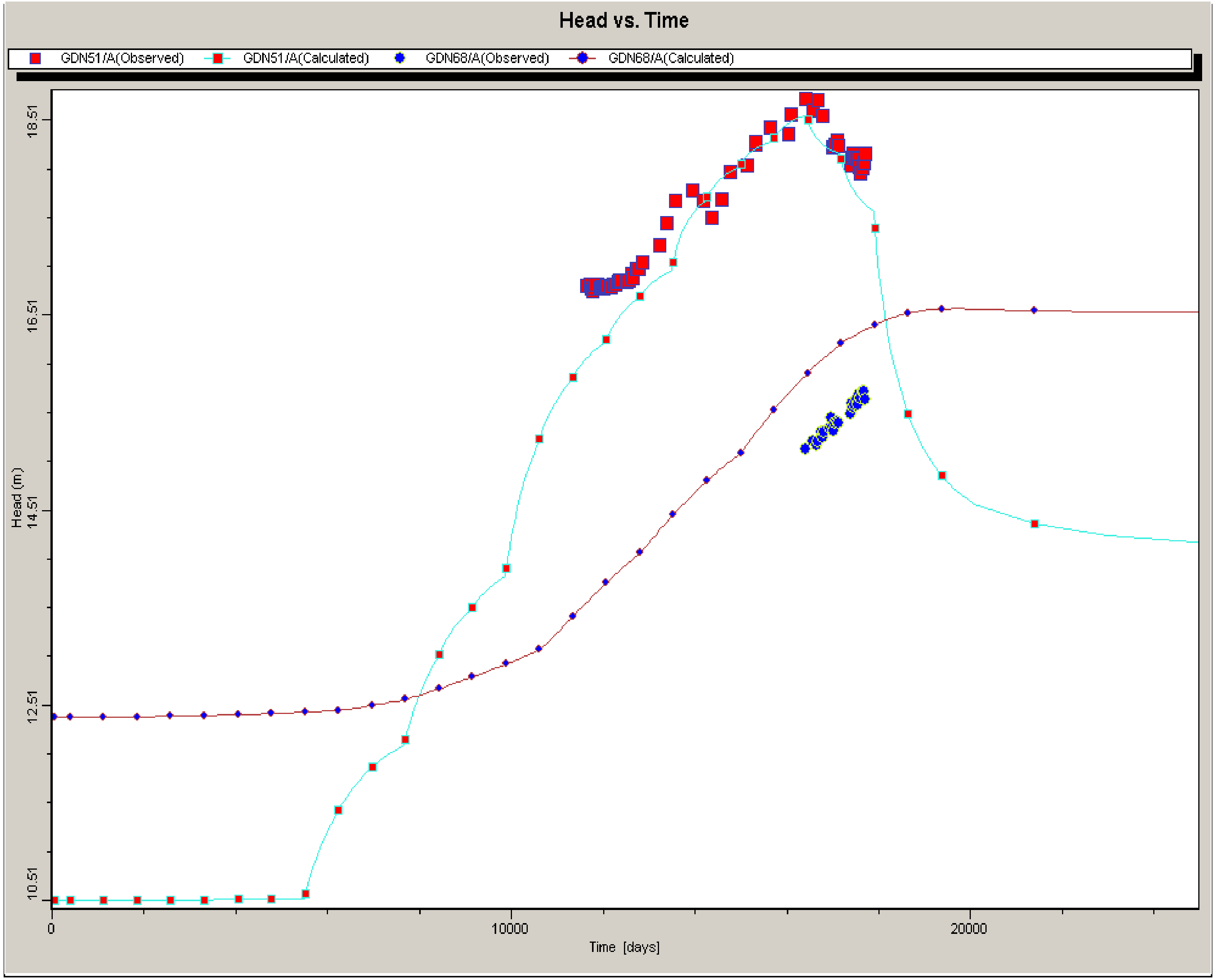
Figure 49: Bookpurnong calibration results – Modelled and observed potentiometric heads (Observation wells GDN133 and GDN67)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN51 and GDN68

Produced By: Water Information Group
Knowledge and Information Division
Department of Water, Land and Biodiversity Conservation
Coordinates: Northing, Easting
Datum: GDA_1994_UTM_Zone_54
Date: June 2004

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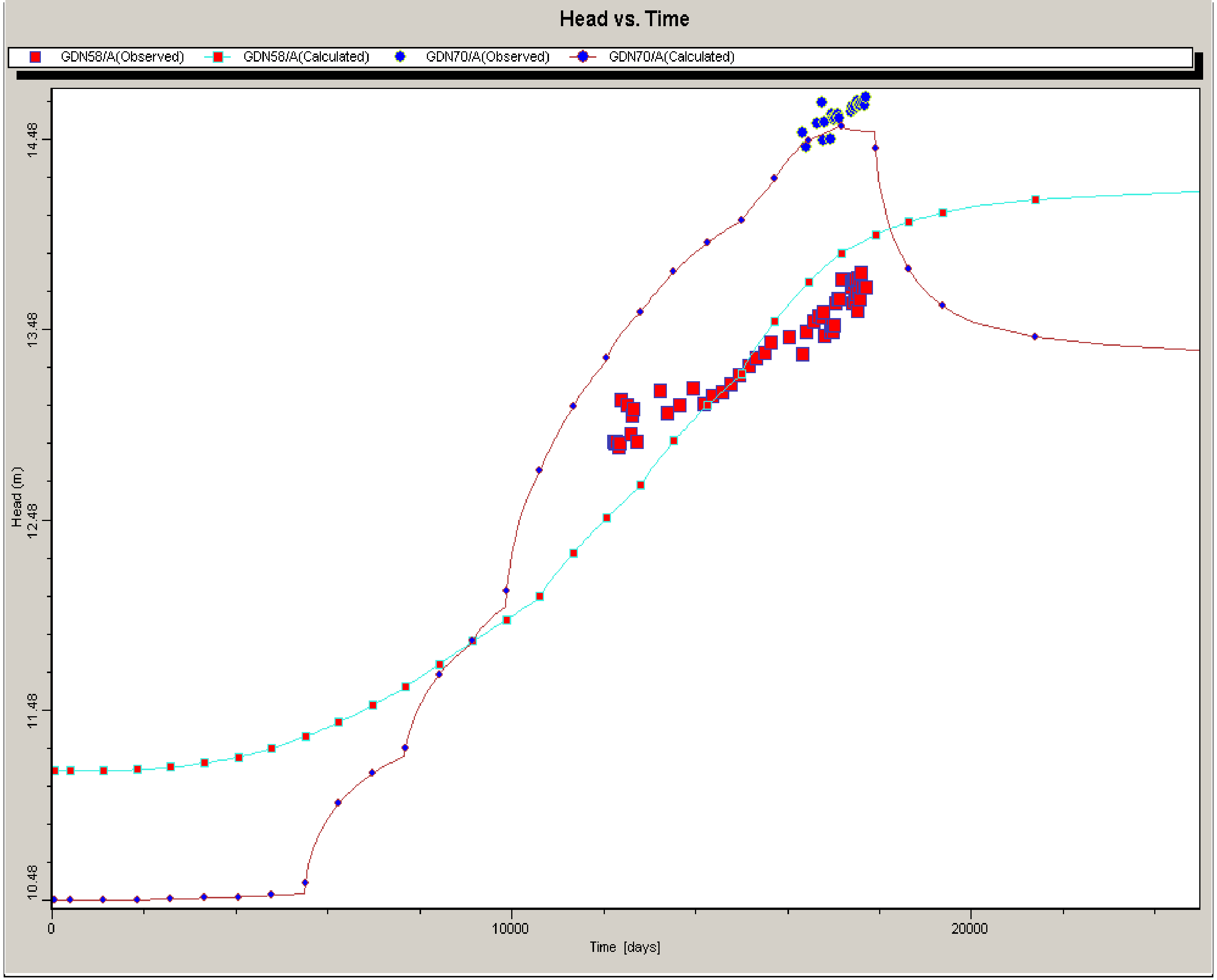
Figure 50: Bookpurnong calibration results – Modelled and observed potentiometric heads (Observation wells GDN51 and GDN68)



Modelled and observed potentiometric heads (m AHD)

-Observation wells GDN58 and GDN70

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Figure 51: Bookpurnong calibration results – Modelled and observed potentiometric heads (Observation wells GDN58 and GDN70)

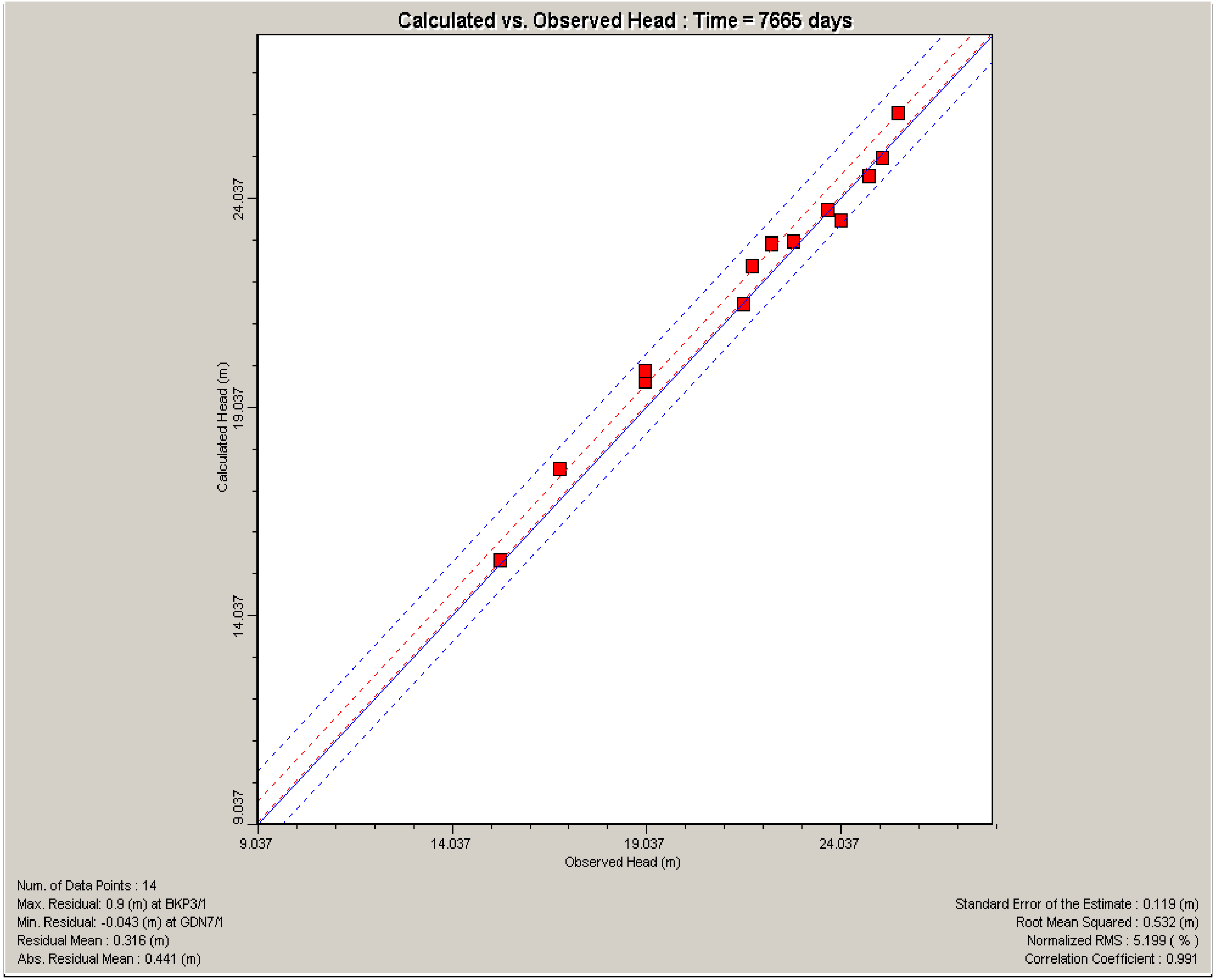

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Figure 52: Loxton area calibration results (1976)

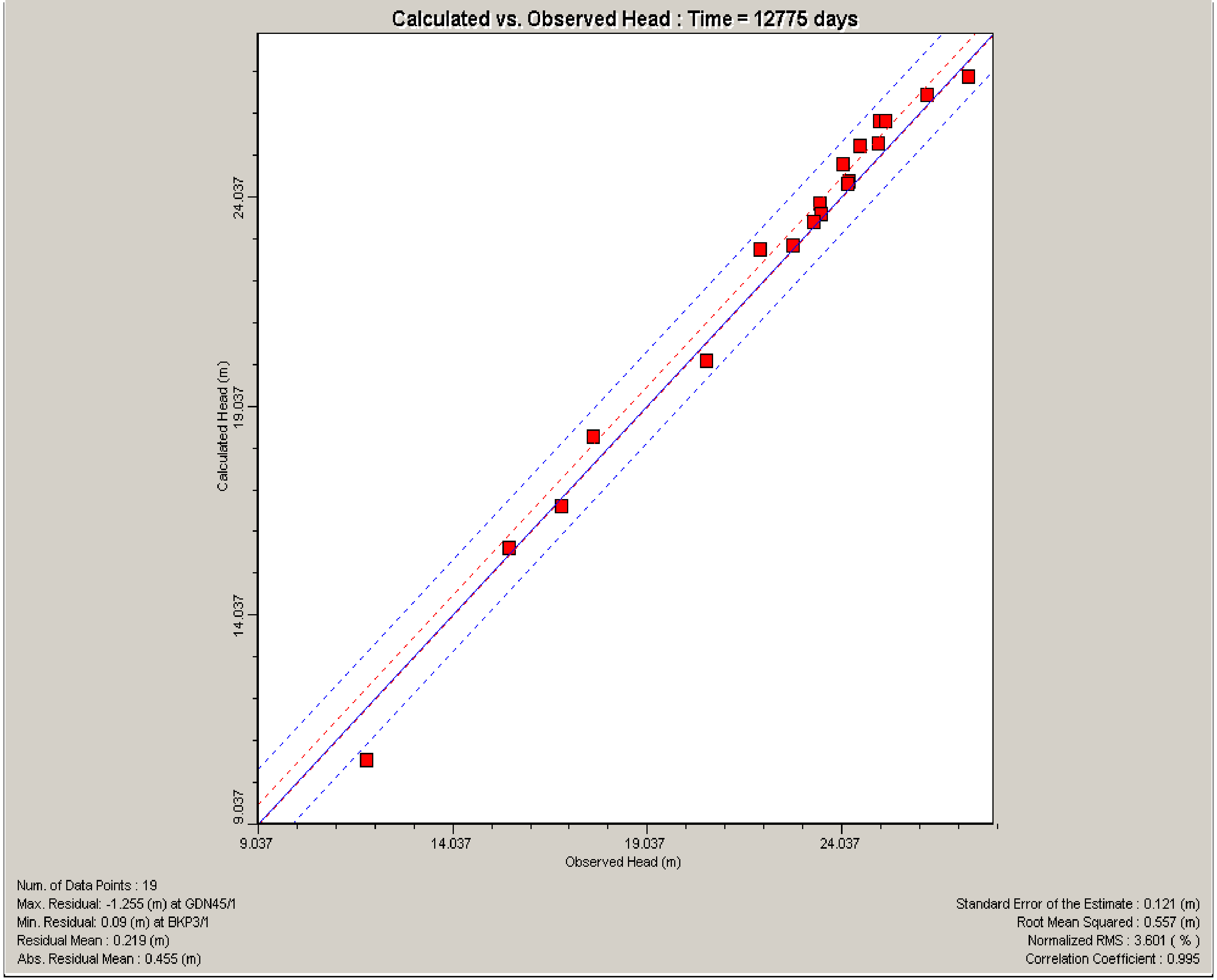

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Figure 53: Loxton area calibration results (1990)

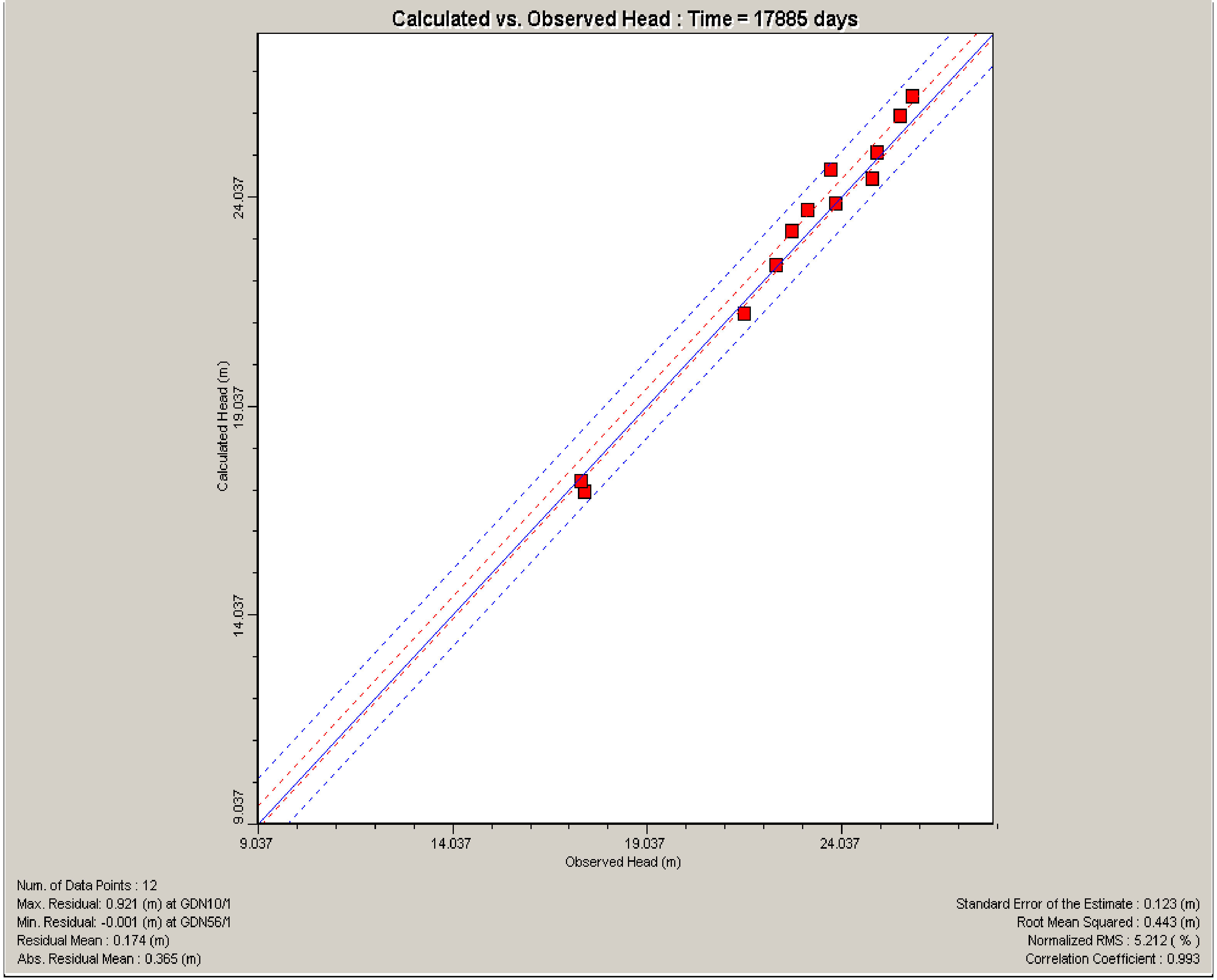

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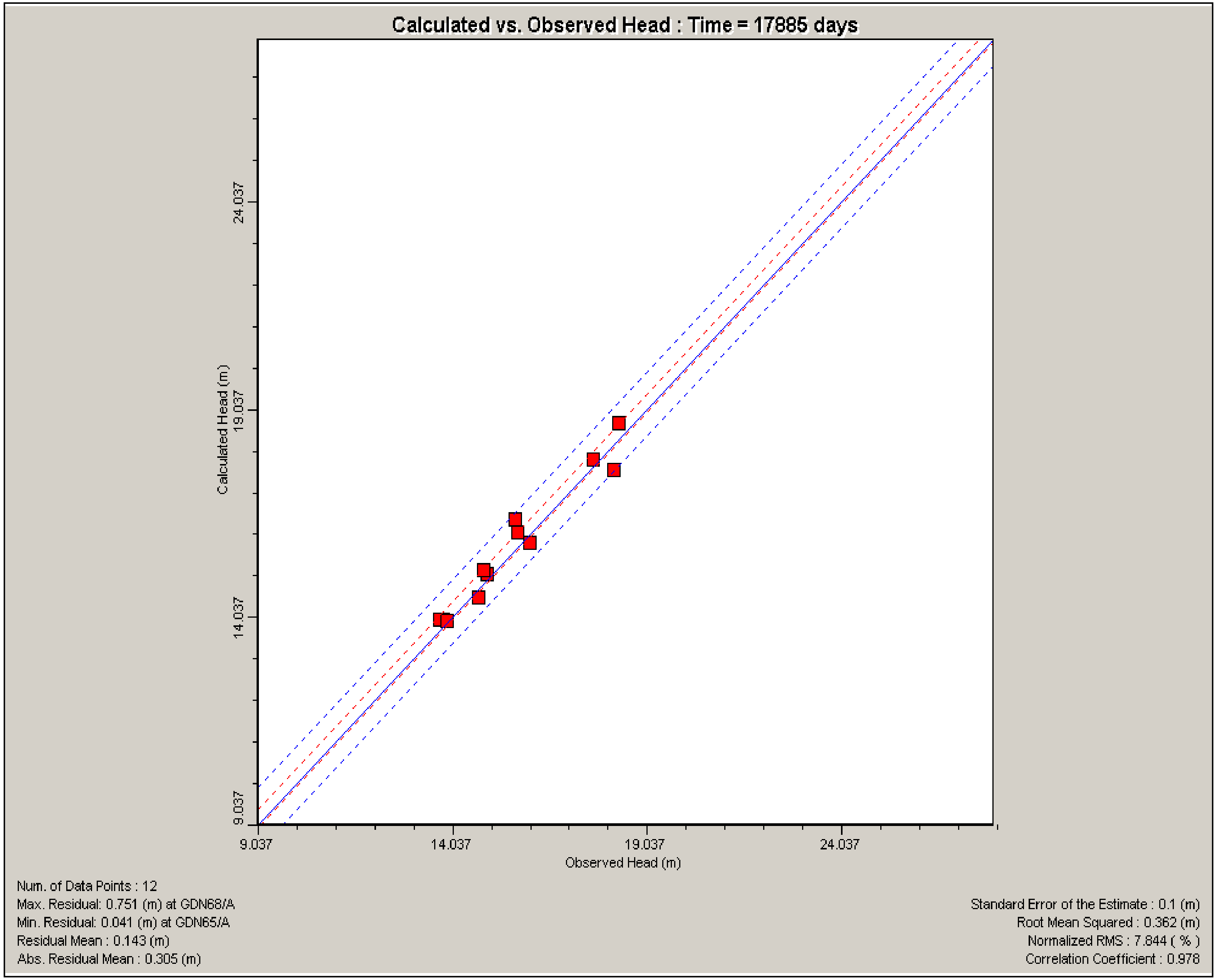
Figure 54: Loxton area validation results (2004)



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Coordinates: Northing, Easting
Datum: GDA_1994_UTM_Zone_54
Date: June 2004

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Figure 55: Bookpurnong area calibration results (2004)

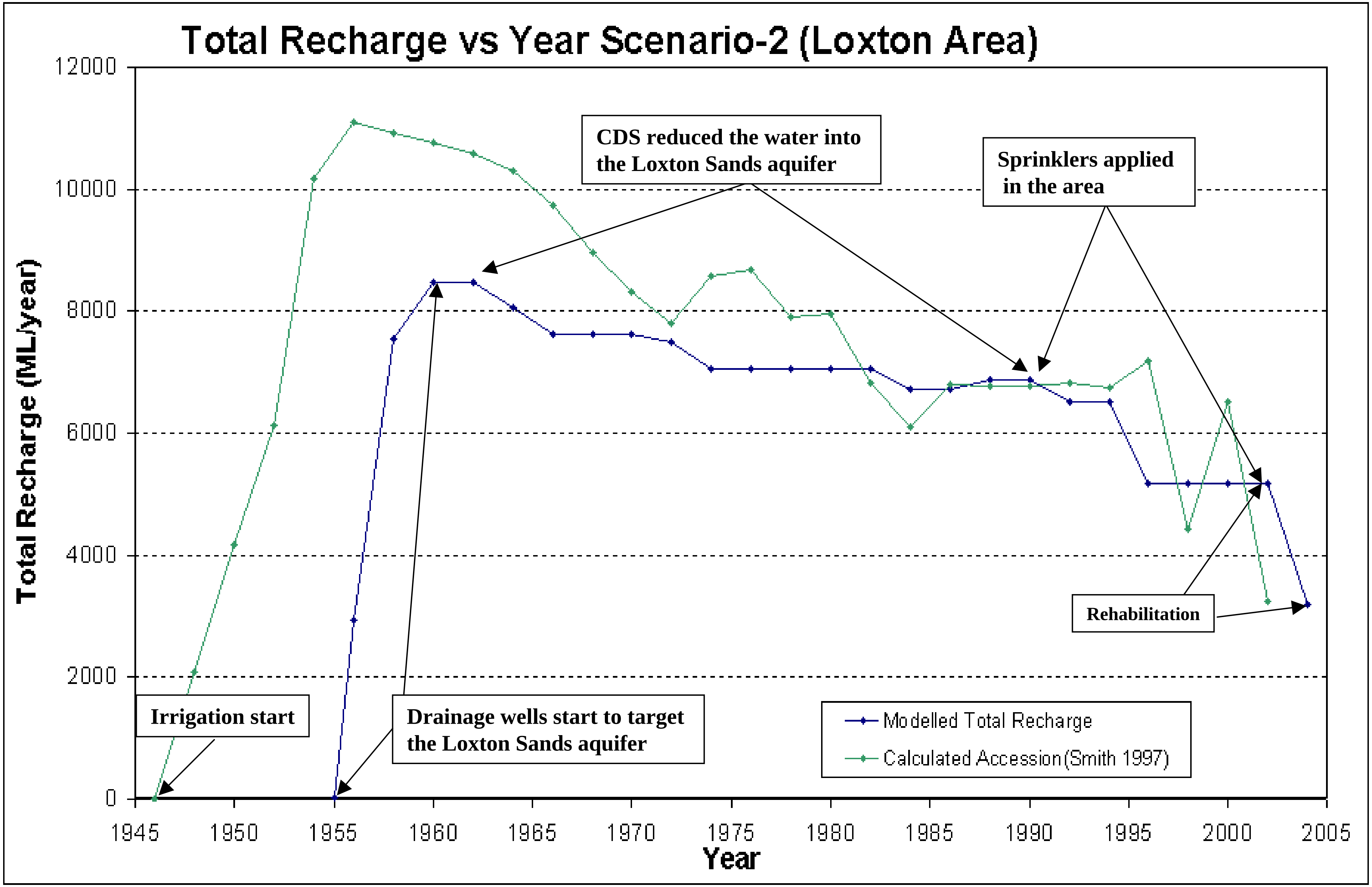


Figure 56: Modelled recharge volume to the Loxton Sands vs accession (Loxton area)

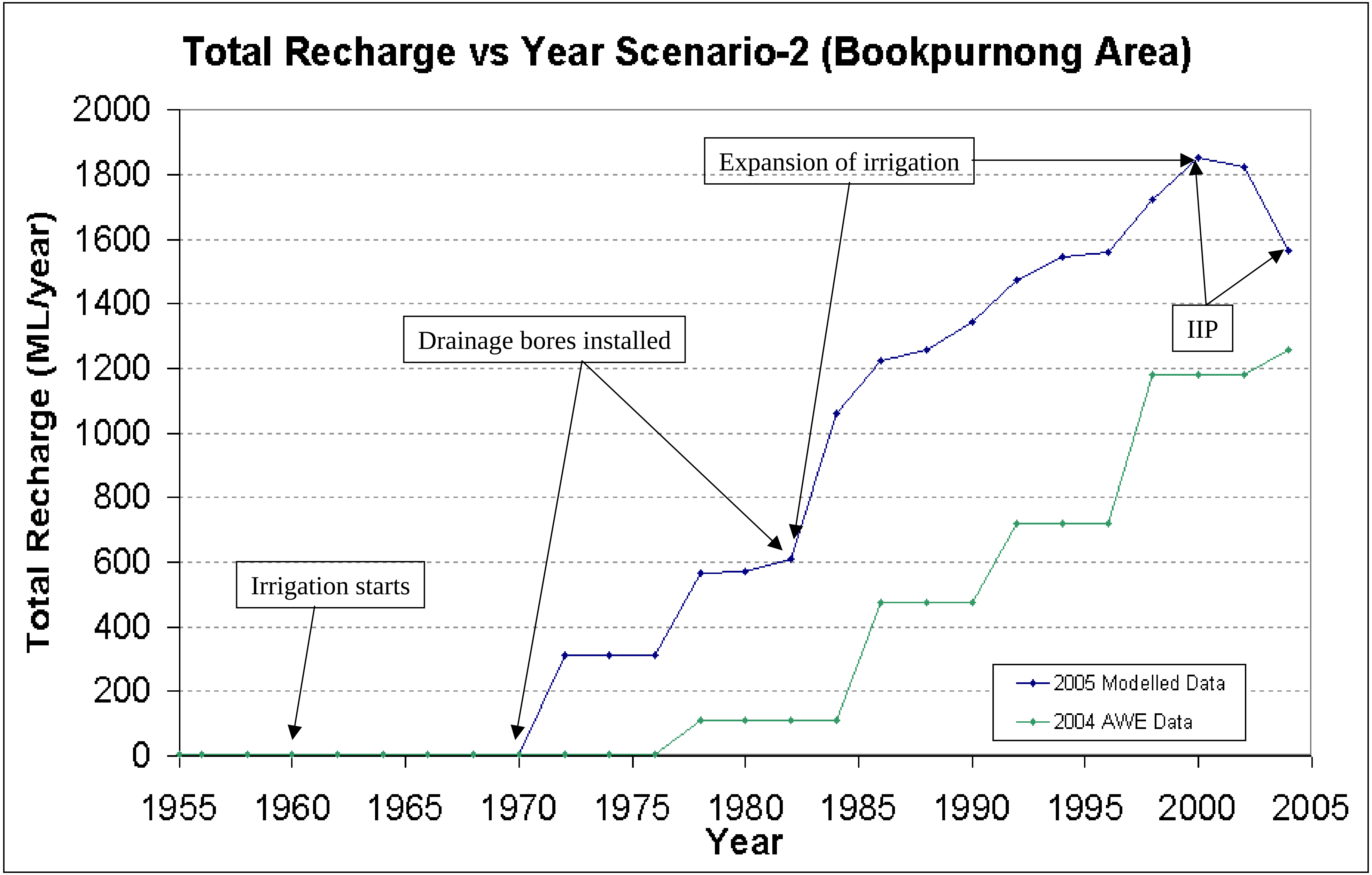


Figure 57: Modelled recharge volume to the Loxton Sands in the Bookpurnong Area

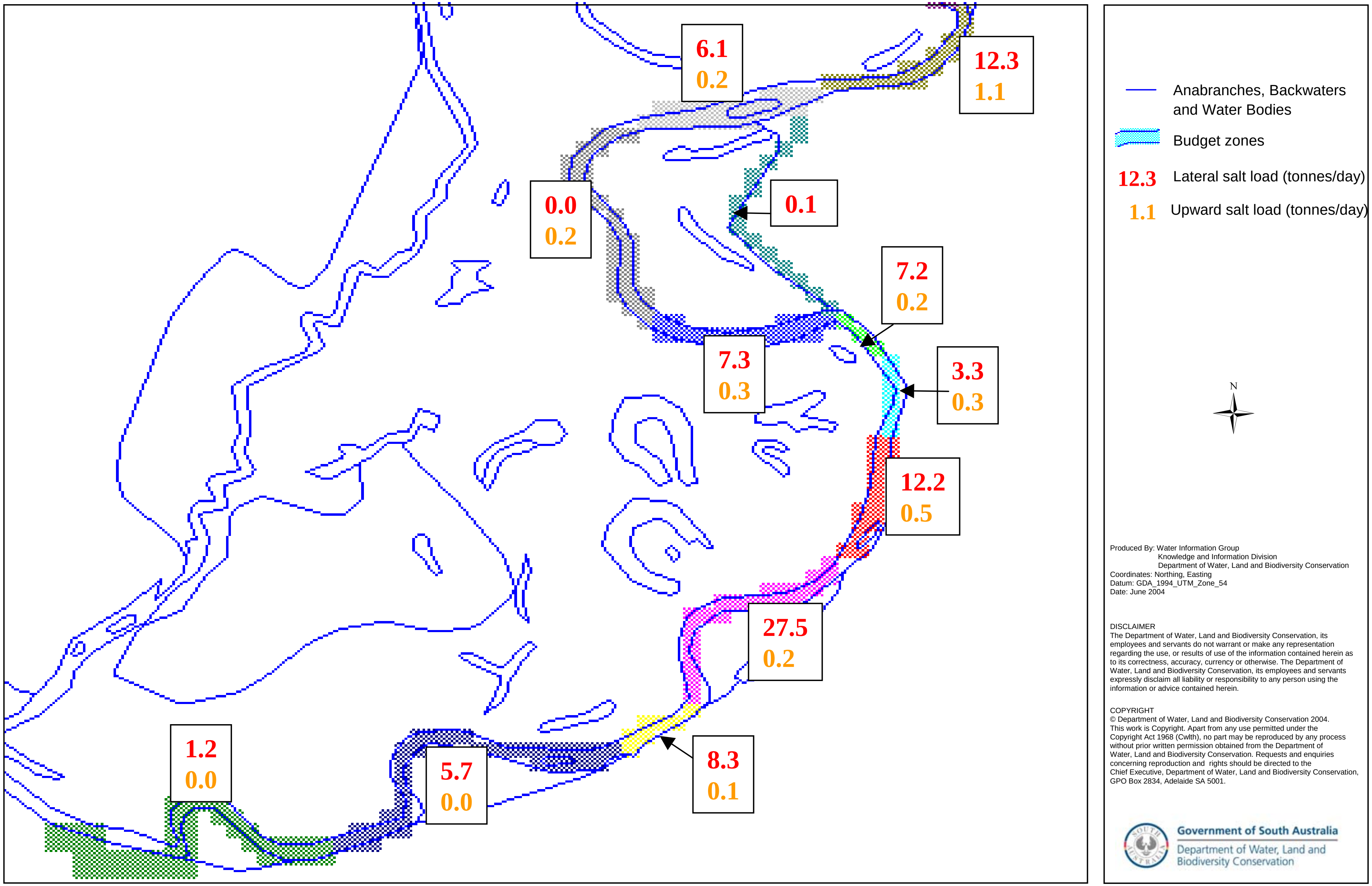


Figure 58: Model flow budget zones and modelled salt load at 2002 (tonnes/day) in Loxton Area

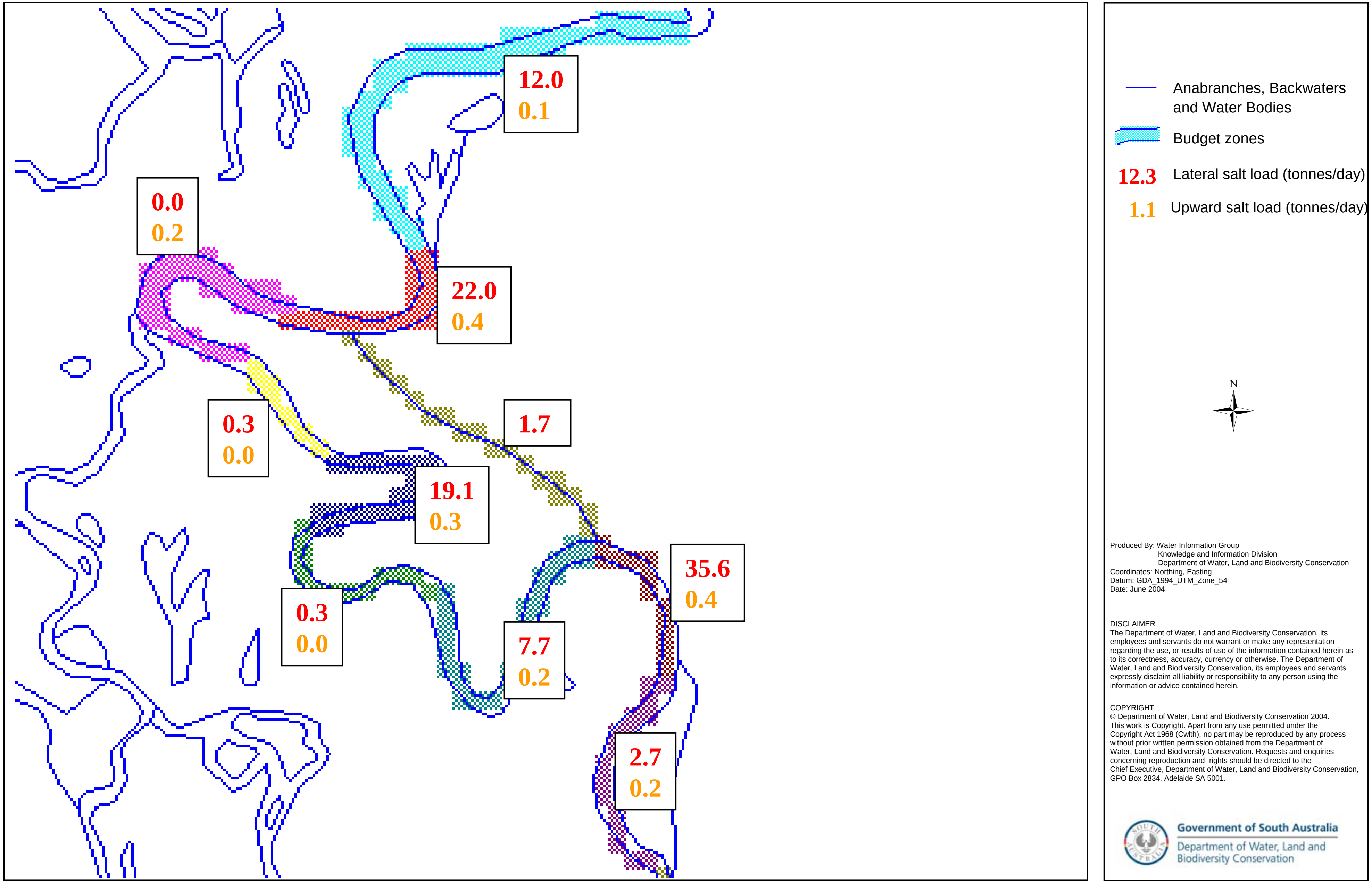


Figure 59: Model flow budget zones and modelled salt load at 2002 (tonnes/day) in Bookpurnong area

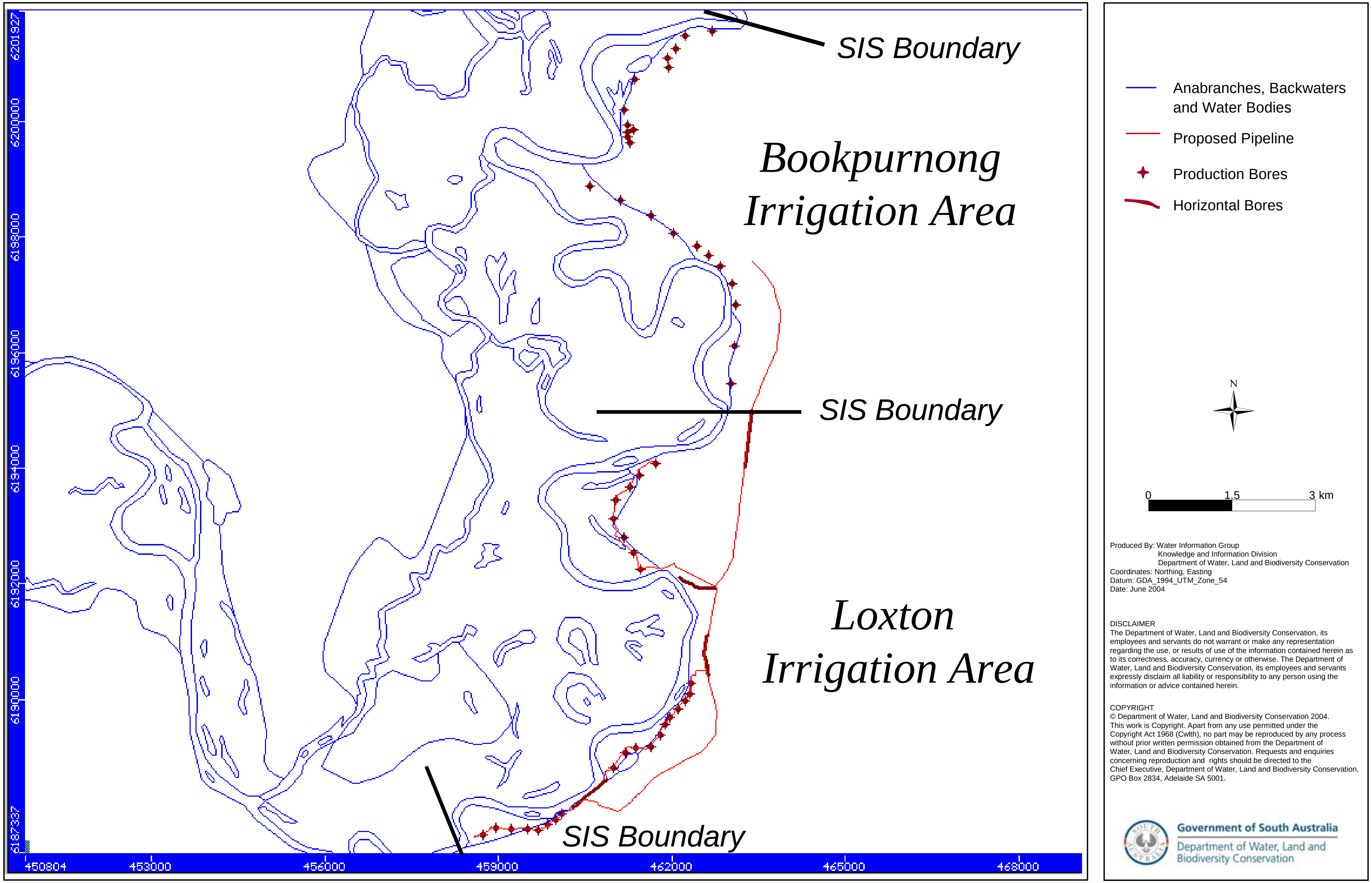


Figure 60a: Concept SIS-1 wellfield Loxton and Bookpurnong Areas (Scenario-7)

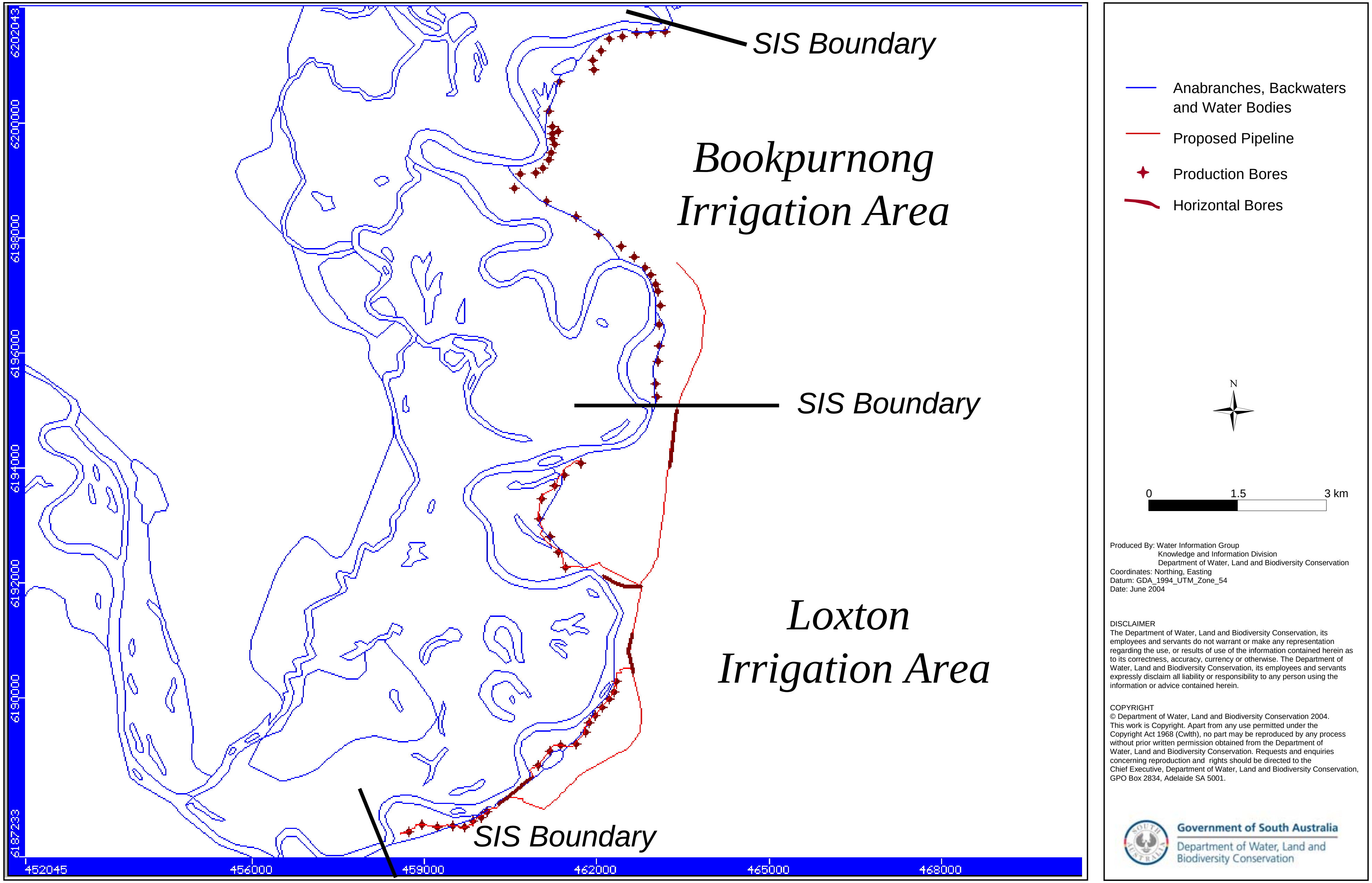


Figure 60b: Concept SIS-2 wellfield Loxton and Bookpurnong Areas (Scenario-8)

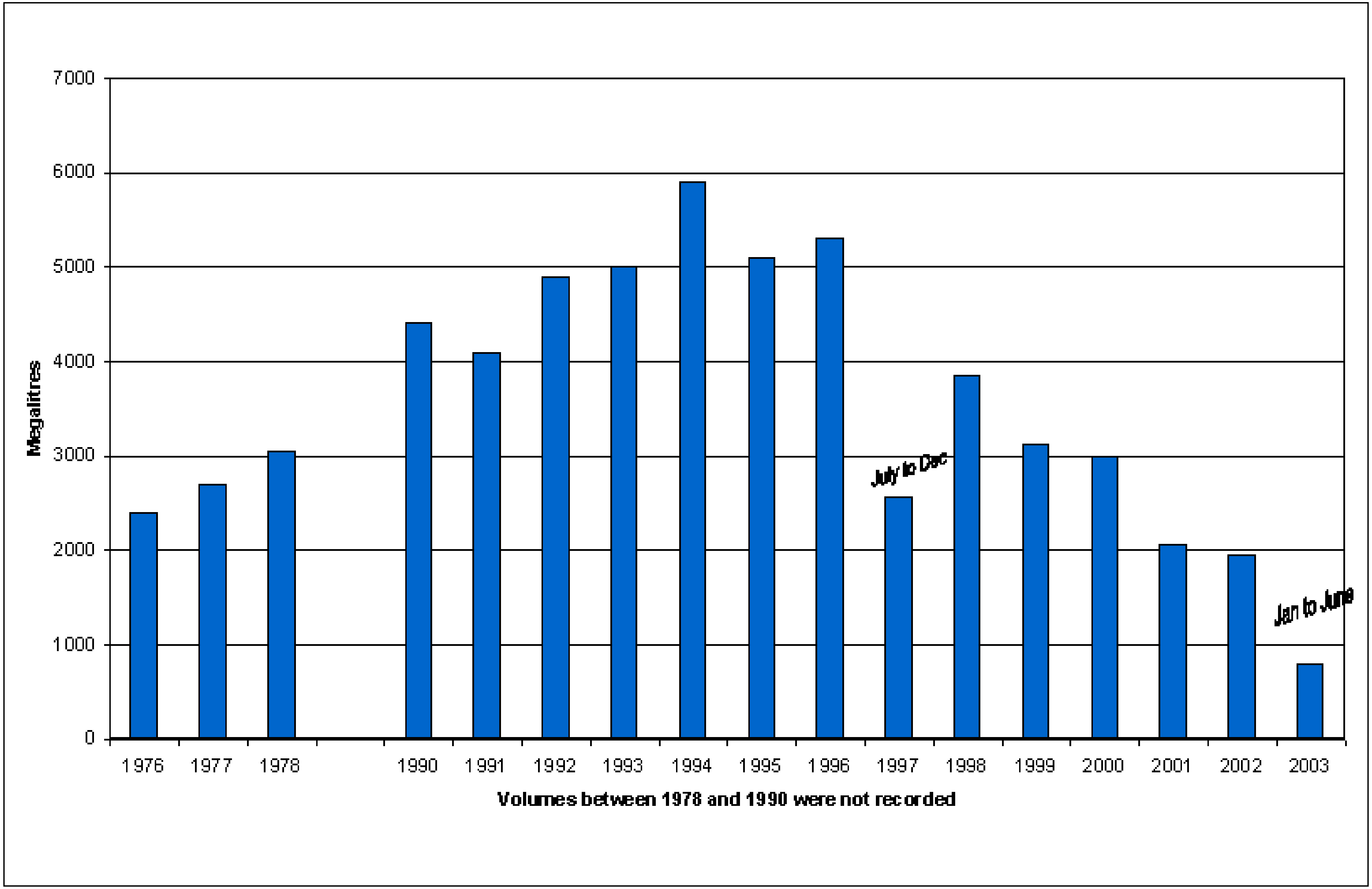


Figure 61: Annual pumped discharge from Loxton CDS

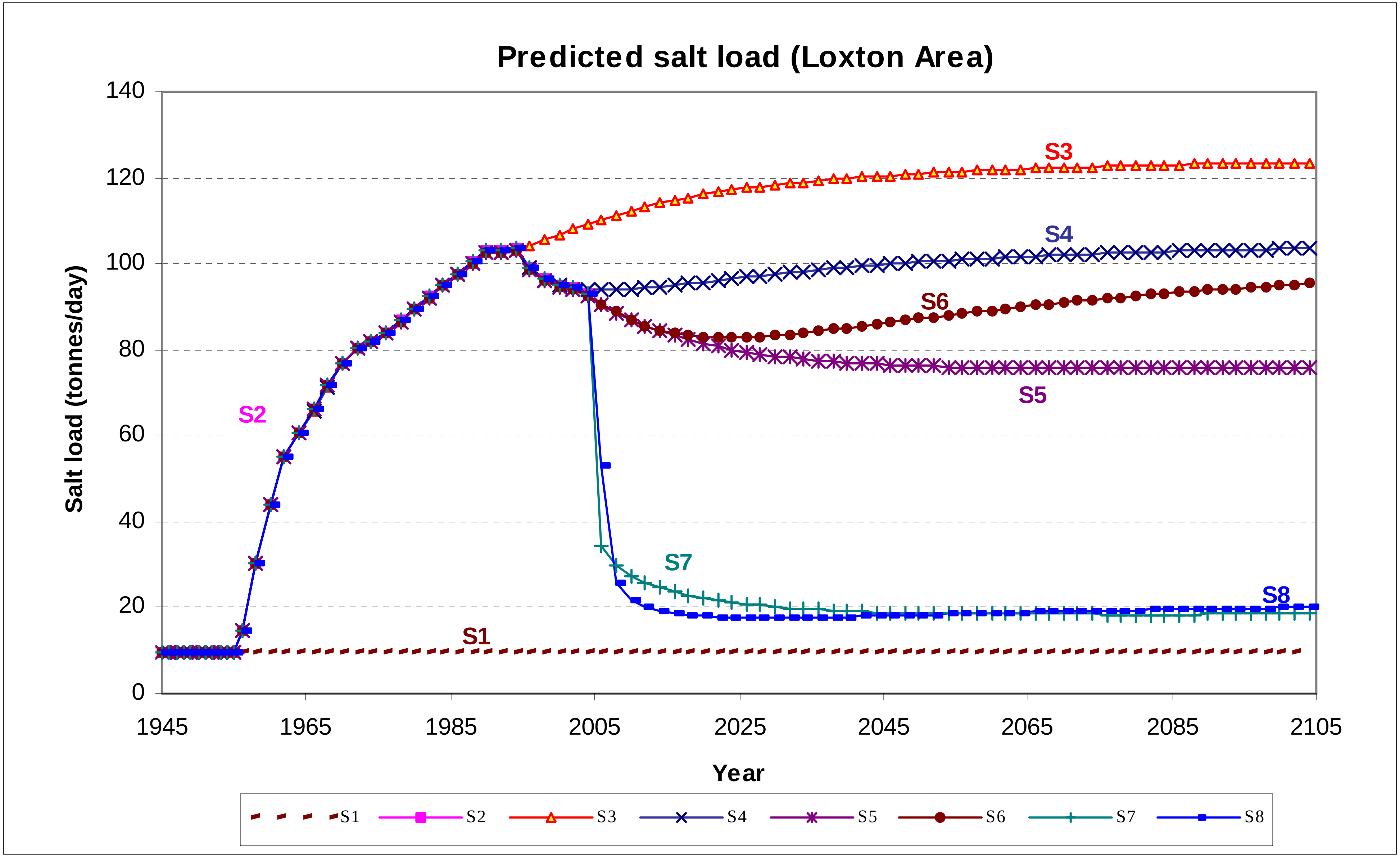


Figure 62: Predicted salt loads entering the River Murray all scenarios (Loxton Area)

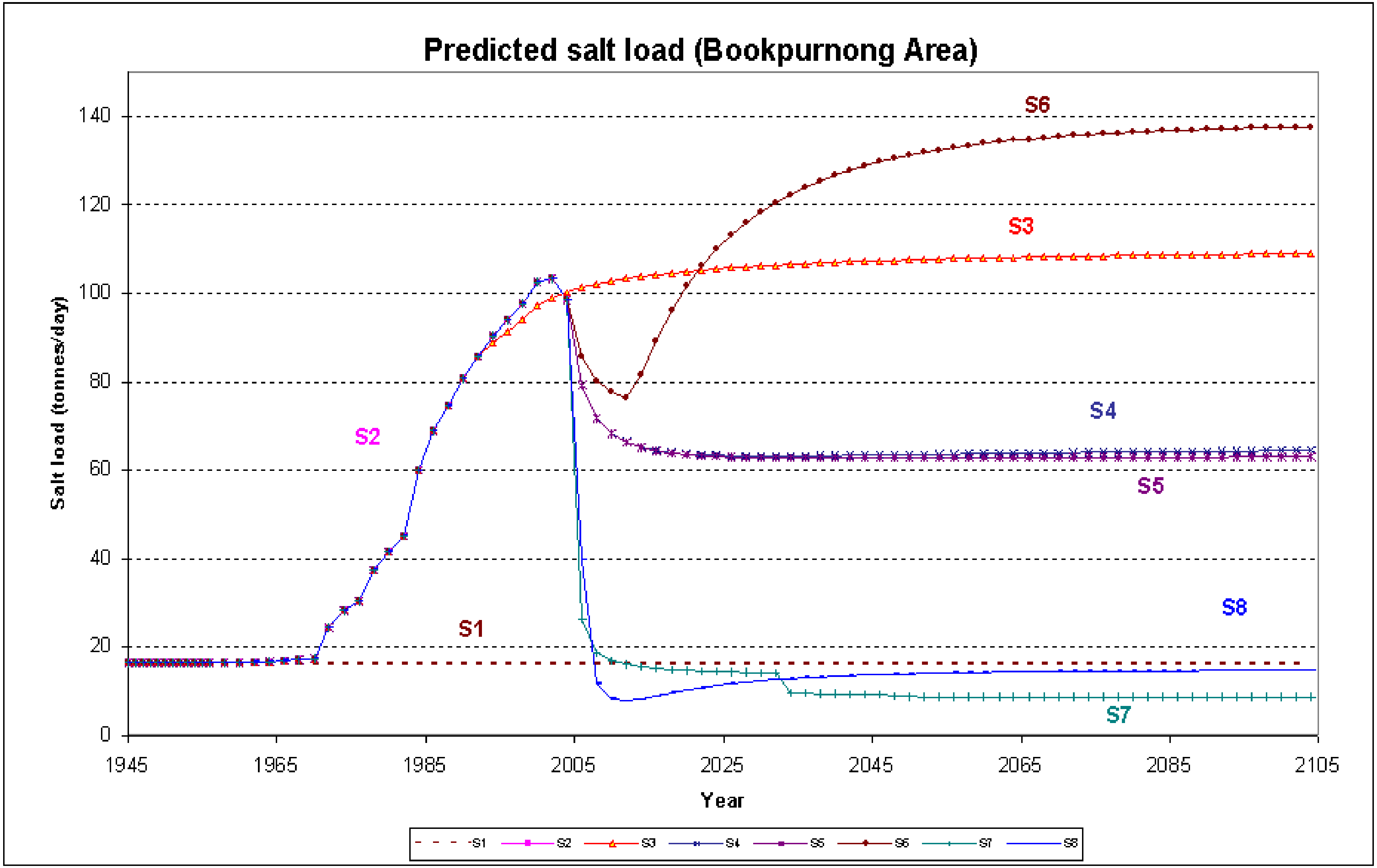


Figure 63: Predicted salt loads entering the River Murray all scenarios (Bookpurnong Area)

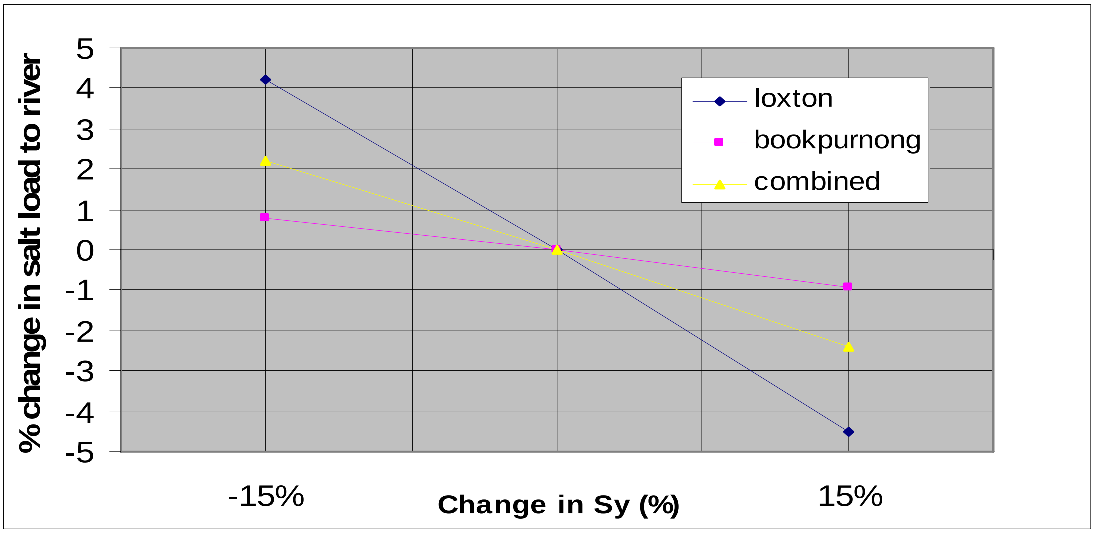


Figure 64: Model sensitivity to specific yield of Loxton Sands aquifer

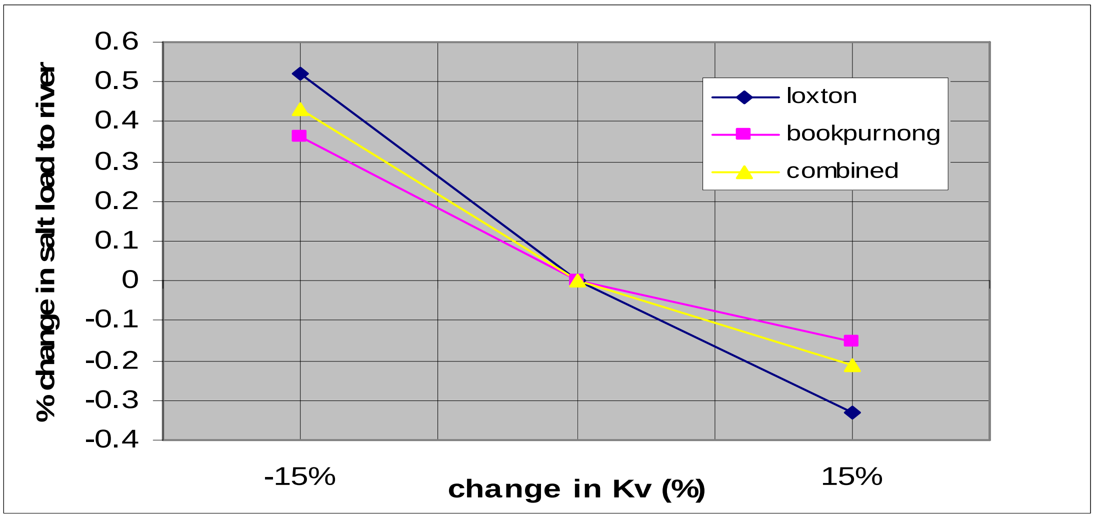


Figure 65: Model sensitivity to vertical hydraulic conductivity of Bookpurnong Formation

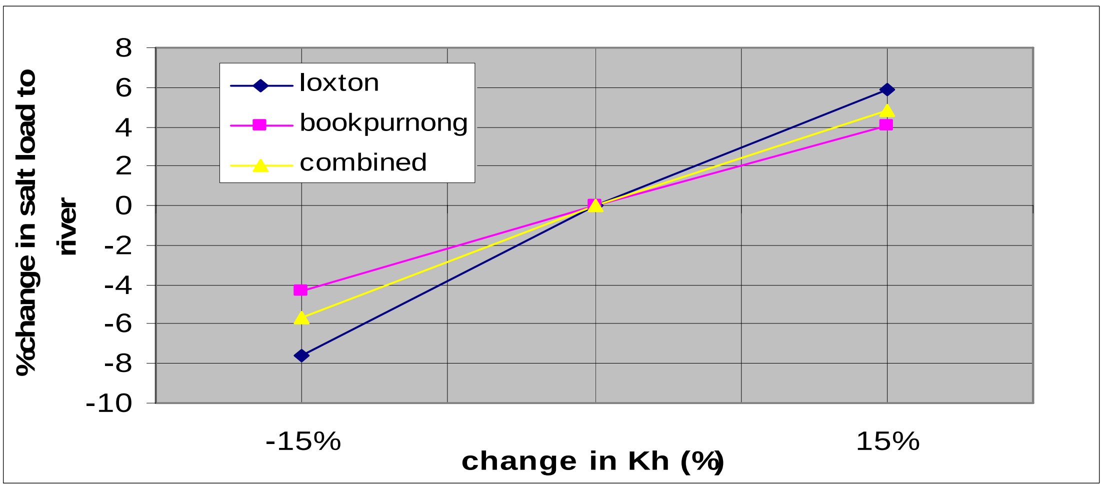


Figure 66: Model sensitivity to hydraulic conductivity of Loxton Sands

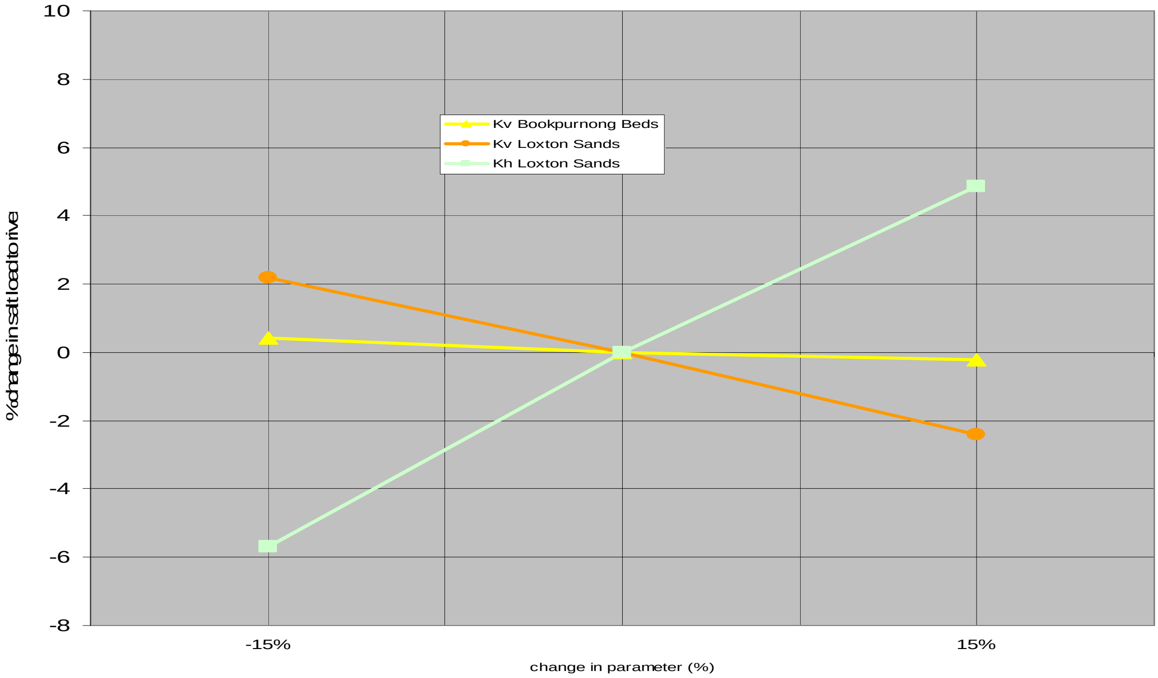


Figure 67: Model sensitivity to changes in hydraulic parameters of Loxton Sands

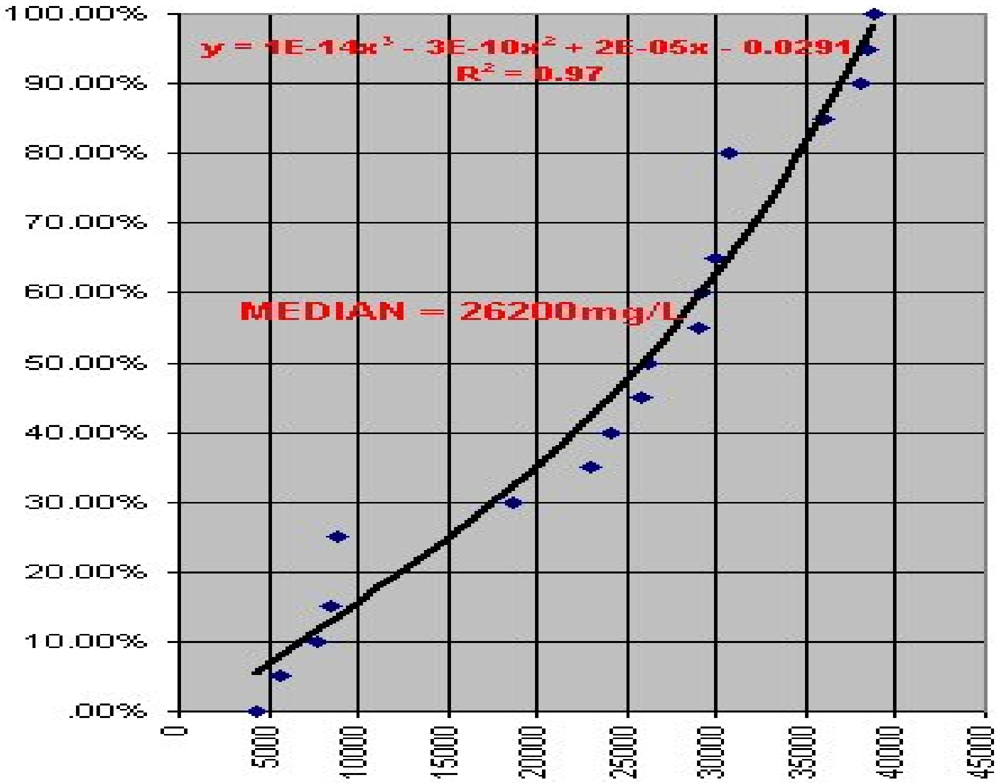


Figure 68: Frequency distribution of groundwater salinity in the model budget zones

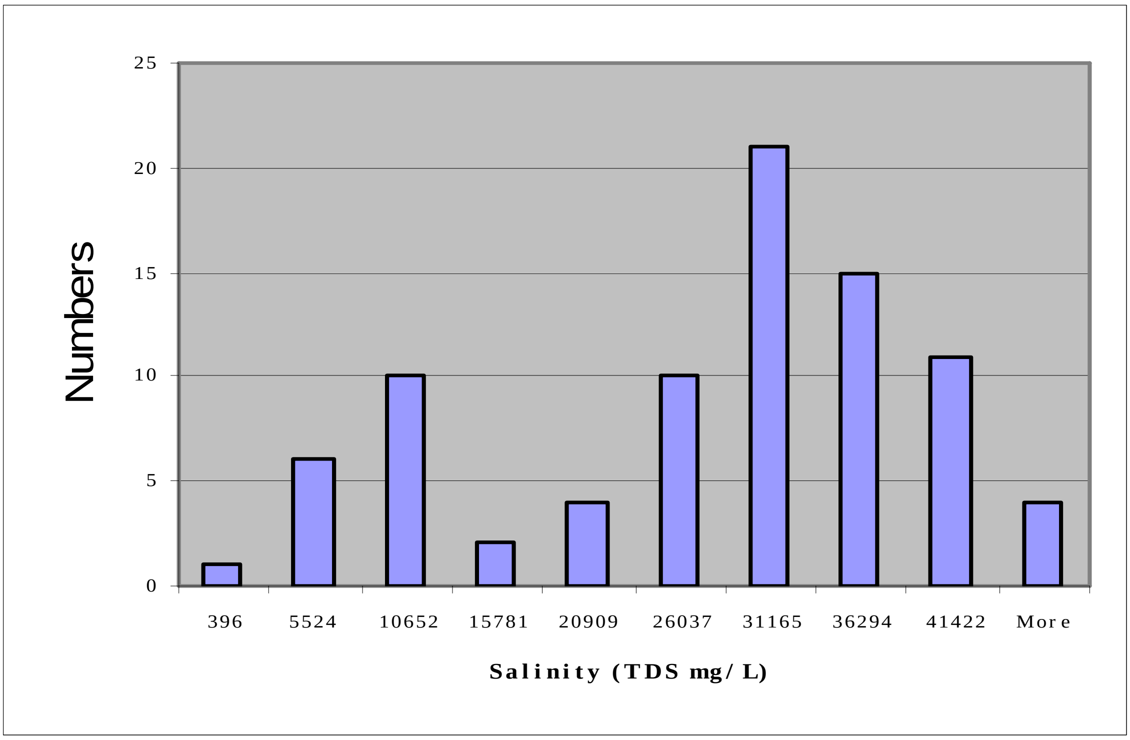


Figure 69: Distribution histogram of relevant groundwater salinity values (84 samples)

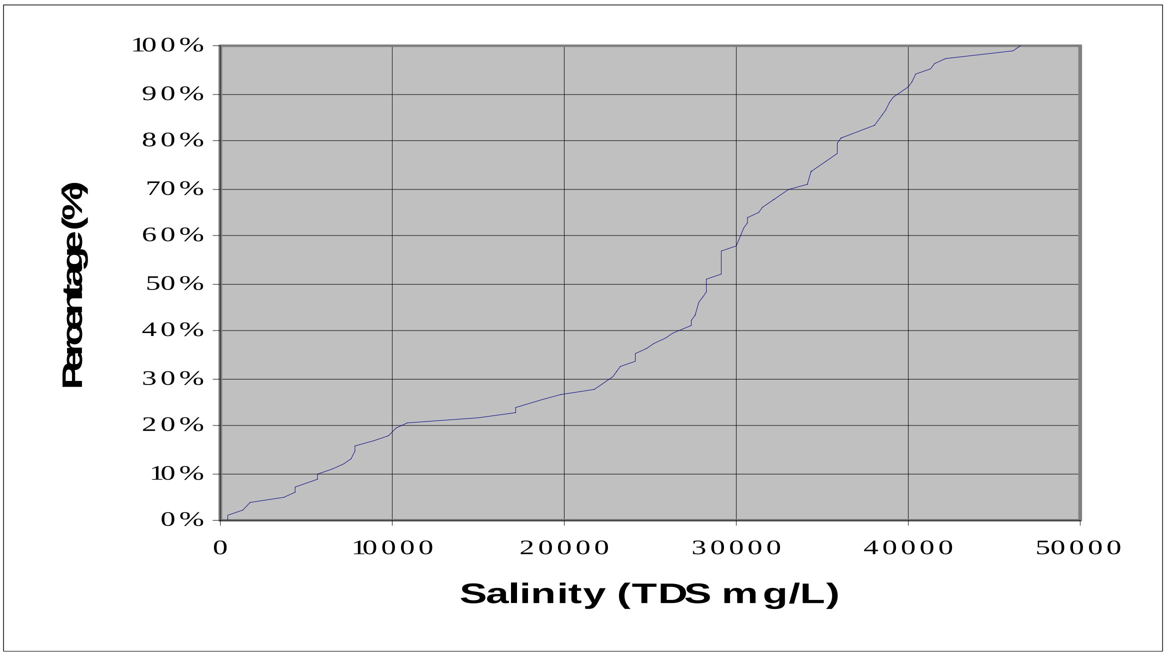
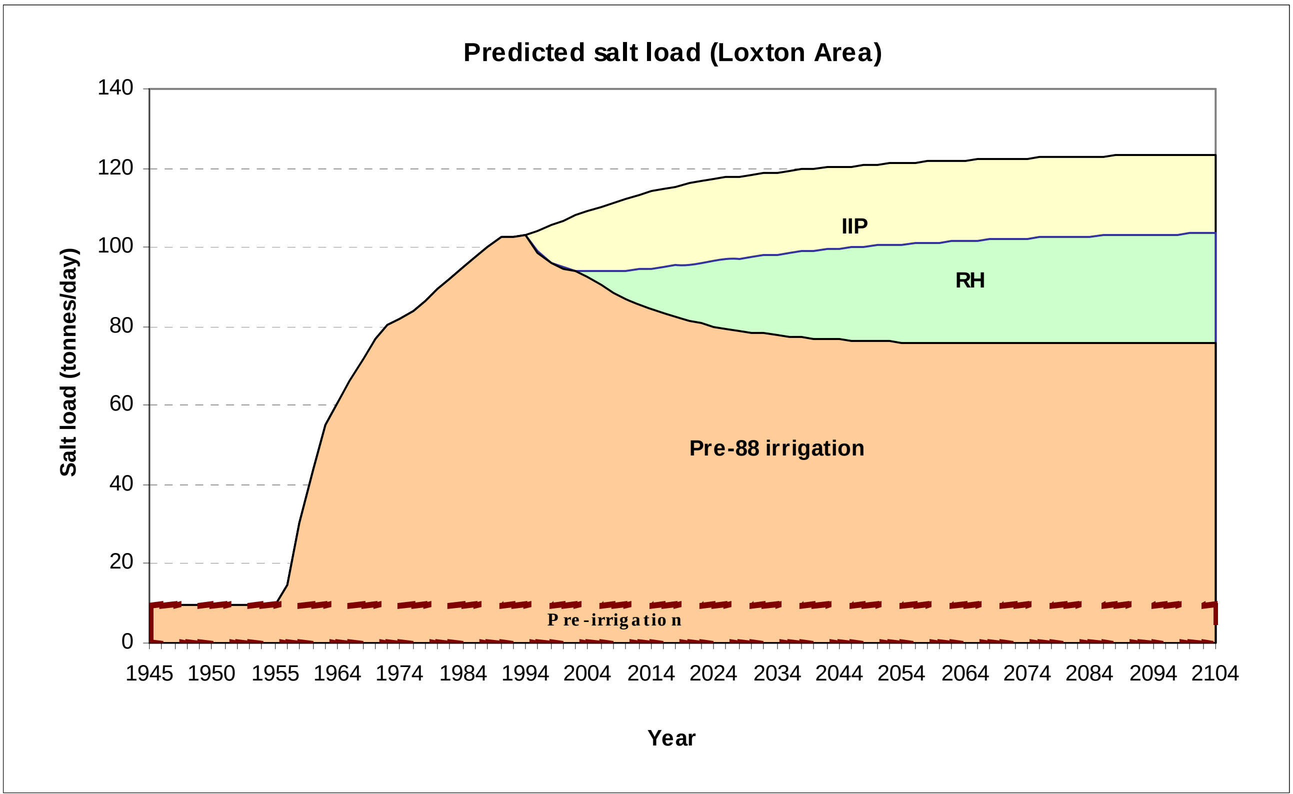


Figure 70: Percentile distribution of all relevant groundwater salinity values (84 samples)



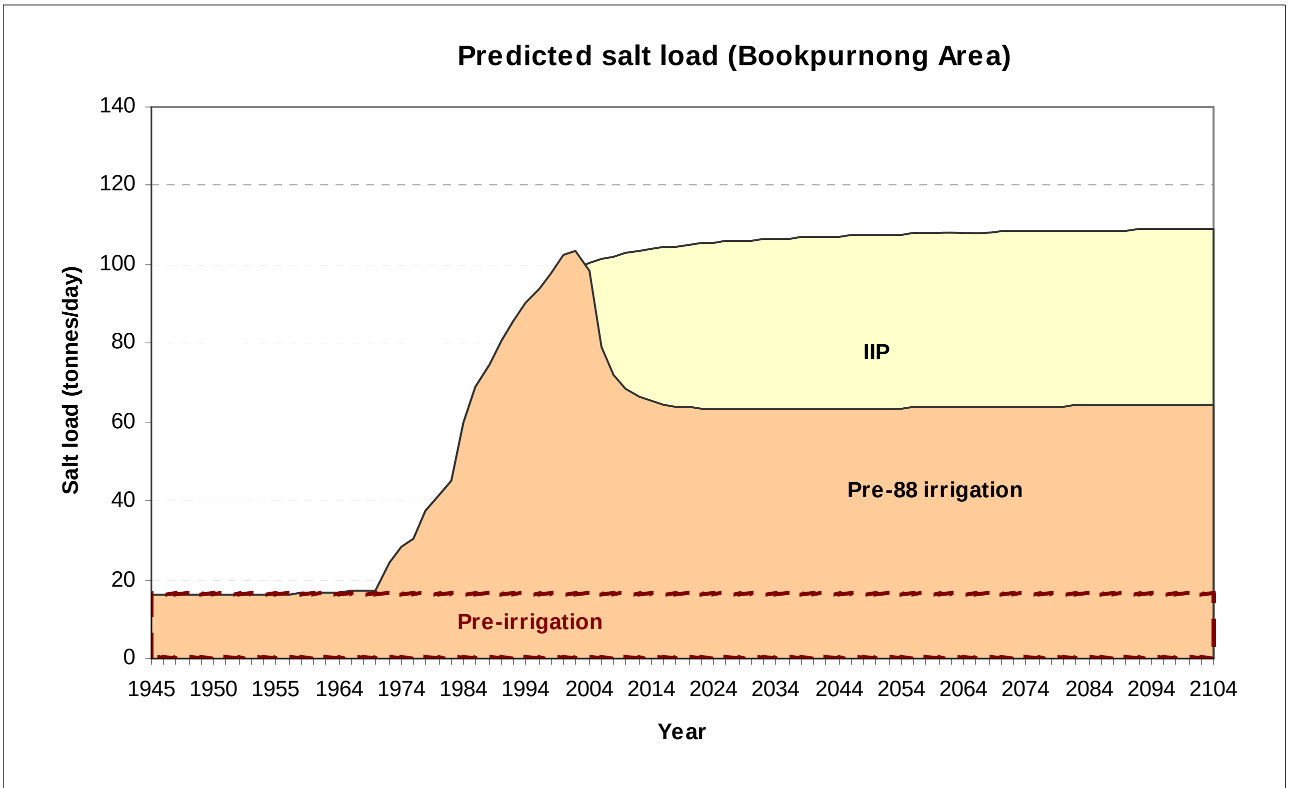
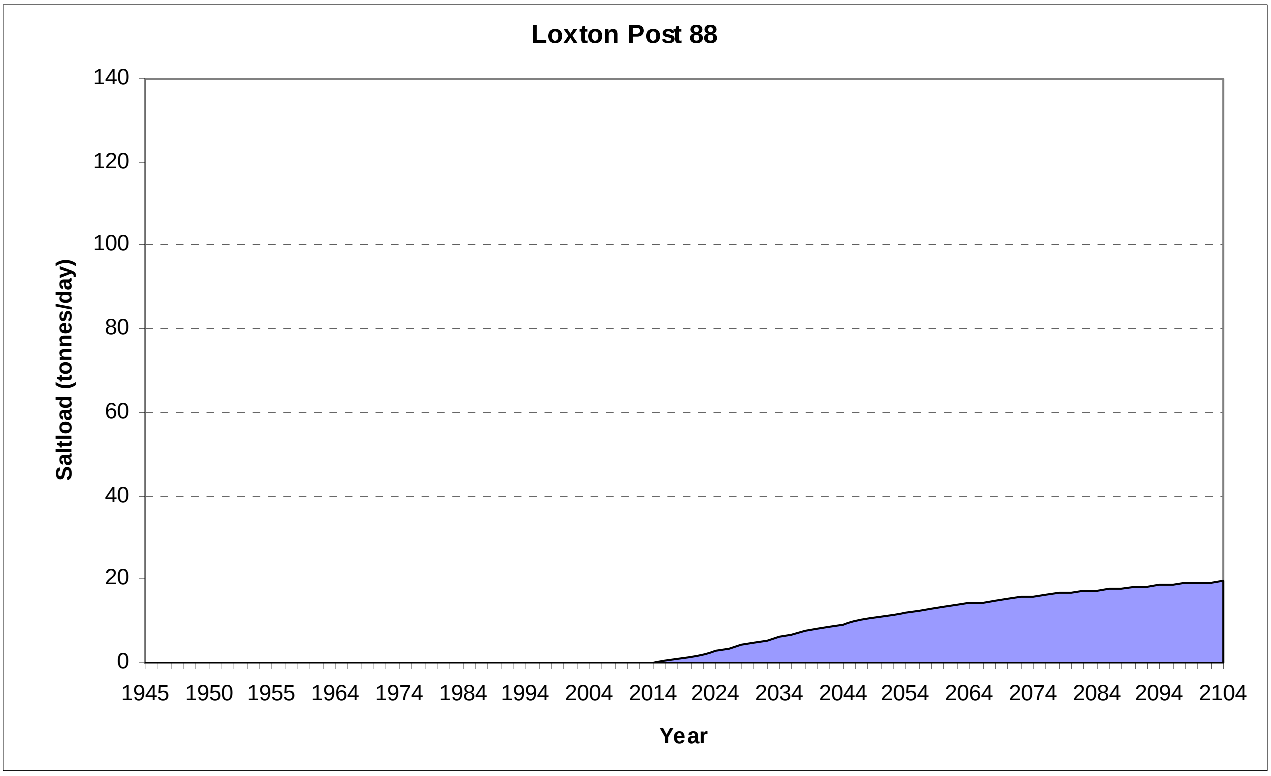


Figure 71: Predicted salt loads entering the River Murray resulting from pre 1988 irrigation development



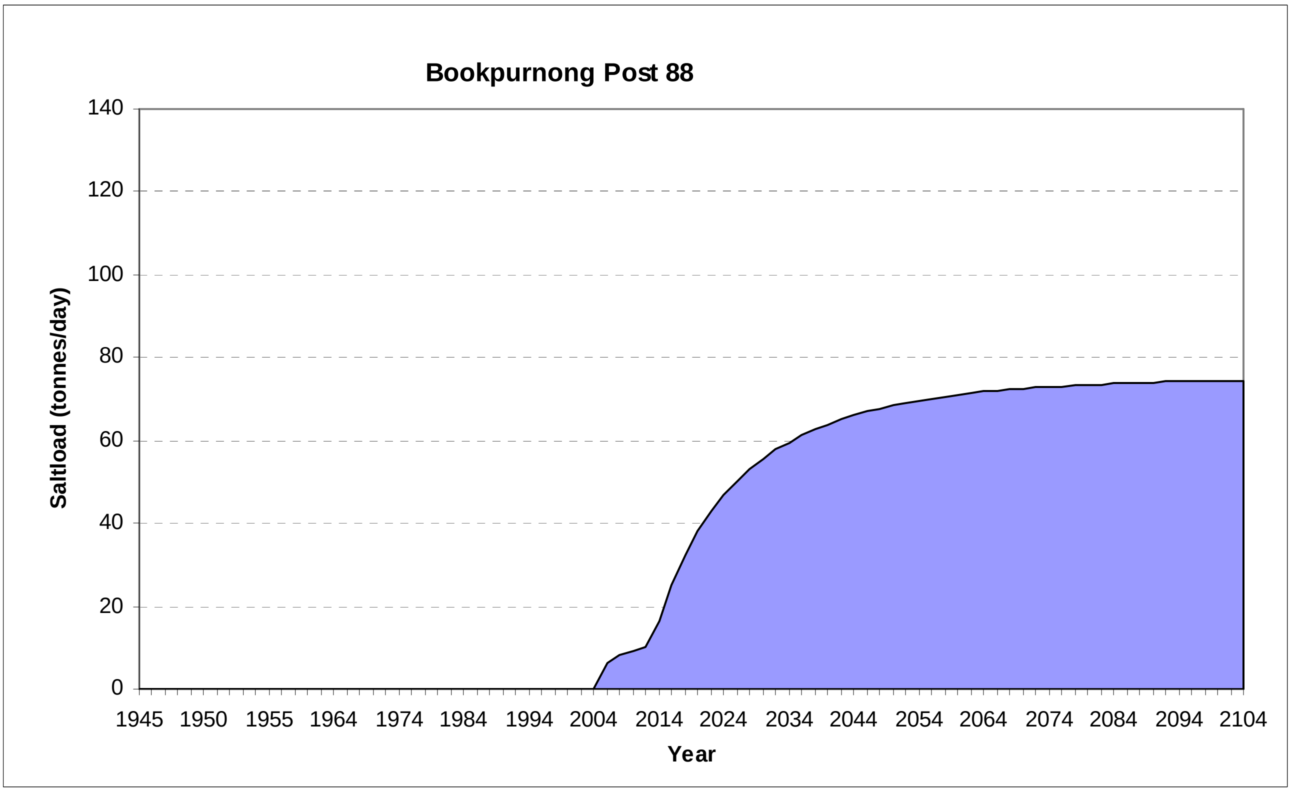


Figure 72: Predicted salt loads entering the River Murray resulting from pre 1988 irrigation development

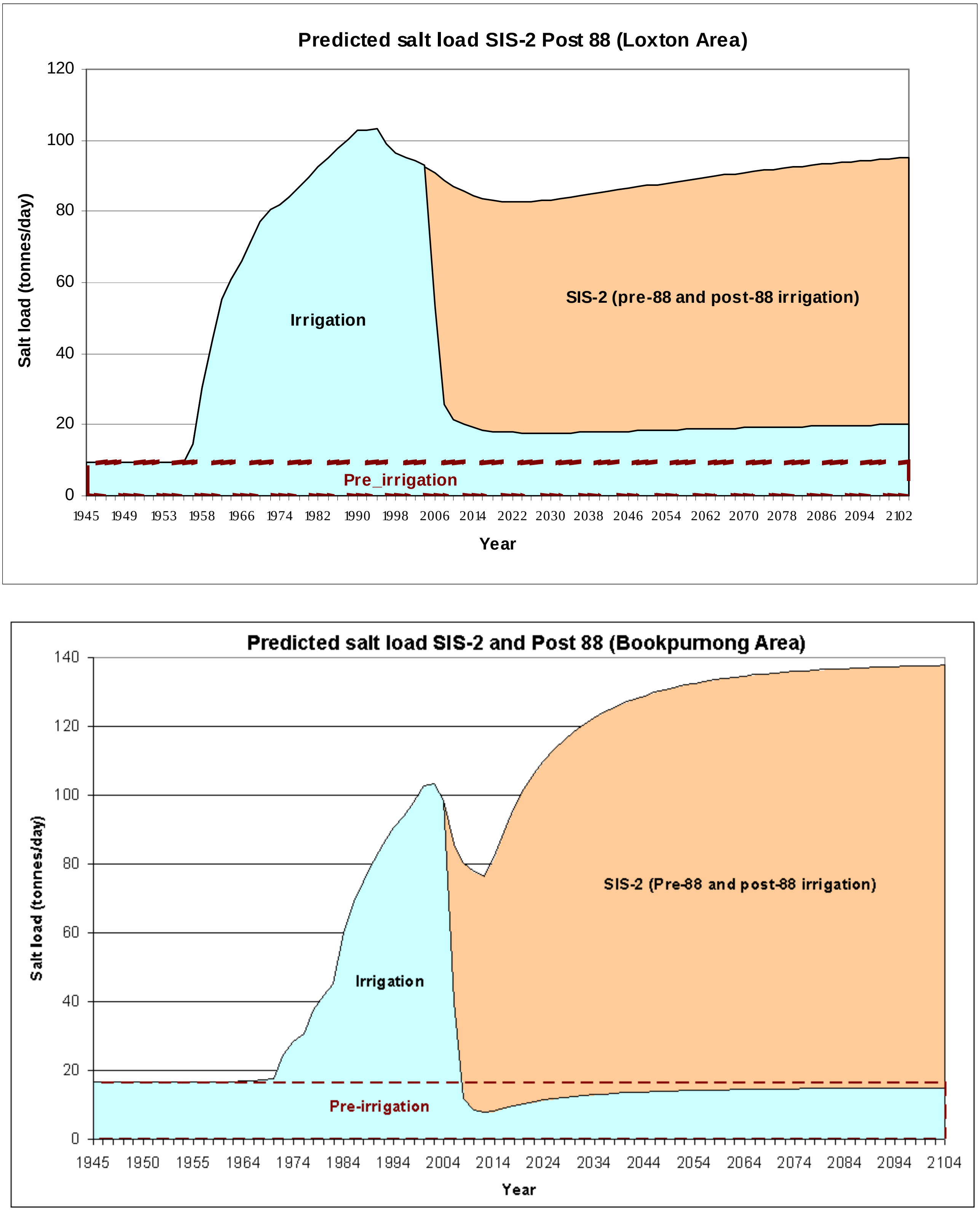


Figure 73: Predicted SIS-2 benefits

Loxton – Bookpurnong Numerical Groundwater Model 2005

W Yan, S Howles, B Howe and T Hill

Report DWLBC 2005/17

Volume 2 – Appendixes

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APPENDIXES

A. MODEL INPUTS AND OUTPUTS (LOXTON AREA)

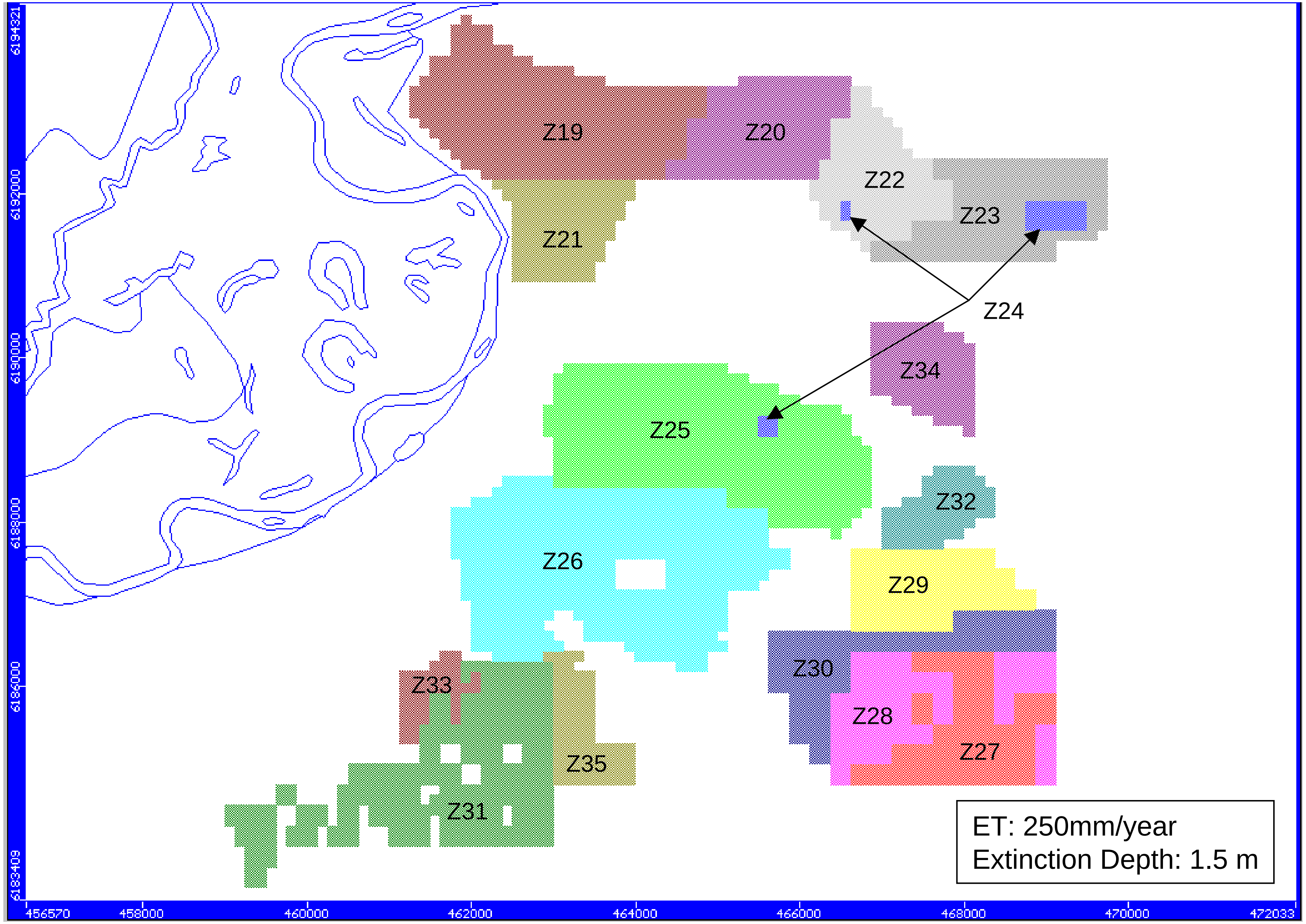
A-1. MODEL RECHARGE (LOXTON AREA)

- Model recharge zones
- Zone number and recharge rates (mm/year)
- Total recharge volumes (ML/year)

Appendix A-1

Model Recharge (Loxton Area)

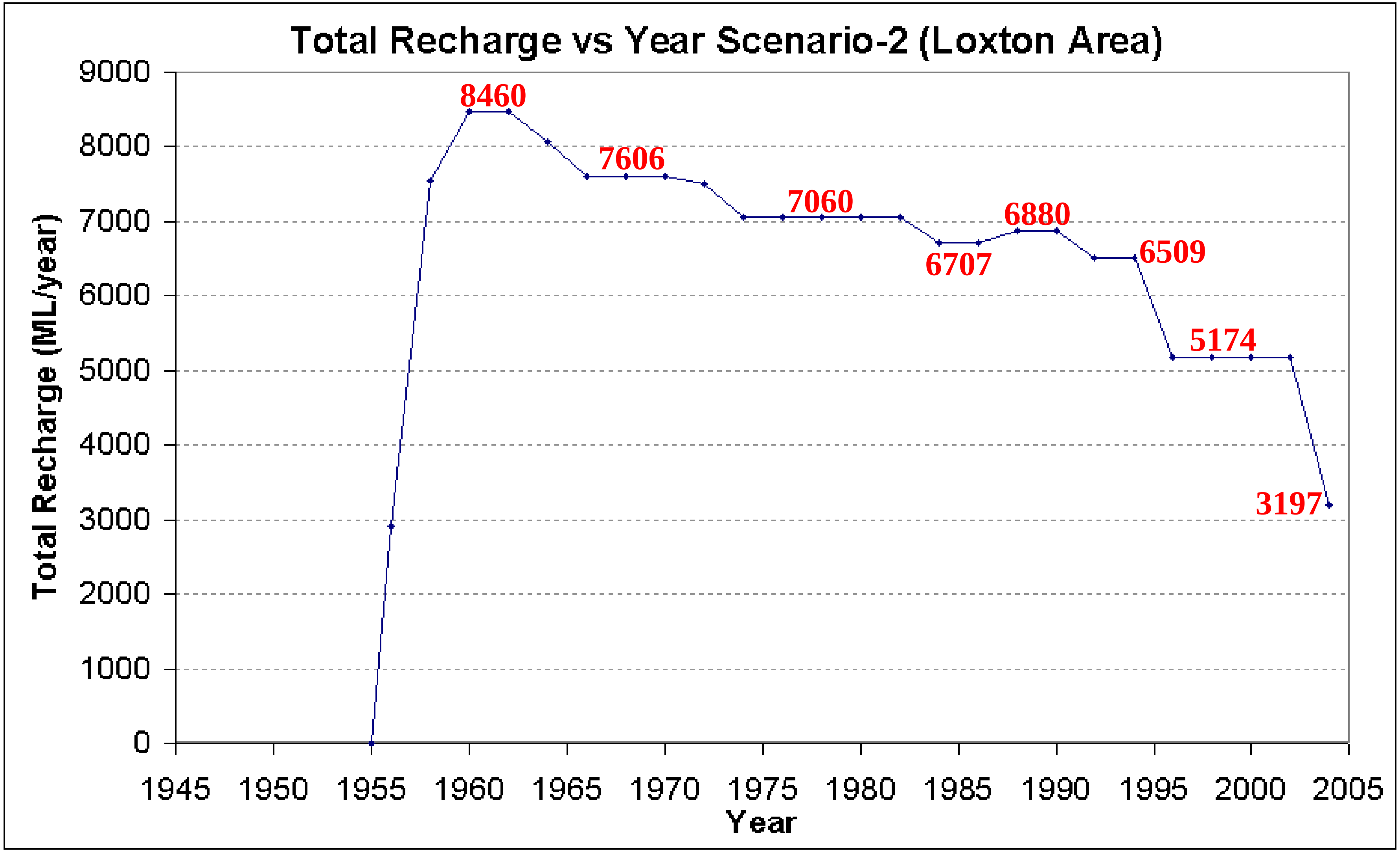
-Model recharge zones
-Zone number and recharge rates (mm/year)
-Total recharge volumes (ML/year)



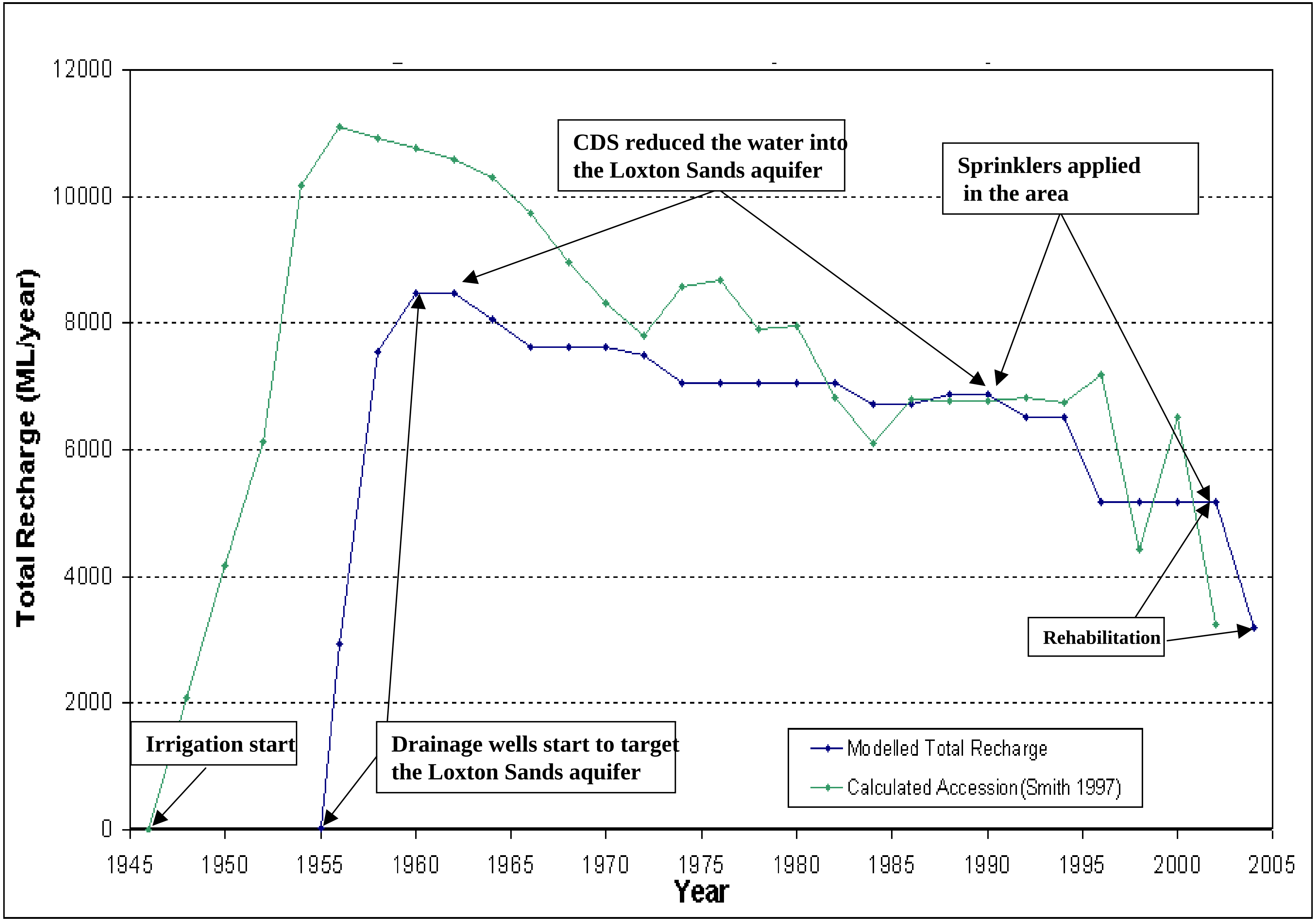
Appendix A-1-1 Model recharge zones in the Loxton area

Start Day	End Day	Zone19	Zone20	Zone21	Zone22	Zone23	Zone24	Zone25	Zone26	Zone27	Zone28	Zone29	Zone30	Zone31	Zone32	Zone33	Zone34	Zone35	Start Year	End Year
0	30	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1955	1955
30	365	410.3	0.1	365.0	0.1	0.1	400.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	400.0	0.1	0.1	0.1	1955	1956
365	1095	410.0	305.9	364.2	339.9	582.7	400.0	339.9	0.1	0.1	0.1	0.1	0.1	0.1	400.0	0.1	0.1	0.1	1956	1958
1095	1825	410.0	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1958	1960
1825	2555	410.0	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1960	1962
2555	3285	319.9	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1962	1964
3285	4015	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1964	1966
4015	4745	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1966	1968
4745	5475	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1968	1970
5475	6205	303.8	217.5	258.9	241.6	559.1	400.0	241.6	140.0	0.1	0.1	0.1	0.1	140.0	400.0	0.1	0.1	0.1	1970	1972
6205	6935	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1972	1974
6935	7665	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1974	1976
7665	8395	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1976	1978
8395	9125	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1978	1980
9125	9855	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1980	1982
9855	10585	262.8	188.1	224.0	209.0	358.3	400.0	209.0	160.0	0.1	0.1	0.1	0.1	160.0	400.0	0.1	0.1	0.1	1982	1984
10585	11315	262.8	188.1	224.0	209.0	358.3	400.0	209.0	160.0	0.1	0.1	0.1	0.1	160.0	400.0	0.1	0.1	0.1	1984	1986
11315	12045	262.8	188.1	224.0	209.0	335.0	400.0	209.0	180.0	0.1	0.1	0.1	0.1	180.0	400.0	0.1	0.1	0.1	1986	1988
12045	12775	262.8	188.1	224.0	209.0	335.0	400.0	209.0	180.0	0.1	0.1	0.1	0.1	180.0	400.0	0.1	0.1	0.1	1988	1990
12775	13505	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1990	1992
13505	14235	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1992	1994
14235	14965	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1994	1996
14965	15695	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1996	1998
15695	16425	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1998	2000
16425	17155	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2000	2002
17155	17885	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2002	2004
17885	18615	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2004	2006

Appendix A-1-2a Model recharge zones and recharge rates (mm/year) Scenario-2 (Loxton Area)



Appendix A-1-2b Total recharge volume to the Loxton Sands from all sources in Scenario-2 (Loxton Area)



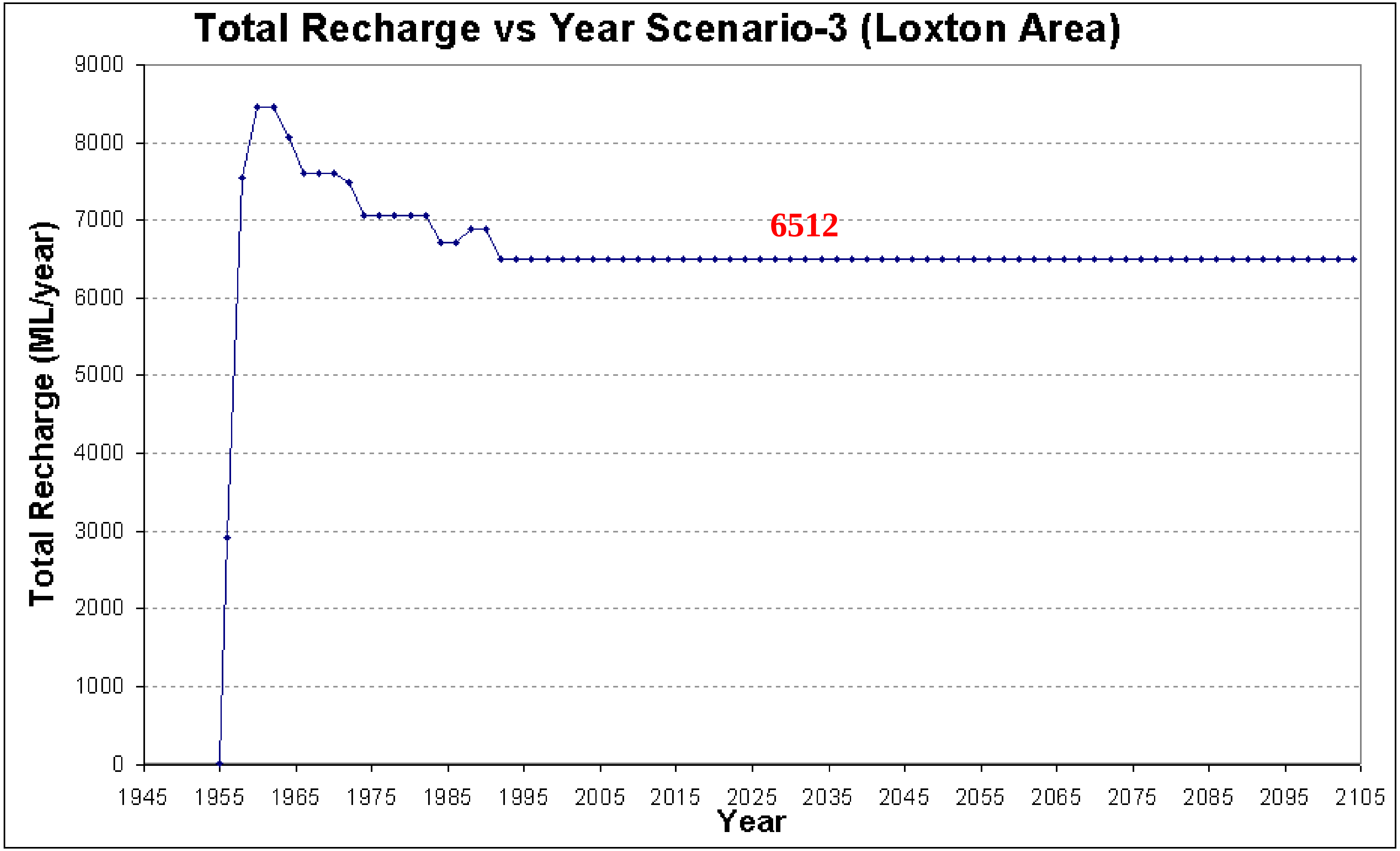
Appendix A-1-2c Modelled recharge volume to the Loxton Sands vs accession (Loxton area)

Start Day	End Day	Zone19	Zone20	Zone21	Zone22	Zone23	Zone24	Zone25	Zone26	Zone27	Zone28	Zone29	Zone30	Zone31	Zone32	Zone33	Zone34	Zone35	Start Year	End Year
0	30	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1955	1955
30	365	410.3	0.1	365.0	0.1	0.1	400.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	400.0	0.1	0.1	0.1	1955	1956
365	1095	410.0	305.9	364.2	339.9	582.7	400.0	339.9	0.1	0.1	0.1	0.1	0.1	0.1	400.0	0.1	0.1	0.1	1956	1958
1095	1825	410.0	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1958	1960
1825	2555	410.0	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1960	1962
2555	3285	319.9	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1962	1964
3285	4015	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1964	1966
4015	4745	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1966	1968
4745	5475	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1968	1970
5475	6205	303.8	217.5	258.9	241.6	559.1	400.0	241.6	140.0	0.1	0.1	0.1	0.1	140.0	400.0	0.1	0.1	0.1	1970	1972
6205	6935	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1972	1974
6935	7665	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1974	1976
7665	8395	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1976	1978
8395	9125	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1978	1980
9125	9855	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1980	1982
9855	10585	262.8	188.1	224.0	209.0	358.3	400.0	209.0	160.0	0.1	0.1	0.1	0.1	160.0	400.0	0.1	0.1	0.1	1982	1984
10585	11315	262.8	188.1	224.0	209.0	358.3	400.0	209.0	160.0	0.1	0.1	0.1	0.1	160.0	400.0	0.1	0.1	0.1	1984	1986
11315	12045	262.8	188.1	224.0	209.0	335.0	400.0	209.0	180.0	0.1	0.1	0.1	0.1	180.0	400.0	0.1	0.1	0.1	1986	1988
12045	12775	262.8	188.1	224.0	209.0	335.0	400.0	209.0	180.0	0.1	0.1	0.1	0.1	180.0	400.0	0.1	0.1	0.1	1988	1990
12775	13505	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1990	1992
13505	14235	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1992	1994
14235	14965	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1994	1996
14965	15695	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1996	1998
15695	16425	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1998	2000
16425	17155	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2000	2002
17155	17885	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2002	2004
17885	18615	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2004	2006
18615	19345	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2006	2008
19345	20075	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2008	2010
20075	20805	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2010	2012
20805	21535	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2012	2014
21535	22265	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2014	2016
22265	22995	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2016	2018
22995	23725	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2018	2020
23725	24455	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2020	2022
24455	25185	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2022	2024
25185	25915	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2024	2026
25915	26645	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2026	2028
26645	27375	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2028	2030

Appendix A-1-3a Recharge zones and rates (mm/year) in Scenario-3 (Loxton Area)

Start Day	End Day	Zone19	Zone20	Zone21	Zone22	Zone23	Zone24	Zone25	Zone26	Zone27	Zone28	Zone29	Zone30	Zone31	Zone32	Zone33	Zone34	Zone35	Start Year	End Year
27375	28105	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2030	2032
28105	28835	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2032	2034
28835	29565	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2034	2036
29565	30295	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2036	2038
30295	31025	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2038	2040
31025	31755	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2040	2042
31755	32485	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2042	2044
32485	33215	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2044	2046
33215	33945	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2046	2048
33945	34675	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2048	2050
34675	35405	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2050	2052
35405	36135	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2052	2054
36135	36865	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2054	2056
36865	37595	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2056	2058
37595	38325	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2058	2060
38325	39055	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2060	2062
39055	39785	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2062	2064
39785	40515	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2064	2066
40515	41245	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2066	2068
41245	41975	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2068	2070
41975	42705	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2070	2072
42705	43435	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2072	2074
43435	44165	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2074	2076
44165	44895	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2076	2078
44895	45625	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2078	2080
45625	46355	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2080	2082
46355	47085	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2082	2084
47085	47815	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2084	2086
47815	48545	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2086	2088
48545	49275	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2088	2090
49275	50005	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2090	2092
50005	50735	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2092	2094
50735	51465	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2094	2096
51465	52195	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2096	2098
52195	52925	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2098	2100
52925	53655	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2100	2102
53655	54385	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2102	2104
54385	54555	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2104	2106

Appendix A-1-3b Recharge zones and rates (mm/year) in Scenario-3 (Loxton Area)



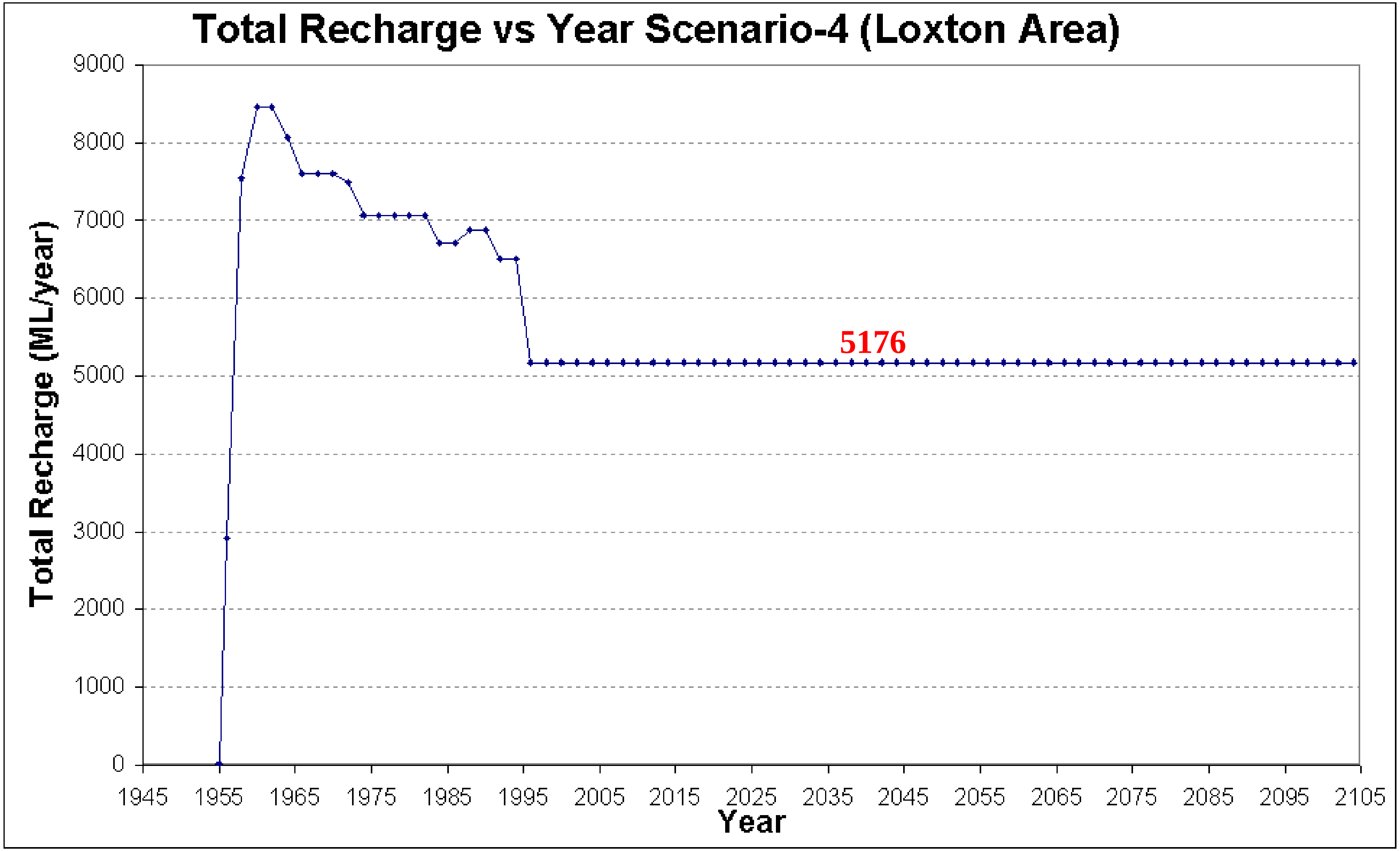
Appendix A-1-3c Total recharge volume to the Loxton Sands from all sources in Scenario-3 (Loxton Area)

Start Day	End Day	Zone19	Zone20	Zone21	Zone22	Zone23	Zone24	Zone25	Zone26	Zone27	Zone28	Zone29	Zone30	Zone31	Zone32	Zone33	Zone34	Zone35	Start Year	End Year
0	30	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1955	1955
30	365	410.3	0.1	365.0	0.1	0.1	400.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	400.0	0.1	0.1	0.1	1955	1956
365	1095	410.0	305.9	364.2	339.9	582.7	400.0	339.9	0.1	0.1	0.1	0.1	0.1	0.1	400.0	0.1	0.1	0.1	1956	1958
1095	1825	410.0	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1958	1960
1825	2555	410.0	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1960	1962
2555	3285	319.9	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1962	1964
3285	4015	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1964	1966
4015	4745	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1966	1968
4745	5475	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1968	1970
5475	6205	303.8	217.5	258.9	241.6	559.1	400.0	241.6	140.0	0.1	0.1	0.1	0.1	140.0	400.0	0.1	0.1	0.1	1970	1972
6205	6935	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1972	1974
6935	7665	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1974	1976
7665	8395	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1976	1978
8395	9125	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1978	1980
9125	9855	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1980	1982
9855	10585	262.8	188.1	224.0	209.0	358.3	400.0	209.0	160.0	0.1	0.1	0.1	0.1	160.0	400.0	0.1	0.1	0.1	1982	1984
10585	11315	262.8	188.1	224.0	209.0	358.3	400.0	209.0	160.0	0.1	0.1	0.1	0.1	160.0	400.0	0.1	0.1	0.1	1984	1986
11315	12045	262.8	188.1	224.0	209.0	335.0	400.0	209.0	180.0	0.1	0.1	0.1	0.1	180.0	400.0	0.1	0.1	0.1	1986	1988
12045	12775	262.8	188.1	224.0	209.0	335.0	400.0	209.0	180.0	0.1	0.1	0.1	0.1	180.0	400.0	0.1	0.1	0.1	1988	1990
12775	13505	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1990	1992
13505	14235	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1992	1994
14235	14965	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1994	1996
14965	15695	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1996	1998
15695	16425	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1998	2000
16425	17155	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2000	2002
17155	17885	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2002	2004
17885	18615	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2004	2006
18615	19345	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2006	2008
19345	20075	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2008	2010
20075	20805	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2010	2012
20805	21535	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2012	2014
21535	22265	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2014	2016
22265	22995	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2016	2018
22995	23725	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2018	2020
23725	24455	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2020	2022
24455	25185	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2022	2024
25185	25915	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2024	2026
25915	26645	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2026	2028
26645	27375	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2028	2030

Appendix A-1-4a Recharge zones and rates (mm/year) in Scenario-4 (Loxton Area)

Start Day	End Day	Zone19	Zone20	Zone21	Zone22	Zone23	Zone24	Zone25	Zone26	Zone27	Zone28	Zone29	Zone30	Zone31	Zone32	Zone33	Zone34	Zone35	Start Year	End Year
27375	28105	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2030	2032
28105	28835	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2032	2034
28835	29565	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2034	2036
29565	30295	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2036	2038
30295	31025	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2038	2040
31025	31755	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2040	2042
31755	32485	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2042	2044
32485	33215	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2044	2046
33215	33945	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2046	2048
33945	34675	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2048	2050
34675	35405	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2050	2052
35405	36135	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2052	2054
36135	36865	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2054	2056
36865	37595	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2056	2058
37595	38325	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2058	2060
38325	39055	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2060	2062
39055	39785	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2062	2064
39785	40515	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2064	2066
40515	41245	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2066	2068
41245	41975	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2068	2070
41975	42705	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2070	2072
42705	43435	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2072	2074
43435	44165	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2074	2076
44165	44895	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2076	2078
44895	45625	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2078	2080
45625	46355	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2080	2082
46355	47085	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2082	2084
47085	47815	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2084	2086
47815	48545	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2086	2088
48545	49275	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2088	2090
49275	50005	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2090	2092
50005	50735	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2092	2094
50735	51465	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2094	2096
51465	52195	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2096	2098
52195	52925	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2098	2100
52925	53655	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2100	2102
53655	54385	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2102	2104
54385	54555	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2104	2106

Appendix A-1-4b Recharge zones and rates (mm/year) in Scenario-4 (Loxton Area)



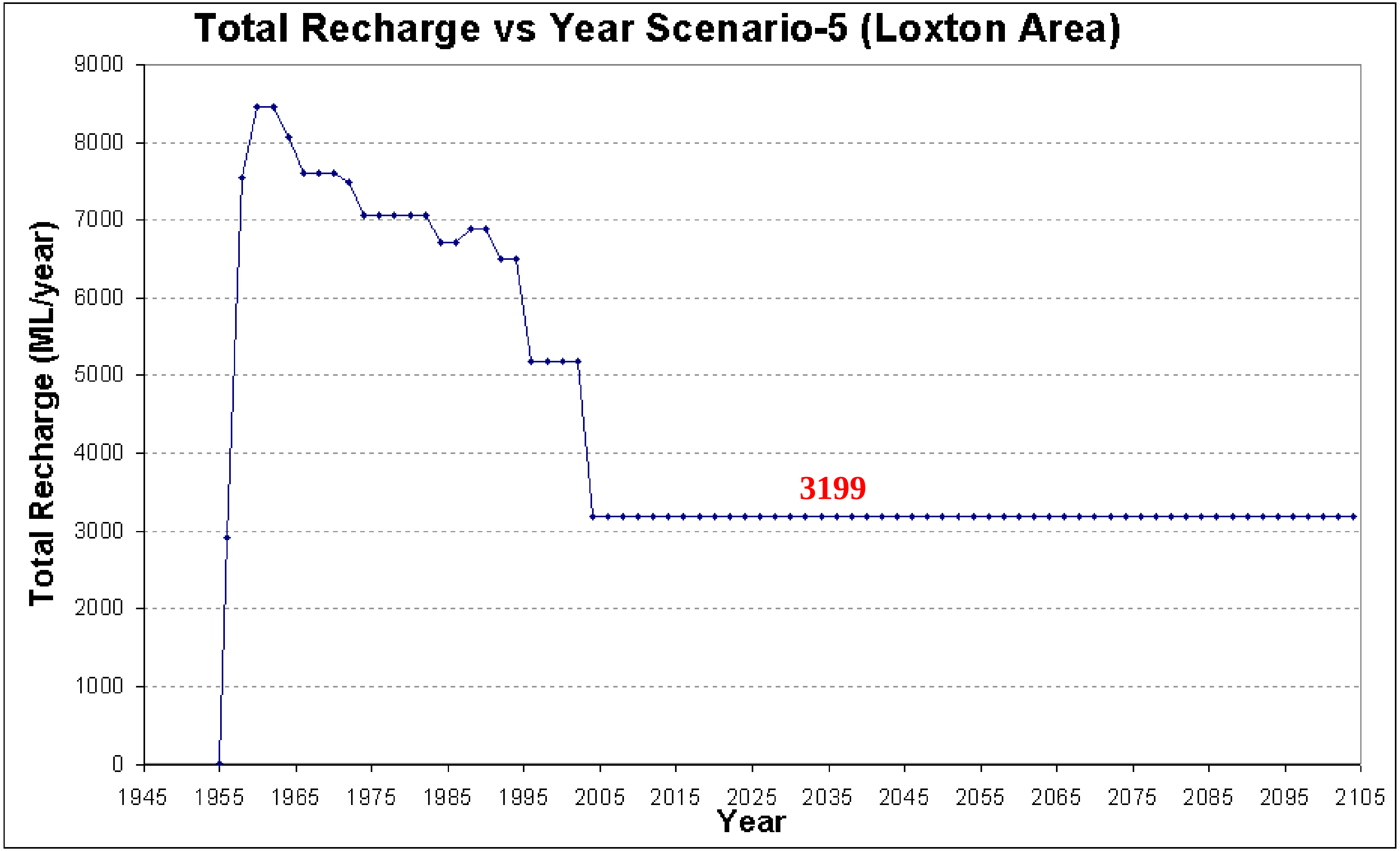
Appendix A-1-4c Total recharge volume to the Loxton Sands from all sources in Scenario-4 (Loxton Area)

Start Day	End Day	Zone19	Zone20	Zone21	Zone22	Zone23	Zone24	Zone25	Zone26	Zone27	Zone28	Zone29	Zone30	Zone31	Zone32	Zone33	Zone34	Zone35	Start Year	End Year
0	30	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1955	1955
30	365	410.3	0.1	365.0	0.1	0.1	400.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	400.0	0.1	0.1	0.1	1955	1956
365	1095	410.0	305.9	364.2	339.9	582.7	400.0	339.9	0.1	0.1	0.1	0.1	0.1	0.1	400.0	0.1	0.1	0.1	1956	1958
1095	1825	410.0	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1958	1960
1825	2555	410.0	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1960	1962
2555	3285	319.9	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1962	1964
3285	4015	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1964	1966
4015	4745	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1966	1968
4745	5475	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1968	1970
5475	6205	303.8	217.5	258.9	241.6	559.1	400.0	241.6	140.0	0.1	0.1	0.1	0.1	140.0	400.0	0.1	0.1	0.1	1970	1972
6205	6935	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1972	1974
6935	7665	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1974	1976
7665	8395	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1976	1978
8395	9125	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1978	1980
9125	9855	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1980	1982
9855	10585	262.8	188.1	224.0	209.0	358.3	400.0	209.0	160.0	0.1	0.1	0.1	0.1	160.0	400.0	0.1	0.1	0.1	1982	1984
10585	11315	262.8	188.1	224.0	209.0	358.3	400.0	209.0	160.0	0.1	0.1	0.1	0.1	160.0	400.0	0.1	0.1	0.1	1984	1986
11315	12045	262.8	188.1	224.0	209.0	335.0	400.0	209.0	180.0	0.1	0.1	0.1	0.1	180.0	400.0	0.1	0.1	0.1	1986	1988
12045	12775	262.8	188.1	224.0	209.0	335.0	400.0	209.0	180.0	0.1	0.1	0.1	0.1	180.0	400.0	0.1	0.1	0.1	1988	1990
12775	13505	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1990	1992
13505	14235	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1992	1994
14235	14965	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1994	1996
14965	15695	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1996	1998
15695	16425	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1998	2000
16425	17155	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2000	2002
17155	17885	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2002	2004
17885	18615	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2004	2006
18615	19345	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2006	2008
19345	20075	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2008	2010
20075	20805	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2010	2012
20805	21535	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2012	2014
21535	22265	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2014	2016
22265	22995	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2016	2018
22995	23725	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2018	2020
23725	24455	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2020	2022
24455	25185	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2022	2024
25185	25915	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2024	2026
25915	26645	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2026	2028
26645	27375	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2028	2030

Appendix A-1-5a Recharge zones and rates (mm/year) in Scenario-5 (Loxton Area)

Start Day	End Day	Zone19	Zone20	Zone21	Zone22	Zone23	Zone24	Zone25	Zone26	Zone27	Zone28	Zone29	Zone30	Zone31	Zone32	Zone33	Zone34	Zone35	Start Year	End Year
27375	28105	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2030	2032
28105	28835	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2032	2034
28835	29565	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2034	2036
29565	30295	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2036	2038
30295	31025	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2038	2040
31025	31755	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2040	2042
31755	32485	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2042	2044
32485	33215	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2044	2046
33215	33945	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2046	2048
33945	34675	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2048	2050
34675	35405	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2050	2052
35405	36135	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2052	2054
36135	36865	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2054	2056
36865	37595	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2056	2058
37595	38325	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2058	2060
38325	39055	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2060	2062
39055	39785	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2062	2064
39785	40515	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2064	2066
40515	41245	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2066	2068
41245	41975	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2068	2070
41975	42705	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2070	2072
42705	43435	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2072	2074
43435	44165	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2074	2076
44165	44895	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2076	2078
44895	45625	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2078	2080
45625	46355	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2080	2082
46355	47085	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2082	2084
47085	47815	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2084	2086
47815	48545	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2086	2088
48545	49275	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2088	2090
49275	50005	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2090	2092
50005	50735	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2092	2094
50735	51465	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2094	2096
51465	52195	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2096	2098
52195	52925	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2098	2100
52925	53655	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2100	2102
53655	54385	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2102	2104
54385	54555	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2104	2106

Appendix A-1-5b Recharge zones and rates (mm/year) in Scenario-5 (Loxton Area)



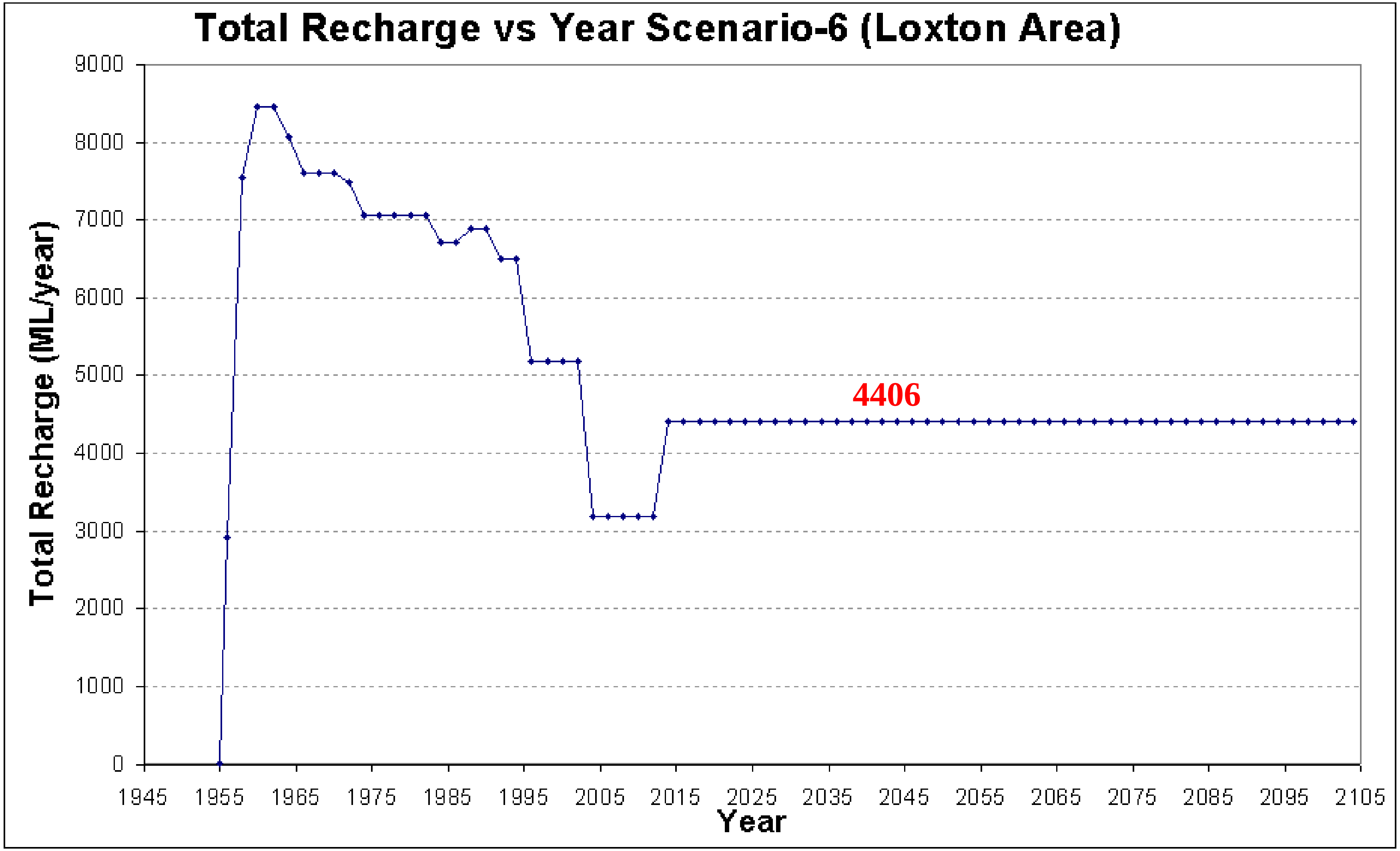
Appendix A-1-5c Total recharge volume to the Loxton Sands from all sources in Scenario-5 (Loxton Area)

Start Day	End Day	Zone19	Zone20	Zone21	Zone22	Zone23	Zone24	Zone25	Zone26	Zone27	Zone28	Zone29	Zone30	Zone31	Zone32	Zone33	Zone34	Zone35	Start Year	End Year
0	30	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1955	1955
30	365	410.3	0.1	365.0	0.1	0.1	400.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	400.0	0.1	0.1	0.1	1955	1956
365	1095	410.0	305.9	364.2	339.9	582.7	400.0	339.9	0.1	0.1	0.1	0.1	0.1	0.1	400.0	0.1	0.1	0.1	1956	1958
1095	1825	410.0	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1958	1960
1825	2555	410.0	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1960	1962
2555	3285	319.9	293.5	349.4	326.1	559.1	400.0	326.1	100.0	0.1	0.1	0.1	0.1	100.0	400.0	0.1	0.1	0.1	1962	1964
3285	4015	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1964	1966
4015	4745	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1966	1968
4745	5475	319.9	229.0	349.5	254.5	559.1	400.0	254.5	120.0	0.1	0.1	0.1	0.1	120.0	400.0	0.1	0.1	0.1	1968	1970
5475	6205	303.8	217.5	258.9	241.6	559.1	400.0	241.6	140.0	0.1	0.1	0.1	0.1	140.0	400.0	0.1	0.1	0.1	1970	1972
6205	6935	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1972	1974
6935	7665	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1974	1976
7665	8395	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1976	1978
8395	9125	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1978	1980
9125	9855	262.8	188.1	224.0	209.0	559.1	400.0	209.0	150.0	0.1	0.1	0.1	0.1	150.0	400.0	0.1	0.1	0.1	1980	1982
9855	10585	262.8	188.1	224.0	209.0	358.3	400.0	209.0	160.0	0.1	0.1	0.1	0.1	160.0	400.0	0.1	0.1	0.1	1982	1984
10585	11315	262.8	188.1	224.0	209.0	358.3	400.0	209.0	160.0	0.1	0.1	0.1	0.1	160.0	400.0	0.1	0.1	0.1	1984	1986
11315	12045	262.8	188.1	224.0	209.0	335.0	400.0	209.0	180.0	0.1	0.1	0.1	0.1	180.0	400.0	0.1	0.1	0.1	1986	1988
12045	12775	262.8	188.1	224.0	209.0	335.0	400.0	209.0	180.0	0.1	0.1	0.1	0.1	180.0	400.0	0.1	0.1	0.1	1988	1990
12775	13505	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1990	1992
13505	14235	218.8	156.6	180.0	174.0	335.0	400.0	174.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1992	1994
14235	14965	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1994	1996
14965	15695	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1996	1998
15695	16425	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	1998	2000
16425	17155	120.0	120.0	120.0	120.0	200.0	400.0	120.0	200.0	0.1	0.1	0.1	0.1	200.0	400.0	0.1	0.1	0.1	2000	2002
17155	17885	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2002	2004
17885	18615	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2004	2006
18615	19345	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2006	2008
19345	20075	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2008	2010
20075	20805	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	0.1	0.1	0.1	0.1	108.0	0.1	0.1	0.1	0.1	2010	2012
20805	21535	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2012	2014
21535	22265	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2014	2016
22265	22995	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2016	2018
22995	23725	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2018	2020
23725	24455	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2020	2022
24455	25185	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2022	2024
25185	25915	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2024	2026
25915	26645	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2026	2028
26645	27375	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2028	2030

Appendix A-1-6a Recharge zones and rates (mm/year) in Scenario-6 (Loxton Area)

Start Day	End Day	Zone19	Zone20	Zone21	Zone22	Zone23	Zone24	Zone25	Zone26	Zone27	Zone28	Zone29	Zone30	Zone31	Zone32	Zone33	Zone34	Zone35	Start Year	End Year
27375	28105	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2030	2032
28105	28835	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2032	2034
28835	29565	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2034	2036
29565	30295	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2036	2038
30295	31025	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2038	2040
31025	31755	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2040	2042
31755	32485	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2042	2044
32485	33215	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2044	2046
33215	33945	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2046	2048
33945	34675	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2048	2050
34675	35405	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2050	2052
35405	36135	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2052	2054
36135	36865	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2054	2056
36865	37595	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2056	2058
37595	38325	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2058	2060
38325	39055	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2060	2062
39055	39785	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2062	2064
39785	40515	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2064	2066
40515	41245	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2066	2068
41245	41975	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2068	2070
41975	42705	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2070	2072
42705	43435	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2072	2074
43435	44165	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2074	2076
44165	44895	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2076	2078
44895	45625	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2078	2080
45625	46355	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2080	2082
46355	47085	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2082	2084
47085	47815	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2084	2086
47815	48545	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2086	2088
48545	49275	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2088	2090
49275	50005	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2090	2092
50005	50735	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2092	2094
50735	51465	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2094	2096
51465	52195	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2096	2098
52195	52925	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2098	2100
52925	53655	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2100	2102
53655	54385	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2102	2104
54385	54555	108.0	108.0	108.0	108.0	108.0	0.1	108.0	108.0	100.0	100.0	100.0	100.0	108.0	100.0	100.0	100.0	100.0	2104	2106

Appendix A-1-6b Recharge zones and rates (mm/year) in Scenario-6 (Loxton Area)



Appendix A-1-6c Total recharge volume to the Loxton Sands from all sources in Scenario-6 (Loxton Area)

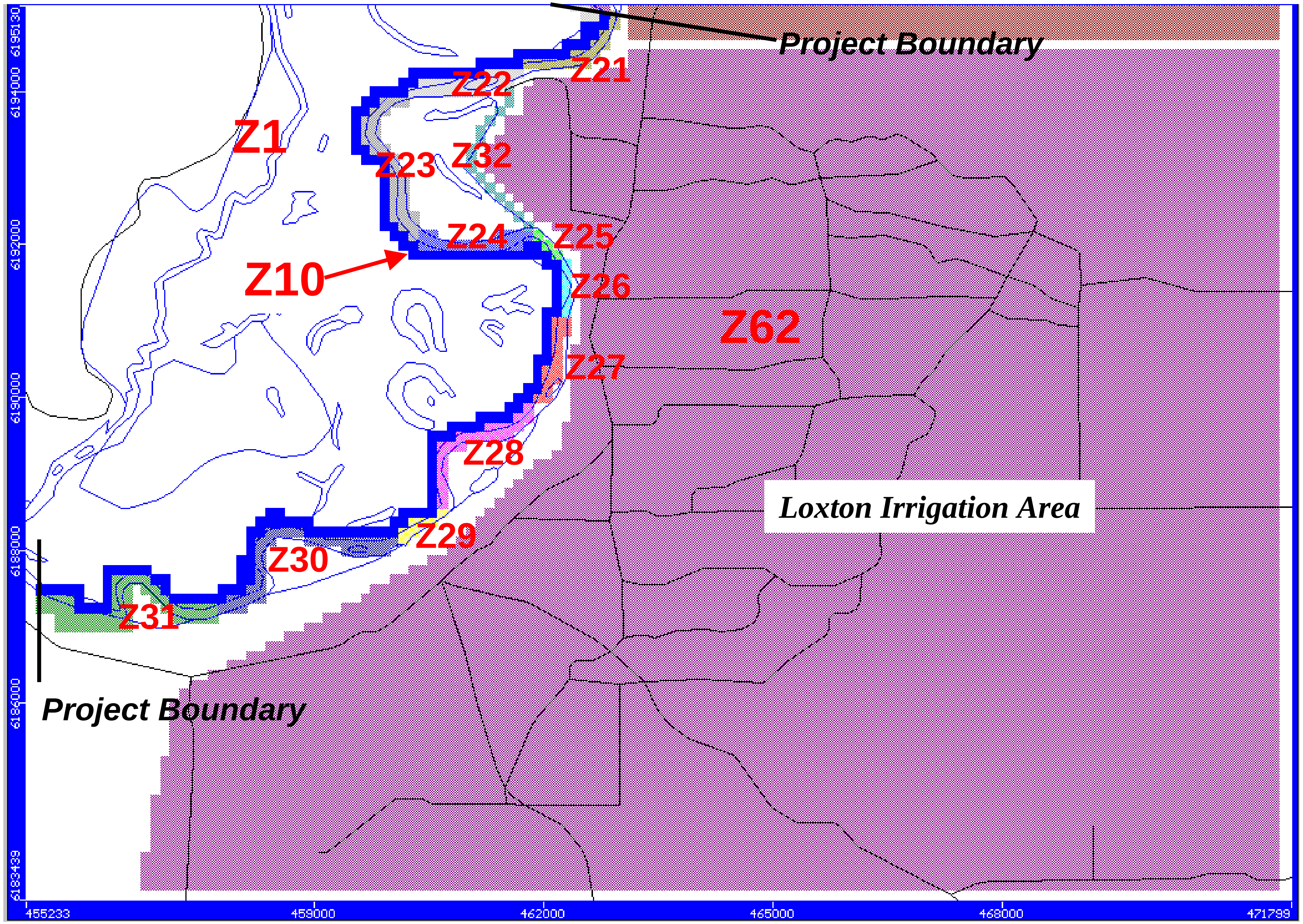
A2. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-2 (LOXTON AREA)

- Flow budget zones (Loxton Area)
- Predicted lateral groundwater flux (m3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)

Appendix A-2

Groundwater flux and salt load entering the River Murray
Scenario-2
(Loxton Area)

-Flow budget zones (Loxton Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)



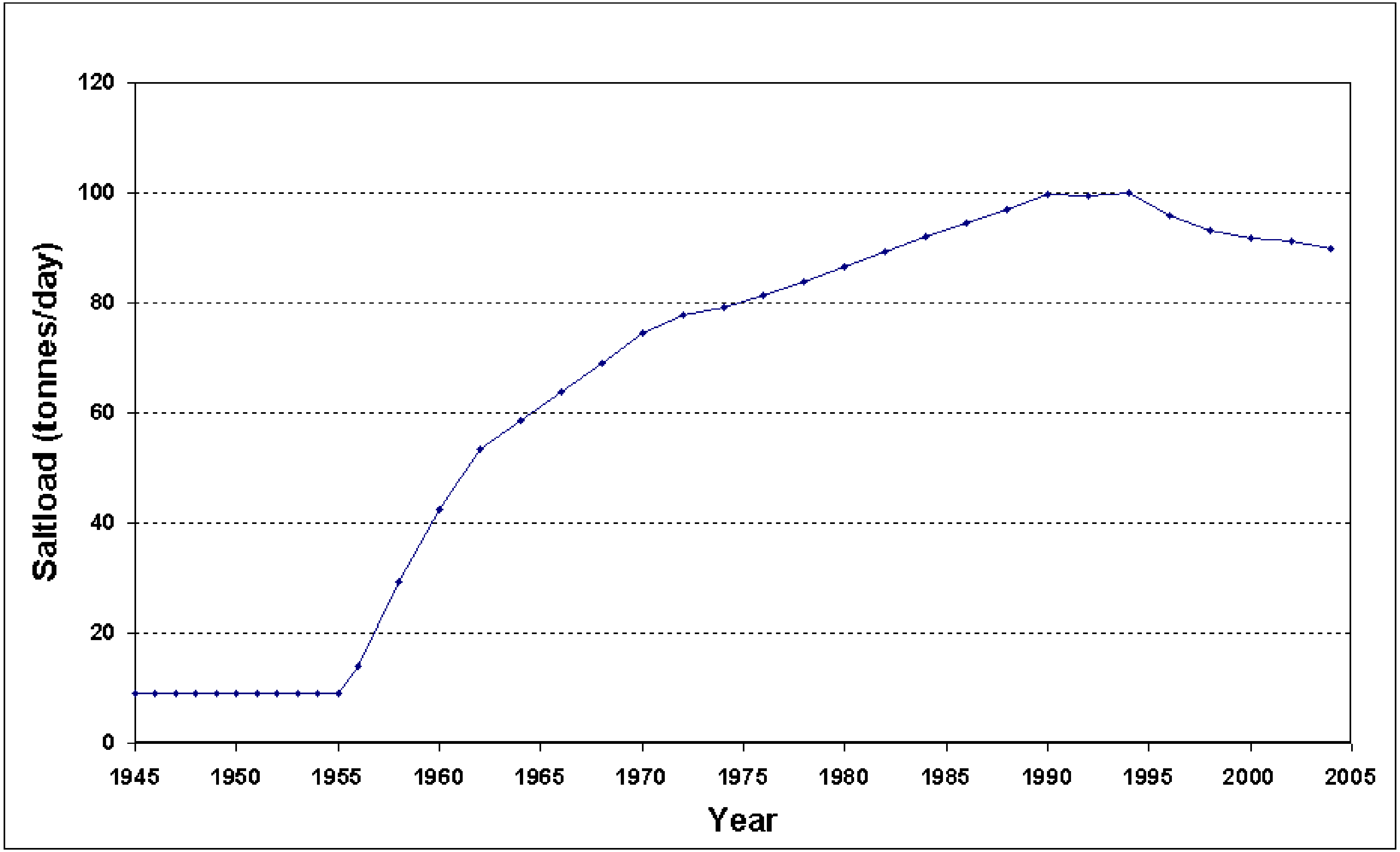
Appendix A-2-1a Flow budget zones in model Layer-1 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1946	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1947	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1948	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1949	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1950	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1951	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1952	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1953	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1954	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
30	1955	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
365	1956	71.5	46.8	0.0	36.3	94.1	176.1	175.1	61.9	35.6	57.7	146.8	0.0	902
1095	1958	134.3	178.8	0.0	149.8	260.5	384.8	309.5	66.4	35.7	57.8	146.8	7.1	1732
1825	1960	215.6	270.8	0.0	233.5	373.7	525.4	490.6	84.1	36.1	58.2	147.0	56.4	2491
2555	1962	300.3	327.7	0.0	283.5	448.3	641.8	683.9	117.6	37.8	58.9	147.5	90.8	3138
3285	1964	355.7	326.5	0.0	282.2	465.3	724.9	868.5	165.9	41.8	60.2	148.2	87.4	3526
4015	1966	397.8	328.4	0.0	283.5	486.0	790.7	1015.9	220.1	48.5	62.1	149.2	88.0	3870
4745	1968	434.5	334.9	0.0	289.6	508.1	847.1	1135.6	274.6	58.2	65.1	150.4	91.7	4190
5475	1970	467.7	342.7	0.0	296.9	528.9	897.2	1245.1	328.2	70.4	69.4	151.9	96.2	4495
6205	1972	493.6	343.6	0.0	297.2	522.3	875.8	1301.5	378.0	84.3	75.1	153.6	96.0	4621
6935	1974	504.7	328.8	0.0	283.5	503.3	861.3	1340.8	424.8	99.5	82.2	155.6	85.9	4670
7665	1976	512.2	321.8	0.0	277.1	499.6	868.5	1383.5	466.8	115.8	90.7	157.8	81.4	4775
8395	1978	520.2	320.0	0.0	275.6	502.2	882.3	1430.5	503.8	132.1	100.3	160.3	80.2	4907
9125	1980	529.4	320.5	0.0	276.3	507.3	898.7	1478.2	536.6	147.8	110.8	163.0	80.5	5049
9855	1982	539.2	322.1	0.0	278.1	513.5	916.0	1525.1	566.2	162.4	121.8	166.0	81.6	5192
10585	1984	549.4	324.3	0.0	280.2	520.0	933.1	1570.3	593.6	175.9	133.1	169.2	82.8	5332
11315	1986	559.7	326.6	0.0	282.4	526.4	949.3	1614.0	620.0	188.9	144.5	172.6	84.2	5469
12045	1988	570.0	328.9	0.0	284.6	532.5	964.0	1655.8	645.9	201.6	155.9	176.4	85.6	5601
12775	1990	579.7	331.2	0.0	286.9	538.2	977.6	1697.1	673.2	214.8	167.6	180.4	87.0	5734
13505	1992	576.9	315.0	0.0	272.7	515.0	949.8	1701.0	698.1	228.1	179.4	184.6	76.2	5697
14235	1994	571.9	305.5	0.0	263.9	504.5	939.9	1706.3	721.3	241.8	191.5	189.1	70.2	5706
14965	1996	543.0	261.7	0.0	225.6	446.3	871.6	1664.4	738.8	254.9	203.8	193.8	41.2	5445
15695	1998	513.9	234.8	0.0	201.5	414.7	831.8	1624.1	749.2	266.5	215.9	198.8	26.4	5278
16425	2000	491.8	220.0	0.0	189.1	396.6	806.2	1597.0	757.5	276.4	227.5	204.0	19.0	5185
17155	2002	475.7	211.5	0.0	182.0	385.1	788.7	1579.0	764.9	284.8	238.1	209.4	15.1	5134
17885	2004	461.0	201.7	0.0	173.6	370.1	765.0	1550.7	761.9	289.7	247.6	214.9	10.8	5047
TDS	mg/L	25807	29055	30760	39978	18716	4240	7710	35935	29140	24080	5620	8440	

Appendix A-2-2 Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-2 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9
0	1946	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9
0	1947	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9
0	1948	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9
0	1949	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9
0	1950	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9
0	1951	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9
0	1952	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9
0	1953	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9
0	1954	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9
30	1955	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9
365	1956	1.8	1.4	0.0	1.5	1.8	0.7	1.4	2.2	1.0	1.4	0.8	0.0	14
1095	1958	3.5	5.2	0.0	6.0	4.9	1.6	2.4	2.4	1.0	1.4	0.8	0.1	29
1825	1960	5.6	7.9	0.0	9.3	7.0	2.2	3.8	3.0	1.1	1.4	0.8	0.5	43
2555	1962	7.8	9.5	0.0	11.3	8.4	2.7	5.3	4.2	1.1	1.4	0.8	0.8	53
3285	1964	9.2	9.5	0.0	11.3	8.7	3.1	6.7	6.0	1.2	1.4	0.8	0.7	59
4015	1966	10.3	9.5	0.0	11.3	9.1	3.4	7.8	7.9	1.4	1.5	0.8	0.7	64
4745	1968	11.2	9.7	0.0	11.6	9.5	3.6	8.8	9.9	1.7	1.6	0.8	0.8	69
5475	1970	12.1	10.0	0.0	11.9	9.9	3.8	9.6	11.8	2.1	1.7	0.9	0.8	74
6205	1972	12.7	10.0	0.0	11.9	9.8	3.7	10.0	13.6	2.5	1.8	0.9	0.8	78
6935	1974	13.0	9.6	0.0	11.3	9.4	3.7	10.3	15.3	2.9	2.0	0.9	0.7	79
7665	1976	13.2	9.4	0.0	11.1	9.4	3.7	10.7	16.8	3.4	2.2	0.9	0.7	81
8395	1978	13.4	9.3	0.0	11.0	9.4	3.7	11.0	18.1	3.9	2.4	0.9	0.7	84
9125	1980	13.7	9.3	0.0	11.0	9.5	3.8	11.4	19.3	4.3	2.7	0.9	0.7	87
9855	1982	13.9	9.4	0.0	11.1	9.6	3.9	11.8	20.3	4.7	2.9	0.9	0.7	89
10585	1984	14.2	9.4	0.0	11.2	9.7	4.0	12.1	21.3	5.1	3.2	1.0	0.7	92
11315	1986	14.4	9.5	0.0	11.3	9.9	4.0	12.4	22.3	5.5	3.5	1.0	0.7	94
12045	1988	14.7	9.6	0.0	11.4	10.0	4.1	12.8	23.2	5.9	3.8	1.0	0.7	97
12775	1990	15.0	9.6	0.0	11.5	10.1	4.1	13.1	24.2	6.3	4.0	1.0	0.7	100
13505	1992	14.9	9.2	0.0	10.9	9.6	4.0	13.1	25.1	6.6	4.3	1.0	0.6	99
14235	1994	14.8	8.9	0.0	10.6	9.4	4.0	13.2	25.9	7.0	4.6	1.1	0.6	100
14965	1996	14.0	7.6	0.0	9.0	8.4	3.7	12.8	26.5	7.4	4.9	1.1	0.3	96
15695	1998	13.3	6.8	0.0	8.1	7.8	3.5	12.5	26.9	7.8	5.2	1.1	0.2	93
16425	2000	12.7	6.4	0.0	7.6	7.4	3.4	12.3	27.2	8.1	5.5	1.1	0.2	92
17155	2002	12.3	6.1	0.0	7.3	7.2	3.3	12.2	27.5	8.3	5.7	1.2	0.1	91
17885	2004	11.9	5.9	0.0	6.9	6.9	3.2	12.0	27.4	8.4	6.0	1.2	0.1	90
TDS	mg/L	25807	29055	30760	39978	18716	4240	7710	35935	29140	24080	5620	8440	

Appendix A-2-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-2 (Loxton Area)



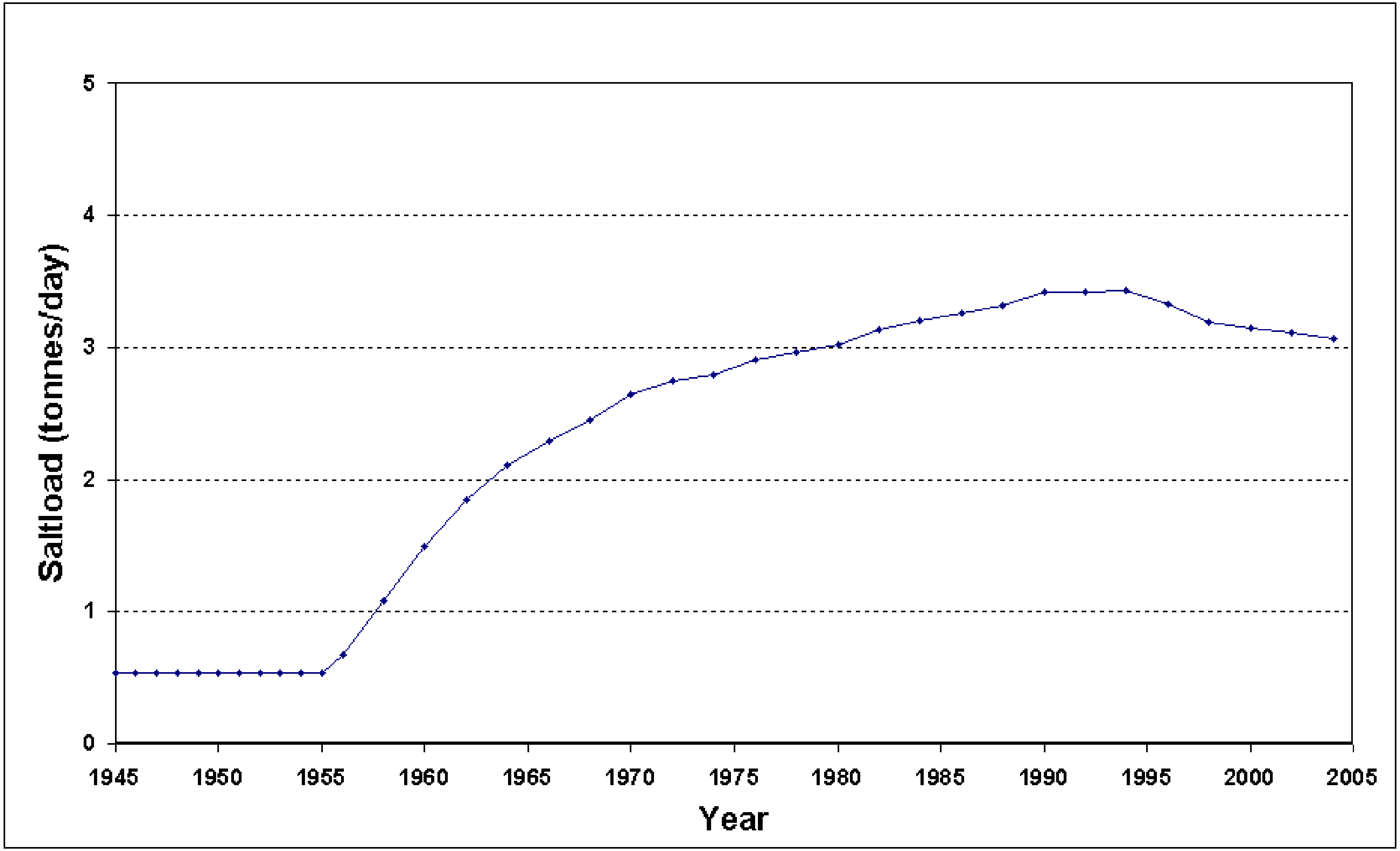
Appendix A-2-3b Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-2 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	1945	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1946	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1947	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1948	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1949	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1950	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1951	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1952	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1953	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1954	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
30	1955	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
365	1956	6.4	2.2	1.9	1.6	1.5	2.9	3.1	2.5	2.5	4.1	5.0	34
1095	1958	10.3	4.6	2.1	3.7	2.8	4.5	4.5	2.7	2.5	4.2	5.0	47
1825	1960	15.7	6.3	2.4	5.4	3.6	5.6	6.2	3.3	2.7	4.4	5.1	61
2555	1962	21.0	7.4	2.8	6.5	4.2	6.5	7.8	4.2	2.8	4.7	5.1	73
3285	1964	24.7	7.6	3.0	7.3	4.4	7.2	9.7	6.1	3.2	5.0	5.2	83
4015	1966	27.3	7.8	3.2	7.6	4.6	7.7	10.8	7.2	3.6	5.3	5.4	91
4745	1968	29.5	8.1	3.4	7.9	4.8	8.2	11.7	8.4	4.1	5.7	5.5	97
5475	1970	31.3	8.4	3.7	8.9	5.0	8.6	13.0	10.2	4.8	6.1	5.6	106
6205	1972	32.8	8.6	3.9	9.1	5.0	8.7	13.6	11.2	5.4	6.6	5.7	111
6935	1974	33.6	8.5	4.0	9.0	5.0	8.8	14.1	12.1	6.1	7.0	5.8	114
7665	1976	34.2	8.5	4.2	9.7	5.0	9.0	15.0	13.7	6.9	7.6	5.9	120
8395	1978	34.7	8.6	4.3	9.8	5.1	9.1	15.4	14.4	7.5	8.1	6.0	123
9125	1980	35.2	8.7	4.5	9.9	5.2	9.3	15.8	15.1	8.2	8.6	6.1	126
9855	1982	35.8	8.9	4.7	10.8	5.3	9.5	16.7	16.6	8.8	9.1	6.2	132
10585	1984	36.4	9.0	4.9	10.9	5.3	9.7	17.0	17.1	9.3	9.6	6.3	135
11315	1986	36.9	9.1	5.0	11.1	5.4	9.8	17.4	17.6	9.8	10.1	6.4	139
12045	1988	37.5	9.3	5.1	11.2	5.5	10.0	17.7	18.2	10.2	10.6	6.4	142
12775	1990	38.0	9.4	5.4	12.1	5.6	10.2	18.5	19.6	10.8	11.1	6.5	147
13505	1992	38.0	9.2	5.5	11.9	5.5	10.1	18.7	20.1	11.2	11.6	6.6	148
14235	1994	37.9	9.1	5.5	11.8	5.4	10.1	18.8	20.5	11.7	12.1	6.7	150
14965	1996	36.8	8.5	5.4	11.2	5.1	9.8	18.7	20.8	12.1	12.5	6.8	148
15695	1998	35.5	8.0	5.2	10.1	4.9	9.5	18.1	20.1	12.5	12.9	6.9	144
16425	2000	34.4	7.8	5.1	9.8	4.8	9.4	18.0	20.3	12.8	13.3	7.0	143
17155	2002	33.7	7.7	5.1	9.7	4.7	9.3	18.0	20.4	13.1	13.7	7.1	142
17885	2004	33.0	7.5	5.1	9.6	4.6	9.2	17.8	20.3	13.2	14.0	7.1	141
TDS	mg/L	32267	32267	32267	32267	32267	29405	29405	9700	7550	3300	3140	

Appendix A-2-4 Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-2 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	*Total*
0	*1945*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*1*
0	*1946*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*1*
0	*1947*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*1*
0	*1948*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*1*
0	*1949*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*1*
0	*1950*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*1*
0	*1951*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*1*
0	*1952*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*1*
0	*1953*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*1*
0	*1954*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*1*
30	1955	0.2	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	*1*
365	1956	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	*1*
1095	1958	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	*1*
1825	1960	0.5	0.2	0.1	0.2	0.1	0.2	0.2	0.0	0.0	0.0	0.0	*1*
2555	1962	0.7	0.2	0.1	0.2	0.1	0.2	0.2	0.0	0.0	0.0	0.0	*2*
3285	1964	0.8	0.2	0.1	0.2	0.1	0.2	0.3	0.1	0.0	0.0	0.0	*2*
4015	1966	0.9	0.3	0.1	0.2	0.1	0.2	0.3	0.1	0.0	0.0	0.0	*2*
4745	1968	1.0	0.3	0.1	0.3	0.2	0.2	0.3	0.1	0.0	0.0	0.0	*2*
5475	1970	1.0	0.3	0.1	0.3	0.2	0.3	0.4	0.1	0.0	0.0	0.0	*3*
6205	1972	1.1	0.3	0.1	0.3	0.2	0.3	0.4	0.1	0.0	0.0	0.0	*3*
6935	1974	1.1	0.3	0.1	0.3	0.2	0.3	0.4	0.1	0.0	0.0	0.0	*3*
7665	1976	1.1	0.3	0.1	0.3	0.2	0.3	0.4	0.1	0.1	0.0	0.0	*3*
8395	1978	1.1	0.3	0.1	0.3	0.2	0.3	0.5	0.1	0.1	0.0	0.0	*3*
9125	1980	1.1	0.3	0.1	0.3	0.2	0.3	0.5	0.1	0.1	0.0	0.0	*3*
9855	1982	1.2	0.3	0.2	0.3	0.2	0.3	0.5	0.2	0.1	0.0	0.0	*3*
10585	1984	1.2	0.3	0.2	0.4	0.2	0.3	0.5	0.2	0.1	0.0	0.0	*3*
11315	1986	1.2	0.3	0.2	0.4	0.2	0.3	0.5	0.2	0.1	0.0	0.0	*3*
12045	1988	1.2	0.3	0.2	0.4	0.2	0.3	0.5	0.2	0.1	0.0	0.0	*3*
12775	1990	1.2	0.3	0.2	0.4	0.2	0.3	0.5	0.2	0.1	0.0	0.0	*3*
13505	1992	1.2	0.3	0.2	0.4	0.2	0.3	0.5	0.2	0.1	0.0	0.0	*3*
14235	1994	1.2	0.3	0.2	0.4	0.2	0.3	0.6	0.2	0.1	0.0	0.0	*3*
14965	1996	1.2	0.3	0.2	0.4	0.2	0.3	0.6	0.2	0.1	0.0	0.0	*3*
15695	1998	1.1	0.3	0.2	0.3	0.2	0.3	0.5	0.2	0.1	0.0	0.0	*3*
16425	2000	1.1	0.3	0.2	0.3	0.2	0.3	0.5	0.2	0.1	0.0	0.0	*3*
17155	2002	1.1	0.2	0.2	0.3	0.2	0.3	0.5	0.2	0.1	0.0	0.0	*3*
17885	2004	1.1	0.2	0.2	0.3	0.1	0.3	0.5	0.2	0.1	0.0	0.0	*3*
TDS	*mg/L*	*32267*	*32267*	*32267*	*32267*	*32267*	*29405*	*29405*	*9700*	*7550*	*3300*	*3140*	

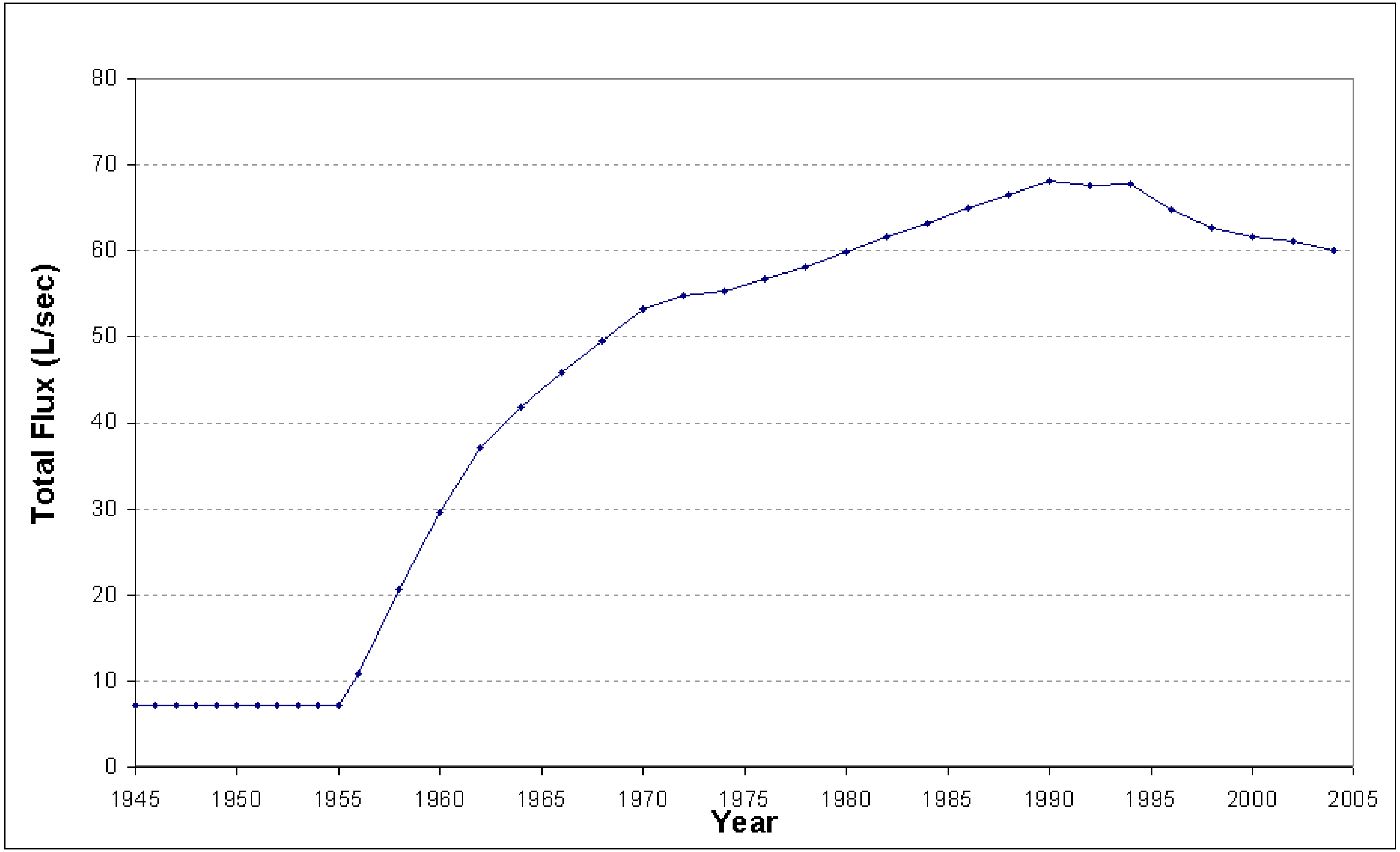
Appendix A-2-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-2 (Loxton Area)



Appendix A-2-5b Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-2 (Loxton Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	*1945*	*591*	*30*	*621*	*7.18*
0	*1946*	*591*	*30*	*621*	*7.18*
0	*1947*	*591*	*30*	*621*	*7.18*
0	*1948*	*591*	*30*	*621*	*7.18*
0	*1949*	*591*	*30*	*621*	*7.18*
0	*1950*	*591*	*30*	*621*	*7.18*
0	*1951*	*591*	*30*	*621*	*7.18*
0	*1952*	*591*	*30*	*621*	*7.18*
0	*1953*	*591*	*30*	*621*	*7.18*
0	*1954*	*591*	*30*	*621*	*7.18*
30	1955	591	30	621	7.18
365	1956	902	34	936	10.83
1095	1958	1732	47	1779	20.59
1825	1960	2491	61	2552	29.54
2555	1962	3138	73	3211	37.17
3285	1964	3526	83	3610	41.78
4015	1966	3870	91	3961	45.84
4745	1968	4190	97	4287	49.62
5475	1970	4495	106	4600	53.25
6205	1972	4621	111	4732	54.76
6935	1974	4670	114	4784	55.37
7665	1976	4775	120	4895	56.65
8395	1978	4907	123	5031	58.22
9125	1980	5049	126	5176	59.90
9855	1982	5192	132	5324	61.62
10585	1984	5332	135	5467	63.28
11315	1986	5469	139	5607	64.90
12045	1988	5601	142	5743	66.47
12775	1990	5734	147	5881	68.06
13505	1992	5697	148	5845	67.65
14235	1994	5706	150	5856	67.78
14965	1996	5445	148	5593	64.73
15695	1998	5278	144	5421	62.75
16425	2000	5185	143	5328	61.67
17155	2002	5134	142	5277	61.07
17885	2004	5047	141	5188	60.05

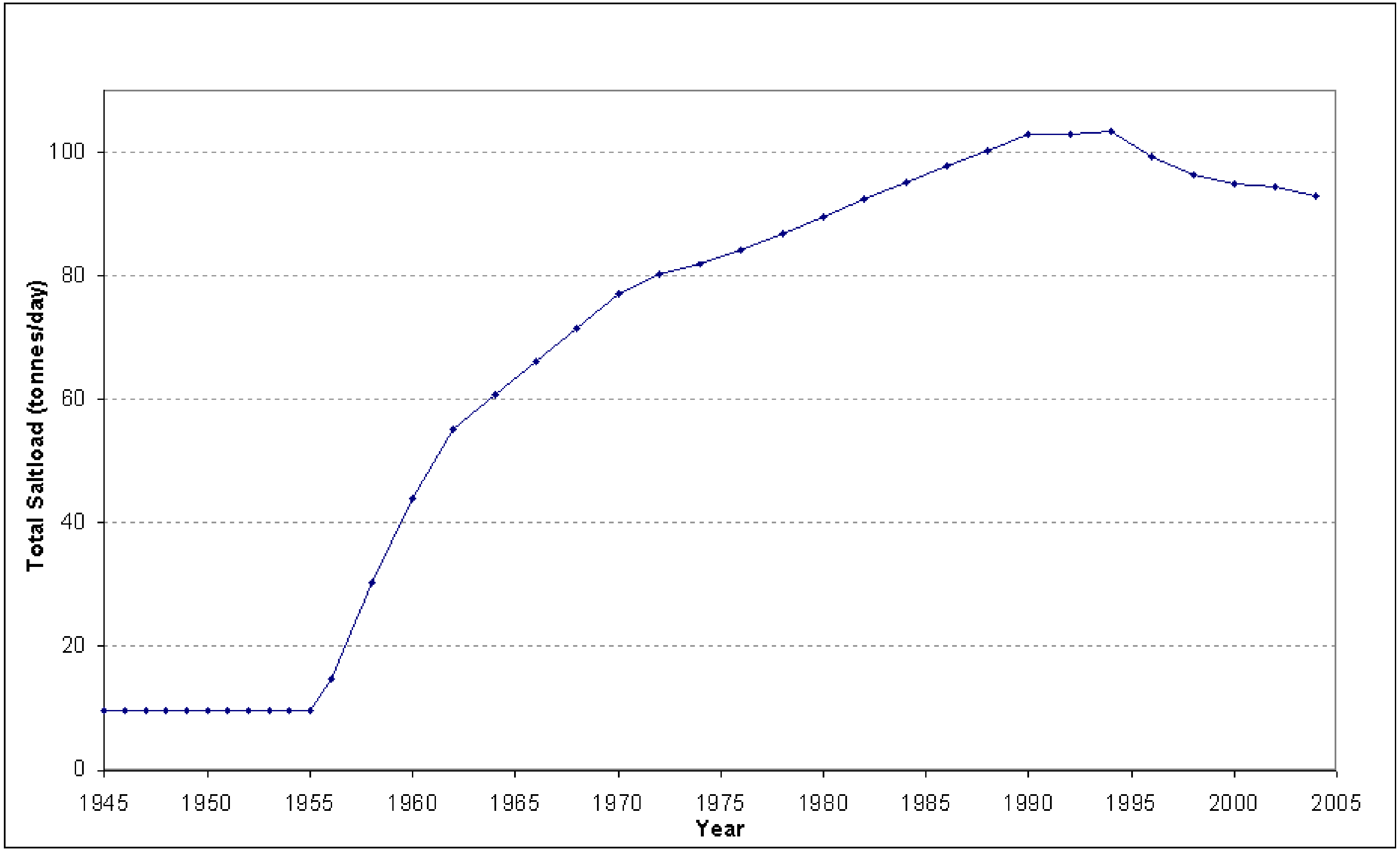
Appendix A-2-6a Predicted total groundwater flux in Scenario-2 (Loxton Area)



Appendix A-2-6b Graph of predicted total groundwater flux (L/s) entering the River Murray in Scenario-2 (Loxton Area)

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Transient Total Saltload (tonnes/day)
0	1945	9	1	9.59
0	1946	9	1	9.59
0	1947	9	1	9.59
0	1948	9	1	9.59
0	1949	9	1	9.59
0	1950	9	1	9.59
0	1951	9	1	9.59
0	1952	9	1	9.59
0	1953	9	1	9.59
0	1954	9	1	9.59
30	1955	9	1	9.59
365	1956	14	1	14.66
1095	1958	29	1	30.33
1825	1960	43	1	44.04
2555	1962	53	2	55.18
3285	1964	59	2	60.73
4015	1966	64	2	66.12
4745	1968	69	2	71.58
5475	1970	74	3	77.03
6205	1972	78	3	80.39
6935	1974	79	3	81.86
7665	1976	81	3	84.15
8395	1978	84	3	86.81
9125	1980	87	3	89.59
9855	1982	89	3	92.42
10585	1984	92	3	95.11
11315	1986	94	3	97.75
12045	1988	97	3	100.33
12775	1990	100	3	103.01
13505	1992	99	3	102.88
14235	1994	100	3	103.44
14965	1996	96	3	99.18
15695	1998	93	3	96.37
16425	2000	92	3	95.00
17155	2002	91	3	94.36
17885	2004	90	3	92.97

Appendix A-2-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-2 (Loxton Area)



Appendix A-2-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-2 (Loxton Area)

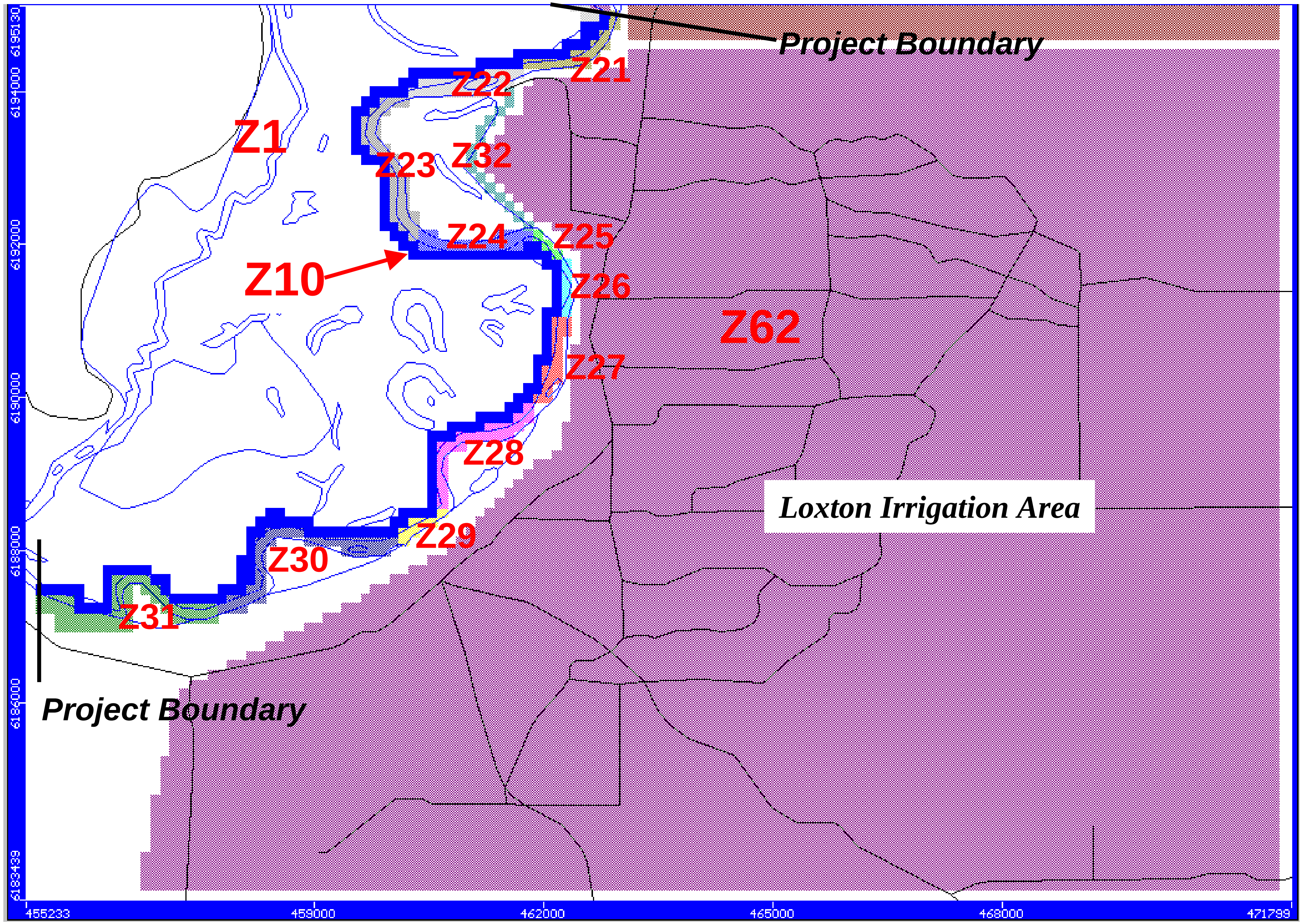
A3. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-3 (LOXTON AREA)

- Flow budget zones (Loxton Area)
- Predicted lateral groundwater flux (m^3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m^3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)

Appendix A-3

Groundwater flux and salt load entering the River Murray
Scenario-3
(Loxton Area)

-Flow budget zones (Loxton Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)



Appendix A-3-1 Flow budget zones in model Layer-1 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1946	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1947	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1948	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1949	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1950	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1951	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1952	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1953	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1954	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
30	1955	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
365	1956	71.5	46.8	0.0	36.3	94.1	176.1	175.1	61.9	35.6	57.7	146.8	0.0	902
1095	1958	134.3	178.8	0.0	149.8	260.5	384.8	309.5	66.4	35.7	57.8	146.8	7.1	1732
1825	1960	215.6	270.8	0.0	233.5	373.7	525.4	490.6	84.1	36.1	58.2	147.0	56.4	2491
2555	1962	300.3	327.7	0.0	283.5	448.3	641.8	683.9	117.6	37.8	58.9	147.5	90.8	3138
3285	1964	355.7	326.5	0.0	282.2	465.3	724.9	868.6	165.9	41.8	60.2	148.2	87.4	3527
4015	1966	397.8	328.4	0.0	283.5	486.0	790.7	1016.1	220.2	48.5	62.1	149.2	88.0	3871
4745	1968	434.5	334.9	0.0	289.6	508.1	847.2	1135.8	274.7	58.2	65.2	150.4	91.7	4190
5475	1970	467.7	342.7	0.0	296.9	529.0	897.2	1245.4	328.3	70.4	69.5	151.9	96.2	4495
6205	1972	493.6	343.6	0.0	297.2	522.3	875.9	1301.8	378.1	84.3	75.1	153.6	96.0	4622
6935	1974	504.7	328.9	0.0	283.5	503.3	861.4	1341.3	424.9	99.6	82.2	155.6	85.9	4671
7665	1976	512.2	321.8	0.0	277.1	499.6	868.6	1384.0	467.0	115.9	90.7	157.8	81.4	4776
8395	1978	520.2	320.0	0.0	275.6	502.3	882.5	1431.0	503.9	132.2	100.3	160.3	80.2	4908
9125	1980	529.4	320.5	0.0	276.3	507.4	898.9	1478.7	536.8	147.8	110.8	163.0	80.6	5060
9855	1982	539.3	322.1	0.0	278.1	513.6	916.2	1525.7	566.5	162.5	121.8	166.0	81.6	5193
10585	1984	549.5	324.3	0.0	280.2	520.1	933.3	1570.9	593.9	176.0	133.1	169.2	82.9	5333
11315	1986	559.8	326.6	0.0	282.4	526.5	949.5	1614.7	620.2	189.0	144.5	172.6	84.2	5470
12045	1988	570.1	329.0	0.0	284.6	532.6	964.2	1656.5	646.2	201.7	156.0	176.4	85.6	5603
12775	1990	579.8	331.3	0.0	286.9	538.2	977.8	1697.7	673.4	214.8	167.6	180.4	87.0	5735
13505	1992	577.0	315.1	0.0	272.7	515.1	950.0	1701.7	698.4	228.2	179.4	184.6	76.2	5698
14235	1994	572.0	305.6	0.0	264.0	504.6	940.1	1706.9	721.6	241.9	191.6	189.1	70.2	5708
14965	1996	568.6	301.0	0.0	260.0	500.0	936.6	1717.8	742.5	255.1	203.9	193.9	67.4	5747
15695	1998	567.2	298.8	0.0	258.1	498.1	936.3	1730.9	760.6	267.1	216.1	198.9	66.1	5798
16425	2000	567.5	297.8	0.0	257.3	497.6	937.9	1745.2	776.9	278.0	227.9	204.1	65.5	5856
17155	2002	568.6	297.4	0.0	257.0	497.8	940.6	1759.9	791.6	287.8	239.0	209.6	65.3	5915
17885	2004	570.4	297.4	0.0	257.1	498.6	943.9	1774.6	804.8	296.6	249.3	215.2	65.3	5973
18615	2006	572.4	297.6	0.0	257.2	499.6	947.5	1788.5	816.5	304.5	259.1	221.1	65.4	6029
19345	2008	574.6	297.9	0.0	257.6	500.8	951.1	1801.5	827.1	311.7	268.2	227.1	65.6	6083
20075	2010	576.8	298.3	0.0	258.0	502.1	954.7	1812.7	836.5	318.2	276.7	233.2	65.8	6133
20805	2012	579.1	298.8	0.0	258.5	503.4	958.0	1822.1	844.4	324.1	284.6	239.4	66.1	6178
21535	2014	581.3	299.3	0.0	258.9	504.7	960.9	1830.0	851.2	329.3	292.0	245.6	66.4	6220
22265	2016	583.4	299.8	0.0	259.4	505.8	963.6	1836.7	857.0	333.9	298.8	251.8	66.7	6257
22995	2018	585.5	300.3	0.0	259.9	506.9	966.0	1842.4	862.0	338.0	305.1	258.1	67.0	6291

Appendix A-3-2a Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-3 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
23725	2020	587.4	300.8	0.0	260.3	508.0	968.2	1847.4	866.3	341.6	310.9	264.2	67.3	6322
24455	2022	589.3	301.2	0.0	260.7	508.9	970.2	1851.8	870.0	344.9	316.2	270.4	67.6	6351
25185	2024	591.1	301.7	0.0	261.1	509.8	972.0	1855.6	873.2	347.8	321.1	276.4	67.8	6377
25915	2026	592.7	302.1	0.0	261.5	510.6	973.7	1859.0	876.0	350.4	325.6	282.4	68.1	6402
26645	2028	594.2	302.4	0.0	261.8	511.3	975.2	1862.0	878.4	352.7	329.8	288.3	68.3	6424
27375	2030	595.7	302.8	0.0	262.1	512.0	976.6	1864.7	880.6	354.8	333.8	294.0	68.5	6445
28105	2032	597.0	303.1	0.0	262.4	512.7	977.8	1867.2	882.5	356.7	337.3	299.7	68.7	6465
28835	2034	598.3	303.5	0.0	262.7	513.3	979.0	1869.5	884.2	358.4	340.6	305.2	68.9	6484
29565	2036	599.5	303.8	0.0	262.9	513.9	980.1	1871.6	885.8	360.0	343.7	310.6	69.0	6501
30295	2038	600.6	304.0	0.0	263.2	514.4	981.2	1873.5	887.3	361.5	346.6	315.8	69.2	6517
31025	2040	601.6	304.3	0.0	263.4	514.9	982.2	1875.3	888.6	362.9	349.2	320.9	69.4	6533
31755	2042	602.6	304.5	0.0	263.6	515.4	983.1	1877.0	889.9	364.2	351.7	325.9	69.5	6547
32485	2044	603.5	304.8	0.0	263.8	515.8	983.9	1878.5	891.0	365.3	354.1	330.7	69.6	6561
33215	2046	604.4	305.0	0.0	264.0	516.2	984.7	1880.0	892.1	366.5	356.3	335.4	69.8	6574
33945	2048	605.2	305.2	0.0	264.2	516.6	985.4	1881.3	893.1	367.5	358.4	339.9	69.9	6587
34675	2050	606.0	305.4	0.0	264.4	516.9	986.1	1882.6	894.1	368.5	360.4	344.3	70.0	6599
35405	2052	606.7	305.6	0.0	264.6	517.3	986.7	1883.7	895.0	369.4	362.2	348.6	70.1	6610
36135	2054	607.4	305.7	0.0	264.7	517.6	987.3	1884.8	895.8	370.3	364.0	352.7	70.2	6620
36865	2056	608.0	305.9	0.0	264.8	517.9	987.8	1885.8	896.6	371.1	365.7	356.7	70.3	6631
37595	2058	608.6	306.1	0.0	265.0	518.1	988.3	1886.7	897.2	371.8	367.3	360.6	70.4	6640
38325	2060	609.2	306.2	0.0	265.1	518.4	988.8	1887.6	897.9	372.5	368.8	364.3	70.5	6649
39055	2062	609.7	306.3	0.0	265.2	518.6	989.3	1888.4	898.4	373.2	370.2	367.9	70.5	6658
39785	2064	610.2	306.5	0.0	265.3	518.8	989.7	1889.1	899.0	373.7	371.5	371.4	70.6	6666
40515	2066	610.6	306.6	0.0	265.4	519.1	990.1	1889.8	899.5	374.3	372.8	374.8	70.7	6674
41245	2068	611.1	306.7	0.0	265.5	519.3	990.5	1890.5	899.9	374.8	374.0	378.1	70.7	6681
41975	2070	611.5	306.8	0.0	265.6	519.4	990.8	1891.1	900.3	375.2	375.1	381.2	70.8	6688
42705	2072	611.9	306.9	0.0	265.7	519.6	991.2	1891.7	900.7	375.7	376.1	384.2	70.9	6695
43435	2074	612.3	307.0	0.0	265.8	519.8	991.5	1892.2	901.1	376.1	377.2	387.2	70.9	6701
44165	2076	612.6	307.1	0.0	265.9	520.0	991.8	1892.8	901.5	376.5	378.1	390.0	71.0	6707
44895	2078	613.0	307.2	0.0	266.0	520.1	992.1	1893.3	901.8	376.9	379.0	392.7	71.0	6713
45625	2080	613.3	307.3	0.0	266.1	520.3	992.3	1893.8	902.1	377.2	379.9	395.3	71.1	6719
46355	2082	613.6	307.4	0.0	266.1	520.4	992.6	1894.2	902.4	377.6	380.8	397.9	71.1	6724
47085	2084	613.9	307.5	0.0	266.2	520.5	992.8	1894.6	902.7	377.9	381.6	400.3	71.2	6729
47815	2086	614.2	307.5	0.0	266.3	520.7	993.1	1895.1	903.0	378.2	382.3	402.6	71.2	6734
48545	2088	614.4	307.6	0.0	266.3	520.8	993.3	1895.5	903.3	378.5	383.0	404.9	71.2	6739
49275	2090	614.7	307.7	0.0	266.4	520.9	993.5	1895.8	903.5	378.8	383.7	407.1	71.3	6743
50005	2092	614.9	307.7	0.0	266.5	521.0	993.7	1896.2	903.8	379.1	384.4	409.1	71.3	6748
50735	2094	615.2	307.8	0.0	266.5	521.1	993.9	1896.6	904.0	379.3	385.1	411.2	71.4	6752
51465	2096	615.4	307.9	0.0	266.6	521.2	994.1	1896.9	904.2	379.6	385.7	413.1	71.4	6756
52195	2098	615.6	307.9	0.0	266.6	521.3	994.3	1897.2	904.4	379.8	386.3	415.0	71.4	6760
52925	2100	615.8	308.0	0.0	266.7	521.4	994.5	1897.6	904.6	380.0	386.8	416.8	71.5	6764
53655	2102	616.0	308.0	0.0	266.7	521.5	994.7	1897.9	904.8	380.3	387.4	418.5	71.5	6767
54385	2104	616.2	308.1	0.0	266.8	521.6	994.8	1898.1	905.0	380.5	387.9	420.2	71.5	6771
TDS	*mg/L*	*25807*	*29055*	*30760*	*39978*	*18716*	*4240*	*7710*	*35935*	*29140*	*24080*	*5620*	*8440*	

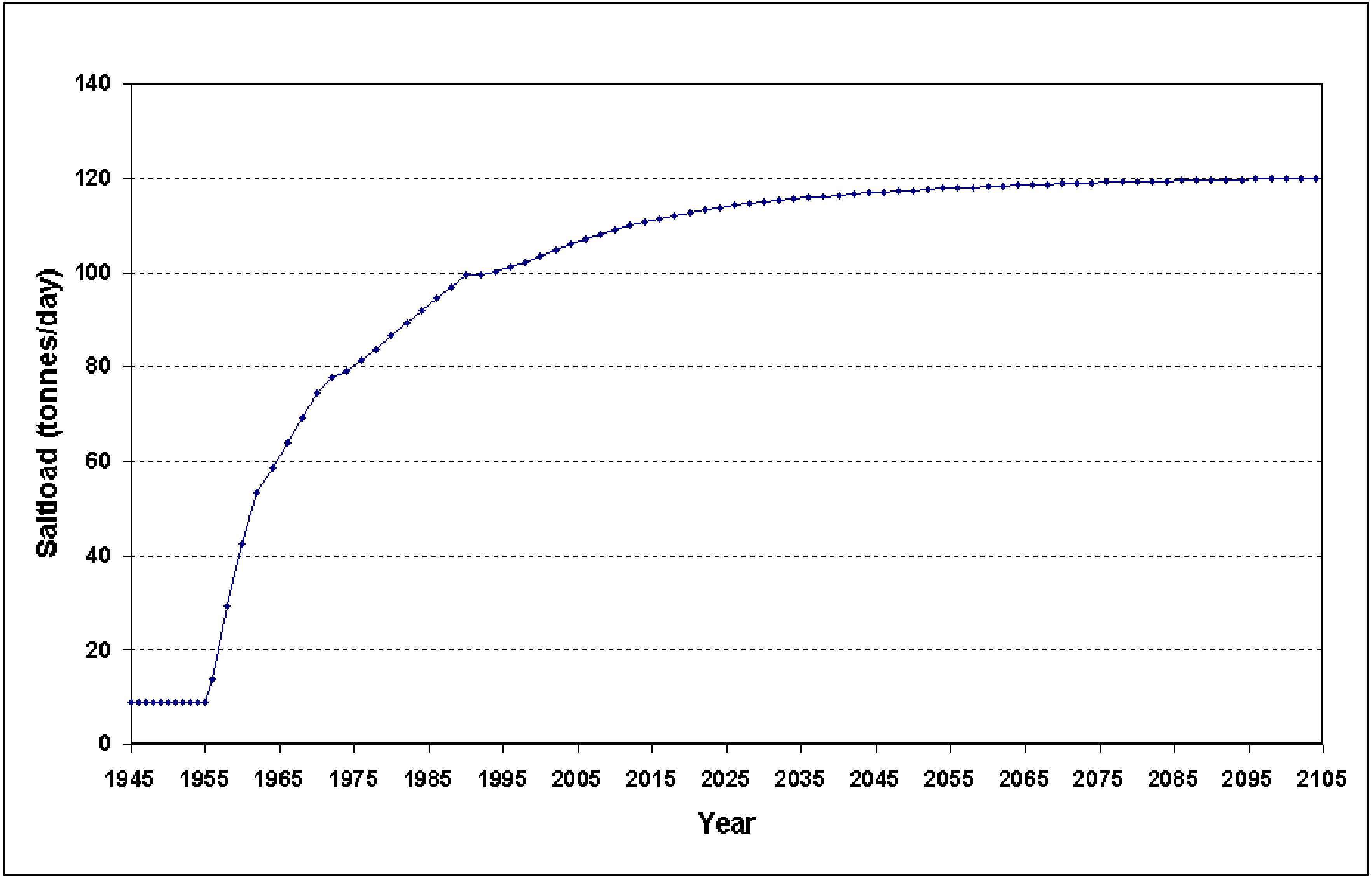
Appendix A-3-2b Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-3 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1946	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1947	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1948	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1949	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1950	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1951	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1952	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1953	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1954	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
30	1955	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
365	1956	1.8	1.4	0.0	1.5	1.8	0.7	1.4	2.2	1.0	1.4	0.8	0.0	13.99
1095	1958	3.5	5.2	0.0	6.0	4.9	1.6	2.4	2.4	1.0	1.4	0.8	0.1	29.25
1825	1960	5.6	7.9	0.0	9.3	7.0	2.2	3.8	3.0	1.1	1.4	0.8	0.5	42.55
2555	1962	7.8	9.5	0.0	11.3	8.4	2.7	5.3	4.2	1.1	1.4	0.8	0.8	53.33
3285	1964	9.2	9.5	0.0	11.3	8.7	3.1	6.7	6.0	1.2	1.4	0.8	0.7	58.62
4015	1966	10.3	9.5	0.0	11.3	9.1	3.4	7.8	7.9	1.4	1.5	0.8	0.7	63.83
4745	1968	11.2	9.7	0.0	11.6	9.5	3.6	8.8	9.9	1.7	1.6	0.8	0.8	69.13
5475	1970	12.1	10.0	0.0	11.9	9.9	3.8	9.6	11.8	2.1	1.7	0.9	0.8	74.39
6205	1972	12.7	10.0	0.0	11.9	9.8	3.7	10.0	13.6	2.5	1.8	0.9	0.8	77.65
6935	1974	13.0	9.6	0.0	11.3	9.4	3.7	10.3	15.3	2.9	2.0	0.9	0.7	79.08
7665	1976	13.2	9.4	0.0	11.1	9.4	3.7	10.7	16.8	3.4	2.2	0.9	0.7	81.26
8395	1978	13.4	9.3	0.0	11.0	9.4	3.7	11.0	18.1	3.9	2.4	0.9	0.7	83.87
9125	1980	13.7	9.3	0.0	11.0	9.5	3.8	11.4	19.3	4.3	2.7	0.9	0.7	86.59
9855	1982	13.9	9.4	0.0	11.1	9.6	3.9	11.8	20.4	4.7	2.9	0.9	0.7	89.30
10585	1984	14.2	9.4	0.0	11.2	9.7	4.0	12.1	21.3	5.1	3.2	1.0	0.7	91.93
11315	1986	14.4	9.5	0.0	11.3	9.9	4.0	12.4	22.3	5.5	3.5	1.0	0.7	94.51
12045	1988	14.7	9.6	0.0	11.4	10.0	4.1	12.8	23.2	5.9	3.8	1.0	0.7	97.04
12775	1990	15.0	9.6	0.0	11.5	10.1	4.1	13.1	24.2	6.3	4.0	1.0	0.7	99.61
13505	1992	14.9	9.2	0.0	10.9	9.6	4.0	13.1	25.1	6.6	4.3	1.0	0.6	99.48
14235	1994	14.8	8.9	0.0	10.6	9.4	4.0	13.2	25.9	7.1	4.6	1.1	0.6	100.03
14965	1996	14.7	8.7	0.0	10.4	9.4	4.0	13.2	26.7	7.4	4.9	1.1	0.6	101.08
15695	1998	14.6	8.7	0.0	10.3	9.3	4.0	13.3	27.3	7.8	5.2	1.1	0.6	102.27
16425	2000	14.6	8.7	0.0	10.3	9.3	4.0	13.5	27.9	8.1	5.5	1.1	0.6	103.53
17155	2002	14.7	8.6	0.0	10.3	9.3	4.0	13.6	28.4	8.4	5.8	1.2	0.6	104.78
17885	2004	14.7	8.6	0.0	10.3	9.3	4.0	13.7	28.9	8.6	6.0	1.2	0.6	105.98
18615	2006	14.8	8.6	0.0	10.3	9.4	4.0	13.8	29.3	8.9	6.2	1.2	0.6	107.10
19345	2008	14.8	8.7	0.0	10.3	9.4	4.0	13.9	29.7	9.1	6.5	1.3	0.6	108.17
20075	2010	14.9	8.7	0.0	10.3	9.4	4.0	14.0	30.1	9.3	6.7	1.3	0.6	109.15
20805	2012	14.9	8.7	0.0	10.3	9.4	4.1	14.0	30.3	9.4	6.9	1.3	0.6	110.03
21535	2014	15.0	8.7	0.0	10.4	9.4	4.1	14.1	30.6	9.6	7.0	1.4	0.6	110.83
22265	2016	15.1	8.7	0.0	10.4	9.5	4.1	14.2	30.8	9.7	7.2	1.4	0.6	111.55
22995	2018	15.1	8.7	0.0	10.4	9.5	4.1	14.2	31.0	9.8	7.3	1.5	0.6	112.20

Appendix A-3-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-3 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
23725	2020	15.2	8.7	0.0	10.4	9.5	4.1	14.2	31.1	10.0	7.5	1.5	0.6	112.78
24455	2022	15.2	8.8	0.0	10.4	9.5	4.1	14.3	31.3	10.0	7.6	1.5	0.6	113.31
25185	2024	15.3	8.8	0.0	10.4	9.5	4.1	14.3	31.4	10.1	7.7	1.6	0.6	113.79
25915	2026	15.3	8.8	0.0	10.5	9.6	4.1	14.3	31.5	10.2	7.8	1.6	0.6	114.23
26645	2028	15.3	8.8	0.0	10.5	9.6	4.1	14.4	31.6	10.3	7.9	1.6	0.6	114.63
27375	2030	15.4	8.8	0.0	10.5	9.6	4.1	14.4	31.6	10.3	8.0	1.7	0.6	115.00
28105	2032	15.4	8.8	0.0	10.5	9.6	4.1	14.4	31.7	10.4	8.1	1.7	0.6	115.34
28835	2034	15.4	8.8	0.0	10.5	9.6	4.2	14.4	31.8	10.4	8.2	1.7	0.6	115.65
29565	2036	15.5	8.8	0.0	10.5	9.6	4.2	14.4	31.8	10.5	8.3	1.7	0.6	115.94
30295	2038	15.5	8.8	0.0	10.5	9.6	4.2	14.4	31.9	10.5	8.3	1.8	0.6	116.21
31025	2040	15.5	8.8	0.0	10.5	9.6	4.2	14.5	31.9	10.6	8.4	1.8	0.6	116.46
31755	2042	15.6	8.8	0.0	10.5	9.6	4.2	14.5	32.0	10.6	8.5	1.8	0.6	116.70
32485	2044	15.6	8.9	0.0	10.5	9.7	4.2	14.5	32.0	10.6	8.5	1.9	0.6	116.92
33215	2046	15.6	8.9	0.0	10.6	9.7	4.2	14.5	32.1	10.7	8.6	1.9	0.6	117.14
33945	2048	15.6	8.9	0.0	10.6	9.7	4.2	14.5	32.1	10.7	8.6	1.9	0.6	117.33
34675	2050	15.6	8.9	0.0	10.6	9.7	4.2	14.5	32.1	10.7	8.7	1.9	0.6	117.52
35405	2052	15.7	8.9	0.0	10.6	9.7	4.2	14.5	32.2	10.8	8.7	2.0	0.6	117.70
36135	2054	15.7	8.9	0.0	10.6	9.7	4.2	14.5	32.2	10.8	8.8	2.0	0.6	117.87
36865	2056	15.7	8.9	0.0	10.6	9.7	4.2	14.5	32.2	10.8	8.8	2.0	0.6	118.02
37595	2058	15.7	8.9	0.0	10.6	9.7	4.2	14.5	32.2	10.8	8.8	2.0	0.6	118.17
38325	2060	15.7	8.9	0.0	10.6	9.7	4.2	14.6	32.3	10.9	8.9	2.0	0.6	118.30
39055	2062	15.7	8.9	0.0	10.6	9.7	4.2	14.6	32.3	10.9	8.9	2.1	0.6	118.43
39785	2064	15.7	8.9	0.0	10.6	9.7	4.2	14.6	32.3	10.9	8.9	2.1	0.6	118.55
40515	2066	15.8	8.9	0.0	10.6	9.7	4.2	14.6	32.3	10.9	9.0	2.1	0.6	118.67
41245	2068	15.8	8.9	0.0	10.6	9.7	4.2	14.6	32.3	10.9	9.0	2.1	0.6	118.78
41975	2070	15.8	8.9	0.0	10.6	9.7	4.2	14.6	32.4	10.9	9.0	2.1	0.6	118.88
42705	2072	15.8	8.9	0.0	10.6	9.7	4.2	14.6	32.4	10.9	9.1	2.2	0.6	118.97
43435	2074	15.8	8.9	0.0	10.6	9.7	4.2	14.6	32.4	11.0	9.1	2.2	0.6	119.07
44165	2076	15.8	8.9	0.0	10.6	9.7	4.2	14.6	32.4	11.0	9.1	2.2	0.6	119.15
44895	2078	15.8	8.9	0.0	10.6	9.7	4.2	14.6	32.4	11.0	9.1	2.2	0.6	119.24
45625	2080	15.8	8.9	0.0	10.6	9.7	4.2	14.6	32.4	11.0	9.1	2.2	0.6	119.32
46355	2082	15.8	8.9	0.0	10.6	9.7	4.2	14.6	32.4	11.0	9.2	2.2	0.6	119.39
47085	2084	15.8	8.9	0.0	10.6	9.7	4.2	14.6	32.4	11.0	9.2	2.2	0.6	119.47
47815	2086	15.8	8.9	0.0	10.6	9.7	4.2	14.6	32.4	11.0	9.2	2.3	0.6	119.54
48545	2088	15.9	8.9	0.0	10.6	9.7	4.2	14.6	32.5	11.0	9.2	2.3	0.6	119.60
49275	2090	15.9	8.9	0.0	10.6	9.7	4.2	14.6	32.5	11.0	9.2	2.3	0.6	119.67
50005	2092	15.9	8.9	0.0	10.7	9.8	4.2	14.6	32.5	11.0	9.3	2.3	0.6	119.73
50735	2094	15.9	8.9	0.0	10.7	9.8	4.2	14.6	32.5	11.1	9.3	2.3	0.6	119.79
51465	2096	15.9	8.9	0.0	10.7	9.8	4.2	14.6	32.5	11.1	9.3	2.3	0.6	119.84
52195	2098	15.9	8.9	0.0	10.7	9.8	4.2	14.6	32.5	11.1	9.3	2.3	0.6	119.90
52925	2100	15.9	8.9	0.0	10.7	9.8	4.2	14.6	32.5	11.1	9.3	2.3	0.6	119.95
53655	2102	15.9	9.0	0.0	10.7	9.8	4.2	14.6	32.5	11.1	9.3	2.4	0.6	120.00
54385	2104	15.9	9.0	0.0	10.7	9.8	4.2	14.6	32.5	11.1	9.3	2.4	0.6	120.05
TDS	mg/L	25807	29055	30760	39978	18716	4240	7710	35935	29140	24080	5620	8440	

Appendix A-3-3b Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-3 (Loxton Area)



Appendix A-3-3c Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-3 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	1945	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1946	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1947	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1948	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1949	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1950	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1951	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1952	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1953	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1954	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
30	1955	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
365	1956	6.4	2.2	1.9	1.6	1.5	2.9	3.1	2.5	2.5	4.1	5.0	34
1095	1958	10.3	4.6	2.1	3.7	2.8	4.5	4.5	2.7	2.5	4.2	5.0	47
1825	1960	15.7	6.3	2.4	5.4	3.6	5.6	6.2	3.3	2.7	4.4	5.1	61
2555	1962	21.0	7.4	2.8	6.5	4.2	6.5	7.8	4.2	2.8	4.7	5.1	73
3285	1964	24.7	7.6	3.0	7.3	4.4	7.2	9.7	6.1	3.2	5.0	5.2	83
4015	1966	27.3	7.8	3.2	7.6	4.6	7.7	10.8	7.2	3.6	5.3	5.4	91
4745	1968	29.5	8.1	3.4	7.9	4.8	8.2	11.7	8.4	4.1	5.7	5.5	97
5475	1970	31.3	8.4	3.7	8.9	5.0	8.6	13.0	10.2	4.8	6.1	5.6	106
6205	1972	32.8	8.6	3.9	9.1	5.0	8.7	13.6	11.2	5.4	6.6	5.7	111
6935	1974	33.6	8.5	4.0	9.0	5.0	8.8	14.1	12.1	6.1	7.0	5.8	114
7665	1976	34.2	8.5	4.2	9.7	5.0	9.0	15.0	13.7	6.9	7.6	5.9	120
8395	1978	34.7	8.6	4.3	9.8	5.1	9.1	15.4	14.5	7.5	8.1	6.0	123
9125	1980	35.2	8.7	4.5	9.9	5.2	9.3	15.8	15.1	8.2	8.6	6.1	126
9855	1982	35.8	8.9	4.7	10.8	5.3	9.5	16.7	16.6	8.8	9.1	6.2	132
10585	1984	36.4	9.0	4.9	10.9	5.3	9.7	17.0	17.1	9.3	9.6	6.3	136
11315	1986	36.9	9.1	5.0	11.1	5.4	9.8	17.4	17.6	9.8	10.1	6.4	139
12045	1988	37.5	9.3	5.1	11.2	5.5	10.0	17.7	18.2	10.2	10.6	6.4	142
12775	1990	38.0	9.4	5.4	12.1	5.6	10.2	18.5	19.6	10.8	11.1	6.5	147
13505	1992	38.0	9.2	5.5	11.9	5.5	10.1	18.7	20.1	11.2	11.6	6.6	148
14235	1994	37.9	9.1	5.5	11.8	5.4	10.1	18.8	20.5	11.7	12.1	6.7	150
14965	1996	37.8	9.1	5.6	11.8	5.4	10.1	19.0	20.9	12.1	12.6	6.8	151
15695	1998	37.7	9.1	5.5	11.1	5.4	10.1	18.7	20.4	12.5	13.0	6.9	150
16425	2000	37.8	9.2	5.6	11.1	5.4	10.1	18.8	20.7	12.9	13.4	7.0	152
17155	2002	37.8	9.2	5.7	11.2	5.4	10.2	19.0	21.0	13.2	13.8	7.1	154
17885	2004	38.0	9.3	5.8	11.2	5.4	10.2	19.1	21.2	13.5	14.2	7.2	155
18615	2006	38.1	9.3	5.7	10.6	5.4	10.2	18.8	20.6	13.7	14.5	7.3	154
19345	2008	38.2	9.4	5.8	10.6	5.4	10.2	18.9	20.8	13.9	14.8	7.4	155
20075	2010	38.3	9.4	5.8	10.7	5.5	10.3	19.1	21.0	14.1	15.1	7.4	157
20805	2012	38.5	9.5	5.9	10.7	5.5	10.3	19.2	21.2	14.3	15.4	7.5	158
21535	2014	38.6	9.5	6.0	10.8	5.5	10.3	19.3	21.3	14.5	15.7	7.6	159
22265	2016	38.7	9.6	6.0	10.8	5.5	10.4	19.3	21.5	14.6	15.9	7.7	160
22995	2018	38.9	9.6	6.1	10.9	5.5	10.4	19.4	21.6	14.8	16.1	7.7	161

Appendix A-3-4a Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-3 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
23725	2020	39.0	9.6	6.1	10.9	5.5	10.4	19.5	21.7	14.9	16.4	7.8	162
24455	2022	39.1	9.7	6.2	10.9	5.5	10.5	19.6	21.8	15.0	16.6	7.9	163
25185	2024	39.2	9.7	6.2	11.0	5.6	10.5	19.6	21.9	15.1	16.7	7.9	163
25915	2026	39.3	9.8	6.3	11.0	5.6	10.5	19.7	22.0	15.2	16.9	8.0	164
26645	2028	39.4	9.8	6.3	11.0	5.6	10.5	19.7	22.1	15.3	17.1	8.0	165
27375	2030	39.5	9.8	6.4	11.1	5.6	10.6	19.8	22.1	15.3	17.2	8.1	165
28105	2032	39.6	9.9	6.4	11.1	5.6	10.6	19.8	22.2	15.4	17.4	8.2	166
28835	2034	39.6	9.9	6.4	11.1	5.6	10.6	19.9	22.3	15.5	17.5	8.2	167
29565	2036	39.7	9.9	6.5	11.2	5.6	10.6	19.9	22.3	15.5	17.6	8.3	167
30295	2038	39.8	9.9	6.5	11.2	5.6	10.6	19.9	22.4	15.6	17.7	8.3	168
31025	2040	39.9	10.0	6.5	11.2	5.6	10.6	20.0	22.4	15.6	17.8	8.4	168
31755	2042	39.9	10.0	6.6	11.2	5.7	10.7	20.0	22.5	15.7	17.9	8.4	169
32485	2044	40.0	10.0	6.6	11.3	5.7	10.7	20.1	22.5	15.7	18.0	8.4	169
33215	2046	40.0	10.0	6.6	11.3	5.7	10.7	20.1	22.6	15.7	18.1	8.5	169
33945	2048	40.1	10.1	6.7	11.3	5.7	10.7	20.1	22.6	15.8	18.2	8.5	170
34675	2050	40.1	10.1	6.7	11.3	5.7	10.7	20.1	22.6	15.8	18.3	8.6	170
35405	2052	40.2	10.1	6.7	11.3	5.7	10.7	20.2	22.7	15.9	18.4	8.6	170
36135	2054	40.2	10.1	6.7	11.3	5.7	10.7	20.2	22.7	15.9	18.4	8.6	171
36865	2056	40.3	10.1	6.8	11.4	5.7	10.8	20.2	22.8	15.9	18.5	8.7	171
37595	2058	40.3	10.2	6.8	11.4	5.7	10.8	20.2	22.8	16.0	18.6	8.7	171
38325	2060	40.3	10.2	6.8	11.4	5.7	10.8	20.3	22.8	16.0	18.6	8.7	172
39055	2062	40.4	10.2	6.8	11.4	5.7	10.8	20.3	22.8	16.0	18.7	8.8	172
39785	2064	40.4	10.2	6.9	11.4	5.7	10.8	20.3	22.9	16.0	18.8	8.8	172
40515	2066	40.4	10.2	6.9	11.4	5.7	10.8	20.3	22.9	16.0	18.8	8.8	172
41245	2068	40.5	10.2	6.9	11.5	5.7	10.8	20.4	22.9	16.1	18.9	8.8	173
41975	2070	40.5	10.2	6.9	11.5	5.7	10.8	20.4	22.9	16.1	18.9	8.9	173
42705	2072	40.5	10.3	6.9	11.5	5.7	10.8	20.4	23.0	16.1	19.0	8.9	173
43435	2074	40.6	10.3	6.9	11.5	5.7	10.8	20.4	23.0	16.1	19.0	8.9	173
44165	2076	40.6	10.3	7.0	11.5	5.7	10.8	20.4	23.0	16.1	19.1	8.9	173
44895	2078	40.6	10.3	7.0	11.5	5.7	10.8	20.4	23.0	16.2	19.1	9.0	174
45625	2080	40.6	10.3	7.0	11.5	5.7	10.9	20.5	23.1	16.2	19.1	9.0	174
46355	2082	40.7	10.3	7.0	11.5	5.7	10.9	20.5	23.1	16.2	19.2	9.0	174
47085	2084	40.7	10.3	7.0	11.5	5.8	10.9	20.5	23.1	16.2	19.2	9.0	174
47815	2086	40.7	10.3	7.0	11.6	5.8	10.9	20.5	23.1	16.2	19.3	9.1	174
48545	2088	40.7	10.3	7.1	11.6	5.8	10.9	20.5	23.1	16.2	19.3	9.1	175
49275	2090	40.7	10.4	7.1	11.6	5.8	10.9	20.5	23.1	16.2	19.3	9.1	175
50005	2092	40.8	10.4	7.1	11.6	5.8	10.9	20.5	23.2	16.3	19.4	9.1	175
50735	2094	40.8	10.4	7.1	11.6	5.8	10.9	20.6	23.2	16.3	19.4	9.1	175
51465	2096	40.8	10.4	7.1	11.6	5.8	10.9	20.6	23.2	16.3	19.4	9.1	175
52195	2098	40.8	10.4	7.1	11.6	5.8	10.9	20.6	23.2	16.3	19.4	9.2	175
52925	2100	40.8	10.4	7.1	11.6	5.8	10.9	20.6	23.2	16.3	19.5	9.2	175
53655	2102	40.8	10.4	7.1	11.6	5.8	10.9	20.6	23.2	16.3	19.5	9.2	176
54385	2104	40.9	10.4	7.2	11.6	5.8	10.9	20.6	23.2	16.3	19.5	9.2	176
TDS	*mg/L*	*32267*	*32267*	*32267*	*32267*	*32267*	*29405*	*29405*	*9700*	*7550*	*3300*	*3140*	

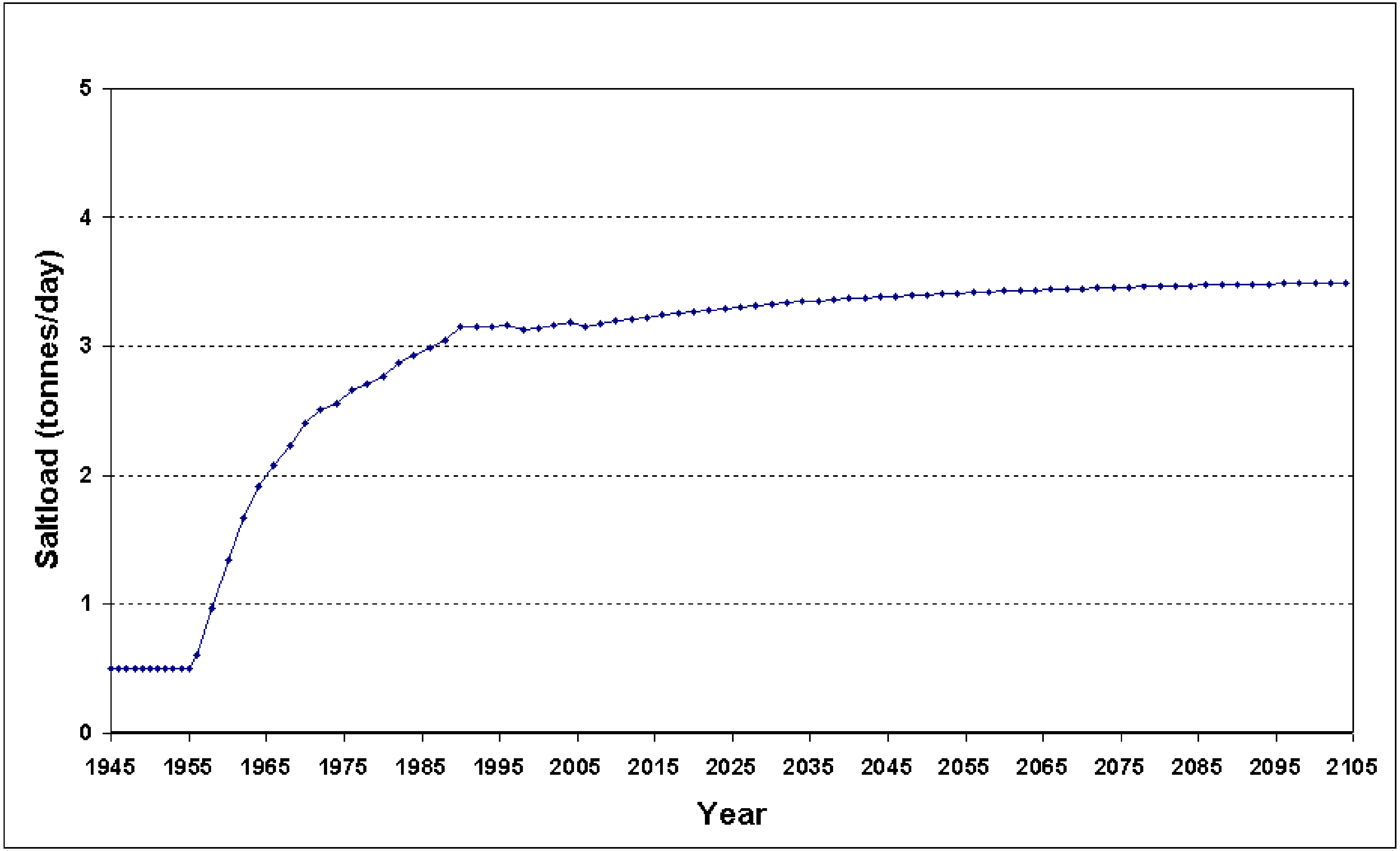
Appendix A-3-4b Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-3 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	1945	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1946	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1947	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1948	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1949	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1950	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1951	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1952	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1953	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1954	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
30	1955	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
365	1956	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.60
1095	1958	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.97
1825	1960	0.5	0.2	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	1.34
2555	1962	0.7	0.2	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	1.67
3285	1964	0.8	0.2	0.1	0.2	0.1	0.3	0.1	0.0	0.0	0.0	0.0	1.92
4015	1966	0.9	0.3	0.1	0.2	0.1	0.3	0.1	0.0	0.0	0.0	0.0	2.08
4745	1968	1.0	0.3	0.1	0.3	0.2	0.3	0.1	0.0	0.0	0.0	0.0	2.23
5475	1970	1.0	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.41
6205	1972	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.51
6935	1974	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.56
7665	1976	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.1	0.0	0.0	0.0	2.66
8395	1978	1.1	0.3	0.1	0.3	0.2	0.5	0.1	0.1	0.0	0.0	0.0	2.71
9125	1980	1.1	0.3	0.1	0.3	0.2	0.5	0.1	0.1	0.0	0.0	0.0	2.77
9855	1982	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.88
10585	1984	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.93
11315	1986	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.99
12045	1988	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.04
12775	1990	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.15
13505	1992	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.15
14235	1994	1.2	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.0	0.0	0.0	3.15
14965	1996	1.2	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.0	0.0	0.0	3.16
15695	1998	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.13
16425	2000	1.2	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.0	0.0	0.0	3.15
17155	2002	1.2	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.0	0.0	0.0	3.17
17885	2004	1.2	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.0	0.0	0.0	3.19
18615	2006	1.2	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.0	0.0	0.0	3.16
19345	2008	1.2	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.0	0.0	0.0	3.17
20075	2010	1.2	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.0	0.0	0.0	3.19
20805	2012	1.2	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.21
21535	2014	1.2	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.23
22265	2016	1.3	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.24
22995	2018	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.26

Appendix A-3-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-3 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
23725	2020	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.27
24455	2022	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.28
25185	2024	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.30
25915	2026	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.31
26645	2028	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.32
27375	2030	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.33
28105	2032	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.34
28835	2034	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.35
29565	2036	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.35
30295	2038	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.36
31025	2040	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.37
31755	2042	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.38
32485	2044	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.38
33215	2046	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.39
33945	2048	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.40
34675	2050	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.40
35405	2052	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.41
36135	2054	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.41
36865	2056	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.42
37595	2058	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.42
38325	2060	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.43
39055	2062	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.43
39785	2064	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.44
40515	2066	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.44
41245	2068	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.44
41975	2070	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.45
42705	2072	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.45
43435	2074	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.46
44165	2076	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.46
44895	2078	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.46
45625	2080	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.47
46355	2082	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.47
47085	2084	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.47
47815	2086	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.47
48545	2088	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.48
49275	2090	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.48
50005	2092	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.48
50735	2094	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.48
51465	2096	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.49
52195	2098	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.49
52925	2100	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.49
53655	2102	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.49
54385	2104	1.3	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.1	0.0	0.0	3.49
TDS	*mg/L*	*32267*	*32267*	*32267*	*32267*	*32267*	*29405*	*29405*	*9700*	*7550*	*3300*	*3140*	

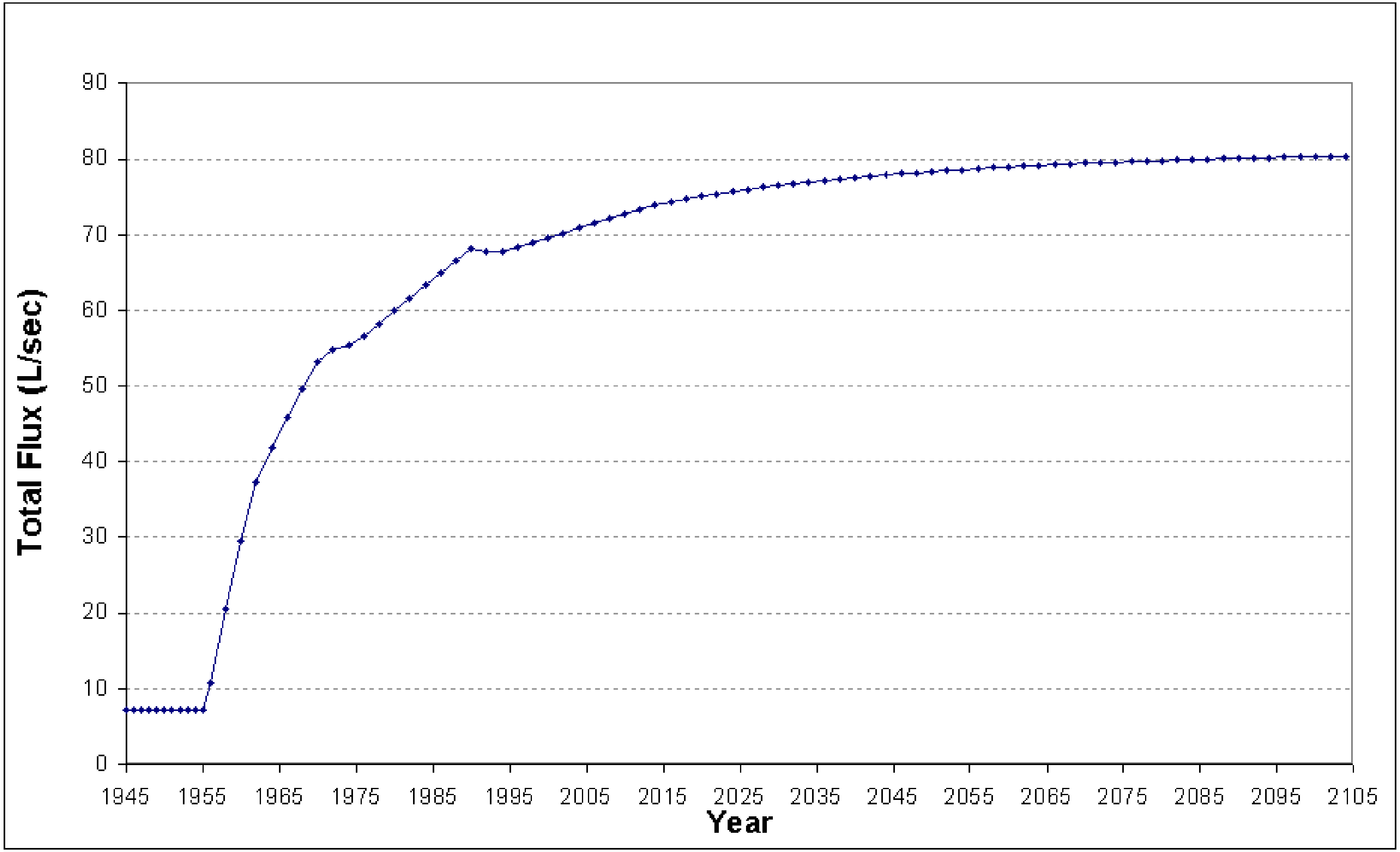
Appendix A-3-5b Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-3 (Loxton Area)



Appendix A-3-5c Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-3 (Loxton Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	1945	591	30	621	7.18
0	1946	591	30	621	7.18
0	1947	591	30	621	7.18
0	1948	591	30	621	7.18
0	1949	591	30	621	7.18
0	1950	591	30	621	7.18
0	1951	591	30	621	7.18
0	1952	591	30	621	7.18
0	1953	591	30	621	7.18
0	1954	591	30	621	7.18
30	1955	591	30	621	7.18
365	1956	902	34	936	10.83
1095	1958	1732	47	1779	20.59
1825	1960	2491	61	2552	29.54
2555	1962	3138	73	3211	37.17
3285	1964	3527	83	3610	41.78
4015	1966	3871	91	3961	45.85
4745	1968	4190	97	4287	49.62
5475	1970	4495	106	4601	53.25
6205	1972	4622	111	4732	54.77
6935	1974	4671	114	4785	55.39
7665	1976	4776	120	4896	56.66
8395	1978	4908	123	5032	58.24
9125	1980	5050	126	5177	59.91
9855	1982	5193	132	5326	61.64
10585	1984	5333	136	5469	63.30
11315	1986	5470	139	5609	64.92
12045	1988	5603	142	5744	66.49
12775	1990	5735	147	5882	68.08
13505	1992	5698	148	5847	67.67
14235	1994	5708	150	5857	67.79
14965	1996	5747	151	5898	68.27
15695	1998	5798	150	5949	68.85
16425	2000	5856	152	6007	69.53
17155	2002	5915	154	6068	70.23
17885	2004	5973	155	6128	70.93
18615	2006	6029	154	6183	71.57
19345	2008	6083	155	6239	72.21
20075	2010	6133	157	6290	72.80
20805	2012	6178	158	6336	73.34
21535	2014	6220	159	6379	73.83
22265	2016	6257	160	6417	74.27
22995	2018	6291	161	6452	74.68
23725	2020	6322	162	6484	75.05
24455	2022	6351	163	6514	75.39
25185	2024	6377	163	6541	75.70
25915	2026	6402	164	6566	76.00
26645	2028	6424	165	6589	76.26
27375	2030	6445	165	6611	76.52
28105	2032	6465	166	6631	76.75
28835	2034	6484	167	6650	76.97
29565	2036	6501	167	6668	77.18
30295	2038	6517	168	6685	77.37
31025	2040	6533	168	6701	77.55
31755	2042	6547	169	6716	77.73
32485	2044	6561	169	6730	77.89
33215	2046	6574	169	6744	78.05
33945	2048	6587	170	6756	78.20
34675	2050	6599	170	6769	78.34
35405	2052	6610	170	6780	78.47
36135	2054	6620	171	6791	78.60
36865	2056	6631	171	6802	78.72
37595	2058	6640	171	6811	78.84
38325	2060	6649	172	6821	78.94
39055	2062	6658	172	6830	79.05
39785	2064	6666	172	6838	79.14
40515	2066	6674	172	6846	79.24
41245	2068	6681	173	6854	79.32
41975	2070	6688	173	6861	79.41
42705	2072	6695	173	6868	79.49
43435	2074	6701	173	6874	79.56
44165	2076	6707	173	6881	79.64
44895	2078	6713	174	6887	79.71
45625	2080	6719	174	6893	79.77
46355	2082	6724	174	6898	79.84
47085	2084	6729	174	6903	79.90
47815	2086	6734	174	6909	79.96
48545	2088	6739	175	6913	80.02
49275	2090	6743	175	6918	80.07
50005	2092	6748	175	6923	80.12
50735	2094	6752	175	6927	80.17
51465	2096	6756	175	6931	80.22
52195	2098	6760	175	6935	80.27
52925	2100	6764	175	6939	80.31
53655	2102	6767	176	6943	80.36
54385	2104	6771	176	6946	80.40

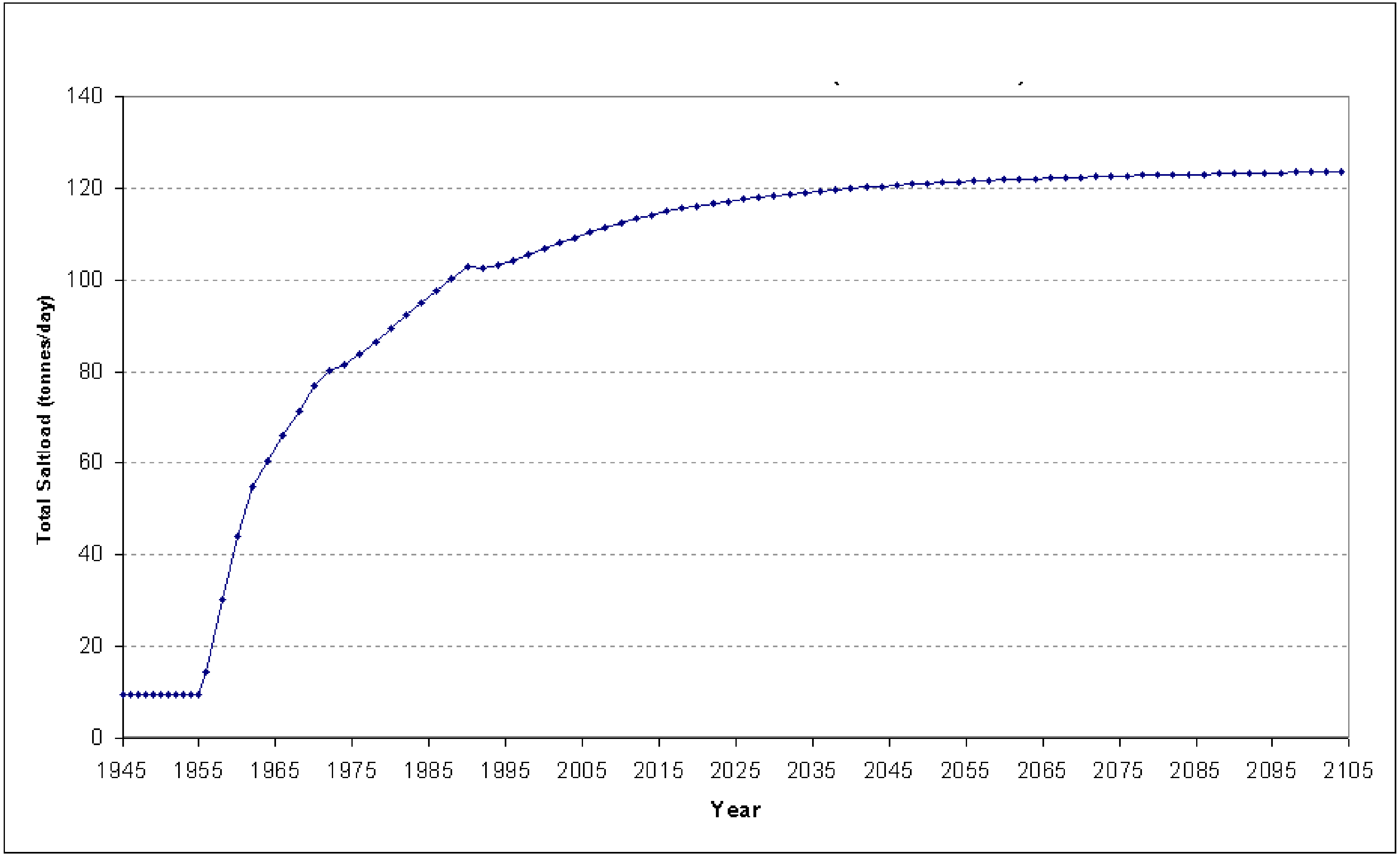
Appendix A-3-6a Predicted total groundwater flux in Scenario-3 (Loxton Area)



Appendix A-3-6b Graph of predicted total groundwater flux (L/s) entering the River Murray in Scenario-3 (Loxton Area)

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	9	0	9.54
0	1946	9	0	9.54
0	1947	9	0	9.54
0	1948	9	0	9.54
0	1949	9	0	9.54
0	1950	9	0	9.54
0	1951	9	0	9.54
0	1952	9	0	9.54
0	1953	9	0	9.54
0	1954	9	0	9.54
30	1955	9	0	9.54
365	1956	14	1	14.59
1095	1958	29	1	30.22
1825	1960	43	1	43.89
2555	1962	53	2	55.00
3285	1964	59	2	60.54
4015	1966	64	2	65.91
4745	1968	69	2	71.36
5475	1970	74	2	76.80
6205	1972	78	3	80.16
6935	1974	79	3	81.64
7665	1976	81	3	83.92
8395	1978	84	3	86.58
9125	1980	87	3	89.36
9855	1982	89	3	92.18
10585	1984	92	3	94.87
11315	1986	95	3	97.50
12045	1988	97	3	100.08
12775	1990	100	3	102.76
13505	1992	99	3	102.63
14235	1994	100	3	103.19
14965	1996	101	3	104.24
15695	1998	102	3	105.40
16425	2000	104	3	106.68
17155	2002	105	3	107.95
17885	2004	106	3	109.17
18615	2006	107	3	110.26
19345	2008	108	3	111.34
20075	2010	109	3	112.34
20805	2012	110	3	113.25
21535	2014	111	3	114.06
22265	2016	112	3	114.79
22995	2018	112	3	115.46
23725	2020	113	3	116.05
24455	2022	113	3	116.60
25185	2024	114	3	117.09
25915	2026	114	3	117.54
26645	2028	115	3	117.95
27375	2030	115	3	118.33
28105	2032	115	3	118.67
28835	2034	116	3	119.00
29565	2036	116	3	119.29
30295	2038	116	3	119.57
31025	2040	116	3	119.83
31755	2042	117	3	120.08
32485	2044	117	3	120.31
33215	2046	117	3	120.53
33945	2048	117	3	120.73
34675	2050	118	3	120.92
35405	2052	118	3	121.11
36135	2054	118	3	121.28
36865	2056	118	3	121.44
37595	2058	118	3	121.59
38325	2060	118	3	121.73
39055	2062	118	3	121.87
39785	2064	119	3	121.99
40515	2066	119	3	122.11
41245	2068	119	3	122.22
41975	2070	119	3	122.33
42705	2072	119	3	122.43
43435	2074	119	3	122.52
44165	2076	119	3	122.61
44895	2078	119	3	122.70
45625	2080	119	3	122.78
46355	2082	119	3	122.86
47085	2084	119	3	122.94
47815	2086	120	3	123.01
48545	2088	120	3	123.08
49275	2090	120	3	123.14
50005	2092	120	3	123.21
50735	2094	120	3	123.27
51465	2096	120	3	123.33
52195	2098	120	3	123.39
52925	2100	120	3	123.44
53655	2102	120	3	123.49
54385	2104	120	3	123.54

Appendix A-3-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-3 (Loxton Area)



Appendix A-3-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-3 (Loxton Area)

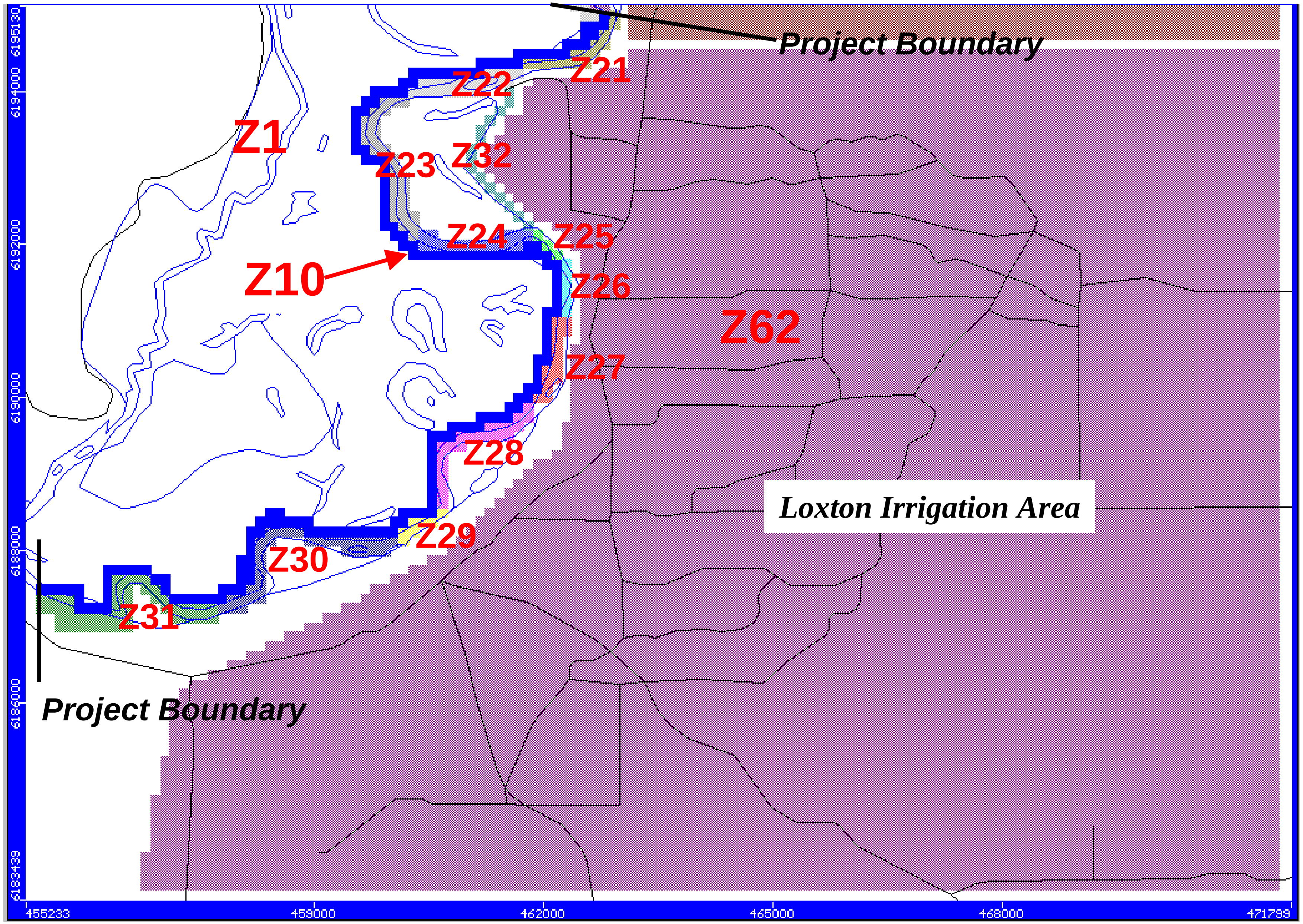
A4. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-4 (LOXTON AREA)

- Flow budget zones (Loxton Area)
- Predicted lateral groundwater flux (m3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)

Appendix A-4

Groundwater flux and salt load entering the River Murray
Scenario-4
(Loxton Area)

-Flow budget zones (Loxton Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)



Appendix A-4-1a Flow budget zones in model Layer-1 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1946	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1947	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1948	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1949	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1950	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1951	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1952	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1953	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1954	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
30	1955	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
365	1956	71.5	46.8	0.0	36.3	94.1	176.1	175.1	61.9	35.6	57.7	146.8	0.0	902
1095	1958	134.3	178.8	0.0	149.8	260.5	384.8	309.5	66.4	35.7	57.8	146.8	7.1	1732
1825	1960	215.6	270.8	0.0	233.5	373.7	525.4	490.6	84.1	36.1	58.2	147.0	56.4	2491
2555	1962	300.3	327.7	0.0	283.5	448.3	641.8	683.9	117.6	37.8	58.9	147.5	90.8	3138
3285	1964	355.7	326.5	0.0	282.2	465.3	724.9	868.6	165.9	41.8	60.2	148.2	87.4	3527
4015	1966	397.8	328.4	0.0	283.5	486.0	790.7	1016.1	220.2	48.5	62.1	149.2	88.0	3871
4745	1968	434.5	334.9	0.0	289.6	508.1	847.2	1135.8	274.7	58.2	65.2	150.4	91.7	4190
5475	1970	467.7	342.7	0.0	296.9	529.0	897.2	1245.4	328.3	70.4	69.5	151.9	96.2	4495
6205	1972	493.6	343.6	0.0	297.2	522.3	875.9	1301.8	378.1	84.3	75.1	153.6	96.0	4622
6935	1974	504.7	328.9	0.0	283.5	503.3	861.4	1341.3	424.9	99.6	82.2	155.6	85.9	4671
7665	1976	512.2	321.8	0.0	277.1	499.6	868.6	1384.0	467.0	115.9	90.7	157.8	81.4	4776
8395	1978	520.2	320.0	0.0	275.6	502.3	882.5	1431.0	503.9	132.2	100.3	160.3	80.2	4908
9125	1980	529.4	320.5	0.0	276.3	507.4	898.9	1478.7	536.8	147.8	110.8	163.0	80.6	5050
9855	1982	539.3	322.1	0.0	278.1	513.6	916.2	1525.7	566.5	162.5	121.8	166.0	81.6	5193
10585	1984	549.5	324.3	0.0	280.2	520.1	933.3	1570.9	593.9	176.0	133.1	169.2	82.9	5333
11315	1986	559.8	326.6	0.0	282.4	526.5	949.5	1614.7	620.2	189.0	144.5	172.6	84.2	5470
12045	1988	570.1	329.0	0.0	284.6	532.6	964.2	1656.5	646.2	201.7	156.0	176.4	85.6	5603
12775	1990	579.8	331.3	0.0	286.9	538.2	977.8	1697.7	673.4	214.8	167.6	180.4	87.0	5735
13505	1992	577.0	315.1	0.0	272.7	515.1	950.0	1701.7	698.4	228.2	179.4	184.6	76.2	5698
14235	1994	572.0	305.6	0.0	264.0	504.6	940.1	1706.9	721.6	241.9	191.6	189.1	70.2	5708
14965	1996	543.1	261.7	0.0	225.6	446.4	871.8	1665.1	739.1	255.0	203.9	193.9	41.2	5447
15695	1998	514.0	234.8	0.0	201.5	414.7	832.0	1624.8	749.5	266.6	216.0	198.8	26.4	5279
16425	2000	491.8	220.1	0.0	189.2	396.7	806.4	1597.6	757.8	276.5	227.6	204.0	19.0	5187
17155	2002	475.7	211.5	0.0	182.0	385.2	788.9	1579.6	765.2	284.9	238.2	209.4	15.1	5136
17885	2004	463.9	206.1	0.0	177.5	377.3	776.4	1567.8	772.0	292.2	248.0	215.0	12.9	5109
18615	2006	454.9	202.4	0.0	174.3	371.7	767.4	1559.9	778.0	298.6	257.0	220.7	11.3	5096
19345	2008	448.0	199.8	0.0	172.1	367.6	760.8	1555.3	783.9	304.3	265.3	226.5	10.3	5094
20075	2010	442.7	197.9	0.0	170.5	364.6	756.1	1552.9	789.5	309.5	273.0	232.5	9.5	5099
20805	2012	438.5	196.5	0.0	169.4	362.3	752.7	1552.1	794.7	314.2	280.1	238.5	9.1	5108
21535	2014	435.4	195.5	0.0	168.5	360.7	750.4	1552.6	799.6	318.4	286.7	244.5	8.7	5121
22265	2016	432.9	194.7	0.0	167.9	359.5	748.8	1554.1	804.3	322.3	292.8	250.5	8.5	5136
22995	2018	431.1	194.1	0.0	167.5	358.7	747.9	1556.2	808.8	326.0	298.5	256.5	8.3	5154

Appendix A-4-2a Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-4 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
23725	**2020**	429.8	193.6	0.0	167.2	358.1	747.5	1558.8	813.1	329.4	303.8	262.5	8.2	**5172**
24455	**2022**	428.8	193.4	0.0	166.9	357.8	747.4	1561.9	817.2	332.5	308.7	268.4	8.1	**5191**
25185	**2024**	428.1	193.2	0.0	166.8	357.6	747.7	1565.3	821.1	335.5	313.3	274.2	8.0	**5211**
25915	**2026**	427.8	193.0	0.0	166.7	357.6	748.2	1568.9	824.9	338.3	317.6	279.9	8.0	**5231**
26645	**2028**	427.6	193.0	0.0	166.7	357.7	749.0	1572.7	828.5	340.9	321.6	285.5	8.0	**5251**
27375	**2030**	427.6	193.0	0.0	166.7	357.9	749.8	1576.5	831.9	343.4	325.5	291.0	8.0	**5271**
28105	**2032**	427.7	193.0	0.0	166.8	358.1	750.8	1580.2	835.1	345.7	329.2	296.4	8.0	**5291**
28835	**2034**	428.0	193.1	0.0	166.9	358.4	751.8	1583.6	838.0	347.9	332.6	301.6	8.0	**5310**
29565	**2036**	428.3	193.2	0.0	167.0	358.7	752.8	1586.8	840.7	349.9	335.8	306.8	8.1	**5328**
30295	**2038**	428.7	193.3	0.0	167.1	359.1	753.9	1589.7	843.0	351.8	338.9	311.8	8.1	**5345**
31025	**2040**	429.2	193.5	0.0	167.3	359.5	754.9	1592.4	845.1	353.4	341.7	316.6	8.2	**5362**
31755	**2042**	429.7	193.6	0.0	167.4	359.9	755.9	1594.9	846.9	355.0	344.3	321.4	8.2	**5377**
32485	**2044**	430.2	193.8	0.0	167.6	360.2	756.9	1597.3	848.6	356.4	346.8	326.0	8.3	**5392**
33215	**2046**	430.8	193.9	0.0	167.7	360.6	757.8	1599.5	850.1	357.7	349.1	330.5	8.3	**5406**
33945	**2048**	431.4	194.1	0.0	167.9	361.0	758.8	1601.6	851.5	358.9	351.3	334.9	8.4	**5420**
34675	**2050**	432.0	194.3	0.0	168.0	361.4	759.7	1603.6	852.8	360.1	353.3	339.1	8.4	**5433**
35405	**2052**	432.5	194.4	0.0	168.2	361.8	760.6	1605.6	854.0	361.1	355.3	343.2	8.5	**5445**
36135	**2054**	433.1	194.6	0.0	168.3	362.1	761.5	1607.4	855.1	362.1	357.1	347.2	8.5	**5457**
36865	**2056**	433.7	194.8	0.0	168.5	362.5	762.3	1609.2	856.1	363.0	358.9	351.1	8.6	**5469**
37595	**2058**	434.3	194.9	0.0	168.6	362.9	763.1	1610.9	857.1	363.9	360.6	354.8	8.6	**5480**
38325	**2060**	434.8	195.1	0.0	168.7	363.2	763.9	1612.5	858.1	364.8	362.1	358.5	8.7	**5490**
39055	**2062**	435.4	195.2	0.0	168.9	363.5	764.7	1614.1	859.0	365.5	363.6	362.0	8.7	**5501**
39785	**2064**	435.9	195.4	0.0	169.0	363.9	765.4	1615.6	859.8	366.3	365.1	365.4	8.8	**5510**
40515	**2066**	436.4	195.5	0.0	169.2	364.2	766.2	1617.0	860.6	367.0	366.4	368.6	8.8	**5520**
41245	**2068**	437.0	195.7	0.0	169.3	364.5	766.9	1618.4	861.3	367.6	367.7	371.8	8.9	**5529**
41975	**2070**	437.5	195.8	0.0	169.4	364.8	767.5	1619.7	861.9	368.2	369.0	374.9	8.9	**5538**
42705	**2072**	437.9	196.0	0.0	169.5	365.1	768.2	1620.9	862.5	368.7	370.1	377.9	8.9	**5546**
43435	**2074**	438.4	196.1	0.0	169.6	365.4	768.8	1622.1	863.1	369.2	371.2	380.7	9.0	**5554**
44165	**2076**	438.9	196.2	0.0	169.8	365.6	769.4	1623.3	863.6	369.7	372.2	383.5	9.0	**5561**
44895	**2078**	439.3	196.4	0.0	169.9	365.9	770.0	1624.4	864.1	370.1	373.2	386.2	9.1	**5569**
45625	**2080**	439.8	196.5	0.0	170.0	366.2	770.6	1625.5	864.6	370.6	374.1	388.7	9.1	**5576**
46355	**2082**	440.2	196.6	0.0	170.1	366.4	771.1	1626.5	865.0	371.0	375.0	391.2	9.1	**5582**
47085	**2084**	440.6	196.7	0.0	170.2	366.6	771.7	1627.5	865.4	371.3	375.9	393.6	9.2	**5589**
47815	**2086**	441.0	196.8	0.0	170.3	366.9	772.2	1628.4	865.9	371.7	376.7	395.9	9.2	**5595**
48545	**2088**	441.4	196.9	0.0	170.4	367.1	772.7	1629.3	866.2	372.0	377.5	398.2	9.2	**5601**
49275	**2090**	441.8	197.0	0.0	170.5	367.3	773.2	1630.2	866.6	372.3	378.2	400.3	9.3	**5607**
50005	**2092**	442.1	197.2	0.0	170.6	367.5	773.6	1631.1	867.0	372.7	378.9	402.4	9.3	**5612**
50735	**2094**	442.5	197.3	0.0	170.7	367.7	774.1	1631.9	867.3	372.9	379.6	404.4	9.3	**5618**
51465	**2096**	442.8	197.4	0.0	170.7	367.9	774.5	1632.7	867.6	373.2	380.2	406.3	9.4	**5623**
52195	**2098**	443.2	197.4	0.0	170.8	368.1	775.0	1633.5	867.9	373.5	380.8	408.2	9.4	**5628**
52925	**2100**	443.5	197.5	0.0	170.9	368.3	775.4	1634.2	868.2	373.7	381.4	409.9	9.4	**5633**
53655	**2102**	443.8	197.6	0.0	171.0	368.5	775.8	1635.0	868.5	374.0	382.0	411.7	9.5	**5637**
54385	**2104**	444.1	197.7	0.0	171.1	368.7	776.2	1635.7	868.8	374.2	382.5	413.3	9.5	**5642**
TDS	***mg/L***	***25807***	***29055***	***30760***	***39978***	***18716***	***4240***	***7710***	***35935***	***29140***	***24080***	***5620***	***8440***	

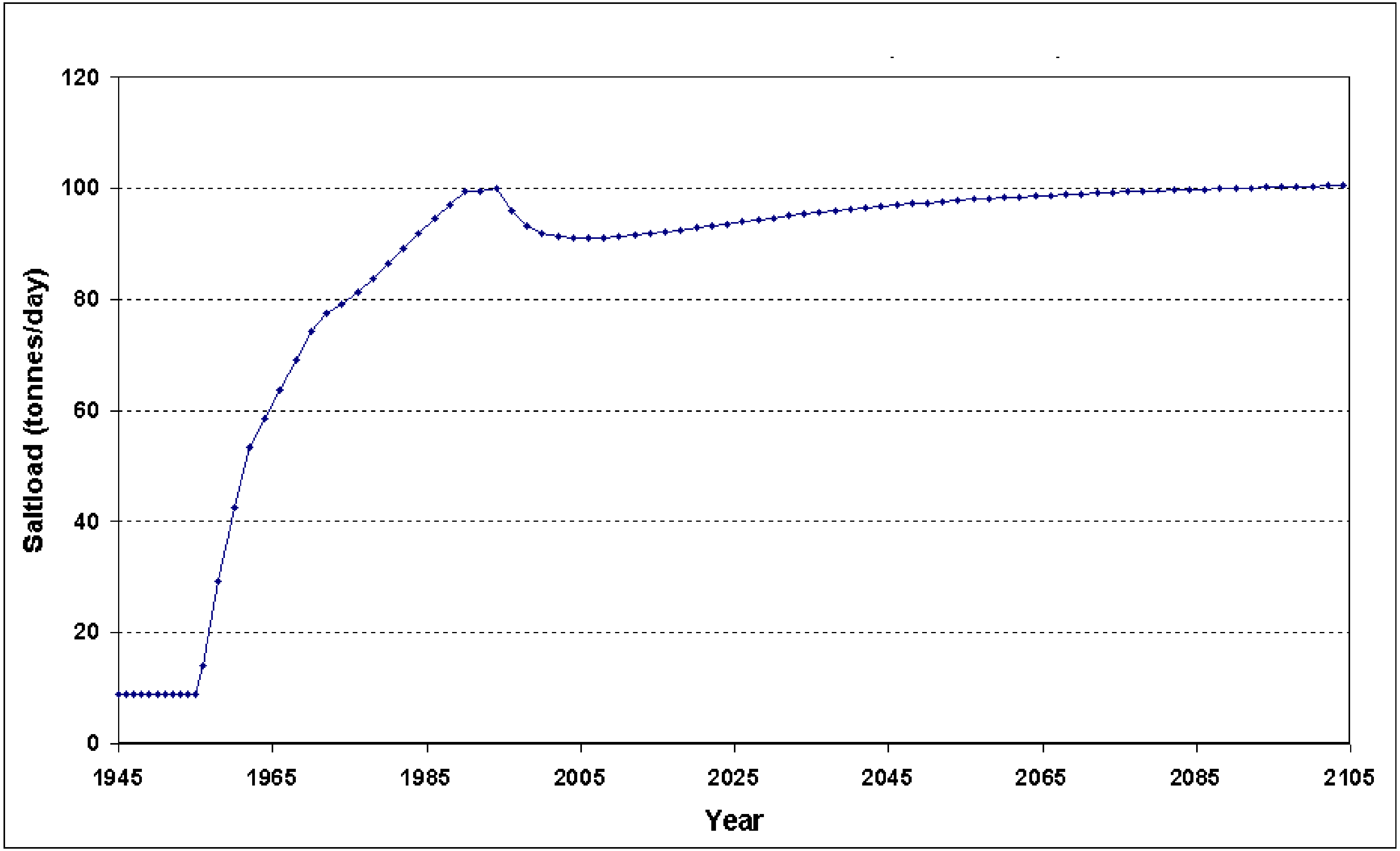
Appendix A-4-2b Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-4 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1946	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1947	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1948	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1949	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1950	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1951	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1952	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1953	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1954	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
30	1955	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
365	1956	1.8	1.4	0.0	1.5	1.8	0.7	1.4	2.2	1.0	1.4	0.8	0.0	13.99
1095	1958	3.5	5.2	0.0	6.0	4.9	1.6	2.4	2.4	1.0	1.4	0.8	0.1	29.25
1825	1960	5.6	7.9	0.0	9.3	7.0	2.2	3.8	3.0	1.1	1.4	0.8	0.5	42.55
2555	1962	7.8	9.5	0.0	11.3	8.4	2.7	5.3	4.2	1.1	1.4	0.8	0.8	53.33
3285	1964	9.2	9.5	0.0	11.3	8.7	3.1	6.7	6.0	1.2	1.4	0.8	0.7	58.62
4015	1966	10.3	9.5	0.0	11.3	9.1	3.4	7.8	7.9	1.4	1.5	0.8	0.7	63.83
4745	1968	11.2	9.7	0.0	11.6	9.5	3.6	8.8	9.9	1.7	1.6	0.8	0.8	69.13
5475	1970	12.1	10.0	0.0	11.9	9.9	3.8	9.6	11.8	2.1	1.7	0.9	0.8	74.39
6205	1972	12.7	10.0	0.0	11.9	9.8	3.7	10.0	13.6	2.5	1.8	0.9	0.8	77.65
6935	1974	13.0	9.6	0.0	11.3	9.4	3.7	10.3	15.3	2.9	2.0	0.9	0.7	79.08
7665	1976	13.2	9.4	0.0	11.1	9.4	3.7	10.7	16.8	3.4	2.2	0.9	0.7	81.26
8395	1978	13.4	9.3	0.0	11.0	9.4	3.7	11.0	18.1	3.9	2.4	0.9	0.7	83.87
9125	1980	13.7	9.3	0.0	11.0	9.5	3.8	11.4	19.3	4.3	2.7	0.9	0.7	86.59
9855	1982	13.9	9.4	0.0	11.1	9.6	3.9	11.8	20.4	4.7	2.9	0.9	0.7	89.30
10585	1984	14.2	9.4	0.0	11.2	9.7	4.0	12.1	21.3	5.1	3.2	1.0	0.7	91.93
11315	1986	14.4	9.5	0.0	11.3	9.9	4.0	12.4	22.3	5.5	3.5	1.0	0.7	94.51
12045	1988	14.7	9.6	0.0	11.4	10.0	4.1	12.8	23.2	5.9	3.8	1.0	0.7	97.04
12775	1990	15.0	9.6	0.0	11.5	10.1	4.1	13.1	24.2	6.3	4.0	1.0	0.7	99.61
13505	1992	14.9	9.2	0.0	10.9	9.6	4.0	13.1	25.1	6.6	4.3	1.0	0.6	99.48
14235	1994	14.8	8.9	0.0	10.6	9.4	4.0	13.2	25.9	7.1	4.6	1.1	0.6	100.03
14965	1996	14.0	7.6	0.0	9.0	8.4	3.7	12.8	26.6	7.4	4.9	1.1	0.3	95.87
15695	1998	13.3	6.8	0.0	8.1	7.8	3.5	12.5	26.9	7.8	5.2	1.1	0.2	93.20
16425	2000	12.7	6.4	0.0	7.6	7.4	3.4	12.3	27.2	8.1	5.5	1.1	0.2	91.88
17155	2002	12.3	6.1	0.0	7.3	7.2	3.3	12.2	27.5	8.3	5.7	1.2	0.1	91.27
17885	2004	12.0	6.0	0.0	7.1	7.1	3.3	12.1	27.7	8.5	6.0	1.2	0.1	91.04
18615	2006	11.7	5.9	0.0	7.0	7.0	3.3	12.0	28.0	8.7	6.2	1.2	0.1	91.01
19345	2008	11.6	5.8	0.0	6.9	6.9	3.2	12.0	28.2	8.9	6.4	1.3	0.1	91.13
20075	2010	11.4	5.8	0.0	6.8	6.8	3.2	12.0	28.4	9.0	6.6	1.3	0.1	91.34
20805	2012	11.3	5.7	0.0	6.8	6.8	3.2	12.0	28.6	9.2	6.7	1.3	0.1	91.61
21535	2014	11.2	5.7	0.0	6.7	6.8	3.2	12.0	28.7	9.3	6.9	1.4	0.1	91.92
22265	2016	11.2	5.7	0.0	6.7	6.7	3.2	12.0	28.9	9.4	7.1	1.4	0.1	92.25
22995	2018	11.1	5.6	0.0	6.7	6.7	3.2	12.0	29.1	9.5	7.2	1.4	0.1	92.60

Appendix A-4-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-4 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
23725	2020	11.1	5.6	0.0	6.7	6.7	3.2	12.0	29.2	9.6	7.3	1.5	0.1	92.96
24455	2022	11.1	5.6	0.0	6.7	6.7	3.2	12.0	29.4	9.7	7.4	1.5	0.1	93.33
25185	2024	11.0	5.6	0.0	6.7	6.7	3.2	12.1	29.5	9.8	7.5	1.5	0.1	93.69
25915	2026	11.0	5.6	0.0	6.7	6.7	3.2	12.1	29.6	9.9	7.6	1.6	0.1	94.06
26645	2028	11.0	5.6	0.0	6.7	6.7	3.2	12.1	29.8	9.9	7.7	1.6	0.1	94.42
27375	2030	11.0	5.6	0.0	6.7	6.7	3.2	12.2	29.9	10.0	7.8	1.6	0.1	94.78
28105	2032	11.0	5.6	0.0	6.7	6.7	3.2	12.2	30.0	10.1	7.9	1.7	0.1	95.13
28835	2034	11.0	5.6	0.0	6.7	6.7	3.2	12.2	30.1	10.1	8.0	1.7	0.1	95.46
29565	2036	11.1	5.6	0.0	6.7	6.7	3.2	12.2	30.2	10.2	8.1	1.7	0.1	95.77
30295	2038	11.1	5.6	0.0	6.7	6.7	3.2	12.3	30.3	10.2	8.2	1.8	0.1	96.06
31025	2040	11.1	5.6	0.0	6.7	6.7	3.2	12.3	30.4	10.3	8.2	1.8	0.1	96.33
31755	2042	11.1	5.6	0.0	6.7	6.7	3.2	12.3	30.4	10.3	8.3	1.8	0.1	96.59
32485	2044	11.1	5.6	0.0	6.7	6.7	3.2	12.3	30.5	10.4	8.4	1.8	0.1	96.83
33215	2046	11.1	5.6	0.0	6.7	6.7	3.2	12.3	30.5	10.4	8.4	1.9	0.1	97.06
33945	2048	11.1	5.6	0.0	6.7	6.8	3.2	12.3	30.6	10.5	8.5	1.9	0.1	97.27
34675	2050	11.1	5.6	0.0	6.7	6.8	3.2	12.4	30.6	10.5	8.5	1.9	0.1	97.48
35405	2052	11.2	5.6	0.0	6.7	6.8	3.2	12.4	30.7	10.5	8.6	1.9	0.1	97.68
36135	2054	11.2	5.7	0.0	6.7	6.8	3.2	12.4	30.7	10.6	8.6	2.0	0.1	97.86
36865	2056	11.2	5.7	0.0	6.7	6.8	3.2	12.4	30.8	10.6	8.6	2.0	0.1	98.04
37595	2058	11.2	5.7	0.0	6.7	6.8	3.2	12.4	30.8	10.6	8.7	2.0	0.1	98.21
38325	2060	11.2	5.7	0.0	6.7	6.8	3.2	12.4	30.8	10.6	8.7	2.0	0.1	98.38
39055	2062	11.2	5.7	0.0	6.8	6.8	3.2	12.4	30.9	10.7	8.8	2.0	0.1	98.53
39785	2064	11.2	5.7	0.0	6.8	6.8	3.2	12.5	30.9	10.7	8.8	2.1	0.1	98.68
40515	2066	11.3	5.7	0.0	6.8	6.8	3.2	12.5	30.9	10.7	8.8	2.1	0.1	98.83
41245	2068	11.3	5.7	0.0	6.8	6.8	3.3	12.5	30.9	10.7	8.9	2.1	0.1	98.96
41975	2070	11.3	5.7	0.0	6.8	6.8	3.3	12.5	31.0	10.7	8.9	2.1	0.1	99.09
42705	2072	11.3	5.7	0.0	6.8	6.8	3.3	12.5	31.0	10.7	8.9	2.1	0.1	99.21
43435	2074	11.3	5.7	0.0	6.8	6.8	3.3	12.5	31.0	10.8	8.9	2.1	0.1	99.33
44165	2076	11.3	5.7	0.0	6.8	6.8	3.3	12.5	31.0	10.8	9.0	2.2	0.1	99.44
44895	2078	11.3	5.7	0.0	6.8	6.8	3.3	12.5	31.1	10.8	9.0	2.2	0.1	99.54
45625	2080	11.3	5.7	0.0	6.8	6.9	3.3	12.5	31.1	10.8	9.0	2.2	0.1	99.64
46355	2082	11.4	5.7	0.0	6.8	6.9	3.3	12.5	31.1	10.8	9.0	2.2	0.1	99.74
47085	2084	11.4	5.7	0.0	6.8	6.9	3.3	12.5	31.1	10.8	9.1	2.2	0.1	99.83
47815	2086	11.4	5.7	0.0	6.8	6.9	3.3	12.6	31.1	10.8	9.1	2.2	0.1	99.92
48545	2088	11.4	5.7	0.0	6.8	6.9	3.3	12.6	31.1	10.8	9.1	2.2	0.1	100.01
49275	2090	11.4	5.7	0.0	6.8	6.9	3.3	12.6	31.1	10.8	9.1	2.2	0.1	100.09
50005	2092	11.4	5.7	0.0	6.8	6.9	3.3	12.6	31.2	10.9	9.1	2.3	0.1	100.17
50735	2094	11.4	5.7	0.0	6.8	6.9	3.3	12.6	31.2	10.9	9.1	2.3	0.1	100.24
51465	2096	11.4	5.7	0.0	6.8	6.9	3.3	12.6	31.2	10.9	9.2	2.3	0.1	100.32
52195	2098	11.4	5.7	0.0	6.8	6.9	3.3	12.6	31.2	10.9	9.2	2.3	0.1	100.39
52925	2100	11.4	5.7	0.0	6.8	6.9	3.3	12.6	31.2	10.9	9.2	2.3	0.1	100.46
53655	2102	11.5	5.7	0.0	6.8	6.9	3.3	12.6	31.2	10.9	9.2	2.3	0.1	100.52
54385	2104	11.5	5.7	0.0	6.8	6.9	3.3	12.6	31.2	10.9	9.2	2.3	0.1	100.59
TDS	*mg/L*	*25807*	*29055*	*30760*	*39978*	*18716*	*4240*	*7710*	*35935*	*29140*	*24080*	*5620*	*8440*	

Appendix A-4-3b Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-4 (Loxton Area)



Appendix A-4-3c Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-4 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	*1945*	*5.6*	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1946*	*5.6*	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1947*	*5.6*	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1948*	*5.6*	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1949*	*5.6*	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1950*	*5.6*	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1951*	*5.6*	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1952*	*5.6*	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1953*	*5.6*	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1954*	*5.6*	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
30	1955	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
365	1956	6.4	2.2	1.9	1.6	1.5	2.9	3.1	2.5	2.5	4.1	5.0	34
1095	1958	10.3	4.6	2.1	3.7	2.8	4.5	4.5	2.7	2.5	4.2	5.0	47
1825	1960	15.7	6.3	2.4	5.4	3.6	5.6	6.2	3.3	2.7	4.4	5.1	61
2555	1962	21.0	7.4	2.8	6.5	4.2	6.5	7.8	4.2	2.8	4.7	5.1	73
3285	1964	24.7	7.6	3.0	7.3	4.4	7.2	9.7	6.1	3.2	5.0	5.2	83
4015	1966	27.3	7.8	3.2	7.6	4.6	7.7	10.8	7.2	3.6	5.3	5.4	91
4745	1968	29.5	8.1	3.4	7.9	4.8	8.2	11.7	8.4	4.1	5.7	5.5	97
5475	1970	31.3	8.4	3.7	8.9	5.0	8.6	13.0	10.2	4.8	6.1	5.6	106
6205	1972	32.8	8.6	3.9	9.1	5.0	8.7	13.6	11.2	5.4	6.6	5.7	111
6935	1974	33.6	8.5	4.0	9.0	5.0	8.8	14.1	12.1	6.1	7.0	5.8	114
7665	1976	34.2	8.5	4.2	9.7	5.0	9.0	15.0	13.7	6.9	7.6	5.9	120
8395	1978	34.7	8.6	4.3	9.8	5.1	9.1	15.4	14.5	7.5	8.1	6.0	123
9125	1980	35.2	8.7	4.5	9.9	5.2	9.3	15.8	15.1	8.2	8.6	6.1	126
9855	1982	35.8	8.9	4.7	10.8	5.3	9.5	16.7	16.6	8.8	9.1	6.2	132
10585	1984	36.4	9.0	4.9	10.9	5.3	9.7	17.0	17.1	9.3	9.6	6.3	136
11315	1986	36.9	9.1	5.0	11.1	5.4	9.8	17.4	17.6	9.8	10.1	6.4	139
12045	1988	37.5	9.3	5.1	11.2	5.5	10.0	17.7	18.2	10.2	10.6	6.4	142
12775	1990	38.0	9.4	5.4	12.1	5.6	10.2	18.5	19.6	10.8	11.1	6.5	147
13505	1992	38.0	9.2	5.5	11.9	5.5	10.1	18.7	20.1	11.2	11.6	6.6	148
14235	1994	37.9	9.1	5.5	11.8	5.4	10.1	18.8	20.5	11.7	12.1	6.7	150
14965	1996	36.8	8.5	5.4	11.2	5.1	9.8	18.7	20.8	12.1	12.5	6.8	148
15695	1998	35.5	8.0	5.2	10.1	4.9	9.5	18.1	20.1	12.5	12.9	6.9	144
16425	2000	34.5	7.8	5.2	9.8	4.8	9.4	18.0	20.3	12.8	13.3	7.0	143
17155	2002	33.7	7.7	5.1	9.7	4.7	9.3	18.0	20.4	13.1	13.7	7.1	142
17885	2004	33.1	7.6	5.2	9.6	4.7	9.2	18.0	20.6	13.3	14.0	7.1	142
18615	2006	32.7	7.5	5.0	8.9	4.6	9.1	17.5	19.8	13.5	14.3	7.2	140
19345	2008	32.3	7.5	5.0	8.9	4.6	9.1	17.5	19.9	13.6	14.6	7.3	140
20075	2010	32.0	7.4	5.0	8.8	4.6	9.1	17.5	20.1	13.8	14.8	7.4	141
20805	2012	31.8	7.4	5.1	8.8	4.6	9.1	17.6	20.2	14.0	15.1	7.4	141
21535	2014	31.7	7.4	5.1	8.8	4.6	9.1	17.6	20.3	14.1	15.3	7.5	141
22265	2016	31.6	7.4	5.1	8.8	4.6	9.1	17.7	20.4	14.2	15.5	7.6	142
22995	2018	31.5	7.4	5.1	8.9	4.6	9.1	17.7	20.5	14.3	15.8	7.6	143

Appendix A-4-4a Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-4 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
23725	2020	31.5	7.4	5.2	8.9	4.6	9.1	17.8	20.6	14.5	15.9	7.7	143
24455	2022	31.4	7.4	5.2	8.9	4.6	9.1	17.8	20.7	14.6	16.1	7.7	144
25185	2024	31.4	7.5	5.2	8.9	4.6	9.1	17.9	20.8	14.7	16.3	7.8	144
25915	2026	31.4	7.5	5.3	8.9	4.6	9.1	17.9	20.9	14.8	16.5	7.9	145
26645	2028	31.4	7.5	5.3	8.9	4.6	9.2	18.0	21.0	14.8	16.6	7.9	145
27375	2030	31.4	7.5	5.3	9.0	4.6	9.2	18.0	21.1	14.9	16.8	8.0	146
28105	2032	31.4	7.5	5.4	9.0	4.6	9.2	18.1	21.2	15.0	16.9	8.0	146
28835	2034	31.5	7.5	5.4	9.0	4.6	9.2	18.1	21.2	15.1	17.0	8.1	147
29565	2036	31.5	7.6	5.4	9.0	4.6	9.2	18.2	21.3	15.1	17.2	8.1	147
30295	2038	31.5	7.6	5.5	9.0	4.6	9.2	18.2	21.4	15.2	17.3	8.2	148
31025	2040	31.6	7.6	5.5	9.1	4.6	9.3	18.2	21.4	15.3	17.4	8.2	148
31755	2042	31.6	7.6	5.5	9.1	4.6	9.3	18.3	21.5	15.3	17.5	8.2	149
32485	2044	31.7	7.6	5.5	9.1	4.6	9.3	18.3	21.5	15.4	17.6	8.3	149
33215	2046	31.7	7.7	5.6	9.1	4.7	9.3	18.3	21.6	15.4	17.7	8.3	149
33945	2048	31.8	7.7	5.6	9.1	4.7	9.3	18.4	21.6	15.5	17.8	8.4	150
34675	2050	31.8	7.7	5.6	9.2	4.7	9.3	18.4	21.7	15.5	17.8	8.4	150
35405	2052	31.8	7.7	5.6	9.2	4.7	9.3	18.4	21.7	15.5	17.9	8.4	150
36135	2054	31.9	7.7	5.7	9.2	4.7	9.4	18.5	21.7	15.6	18.0	8.5	151
36865	2056	31.9	7.7	5.7	9.2	4.7	9.4	18.5	21.8	15.6	18.1	8.5	151
37595	2058	32.0	7.8	5.7	9.2	4.7	9.4	18.5	21.8	15.6	18.1	8.5	151
38325	2060	32.0	7.8	5.7	9.3	4.7	9.4	18.6	21.9	15.7	18.2	8.6	152
39055	2062	32.0	7.8	5.8	9.3	4.7	9.4	18.6	21.9	15.7	18.3	8.6	152
39785	2064	32.1	7.8	5.8	9.3	4.7	9.4	18.6	21.9	15.7	18.3	8.6	152
40515	2066	32.1	7.8	5.8	9.3	4.7	9.4	18.6	22.0	15.7	18.4	8.7	153
41245	2068	32.2	7.8	5.8	9.3	4.7	9.4	18.7	22.0	15.8	18.4	8.7	153
41975	2070	32.2	7.8	5.8	9.3	4.7	9.4	18.7	22.0	15.8	18.5	8.7	153
42705	2072	32.2	7.9	5.9	9.3	4.7	9.5	18.7	22.0	15.8	18.6	8.7	153
43435	2074	32.3	7.9	5.9	9.4	4.7	9.5	18.7	22.1	15.8	18.6	8.8	154
44165	2076	32.3	7.9	5.9	9.4	4.7	9.5	18.7	22.1	15.9	18.6	8.8	154
44895	2078	32.3	7.9	5.9	9.4	4.7	9.5	18.8	22.1	15.9	18.7	8.8	154
45625	2080	32.4	7.9	5.9	9.4	4.7	9.5	18.8	22.1	15.9	18.7	8.8	154
46355	2082	32.4	7.9	5.9	9.4	4.7	9.5	18.8	22.2	15.9	18.8	8.8	154
47085	2084	32.4	7.9	6.0	9.4	4.8	9.5	18.8	22.2	15.9	18.8	8.9	155
47815	2086	32.4	7.9	6.0	9.4	4.8	9.5	18.8	22.2	15.9	18.9	8.9	155
48545	2088	32.5	8.0	6.0	9.4	4.8	9.5	18.9	22.2	16.0	18.9	8.9	155
49275	2090	32.5	8.0	6.0	9.4	4.8	9.5	18.9	22.2	16.0	18.9	8.9	155
50005	2092	32.5	8.0	6.0	9.5	4.8	9.5	18.9	22.2	16.0	19.0	8.9	155
50735	2094	32.6	8.0	6.0	9.5	4.8	9.6	18.9	22.3	16.0	19.0	9.0	155
51465	2096	32.6	8.0	6.0	9.5	4.8	9.6	18.9	22.3	16.0	19.0	9.0	156
52195	2098	32.6	8.0	6.1	9.5	4.8	9.6	18.9	22.3	16.0	19.0	9.0	156
52925	2100	32.6	8.0	6.1	9.5	4.8	9.6	19.0	22.3	16.0	19.1	9.0	156
53655	2102	32.6	8.0	6.1	9.5	4.8	9.6	19.0	22.3	16.0	19.1	9.0	156
54385	2104	32.7	8.0	6.1	9.5	4.8	9.6	19.0	22.3	16.1	19.1	9.0	156
TDS	*mg/L*	*32267*	*32267*	*32267*	*32267*	*32267*	*29405*	*29405*	*9700*	*7550*	*3300*	*3140*	

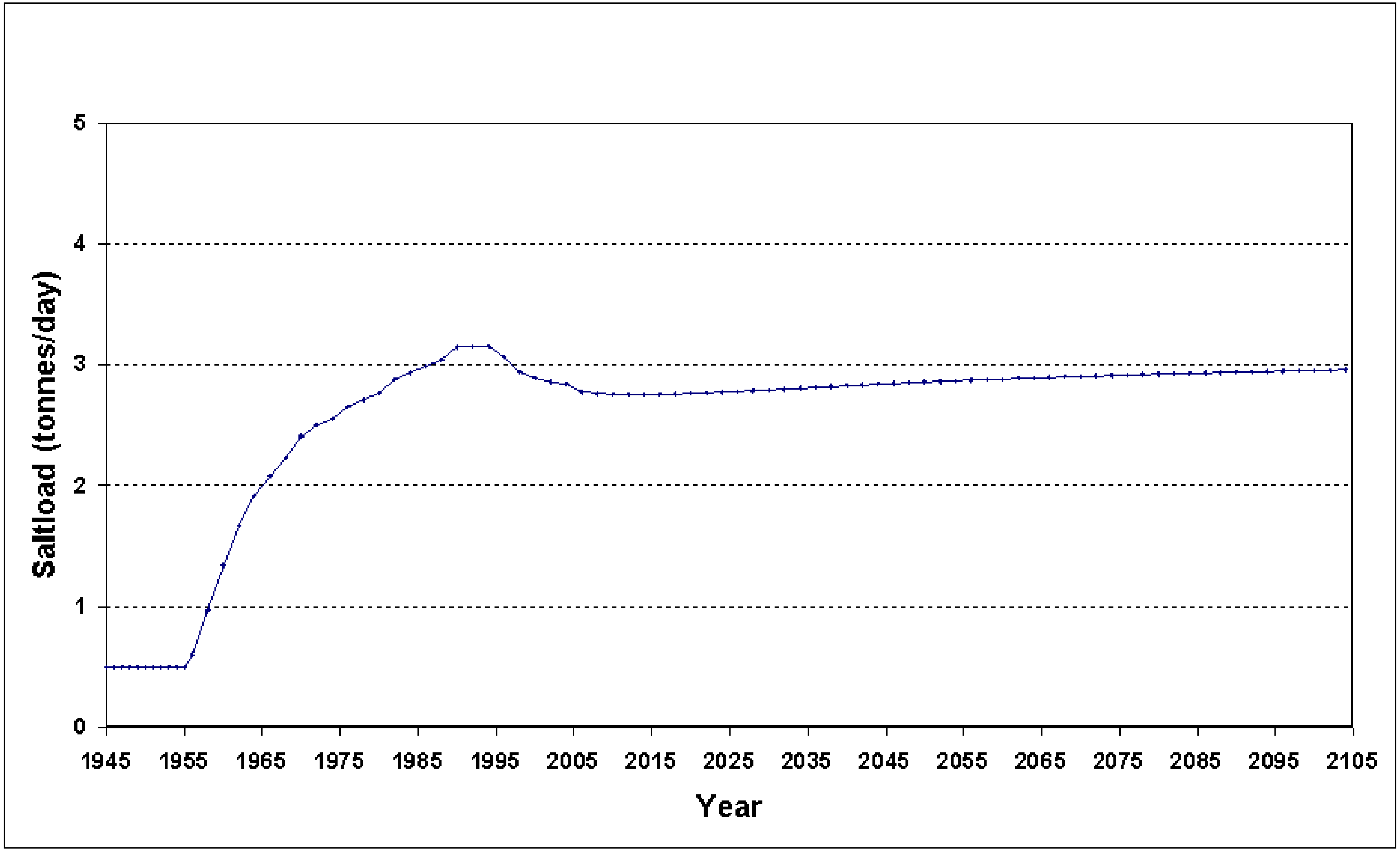
Appendix A-4-4b Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-4 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	1945	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1946	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1947	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1948	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1949	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1950	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1951	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1952	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1953	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1954	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
30	1955	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
365	1956	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.60
1095	1958	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.97
1825	1960	0.5	0.2	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	1.34
2555	1962	0.7	0.2	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	1.67
3285	1964	0.8	0.2	0.1	0.2	0.1	0.3	0.1	0.0	0.0	0.0	0.0	1.92
4015	1966	0.9	0.3	0.1	0.2	0.1	0.3	0.1	0.0	0.0	0.0	0.0	2.08
4745	1968	1.0	0.3	0.1	0.3	0.2	0.3	0.1	0.0	0.0	0.0	0.0	2.23
5475	1970	1.0	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.41
6205	1972	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.51
6935	1974	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.56
7665	1976	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.1	0.0	0.0	0.0	2.66
8395	1978	1.1	0.3	0.1	0.3	0.2	0.5	0.1	0.1	0.0	0.0	0.0	2.71
9125	1980	1.1	0.3	0.1	0.3	0.2	0.5	0.1	0.1	0.0	0.0	0.0	2.77
9855	1982	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.88
10585	1984	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.93
11315	1986	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.99
12045	1988	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.04
12775	1990	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.15
13505	1992	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.15
14235	1994	1.2	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.0	0.0	0.0	3.15
14965	1996	1.2	0.3	0.2	0.4	0.2	0.6	0.2	0.1	0.0	0.0	0.0	3.07
15695	1998	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.94
16425	2000	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.89
17155	2002	1.1	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.86
17885	2004	1.1	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.84
18615	2006	1.1	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.77
19345	2008	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.76
20075	2010	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.76
20805	2012	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.75
21535	2014	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.75
22265	2016	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.76
22995	2018	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.76

Appendix A-4-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-4 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
23725	2020	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.76
24455	2022	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.77
25185	2024	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.77
25915	2026	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.78
26645	2028	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.79
27375	2030	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.79
28105	2032	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.80
28835	2034	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.81
29565	2036	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.81
30295	2038	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.82
31025	2040	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.83
31755	2042	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.83
32485	2044	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.84
33215	2046	1.0	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.84
33945	2048	1.0	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.85
34675	2050	1.0	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.86
35405	2052	1.0	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.86
36135	2054	1.0	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.87
36865	2056	1.0	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.87
37595	2058	1.0	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.88
38325	2060	1.0	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.88
39055	2062	1.0	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.89
39785	2064	1.0	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.89
40515	2066	1.0	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.90
41245	2068	1.0	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.90
41975	2070	1.0	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.90
42705	2072	1.0	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.91
43435	2074	1.0	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.91
44165	2076	1.0	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.92
44895	2078	1.0	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.92
45625	2080	1.0	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.92
46355	2082	1.0	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.93
47085	2084	1.0	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.93
47815	2086	1.0	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.93
48545	2088	1.0	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.94
49275	2090	1.0	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.94
50005	2092	1.0	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.94
50735	2094	1.1	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.95
51465	2096	1.1	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.95
52195	2098	1.1	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.95
52925	2100	1.1	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.95
53655	2102	1.1	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.96
54385	2104	1.1	0.3	0.2	0.3	0.2	0.6	0.2	0.1	0.1	0.0	0.0	2.96
TDS	mg/L	32267	32267	32267	32267	32267	29405	29405	9700	7550	3300	3140	

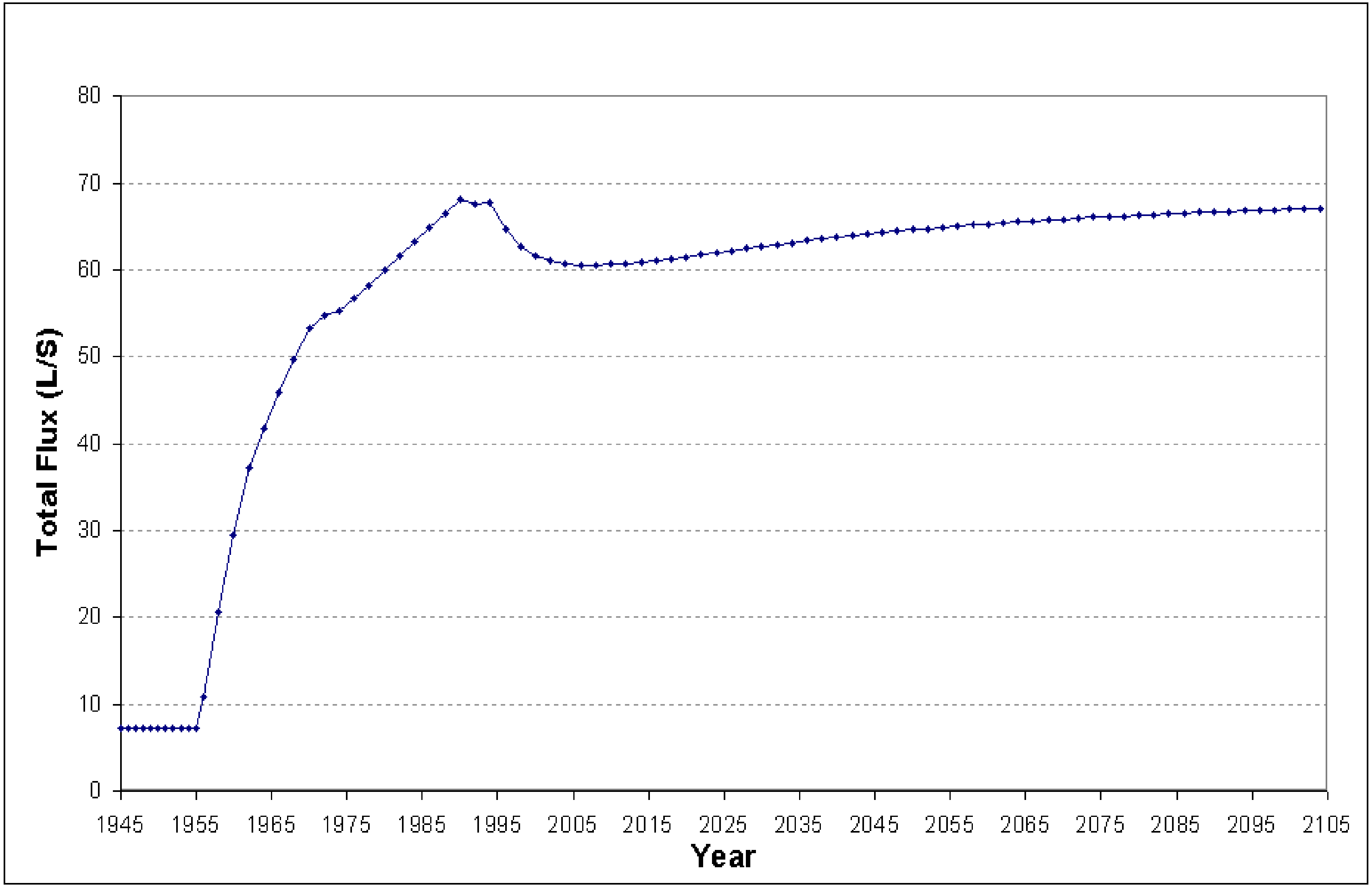
Appendix A-4-5b Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-4 (Loxton Area)



Appendix A-4-5c Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-4 (Loxton Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	1945	591	30	621	7.18
0	1946	591	30	621	7.18
0	1947	591	30	621	7.18
0	1948	591	30	621	7.18
0	1949	591	30	621	7.18
0	1950	591	30	621	7.18
0	1951	591	30	621	7.18
0	1952	591	30	621	7.18
0	1953	591	30	621	7.18
0	1954	591	30	621	7.18
30	1955	591	30	621	7.18
365	1956	902	34	936	10.83
1095	1958	1732	47	1779	20.59
1825	1960	2491	61	2552	29.54
2555	1962	3138	73	3211	37.17
3285	1964	3527	83	3610	41.78
4015	1966	3871	91	3961	45.85
4745	1968	4190	97	4287	49.62
5475	1970	4495	106	4601	53.25
6205	1972	4622	111	4732	54.77
6935	1974	4671	114	4785	55.39
7665	1976	4776	120	4896	56.66
8395	1978	4908	123	5032	58.24
9125	1980	5050	126	5177	59.91
9855	1982	5193	132	5326	61.64
10585	1984	5333	136	5469	63.30
11315	1986	5470	139	5609	64.92
12045	1988	5603	142	5744	66.49
12775	1990	5735	147	5882	68.08
13505	1992	5698	148	5847	67.67
14235	1994	5708	150	5857	67.79
14965	1996	5447	148	5595	64.75
15695	1998	5279	144	5423	62.76
16425	2000	5187	143	5329	61.68
17155	2002	5136	142	5278	61.09
17885	2004	5109	142	5251	60.78
18615	2006	5096	140	5236	60.61
19345	2008	5094	140	5234	60.58
20075	2010	5099	141	5239	60.64
20805	2012	5108	141	5249	60.75
21535	2014	5121	141	5262	60.91
22265	2016	5136	142	5278	61.09
22995	2018	5154	143	5296	61.30
23725	2020	5172	143	5315	61.51
24455	2022	5191	144	5335	61.74
25185	2024	5211	144	5355	61.98
25915	2026	5231	145	5375	62.22
26645	2028	5251	145	5396	62.46
27375	2030	5271	146	5417	62.70
28105	2032	5291	146	5437	62.93
28835	2034	5310	147	5457	63.16
29565	2036	5328	147	5475	63.37
30295	2038	5345	148	5493	63.58
31025	2040	5362	148	5510	63.77
31755	2042	5377	149	5526	63.95
32485	2044	5392	149	5541	64.13
33215	2046	5406	149	5555	64.30
33945	2048	5420	150	5569	64.46
34675	2050	5433	150	5583	64.61
35405	2052	5445	150	5596	64.76
36135	2054	5457	151	5608	64.91
36865	2056	5469	151	5620	65.04
37595	2058	5480	151	5631	65.18
38325	2060	5490	152	5642	65.30
39055	2062	5501	152	5653	65.42
39785	2064	5510	152	5663	65.54
40515	2066	5520	153	5672	65.65
41245	2068	5529	153	5682	65.76
41975	2070	5538	153	5691	65.86
42705	2072	5546	153	5699	65.96
43435	2074	5554	154	5707	66.06
44165	2076	5561	154	5715	66.15
44895	2078	5569	154	5723	66.23
45625	2080	5576	154	5730	66.32
46355	2082	5582	154	5737	66.40
47085	2084	5589	155	5743	66.47
47815	2086	5595	155	5750	66.55
48545	2088	5601	155	5756	66.62
49275	2090	5607	155	5762	66.69
50005	2092	5612	155	5768	66.75
50735	2094	5618	155	5773	66.82
51465	2096	5623	156	5778	66.88
52195	2098	5628	156	5784	66.94
52925	2100	5633	156	5788	67.00
53655	2102	5637	156	5793	67.05
54385	2104	5642	156	5798	67.11

Appendix A-4-6a Predicted total groundwater flux in Scenario-4 (Loxton Area)

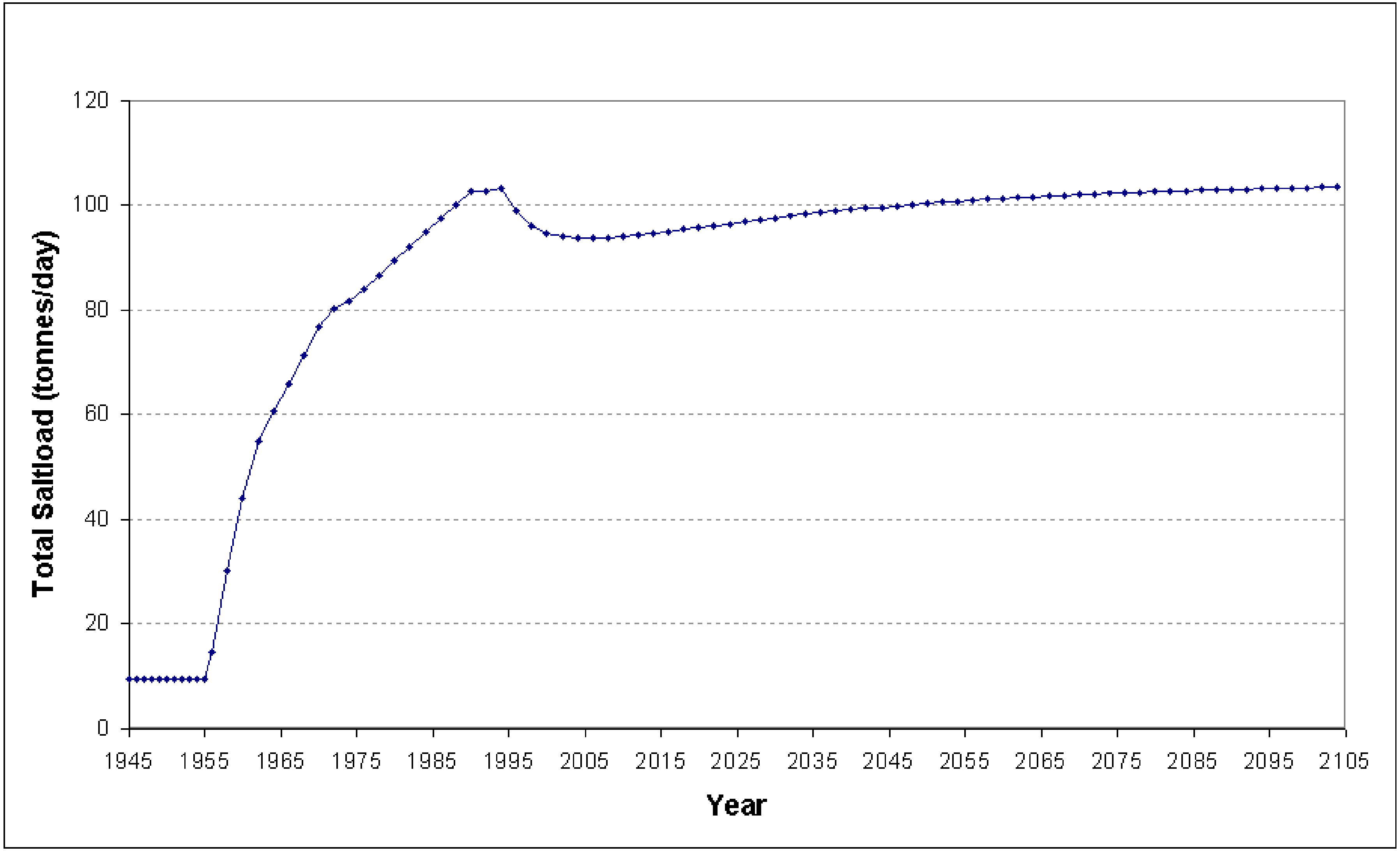


Appendix A-4-6b Graph of predicted total groundwater flux (L/second) entering the River Murray in Scenario-4 (Loxton Area)

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	9	0	9.54
0	1946	9	0	9.54
0	1947	9	0	9.54
0	1948	9	0	9.54
0	1949	9	0	9.54
0	1950	9	0	9.54
0	1951	9	0	9.54
0	1952	9	0	9.54
0	1953	9	0	9.54
0	1954	9	0	9.54
30	1955	9	0	9.54
365	1956	14	1	14.59
1095	1958	29	1	30.22
1825	1960	43	1	43.89
2555	1962	53	2	55.00
3285	1964	59	2	60.54
4015	1966	64	2	65.91
4745	1968	69	2	71.36
5475	1970	74	2	76.80
6205	1972	78	3	80.16
6935	1974	79	3	81.64
7665	1976	81	3	83.92
8395	1978	84	3	86.58
9125	1980	87	3	89.36
9855	1982	89	3	92.18
10585	1984	92	3	94.87
11315	1986	95	3	97.50
12045	1988	97	3	100.08
12775	1990	100	3	102.76
13505	1992	99	3	102.63
14235	1994	100	3	103.19
14965	1996	96	3	98.94
15695	1998	93	3	96.14
16425	2000	92	3	94.78
17155	2002	91	3	94.13
17885	2004	91	3	93.88
18615	2006	91	3	93.78
19345	2008	91	3	93.89
20075	2010	91	3	94.10
20805	2012	92	3	94.36
21535	2014	92	3	94.67
22265	2016	92	3	95.01
22995	2018	93	3	95.36

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
23725	2020	93	3	95.73
24455	2022	93	3	96.10
25185	2024	94	3	96.47
25915	2026	94	3	96.84
26645	2028	94	3	97.21
27375	2030	95	3	97.57
28105	2032	95	3	97.93
28835	2034	95	3	98.26
29565	2036	96	3	98.58
30295	2038	96	3	98.88
31025	2040	96	3	99.16
31755	2042	97	3	99.42
32485	2044	97	3	99.67
33215	2046	97	3	99.90
33945	2048	97	3	100.12
34675	2050	97	3	100.33
35405	2052	98	3	100.54
36135	2054	98	3	100.73
36865	2056	98	3	100.91
37595	2058	98	3	101.09
38325	2060	98	3	101.26
39055	2062	99	3	101.42
39785	2064	99	3	101.57
40515	2066	99	3	101.72
41245	2068	99	3	101.86
41975	2070	99	3	101.99
42705	2072	99	3	102.12
43435	2074	99	3	102.24
44165	2076	99	3	102.35
44895	2078	100	3	102.46
45625	2080	100	3	102.57
46355	2082	100	3	102.67
47085	2084	100	3	102.76
47815	2086	100	3	102.85
48545	2088	100	3	102.94
49275	2090	100	3	103.03
50005	2092	100	3	103.11
50735	2094	100	3	103.19
51465	2096	100	3	103.27
52195	2098	100	3	103.34
52925	2100	100	3	103.41
53655	2102	101	3	103.48
54385	2104	101	3	103.54

Appendix A-4-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-4 (Loxton Area)



Appendix A-4-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-4 (Loxton Area)

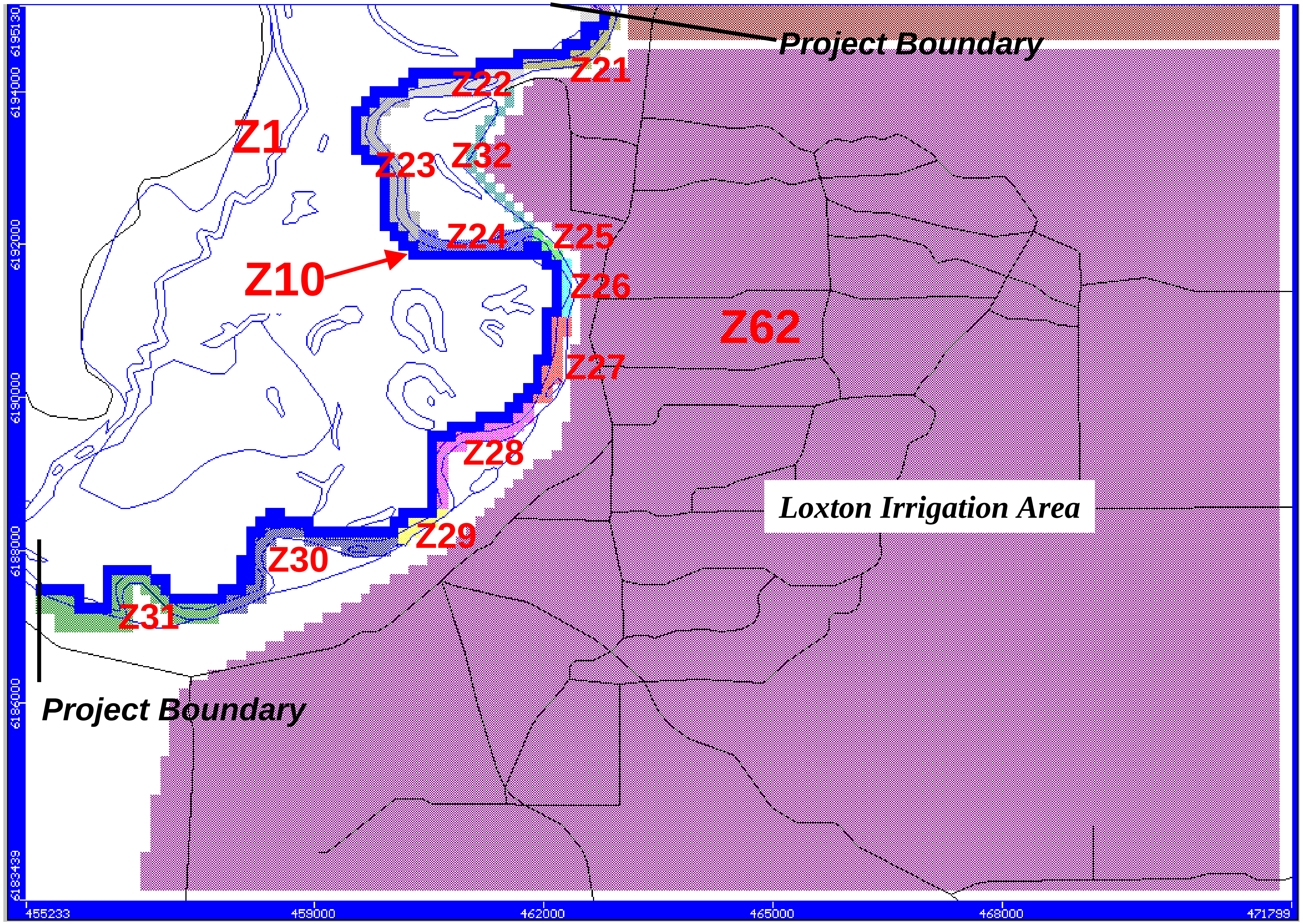
A5. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-5 (LOXTON AREA)

- Flow budget zones (Loxton Area)
- Predicted lateral groundwater flux (m3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)

Appendix A-5

Groundwater flux and salt load entering the River Murray
Scenario-5
(Loxton Area)

-Flow budget zones (Loxton Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)



Appendix A-5-1a Flow budget zones in model Layer-1 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1946	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1947	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1948	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1949	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1950	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1951	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1952	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1953	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1954	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
30	1955	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
365	1956	71.5	46.8	0.0	36.4	94.2	176.3	175.5	62.4	35.7	57.7	146.8	0.0	903
1095	1958	134.4	178.9	0.0	150.3	260.7	385.1	310.3	67.2	35.8	57.9	146.9	7.1	1735
1825	1960	215.6	270.9	0.0	234.1	373.9	525.9	491.6	85.1	36.3	58.3	147.1	56.6	2495
2555	1962	300.5	327.9	0.0	284.1	448.6	642.3	685.0	118.8	38.0	59.1	147.6	91.0	3143
3285	1964	355.8	326.6	0.0	282.6	465.6	725.3	869.6	166.9	42.0	60.3	148.3	87.6	3531
4015	1966	398.0	328.6	0.0	284.0	486.3	791.1	1017.1	221.2	48.7	62.3	149.3	88.1	3875
4745	1968	434.6	335.1	0.0	290.0	508.3	847.6	1136.8	275.8	58.4	65.3	150.5	91.8	4194
5475	1970	467.8	342.8	0.0	297.2	529.2	897.6	1246.2	329.0	70.6	69.6	152.0	96.3	4498
6205	1972	493.7	343.7	0.0	297.5	522.5	876.2	1302.5	378.8	84.5	75.3	153.7	96.1	4624
6935	1974	504.8	328.9	0.0	283.8	503.5	861.7	1341.9	425.6	99.7	82.4	155.7	86.0	4674
7665	1976	512.3	321.9	0.0	277.1	499.7	868.8	1384.4	467.3	116.0	90.8	157.9	81.4	4778
8395	1978	520.3	320.0	0.0	275.6	502.3	882.6	1431.3	504.1	132.3	100.4	160.4	80.3	4910
9125	1980	529.5	320.5	0.0	276.3	507.4	899.0	1479.0	536.9	147.9	110.9	163.1	80.6	5051
9855	1982	539.3	322.1	0.0	278.0	513.6	916.2	1525.6	566.3	162.5	121.9	166.1	81.5	5193
10585	1984	549.5	324.2	0.0	280.0	520.0	933.2	1570.7	593.6	176.0	133.2	169.2	82.8	5333
11315	1986	559.8	326.6	0.0	282.2	526.4	949.4	1614.5	619.9	189.0	144.5	172.7	84.2	5469
12045	1988	570.1	328.9	0.0	284.5	532.5	964.1	1656.2	645.8	201.7	156.0	176.4	85.6	5602
12775	1990	579.7	331.2	0.0	286.6	538.1	977.6	1697.2	672.7	214.8	167.6	180.4	86.9	5733
13505	1992	576.9	315.0	0.0	272.3	514.9	949.7	1701.0	697.6	228.1	179.4	184.6	76.1	5695
14235	1994	571.9	305.4	0.0	263.6	504.4	939.8	1706.2	720.8	241.8	191.5	189.1	70.1	5705
14965	1996	543.0	261.6	0.0	225.3	446.2	871.5	1664.3	738.2	254.9	203.8	193.8	41.1	5444
15695	1998	513.9	234.7	0.0	201.3	414.6	831.7	1624.2	748.9	266.5	215.9	198.8	26.4	5277
16425	2000	491.7	220.0	0.0	189.0	396.5	806.2	1597.1	757.3	276.4	227.5	204.0	19.0	5185
17155	2002	475.7	211.5	0.0	181.8	385.0	788.6	1579.1	764.7	284.8	238.1	209.3	15.0	5134
17885	2004	461.0	201.7	0.0	173.4	370.1	764.9	1550.8	761.7	289.7	247.6	214.9	10.8	5047
18615	2006	448.7	194.9	0.0	167.6	360.0	747.5	1511.4	740.8	287.2	254.5	220.5	8.3	4941
19345	2008	438.6	190.2	0.0	163.7	352.5	732.1	1472.5	718.7	281.4	258.3	226.0	6.8	4841
20075	2010	430.3	186.9	0.0	160.8	346.5	718.4	1437.8	699.7	275.1	259.8	231.3	5.8	4752
20805	2012	423.3	184.3	0.0	158.7	341.2	706.1	1407.6	684.0	269.3	259.8	236.4	5.1	4676
21535	2014	417.3	182.2	0.0	156.8	336.7	695.1	1381.4	670.9	264.2	259.1	241.2	4.6	4610
22265	2016	412.0	180.4	0.0	155.2	332.7	685.5	1358.7	659.9	259.7	258.0	245.7	4.2	4552
22995	2018	407.3	178.9	0.0	153.8	329.1	676.9	1339.0	650.6	255.9	256.8	249.8	3.9	4502

Appendix A-5-2a Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-5 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
23725	**2020**	403.1	177.5	0.0	152.6	326.0	669.3	1321.8	642.6	252.6	255.5	253.7	3.6	**4458**
24455	**2022**	399.2	176.3	0.0	151.5	323.2	662.6	1306.8	635.8	249.8	254.2	257.2	3.3	**4420**
25185	**2024**	395.8	175.3	0.0	150.6	320.7	656.7	1293.7	630.0	247.4	253.1	260.5	3.1	**4387**
25915	**2026**	392.7	174.3	0.0	149.7	318.5	651.4	1282.1	624.9	245.4	252.0	263.5	2.9	**4357**
26645	**2028**	389.9	173.5	0.0	148.9	316.5	646.7	1272.0	620.6	243.6	251.0	266.3	2.7	**4332**
27375	**2030**	387.3	172.7	0.0	148.2	314.7	642.6	1263.1	616.8	242.1	250.2	268.9	2.6	**4309**
28105	**2032**	385.0	172.0	0.0	147.6	313.1	638.8	1255.2	613.5	240.8	249.4	271.3	2.5	**4289**
28835	**2034**	383.0	171.4	0.0	147.0	311.7	635.5	1248.2	610.5	239.6	248.8	273.6	2.4	**4272**
29565	**2036**	381.1	170.8	0.0	146.5	310.5	632.6	1242.0	608.0	238.7	248.2	275.7	2.3	**4256**
30295	**2038**	379.4	170.3	0.0	146.1	309.3	629.9	1236.5	605.8	237.8	247.7	277.7	2.2	**4243**
31025	**2040**	377.9	169.9	0.0	145.7	308.3	627.6	1231.6	603.9	237.1	247.4	279.6	2.1	**4231**
31755	**2042**	376.5	169.5	0.0	145.3	307.4	625.5	1227.3	602.2	236.5	247.0	281.4	2.0	**4220**
32485	**2044**	375.2	169.1	0.0	145.0	306.6	623.6	1223.4	600.7	235.9	246.8	283.0	2.0	**4211**
33215	**2046**	374.1	168.8	0.0	144.7	305.8	621.9	1219.9	599.4	235.5	246.6	284.6	1.9	**4203**
33945	**2048**	373.1	168.5	0.0	144.4	305.2	620.3	1216.9	598.3	235.1	246.4	286.1	1.9	**4196**
34675	**2050**	372.2	168.2	0.0	144.2	304.6	619.0	1214.1	597.3	234.8	246.3	287.5	1.8	**4190**
35405	**2052**	371.4	168.0	0.0	144.0	304.1	617.8	1211.7	596.4	234.5	246.2	288.9	1.8	**4185**
36135	**2054**	370.6	167.8	0.0	143.8	303.6	616.7	1209.5	595.7	234.3	246.2	290.2	1.7	**4180**
36865	**2056**	369.9	167.6	0.0	143.6	303.2	615.7	1207.6	595.0	234.1	246.2	291.4	1.7	**4176**
37595	**2058**	369.3	167.4	0.0	143.5	302.8	614.8	1205.9	594.5	234.0	246.3	292.6	1.7	**4173**
38325	**2060**	368.8	167.3	0.0	143.3	302.4	614.0	1204.4	594.0	233.8	246.3	293.7	1.7	**4170**
39055	**2062**	368.3	167.2	0.0	143.2	302.1	613.3	1203.1	593.6	233.8	246.4	294.8	1.6	**4167**
39785	**2064**	367.9	167.0	0.0	143.1	301.8	612.7	1201.9	593.3	233.7	246.5	295.9	1.6	**4165**
40515	**2066**	367.5	166.9	0.0	143.0	301.6	612.1	1200.9	593.0	233.7	246.6	296.8	1.6	**4164**
41245	**2068**	367.1	166.8	0.0	142.9	301.4	611.6	1200.0	592.8	233.7	246.8	297.8	1.6	**4163**
41975	**2070**	366.8	166.7	0.0	142.9	301.2	611.2	1199.2	592.6	233.7	246.9	298.7	1.6	**4161**
42705	**2072**	366.5	166.7	0.0	142.8	301.0	610.8	1198.6	592.5	233.7	247.1	299.6	1.5	**4161**
43435	**2074**	366.3	166.6	0.0	142.7	300.9	610.5	1198.0	592.4	233.7	247.2	300.5	1.5	**4160**
44165	**2076**	366.1	166.5	0.0	142.7	300.7	610.2	1197.5	592.4	233.8	247.4	301.3	1.5	**4160**
44895	**2078**	365.9	166.5	0.0	142.6	300.6	609.9	1197.1	592.3	233.8	247.6	302.1	1.5	**4160**
45625	**2080**	365.7	166.5	0.0	142.6	300.5	609.7	1196.8	592.3	233.9	247.8	302.8	1.5	**4160**
46355	**2082**	365.5	166.4	0.0	142.6	300.4	609.5	1196.5	592.4	234.0	248.0	303.6	1.5	**4160**
47085	**2084**	365.4	166.4	0.0	142.5	300.3	609.4	1196.3	592.4	234.1	248.2	304.3	1.5	**4161**
47815	**2086**	365.3	166.4	0.0	142.5	300.3	609.2	1196.1	592.5	234.2	248.4	305.0	1.5	**4161**
48545	**2088**	365.2	166.3	0.0	142.5	300.2	609.1	1196.0	592.6	234.3	248.6	305.7	1.5	**4162**
49275	**2090**	365.1	166.3	0.0	142.5	300.2	609.1	1196.0	592.7	234.4	248.8	306.3	1.5	**4163**
50005	**2092**	365.1	166.3	0.0	142.5	300.1	609.0	1195.9	592.8	234.5	249.0	306.9	1.5	**4163**
50735	**2094**	365.0	166.3	0.0	142.5	300.1	608.9	1196.0	592.9	234.6	249.2	307.6	1.5	**4164**
51465	**2096**	365.0	166.3	0.0	142.5	300.1	608.9	1196.0	593.1	234.7	249.4	308.2	1.5	**4165**
52195	**2098**	364.9	166.3	0.0	142.4	300.1	608.9	1196.1	593.2	234.8	249.6	308.7	1.5	**4167**
52925	**2100**	364.9	166.3	0.0	142.4	300.1	608.9	1196.2	593.4	234.9	249.8	309.3	1.5	**4168**
53655	**2102**	364.9	166.3	0.0	142.4	300.1	608.9	1196.3	593.5	235.1	250.0	309.8	1.5	**4169**
54385	**2104**	364.9	166.3	0.0	142.5	300.1	608.9	1196.5	593.7	235.2	250.3	310.4	1.5	**4170**
TDS	***mg/L***	***25807***	***29055***	***30760***	***39978***	***18716***	***4240***	***7710***	***35935***	***29140***	***24080***	***5620***	***8440***	

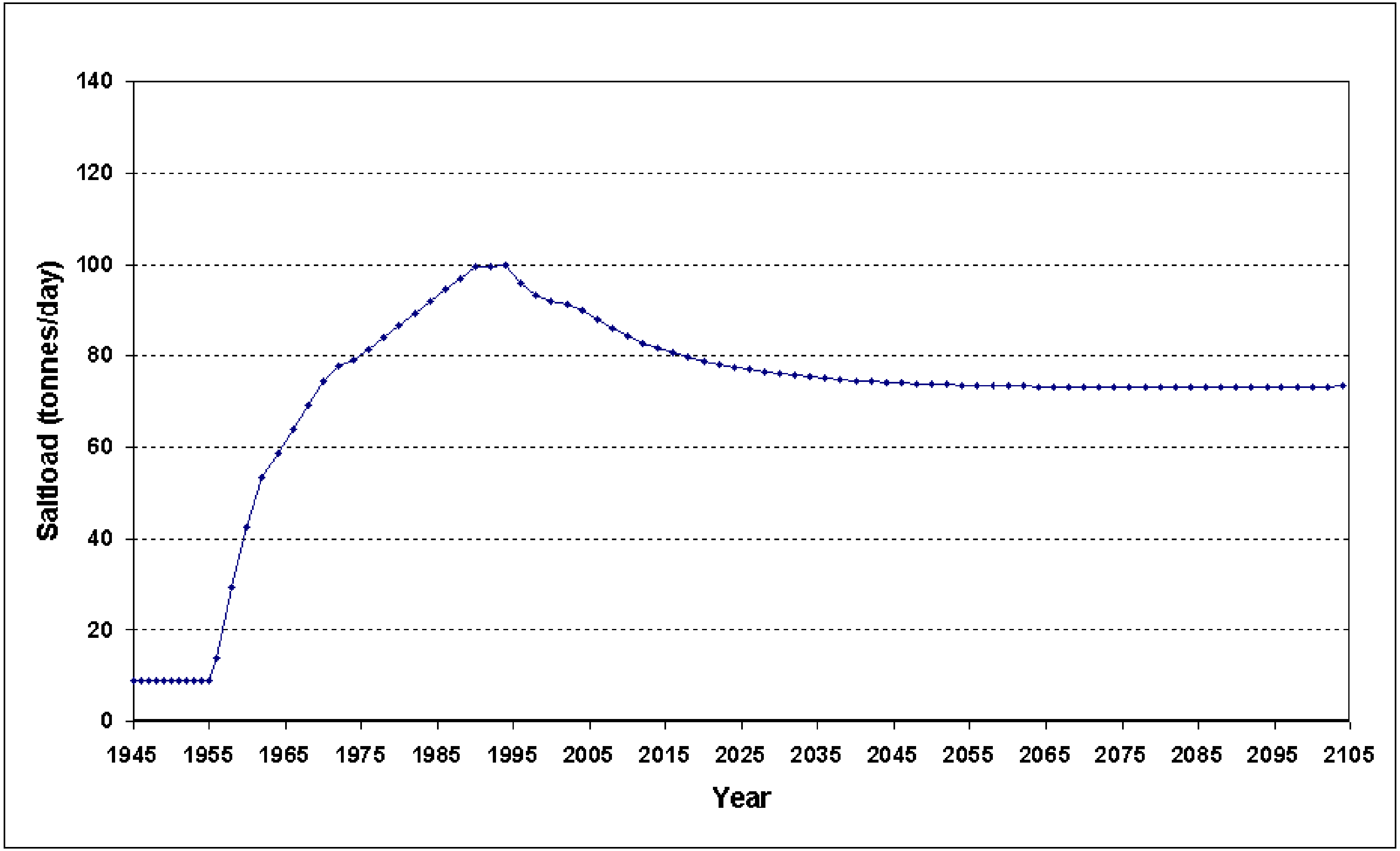
Appendix A-5-2b Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-5 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1946	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1947	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1948	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1949	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1950	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1951	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1952	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1953	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1954	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
30	1955	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
365	1956	1.8	1.4	0.0	1.5	1.8	0.7	1.4	2.2	1.0	1.4	0.8	0.0	14.02
1095	1958	3.5	5.2	0.0	6.0	4.9	1.6	2.4	2.4	1.0	1.4	0.8	0.1	29.32
1825	1960	5.6	7.9	0.0	9.4	7.0	2.2	3.8	3.1	1.1	1.4	0.8	0.5	42.63
2555	1962	7.8	9.5	0.0	11.4	8.4	2.7	5.3	4.3	1.1	1.4	0.8	0.8	53.43
3285	1964	9.2	9.5	0.0	11.3	8.7	3.1	6.7	6.0	1.2	1.5	0.8	0.7	58.71
4015	1966	10.3	9.5	0.0	11.4	9.1	3.4	7.8	7.9	1.4	1.5	0.8	0.7	63.92
4745	1968	11.2	9.7	0.0	11.6	9.5	3.6	8.8	9.9	1.7	1.6	0.8	0.8	69.22
5475	1970	12.1	10.0	0.0	11.9	9.9	3.8	9.6	11.8	2.1	1.7	0.9	0.8	74.46
6205	1972	12.7	10.0	0.0	11.9	9.8	3.7	10.0	13.6	2.5	1.8	0.9	0.8	77.71
6935	1974	13.0	9.6	0.0	11.3	9.4	3.7	10.3	15.3	2.9	2.0	0.9	0.7	79.13
7665	1976	13.2	9.4	0.0	11.1	9.4	3.7	10.7	16.8	3.4	2.2	0.9	0.7	81.29
8395	1978	13.4	9.3	0.0	11.0	9.4	3.7	11.0	18.1	3.9	2.4	0.9	0.7	83.89
9125	1980	13.7	9.3	0.0	11.0	9.5	3.8	11.4	19.3	4.3	2.7	0.9	0.7	86.61
9855	1982	13.9	9.4	0.0	11.1	9.6	3.9	11.8	20.3	4.7	2.9	0.9	0.7	89.29
10585	1984	14.2	9.4	0.0	11.2	9.7	4.0	12.1	21.3	5.1	3.2	1.0	0.7	91.91
11315	1986	14.4	9.5	0.0	11.3	9.9	4.0	12.4	22.3	5.5	3.5	1.0	0.7	94.49
12045	1988	14.7	9.6	0.0	11.4	10.0	4.1	12.8	23.2	5.9	3.8	1.0	0.7	97.02
12775	1990	15.0	9.6	0.0	11.5	10.1	4.1	13.1	24.2	6.3	4.0	1.0	0.7	99.56
13505	1992	14.9	9.2	0.0	10.9	9.6	4.0	13.1	25.1	6.6	4.3	1.0	0.6	99.42
14235	1994	14.8	8.9	0.0	10.5	9.4	4.0	13.2	25.9	7.0	4.6	1.1	0.6	99.96
14965	1996	14.0	7.6	0.0	9.0	8.4	3.7	12.8	26.5	7.4	4.9	1.1	0.3	95.79
15695	1998	13.3	6.8	0.0	8.0	7.8	3.5	12.5	26.9	7.8	5.2	1.1	0.2	93.15
16425	2000	12.7	6.4	0.0	7.6	7.4	3.4	12.3	27.2	8.1	5.5	1.1	0.2	91.84
17155	2002	12.3	6.1	0.0	7.3	7.2	3.3	12.2	27.5	8.3	5.7	1.2	0.1	91.23
17885	2004	11.9	5.9	0.0	6.9	6.9	3.2	12.0	27.4	8.4	6.0	1.2	0.1	89.89
18615	2006	11.6	5.7	0.0	6.7	6.7	3.2	11.7	26.6	8.4	6.1	1.2	0.1	87.93
19345	2008	11.3	5.5	0.0	6.5	6.6	3.1	11.4	25.8	8.2	6.2	1.3	0.1	86.02
20075	2010	11.1	5.4	0.0	6.4	6.5	3.0	11.1	25.1	8.0	6.3	1.3	0.0	84.35
20805	2012	10.9	5.4	0.0	6.3	6.4	3.0	10.9	24.6	7.8	6.3	1.3	0.0	82.91
21535	2014	10.8	5.3	0.0	6.3	6.3	2.9	10.7	24.1	7.7	6.2	1.4	0.0	81.67
22265	2016	10.6	5.2	0.0	6.2	6.2	2.9	10.5	23.7	7.6	6.2	1.4	0.0	80.60
22995	2018	10.5	5.2	0.0	6.1	6.2	2.9	10.3	23.4	7.5	6.2	1.4	0.0	79.67

Appendix A-5-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-5 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
23725	2020	10.4	5.2	0.0	6.1	6.1	2.8	10.2	23.1	7.4	6.2	1.4	0.0	78.85
24455	2022	10.3	5.1	0.0	6.1	6.0	2.8	10.1	22.8	7.3	6.1	1.4	0.0	78.14
25185	2024	10.2	5.1	0.0	6.0	6.0	2.8	10.0	22.6	7.2	6.1	1.5	0.0	77.52
25915	2026	10.1	5.1	0.0	6.0	6.0	2.8	9.9	22.5	7.2	6.1	1.5	0.0	76.97
26645	2028	10.1	5.0	0.0	6.0	5.9	2.7	9.8	22.3	7.1	6.0	1.5	0.0	76.49
27375	2030	10.0	5.0	0.0	5.9	5.9	2.7	9.7	22.2	7.1	6.0	1.5	0.0	76.07
28105	2032	9.9	5.0	0.0	5.9	5.9	2.7	9.7	22.0	7.0	6.0	1.5	0.0	75.69
28835	2034	9.9	5.0	0.0	5.9	5.8	2.7	9.6	21.9	7.0	6.0	1.5	0.0	75.36
29565	2036	9.8	5.0	0.0	5.9	5.8	2.7	9.6	21.8	7.0	6.0	1.5	0.0	75.07
30295	2038	9.8	4.9	0.0	5.8	5.8	2.7	9.5	21.8	6.9	6.0	1.6	0.0	74.82
31025	2040	9.8	4.9	0.0	5.8	5.8	2.7	9.5	21.7	6.9	6.0	1.6	0.0	74.59
31755	2042	9.7	4.9	0.0	5.8	5.8	2.7	9.5	21.6	6.9	5.9	1.6	0.0	74.39
32485	2044	9.7	4.9	0.0	5.8	5.7	2.6	9.4	21.6	6.9	5.9	1.6	0.0	74.22
33215	2046	9.7	4.9	0.0	5.8	5.7	2.6	9.4	21.5	6.9	5.9	1.6	0.0	74.06
33945	2048	9.6	4.9	0.0	5.8	5.7	2.6	9.4	21.5	6.9	5.9	1.6	0.0	73.93
34675	2050	9.6	4.9	0.0	5.8	5.7	2.6	9.4	21.5	6.8	5.9	1.6	0.0	73.81
35405	2052	9.6	4.9	0.0	5.8	5.7	2.6	9.3	21.4	6.8	5.9	1.6	0.0	73.71
36135	2054	9.6	4.9	0.0	5.7	5.7	2.6	9.3	21.4	6.8	5.9	1.6	0.0	73.62
36865	2056	9.5	4.9	0.0	5.7	5.7	2.6	9.3	21.4	6.8	5.9	1.6	0.0	73.54
37595	2058	9.5	4.9	0.0	5.7	5.7	2.6	9.3	21.4	6.8	5.9	1.6	0.0	73.47
38325	2060	9.5	4.9	0.0	5.7	5.7	2.6	9.3	21.3	6.8	5.9	1.7	0.0	73.41
39055	2062	9.5	4.9	0.0	5.7	5.7	2.6	9.3	21.3	6.8	5.9	1.7	0.0	73.37
39785	2064	9.5	4.9	0.0	5.7	5.6	2.6	9.3	21.3	6.8	5.9	1.7	0.0	73.32
40515	2066	9.5	4.8	0.0	5.7	5.6	2.6	9.3	21.3	6.8	5.9	1.7	0.0	73.29
41245	2068	9.5	4.8	0.0	5.7	5.6	2.6	9.3	21.3	6.8	5.9	1.7	0.0	73.26
41975	2070	9.5	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	5.9	1.7	0.0	73.24
42705	2072	9.5	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	5.9	1.7	0.0	73.22
43435	2074	9.5	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.21
44165	2076	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.20
44895	2078	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.19
45625	2080	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.19
46355	2082	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.19
47085	2084	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.20
47815	2086	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.20
48545	2088	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.21
49275	2090	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.22
50005	2092	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.23
50735	2094	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.25
51465	2096	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.26
52195	2098	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.28
52925	2100	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.30
53655	2102	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.8	6.0	1.7	0.0	73.32
54385	2104	9.4	4.8	0.0	5.7	5.6	2.6	9.2	21.3	6.9	6.0	1.7	0.0	73.34
TDS	mg/L	25807	29055	30760	39978	18716	4240	7710	35935	29140	24080	5620	8440	

Appendix A-5-3b Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-5 (Loxton Area)



Appendix A-5-3c Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-5 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	1945	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1946	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1947	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1948	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1949	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1950	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1951	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1952	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1953	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1954	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
30	1955	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
365	1956	6.4	2.2	2.0	2.7	1.7	3.1	4.4	4.3	2.6	4.2	5.0	38
1095	1958	10.3	4.6	2.3	5.5	2.9	4.8	5.9	4.8	2.6	4.3	5.0	53
1825	1960	15.7	6.3	2.6	7.3	3.7	5.9	7.6	5.5	2.7	4.5	5.1	67
2555	1962	21.0	7.4	3.0	8.4	4.3	6.8	9.2	6.6	2.9	4.8	5.2	80
3285	1964	24.7	7.6	3.3	8.7	4.5	7.4	10.7	7.8	3.2	5.1	5.3	88
4015	1966	27.3	7.9	3.4	9.0	4.7	7.9	11.8	8.9	3.7	5.4	5.4	95
4745	1968	29.5	8.2	3.7	9.3	4.9	8.4	12.7	10.1	4.2	5.8	5.5	102
5475	1970	31.3	8.4	3.9	9.6	5.0	8.7	13.5	11.1	4.8	6.2	5.6	108
6205	1972	32.8	8.6	4.0	9.8	5.1	8.8	14.1	12.1	5.5	6.6	5.7	113
6935	1974	33.6	8.5	4.1	9.7	5.0	8.9	14.5	13.0	6.2	7.1	5.8	116
7665	1976	34.2	8.5	4.2	9.7	5.0	9.0	15.0	13.7	6.9	7.6	5.9	120
8395	1978	34.7	8.6	4.3	9.8	5.1	9.1	15.4	14.5	7.5	8.1	6.0	123
9125	1980	35.2	8.7	4.5	9.9	5.2	9.3	15.8	15.1	8.2	8.6	6.1	127
9855	1982	35.8	8.9	4.6	10.1	5.2	9.4	16.2	15.7	8.7	9.1	6.2	130
10585	1984	36.4	9.0	4.7	10.2	5.3	9.6	16.6	16.2	9.2	9.6	6.3	133
11315	1986	36.9	9.1	4.9	10.3	5.4	9.7	16.9	16.8	9.7	10.1	6.3	136
12045	1988	37.5	9.3	5.0	10.5	5.4	9.9	17.3	17.3	10.2	10.6	6.4	139
12775	1990	38.0	9.4	5.1	10.6	5.5	10.0	17.6	17.8	10.7	11.0	6.5	142
13505	1992	38.0	9.2	5.2	10.4	5.4	9.9	17.7	18.3	11.2	11.5	6.6	143
14235	1994	37.8	9.1	5.2	10.4	5.3	9.9	17.9	18.7	11.6	12.0	6.7	145
14965	1996	36.8	8.4	5.1	9.7	5.0	9.6	17.8	19.0	12.1	12.5	6.8	143
15695	1998	35.5	8.0	5.0	9.3	4.9	9.4	17.6	19.2	12.4	12.9	6.9	141
16425	2000	34.4	7.8	5.0	9.1	4.8	9.3	17.5	19.4	12.7	13.3	7.0	140
17155	2002	33.7	7.6	5.0	9.0	4.7	9.2	17.5	19.5	13.0	13.6	7.1	140
17885	2004	33.0	7.5	5.0	8.8	4.6	9.1	17.3	19.5	13.1	13.9	7.1	139
18615	2006	32.3	7.3	4.9	8.7	4.5	9.0	17.1	19.1	13.1	14.1	7.2	137
19345	2008	31.8	7.2	4.9	8.6	4.5	8.9	16.9	18.8	12.9	14.1	7.2	136
20075	2010	31.3	7.1	4.8	8.5	4.4	8.8	16.6	18.5	12.7	14.2	7.2	134
20805	2012	31.0	7.1	4.8	8.4	4.4	8.7	16.4	18.3	12.5	14.2	7.3	133
21535	2014	30.6	7.0	4.7	8.4	4.3	8.6	16.3	18.1	12.4	14.1	7.3	132
22265	2016	30.3	7.0	4.7	8.3	4.3	8.5	16.1	17.9	12.2	14.1	7.3	131
22995	2018	30.1	6.9	4.7	8.3	4.3	8.5	16.0	17.7	12.1	14.1	7.3	130

Appendix A-5-4a Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-5 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
23725	2020	29.8	6.9	4.7	8.2	4.3	8.4	15.9	17.6	12.0	14.0	7.4	129
24455	2022	29.6	6.8	4.7	8.2	4.2	8.4	15.8	17.5	11.9	14.0	7.4	129
25185	2024	29.4	6.8	4.6	8.2	4.2	8.3	15.7	17.4	11.9	14.0	7.4	128
25915	2026	29.3	6.8	4.6	8.1	4.2	8.3	15.7	17.3	11.8	13.9	7.4	127
26645	2028	29.1	6.8	4.6	8.1	4.2	8.3	15.6	17.2	11.7	13.9	7.4	127
27375	2030	29.0	6.7	4.6	8.1	4.2	8.2	15.5	17.2	11.7	13.9	7.4	127
28105	2032	28.8	6.7	4.6	8.1	4.2	8.2	15.5	17.1	11.6	13.9	7.5	126
28835	2034	28.7	6.7	4.6	8.0	4.1	8.2	15.4	17.1	11.6	13.9	7.5	126
29565	2036	28.6	6.7	4.6	8.0	4.1	8.2	15.4	17.1	11.6	13.9	7.5	126
30295	2038	28.5	6.7	4.6	8.0	4.1	8.1	15.4	17.0	11.6	13.9	7.5	125
31025	2040	28.4	6.7	4.6	8.0	4.1	8.1	15.3	17.0	11.5	13.8	7.5	125
31755	2042	28.4	6.7	4.6	8.0	4.1	8.1	15.3	17.0	11.5	13.8	7.5	125
32485	2044	28.3	6.6	4.6	8.0	4.1	8.1	15.3	16.9	11.5	13.8	7.5	125
33215	2046	28.2	6.6	4.6	8.0	4.1	8.1	15.3	16.9	11.5	13.8	7.6	125
33945	2048	28.2	6.6	4.6	8.0	4.1	8.1	15.3	16.9	11.5	13.8	7.6	125
34675	2050	28.1	6.6	4.6	8.0	4.1	8.1	15.3	16.9	11.5	13.8	7.6	125
35405	2052	28.1	6.6	4.6	8.0	4.1	8.1	15.2	16.9	11.5	13.9	7.6	124
36135	2054	28.0	6.6	4.6	7.9	4.1	8.1	15.2	16.9	11.5	13.9	7.6	124
36865	2056	28.0	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	13.9	7.6	124
37595	2058	28.0	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	13.9	7.6	124
38325	2060	27.9	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.4	13.9	7.6	124
39055	2062	27.9	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.4	13.9	7.6	124
39785	2064	27.9	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.4	13.9	7.6	124
40515	2066	27.9	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.4	13.9	7.7	124
41245	2068	27.9	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	13.9	7.7	124
41975	2070	27.8	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	13.9	7.7	124
42705	2072	27.8	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	13.9	7.7	124
43435	2074	27.8	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	14.0	7.7	124
44165	2076	27.8	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	14.0	7.7	124
44895	2078	27.8	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	14.0	7.7	124
45625	2080	27.8	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	14.0	7.7	124
46355	2082	27.8	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	14.0	7.7	124
47085	2084	27.8	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	14.0	7.7	124
47815	2086	27.8	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	14.0	7.7	124
48545	2088	27.8	6.6	4.6	7.9	4.1	8.0	15.2	16.9	11.5	14.0	7.7	124
49275	2090	27.8	6.6	4.6	8.0	4.1	8.0	15.2	16.9	11.5	14.0	7.8	124
50005	2092	27.8	6.6	4.6	8.0	4.1	8.0	15.2	16.9	11.5	14.1	7.8	125
50735	2094	27.8	6.6	4.6	8.0	4.1	8.0	15.2	16.9	11.5	14.1	7.8	125
51465	2096	27.8	6.6	4.6	8.0	4.1	8.0	15.2	16.9	11.5	14.1	7.8	125
52195	2098	27.8	6.6	4.7	8.0	4.1	8.0	15.2	16.9	11.5	14.1	7.8	125
52925	2100	27.8	6.6	4.7	8.0	4.1	8.0	15.2	17.0	11.5	14.1	7.8	125
53655	2102	27.8	6.6	4.7	8.0	4.1	8.0	15.2	17.0	11.5	14.1	7.8	125
54385	2104	27.8	6.6	4.7	8.0	4.1	8.0	15.2	17.0	11.5	14.1	7.8	125
TDS	*mg/L*	*32267*	*32267*	*32267*	*32267*	*32267*	*29405*	*29405*	*9700*	*7550*	*3300*	*3140*	

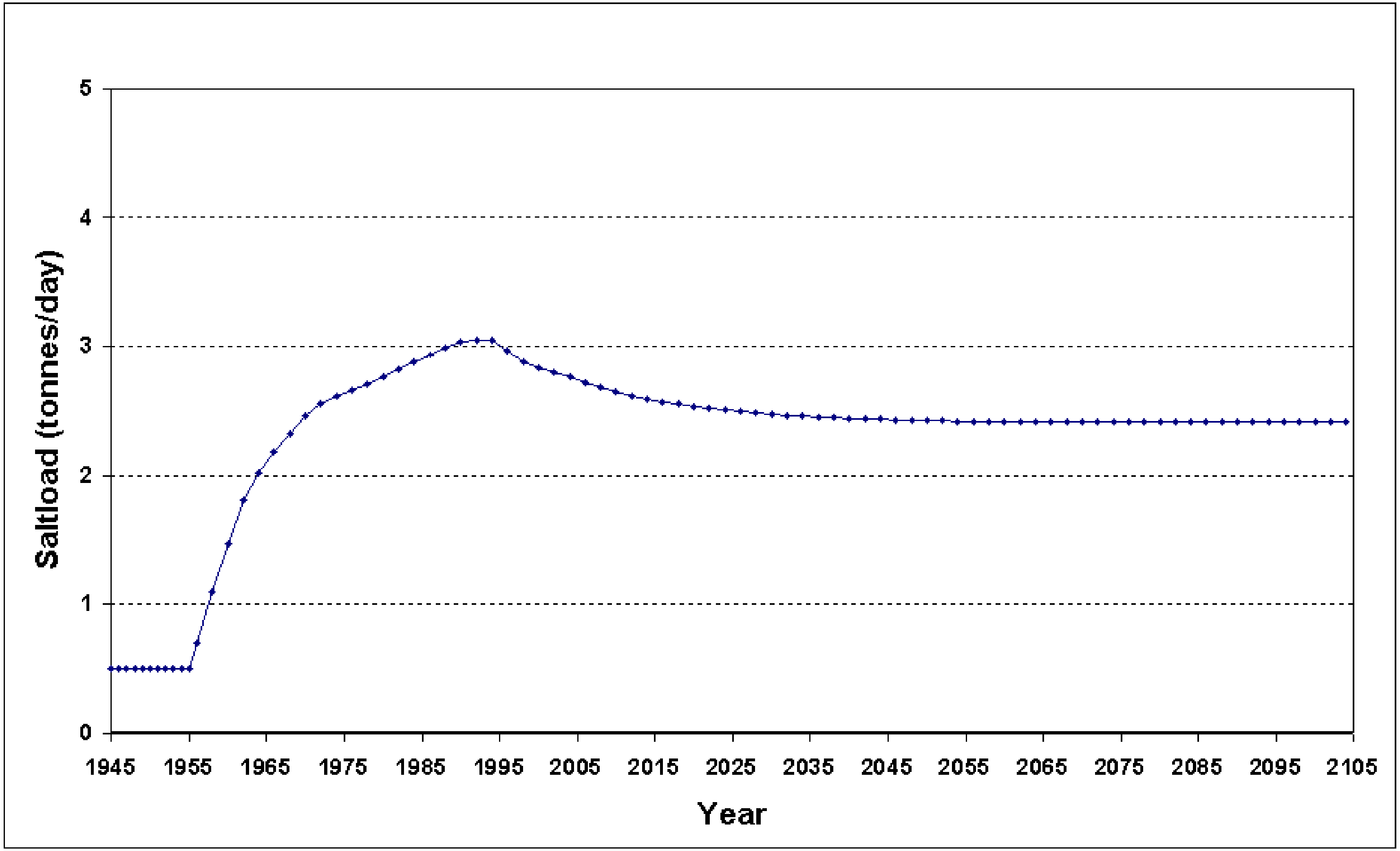
Appendix A-5-4b Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-5 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	1945	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1946	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1947	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1948	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1949	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1950	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1951	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1952	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1953	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1954	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
30	1955	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
365	1956	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.70
1095	1958	0.3	0.1	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	1.10
1825	1960	0.5	0.2	0.1	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	1.48
2555	1962	0.7	0.2	0.1	0.3	0.1	0.3	0.1	0.0	0.0	0.0	0.0	1.81
3285	1964	0.8	0.2	0.1	0.3	0.1	0.3	0.1	0.0	0.0	0.0	0.0	2.02
4015	1966	0.9	0.3	0.1	0.3	0.2	0.3	0.1	0.0	0.0	0.0	0.0	2.18
4745	1968	1.0	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.33
5475	1970	1.0	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.46
6205	1972	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.56
6935	1974	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.61
7665	1976	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.1	0.0	0.0	0.0	2.66
8395	1978	1.1	0.3	0.1	0.3	0.2	0.5	0.1	0.1	0.0	0.0	0.0	2.71
9125	1980	1.1	0.3	0.1	0.3	0.2	0.5	0.1	0.1	0.0	0.0	0.0	2.77
9855	1982	1.2	0.3	0.1	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.83
10585	1984	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.88
11315	1986	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.94
12045	1988	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.99
12775	1990	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.04
13505	1992	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.04
14235	1994	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.05
14965	1996	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.96
15695	1998	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.89
16425	2000	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.84
17155	2002	1.1	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.81
17885	2004	1.1	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.77
18615	2006	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.72
19345	2008	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.68
20075	2010	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.65
20805	2012	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.62
21535	2014	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.59
22265	2016	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.57
22995	2018	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.55

Appendix A-5-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-5 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
23725	2020	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.54
24455	2022	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.52
25185	2024	0.9	0.2	0.1	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.51
25915	2026	0.9	0.2	0.1	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.50
26645	2028	0.9	0.2	0.1	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.49
27375	2030	0.9	0.2	0.1	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.48
28105	2032	0.9	0.2	0.1	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.47
28835	2034	0.9	0.2	0.1	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.46
29565	2036	0.9	0.2	0.1	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.45
30295	2038	0.9	0.2	0.1	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.45
31025	2040	0.9	0.2	0.1	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.44
31755	2042	0.9	0.2	0.1	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.44
32485	2044	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.44
33215	2046	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.43
33945	2048	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.43
34675	2050	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.43
35405	2052	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
36135	2054	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
36865	2056	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
37595	2058	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
38325	2060	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
39055	2062	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
39785	2064	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
40515	2066	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
41245	2068	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.41
41975	2070	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.41
42705	2072	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.41
43435	2074	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.41
44165	2076	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.41
44895	2078	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.41
45625	2080	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.41
46355	2082	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.41
47085	2084	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.41
47815	2086	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
48545	2088	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
49275	2090	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
50005	2092	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
50735	2094	0.9	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
51465	2096	0.9	0.2	0.2	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
52195	2098	0.9	0.2	0.2	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
52925	2100	0.9	0.2	0.2	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
53655	2102	0.9	0.2	0.2	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
54385	2104	0.9	0.2	0.2	0.3	0.1	0.4	0.2	0.1	0.0	0.0	0.0	2.42
TDS	mg/L	32267	32267	32267	32267	32267	29405	29405	9700	7550	3300	3140	

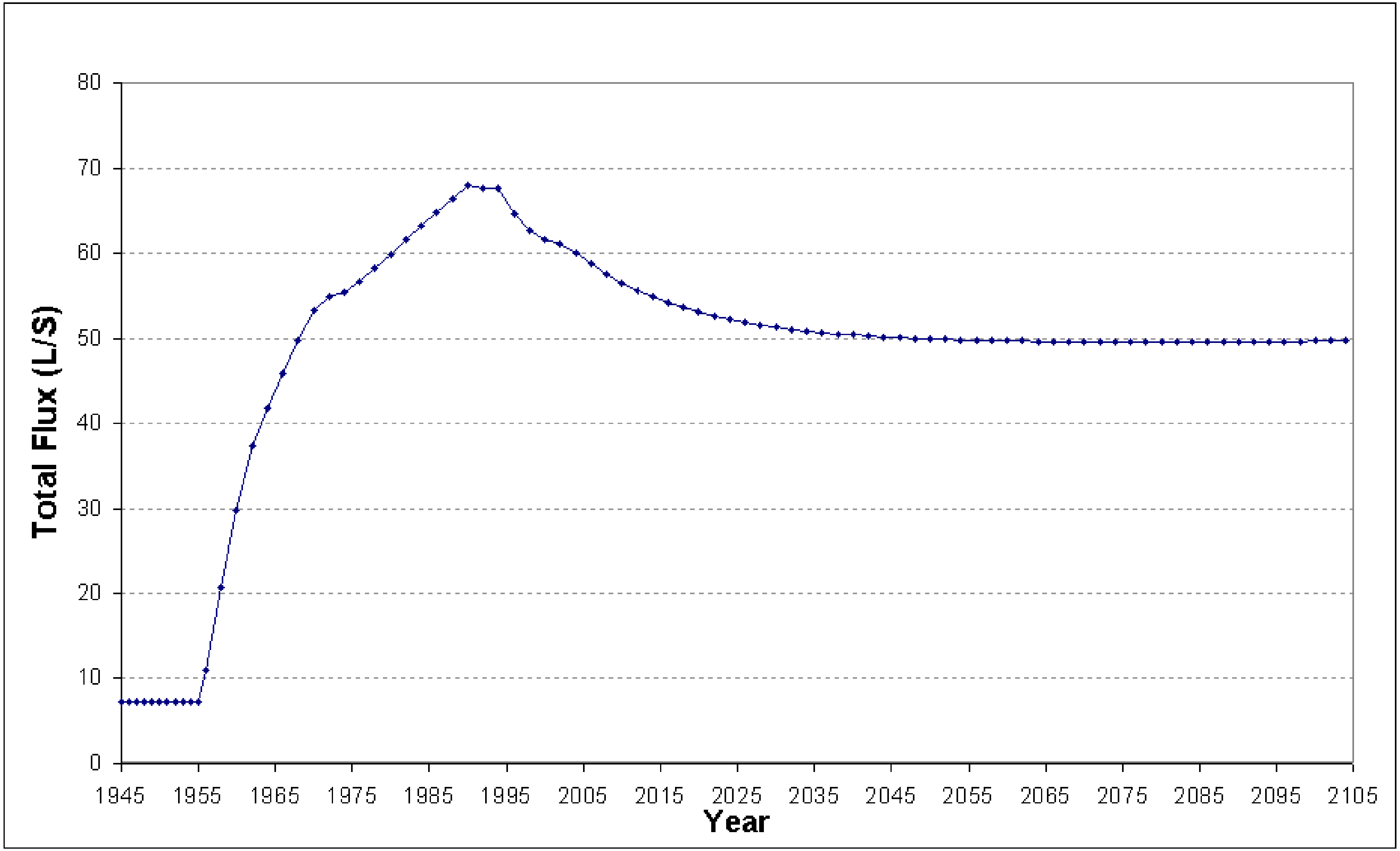
Appendix A-5-5b Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-5 (Loxton Area)



Appendix A-5-5c Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-5 (Loxton Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	1945	591	30	621	7.18
0	1946	591	30	621	7.18
0	1947	591	30	621	7.18
0	1948	591	30	621	7.18
0	1949	591	30	621	7.18
0	1950	591	30	621	7.18
0	1951	591	30	621	7.18
0	1952	591	30	621	7.18
0	1953	591	30	621	7.18
0	1954	591	30	621	7.18
30	1955	591	30	621	7.18
365	1956	903	38	942	10.90
1095	1958	1735	53	1788	20.69
1825	1960	2495	67	2562	29.66
2555	1962	3143	80	3222	37.29
3285	1964	3531	88	3619	41.88
4015	1966	3875	95	3970	45.95
4745	1968	4194	102	4296	49.73
5475	1970	4498	108	4607	53.32
6205	1972	4624	113	4738	54.83
6935	1974	4674	116	4790	55.44
7665	1976	4778	120	4897	56.68
8395	1978	4910	123	5033	58.25
9125	1980	5051	127	5178	59.93
9855	1982	5193	130	5323	61.61
10585	1984	5333	133	5466	63.26
11315	1986	5469	136	5605	64.88
12045	1988	5602	139	5741	66.44
12775	1990	5733	142	5875	68.00
13505	1992	5695	143	5839	67.58
14235	1994	5705	145	5849	67.70
14965	1996	5444	143	5586	64.66
15695	1998	5277	141	5418	62.71
16425	2000	5185	140	5325	61.63
17155	2002	5134	140	5274	61.04
17885	2004	5047	139	5185	60.02
18615	2006	4941	137	5079	58.78
19345	2008	4841	136	4977	57.60
20075	2010	4752	134	4887	56.56
20805	2012	4676	133	4809	55.66
21535	2014	4610	132	4741	54.88
22265	2016	4552	131	4683	54.20
22995	2018	4502	130	4632	53.61
23725	2020	4458	129	4587	53.09
24455	2022	4420	129	4549	52.65
25185	2024	4387	128	4515	52.25
25915	2026	4357	127	4485	51.91
26645	2028	4332	127	4459	51.60
27375	2030	4309	127	4436	51.34
28105	2032	4289	126	4415	51.10
28835	2034	4272	126	4398	50.90
29565	2036	4256	126	4382	50.72
30295	2038	4243	125	4368	50.56
31025	2040	4231	125	4356	50.42
31755	2042	4220	125	4345	50.29
32485	2044	4211	125	4336	50.19
33215	2046	4203	125	4328	50.09
33945	2048	4196	125	4321	50.01
34675	2050	4190	125	4314	49.94
35405	2052	4185	124	4309	49.87
36135	2054	4180	124	4304	49.82
36865	2056	4176	124	4300	49.77
37595	2058	4173	124	4297	49.73
38325	2060	4170	124	4294	49.70
39055	2062	4167	124	4292	49.67
39785	2064	4165	124	4290	49.65
40515	2066	4164	124	4288	49.63
41245	2068	4163	124	4287	49.61
41975	2070	4161	124	4286	49.60
42705	2072	4161	124	4285	49.60
43435	2074	4160	124	4285	49.59
44165	2076	4160	124	4284	49.59
44895	2078	4160	124	4284	49.59
45625	2080	4160	124	4284	49.59
46355	2082	4160	124	4285	49.59
47085	2084	4161	124	4285	49.60
47815	2086	4161	124	4286	49.60
48545	2088	4162	124	4286	49.61
49275	2090	4163	124	4287	49.62
50005	2092	4163	125	4288	49.63
50735	2094	4164	125	4289	49.64
51465	2096	4165	125	4290	49.65
52195	2098	4167	125	4291	49.67
52925	2100	4168	125	4292	49.68
53655	2102	4169	125	4294	49.69
54385	2104	4170	125	4295	49.71

Appendix A-5-6a Predicted total groundwater flux in Scenario-5 (Loxton Area)

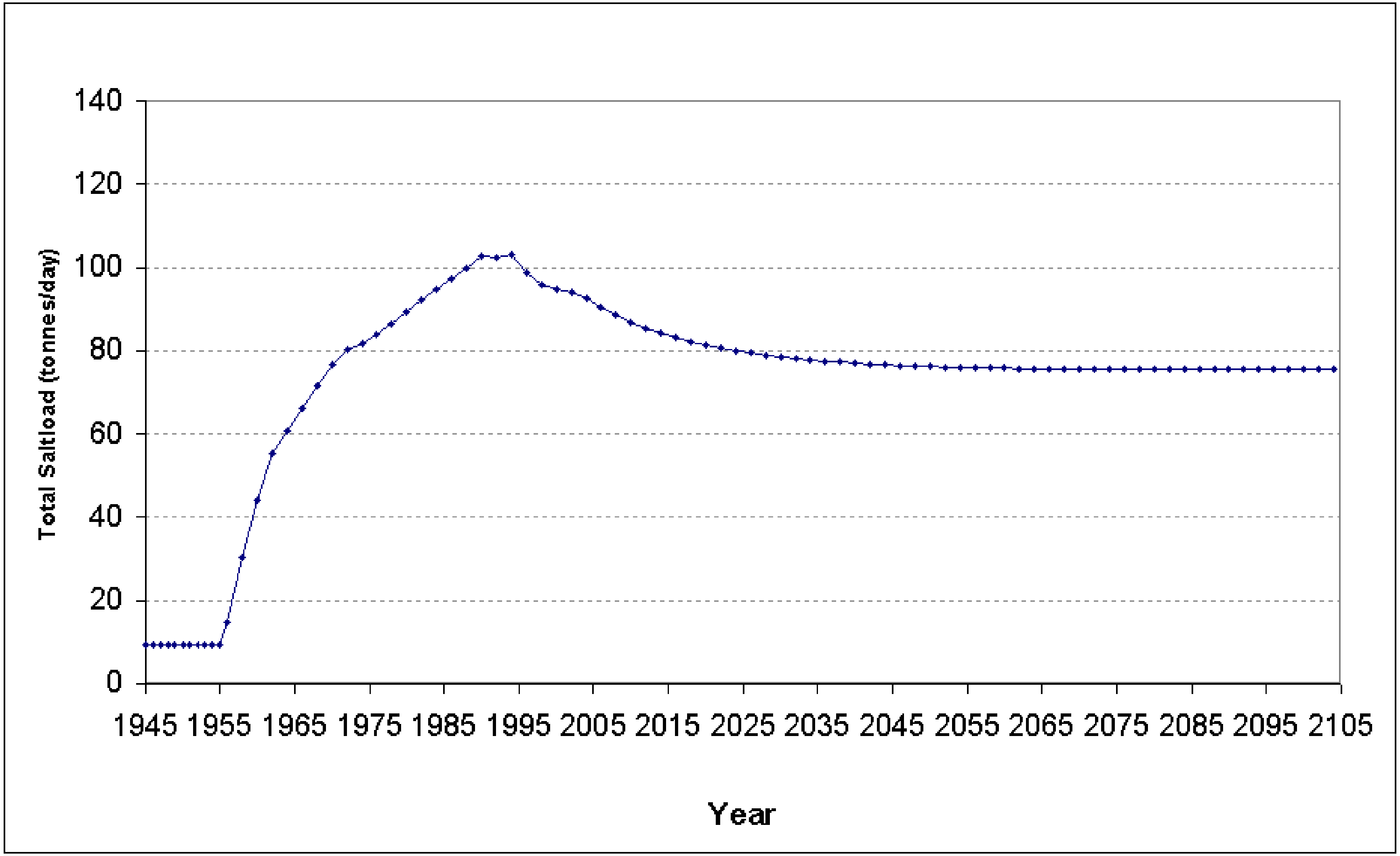


Appendix A-5-6b Graph of predicted total groundwater flux (L/second) entering the River Murray in Scenario-5 (Loxton Area)

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	9	0	9.54
0	1946	9	0	9.54
0	1947	9	0	9.54
0	1948	9	0	9.54
0	1949	9	0	9.54
0	1950	9	0	9.54
0	1951	9	0	9.54
0	1952	9	0	9.54
0	1953	9	0	9.54
0	1954	9	0	9.54
30	1955	9	0	9.54
365	1956	14	1	14.72
1095	1958	29	1	30.41
1825	1960	43	1	44.11
2555	1962	53	2	55.24
3285	1964	59	2	60.73
4015	1966	64	2	66.10
4745	1968	69	2	71.55
5475	1970	74	2	76.92
6205	1972	78	3	80.27
6935	1974	79	3	81.74
7665	1976	81	3	83.95
8395	1978	84	3	86.60
9125	1980	87	3	89.38
9855	1982	89	3	92.12
10585	1984	92	3	94.79
11315	1986	94	3	97.42
12045	1988	97	3	100.00
12775	1990	100	3	102.60
13505	1992	99	3	102.46
14235	1994	100	3	103.01
14965	1996	96	3	98.75
15695	1998	93	3	96.04
16425	2000	92	3	94.68
17155	2002	91	3	94.03
17885	2004	90	3	92.66
18615	2006	88	3	90.65
19345	2008	86	3	88.70
20075	2010	84	3	86.99
20805	2012	83	3	85.53
21535	2014	82	3	84.27
22265	2016	81	3	83.17
22995	2018	80	3	82.22

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
23725	2020	79	3	81.39
24455	2022	78	3	80.66
25185	2024	78	3	80.03
25915	2026	77	2	79.47
26645	2028	76	2	78.98
27375	2030	76	2	78.54
28105	2032	76	2	78.16
28835	2034	75	2	77.82
29565	2036	75	2	77.53
30295	2038	75	2	77.27
31025	2040	75	2	77.03
31755	2042	74	2	76.83
32485	2044	74	2	76.65
33215	2046	74	2	76.50
33945	2048	74	2	76.36
34675	2050	74	2	76.24
35405	2052	74	2	76.13
36135	2054	74	2	76.04
36865	2056	74	2	75.96
37595	2058	73	2	75.89
38325	2060	73	2	75.83
39055	2062	73	2	75.78
39785	2064	73	2	75.74
40515	2066	73	2	75.71
41245	2068	73	2	75.68
41975	2070	73	2	75.65
42705	2072	73	2	75.64
43435	2074	73	2	75.62
44165	2076	73	2	75.61
44895	2078	73	2	75.61
45625	2080	73	2	75.61
46355	2082	73	2	75.61
47085	2084	73	2	75.61
47815	2086	73	2	75.62
48545	2088	73	2	75.63
49275	2090	73	2	75.64
50005	2092	73	2	75.65
50735	2094	73	2	75.67
51465	2096	73	2	75.68
52195	2098	73	2	75.70
52925	2100	73	2	75.72
53655	2102	73	2	75.74
54385	2104	73	2	75.76

Appendix A-5-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-5 (Loxton Area)



Appendix A-5-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-5 (Loxton Area)

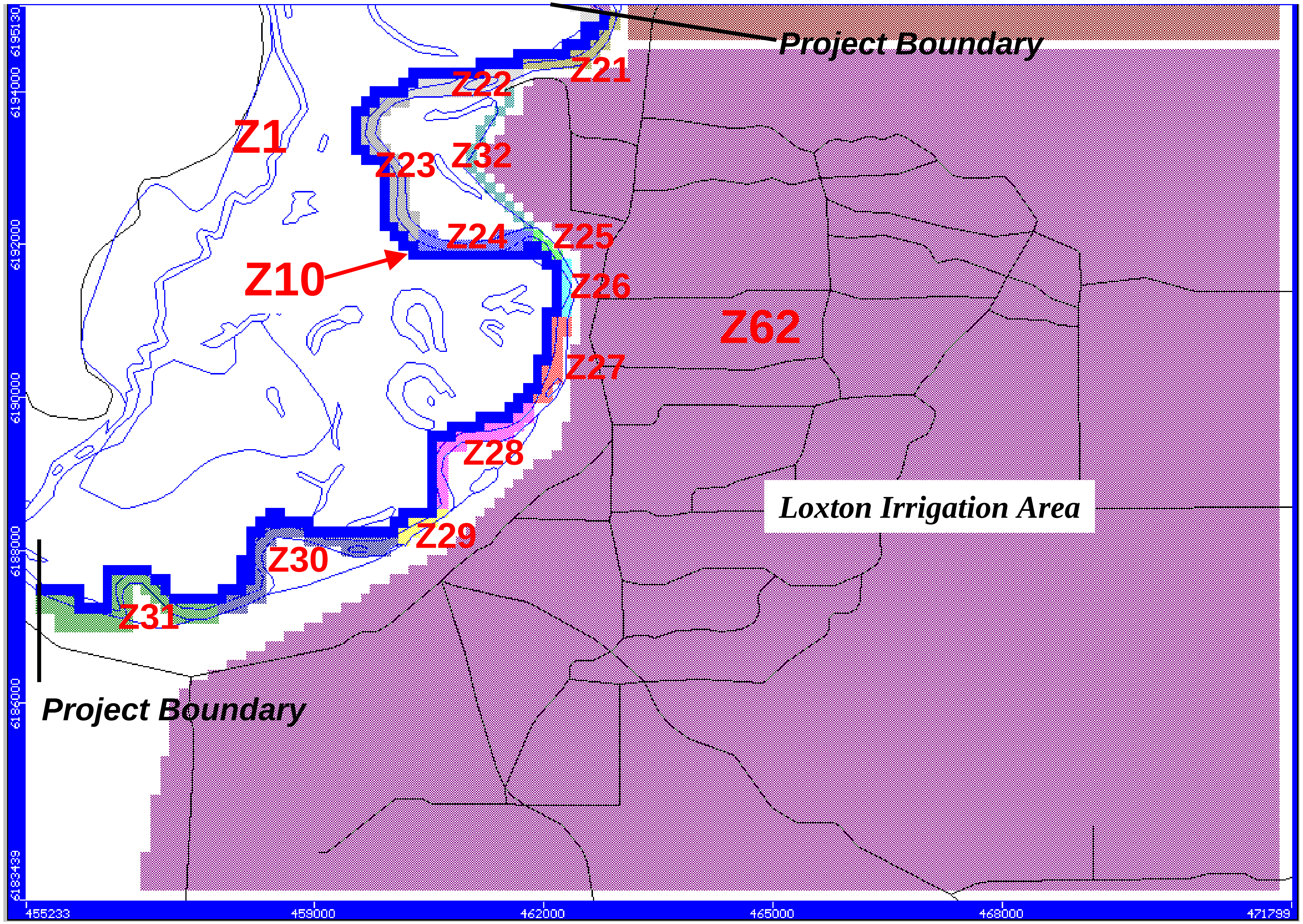
A6. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-6 (LOXTON AREA)

- Flow budget zones (Loxton Area)
- Predicted lateral groundwater flux (m3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)

Appendix A-6

Groundwater flux and salt load entering the River Murray Scenario-6 (Loxton Area)

-Flow budget zones (Loxton Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)



Appendix A-6-1a Flow budget zones in model Layer-1 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	***1945***	*50.2*	*7.6*	*0.0*	*5.9*	*26.9*	*62.8*	*135.7*	*61.9*	*35.6*	*57.7*	*146.8*	*0.0*	***591***
0	***1946***	*50.2*	*7.6*	*0.0*	*5.9*	*26.9*	*62.8*	*135.7*	*61.9*	*35.6*	*57.7*	*146.8*	*0.0*	***591***
0	***1947***	*50.2*	*7.6*	*0.0*	*5.9*	*26.9*	*62.8*	*135.7*	*61.9*	*35.6*	*57.7*	*146.8*	*0.0*	***591***
0	***1948***	*50.2*	*7.6*	*0.0*	*5.9*	*26.9*	*62.8*	*135.7*	*61.9*	*35.6*	*57.7*	*146.8*	*0.0*	***591***
0	***1949***	*50.2*	*7.6*	*0.0*	*5.9*	*26.9*	*62.8*	*135.7*	*61.9*	*35.6*	*57.7*	*146.8*	*0.0*	***591***
0	***1950***	*50.2*	*7.6*	*0.0*	*5.9*	*26.9*	*62.8*	*135.7*	*61.9*	*35.6*	*57.7*	*146.8*	*0.0*	***591***
0	***1951***	*50.2*	*7.6*	*0.0*	*5.9*	*26.9*	*62.8*	*135.7*	*61.9*	*35.6*	*57.7*	*146.8*	*0.0*	***591***
0	***1952***	*50.2*	*7.6*	*0.0*	*5.9*	*26.9*	*62.8*	*135.7*	*61.9*	*35.6*	*57.7*	*146.8*	*0.0*	***591***
0	***1953***	*50.2*	*7.6*	*0.0*	*5.9*	*26.9*	*62.8*	*135.7*	*61.9*	*35.6*	*57.7*	*146.8*	*0.0*	***591***
0	***1954***	*50.2*	*7.6*	*0.0*	*5.9*	*26.9*	*62.8*	*135.7*	*61.9*	*35.6*	*57.7*	*146.8*	*0.0*	***591***
30	**1955**	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	**591**
365	**1956**	71.5	46.8	0.0	36.4	94.2	176.3	175.5	62.4	35.7	57.7	146.8	0.0	**903**
1095	**1958**	134.4	178.9	0.0	150.3	260.7	385.1	310.3	67.2	35.8	57.9	146.9	7.1	**1735**
1825	**1960**	215.6	270.9	0.0	234.1	373.9	525.9	491.6	85.1	36.3	58.3	147.1	56.6	**2495**
2555	**1962**	300.5	327.9	0.0	284.1	448.6	642.3	685.0	118.8	38.0	59.1	147.6	91.0	**3143**
3285	**1964**	355.8	326.6	0.0	282.6	465.6	725.3	869.6	166.9	42.0	60.3	148.3	87.6	**3531**
4015	**1966**	398.0	328.6	0.0	284.0	486.3	791.1	1017.1	221.2	48.7	62.3	149.3	88.1	**3875**
4745	**1968**	434.6	335.1	0.0	290.0	508.3	847.6	1136.8	275.8	58.4	65.3	150.5	91.8	**4194**
5475	**1970**	467.8	342.8	0.0	297.2	529.2	897.6	1246.2	329.0	70.6	69.6	152.0	96.3	**4498**
6205	**1972**	493.7	343.7	0.0	297.5	522.5	876.2	1302.5	378.8	84.5	75.3	153.7	96.1	**4624**
6935	**1974**	504.8	328.9	0.0	283.8	503.5	861.7	1341.9	425.6	99.7	82.4	155.7	86.0	**4674**
7665	**1976**	512.3	321.9	0.0	277.1	499.7	868.8	1384.4	467.3	116.0	90.8	157.9	81.4	**4778**
8395	**1978**	520.3	320.0	0.0	275.6	502.3	882.6	1431.3	504.1	132.3	100.4	160.4	80.3	**4910**
9125	**1980**	529.5	320.5	0.0	276.3	507.4	899.0	1479.0	536.9	147.9	110.9	163.1	80.6	**5051**
9855	**1982**	539.3	322.1	0.0	278.0	513.6	916.2	1525.6	566.3	162.5	121.9	166.1	81.5	**5193**
10585	**1984**	549.5	324.2	0.0	280.0	520.0	933.2	1570.7	593.6	176.0	133.2	169.2	82.8	**5333**
11315	**1986**	559.8	326.6	0.0	282.2	526.4	949.4	1614.5	619.9	189.0	144.5	172.7	84.2	**5469**
12045	**1988**	570.1	328.9	0.0	284.5	532.5	964.1	1656.2	645.8	201.7	156.0	176.4	85.6	**5602**
12775	**1990**	579.7	331.2	0.0	286.6	538.1	977.6	1697.2	672.7	214.8	167.6	180.4	86.9	**5733**
13505	**1992**	576.9	315.0	0.0	272.3	514.9	949.7	1701.0	697.6	228.1	179.4	184.6	76.1	**5695**
14235	**1994**	571.9	305.4	0.0	263.6	504.4	939.8	1706.2	720.8	241.8	191.5	189.1	70.1	**5705**
14965	**1996**	543.0	261.6	0.0	225.3	446.2	871.5	1664.3	738.2	254.9	203.8	193.8	41.1	**5444**
15695	**1998**	513.9	234.7	0.0	201.3	414.6	831.7	1624.2	748.9	266.5	215.9	198.8	26.4	**5277**
16425	**2000**	491.7	220.0	0.0	189.0	396.5	806.2	1597.1	757.3	276.4	227.5	204.0	19.0	**5185**
17155	**2002**	475.7	211.5	0.0	181.8	385.0	788.6	1579.1	764.7	284.8	238.1	209.3	15.0	**5134**
17885	**2004**	461.0	201.7	0.0	173.4	370.1	764.9	1550.8	761.7	289.7	247.6	214.9	10.8	**5047**
18615	**2006**	448.7	194.9	0.0	167.6	360.0	747.5	1511.4	740.8	287.2	254.5	220.5	8.3	**4941**
19345	**2008**	438.6	190.3	0.0	163.7	352.5	732.1	1472.5	718.7	281.4	258.3	226.0	6.9	**4841**
20075	**2010**	430.4	186.9	0.0	160.8	346.5	718.4	1437.8	699.7	275.1	259.8	231.3	5.8	**4752**
20805	**2012**	423.4	184.4	0.0	158.7	341.3	706.1	1407.6	684.0	269.3	259.8	236.4	5.1	**4676**
21535	**2014**	423.6	182.3	0.0	156.8	336.7	695.2	1381.5	671.1	264.3	259.2	241.2	4.6	**4617**
22265	**2016**	426.2	180.7	0.0	155.4	332.9	685.8	1360.0	661.2	260.7	258.5	245.8	4.2	**4571**
22995	**2018**	428.2	179.4	0.0	154.2	329.7	678.3	1344.0	654.6	258.6	258.3	250.0	4.0	**4539**

Appendix A-6-2a Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-6 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
23725	**2020**	430.0	178.5	0.0	153.3	327.2	672.7	1333.3	650.7	257.5	258.5	254.1	3.7	**4519**
24455	**2022**	432.0	177.8	0.0	152.6	325.5	669.0	1327.1	648.9	257.0	258.9	257.9	3.6	**4510**
25185	**2024**	434.1	177.4	0.0	152.2	324.5	666.8	1324.2	648.6	257.0	259.6	261.5	3.5	**4509**
25915	**2026**	436.4	177.3	0.0	152.0	323.9	665.8	1323.7	649.2	257.4	260.4	265.0	3.4	**4514**
26645	**2028**	439.0	177.3	0.0	151.9	323.8	665.8	1325.1	650.7	258.1	261.4	268.3	3.4	**4525**
27375	**2030**	441.7	177.4	0.0	152.0	324.1	666.6	1327.9	652.6	259.0	262.5	271.5	3.4	**4539**
28105	**2032**	444.7	177.7	0.0	152.2	324.6	667.9	1331.6	654.9	260.0	263.7	274.6	3.5	**4555**
28835	**2034**	447.8	178.0	0.0	152.5	325.3	669.7	1336.1	657.4	261.2	265.0	277.6	3.5	**4574**
29565	**2036**	451.0	178.5	0.0	152.9	326.2	671.9	1341.2	660.1	262.5	266.3	280.5	3.6	**4595**
30295	**2038**	454.2	179.0	0.0	153.3	327.3	674.3	1346.7	662.8	263.8	267.8	283.3	3.7	**4616**
31025	**2040**	457.4	179.6	0.0	153.8	328.4	677.0	1352.5	665.7	265.1	269.3	286.0	3.8	**4639**
31755	**2042**	460.5	180.1	0.0	154.3	329.6	679.7	1358.5	668.5	266.5	270.8	288.7	4.0	**4661**
32485	**2044**	463.6	180.7	0.0	154.8	330.9	682.6	1364.6	671.4	267.9	272.3	291.4	4.1	**4684**
33215	**2046**	466.7	181.4	0.0	155.4	332.2	685.6	1370.9	674.3	269.3	273.9	294.0	4.2	**4708**
33945	**2048**	469.6	182.0	0.0	155.9	333.5	688.6	1377.1	677.2	270.7	275.4	296.5	4.4	**4731**
34675	**2050**	472.5	182.6	0.0	156.4	334.8	691.6	1383.5	680.0	272.1	277.0	299.0	4.5	**4754**
35405	**2052**	475.3	183.2	0.0	157.0	336.1	694.6	1389.7	682.8	273.4	278.6	301.4	4.6	**4777**
36135	**2054**	478.0	183.9	0.0	157.5	337.4	697.5	1396.0	685.6	274.8	280.1	303.8	4.7	**4799**
36865	**2056**	480.7	184.5	0.0	158.0	338.7	700.5	1402.2	688.3	276.1	281.6	306.2	4.9	**4822**
37595	**2058**	483.2	185.1	0.0	158.6	340.0	703.4	1408.3	691.0	277.5	283.2	308.5	5.0	**4844**
38325	**2060**	485.6	185.7	0.0	159.1	341.2	706.3	1414.3	693.6	278.8	284.7	310.8	5.1	**4865**
39055	**2062**	487.9	186.2	0.0	159.5	342.4	709.1	1420.2	696.2	280.1	286.2	313.0	5.3	**4886**
39785	**2064**	490.1	186.8	0.0	160.0	343.6	711.8	1426.0	698.8	281.3	287.7	315.2	5.4	**4907**
40515	**2066**	492.2	187.3	0.0	160.5	344.8	714.5	1431.7	701.3	282.6	289.1	317.4	5.6	**4927**
41245	**2068**	494.2	187.8	0.0	160.9	345.9	717.1	1437.3	703.8	283.8	290.5	319.5	5.7	**4947**
41975	**2070**	496.2	188.3	0.0	161.3	347.0	719.6	1442.8	706.2	285.0	292.0	321.6	5.9	**4966**
42705	**2072**	498.0	188.8	0.0	161.7	348.0	722.1	1448.1	708.6	286.2	293.4	323.7	6.0	**4984**
43435	**2074**	499.7	189.2	0.0	162.1	349.0	724.4	1453.2	710.9	287.3	294.7	325.8	6.2	**5003**
44165	**2076**	501.3	189.6	0.0	162.5	350.0	726.7	1458.3	713.2	288.5	296.1	327.8	6.3	**5020**
44895	**2078**	502.9	190.0	0.0	162.9	351.0	728.9	1463.2	715.4	289.6	297.4	329.7	6.5	**5037**
45625	**2080**	504.4	190.4	0.0	163.2	351.9	731.0	1467.9	717.6	290.7	298.7	331.7	6.6	**5054**
46355	**2082**	505.8	190.8	0.0	163.5	352.7	733.1	1472.5	719.7	291.8	300.0	333.6	6.7	**5070**
47085	**2084**	507.1	191.2	0.0	163.9	353.5	735.1	1477.0	721.8	292.8	301.2	335.5	6.8	**5086**
47815	**2086**	508.3	191.5	0.0	164.2	354.3	737.0	1481.3	723.8	293.8	302.5	337.3	6.9	**5101**
48545	**2088**	509.5	191.8	0.0	164.5	355.1	738.8	1485.5	725.8	294.8	303.7	339.1	7.0	**5116**
49275	**2090**	510.7	192.2	0.0	164.7	355.8	740.6	1489.5	727.7	295.8	304.9	340.9	7.1	**5130**
50005	**2092**	511.8	192.5	0.0	165.0	356.5	742.2	1493.4	729.6	296.8	306.1	342.7	7.2	**5144**
50735	**2094**	512.8	192.8	0.0	165.3	357.2	743.9	1497.2	731.4	297.8	307.2	344.4	7.3	**5157**
51465	**2096**	513.8	193.0	0.0	165.5	357.8	745.4	1500.9	733.2	298.7	308.4	346.1	7.4	**5170**
52195	**2098**	514.8	193.3	0.0	165.8	358.5	746.9	1504.5	735.0	299.6	309.5	347.8	7.5	**5183**
52925	**2100**	515.7	193.6	0.0	166.0	359.1	748.4	1507.9	736.7	300.5	310.6	349.4	7.6	**5195**
53655	**2102**	516.5	193.8	0.0	166.2	359.6	749.8	1511.2	738.3	301.3	311.7	351.0	7.7	**5207**
54385	**2104**	517.3	194.0	0.0	166.4	360.2	751.1	1514.5	740.0	302.2	312.7	352.6	7.7	**5219**
TDS	***mg/L***	***25807***	***29055***	***30760***	***39978***	***18716***	***4240***	***7710***	***35935***	***29140***	***24080***	***5620***	***8440***	

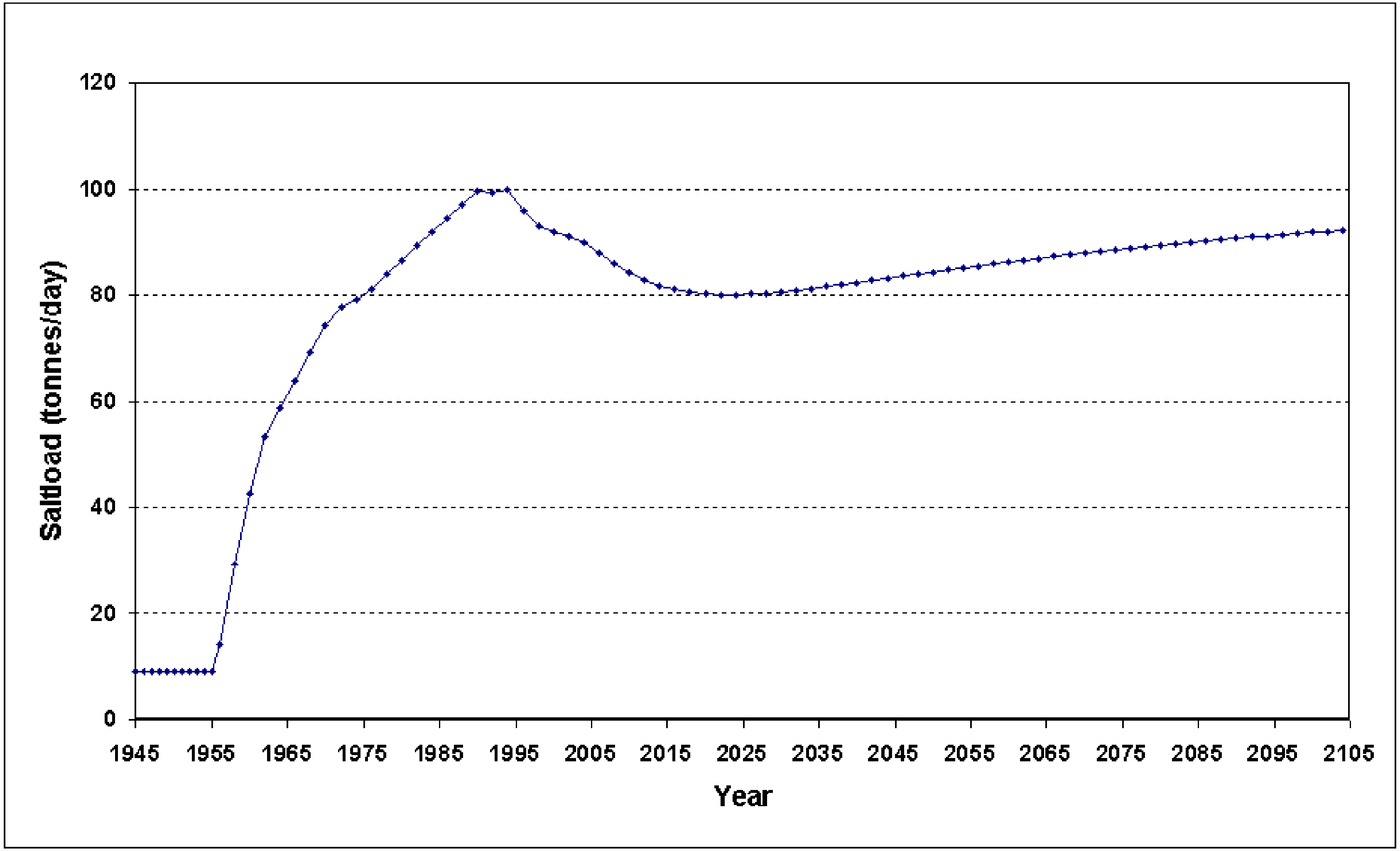
Appendix A-6-2b Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-6 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1946	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1947	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1948	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1949	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1950	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1951	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1952	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1953	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
0	1954	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
30	1955	1.3	0.2	0.0	0.2	0.5	0.3	1.0	2.2	1.0	1.4	0.8	0.0	9.04
365	1956	1.8	1.4	0.0	1.5	1.8	0.7	1.4	2.2	1.0	1.4	0.8	0.0	14.02
1095	1958	3.5	5.2	0.0	6.0	4.9	1.6	2.4	2.4	1.0	1.4	0.8	0.1	29.32
1825	1960	5.6	7.9	0.0	9.4	7.0	2.2	3.8	3.1	1.1	1.4	0.8	0.5	42.63
2555	1962	7.8	9.5	0.0	11.4	8.4	2.7	5.3	4.3	1.1	1.4	0.8	0.8	53.43
3285	1964	9.2	9.5	0.0	11.3	8.7	3.1	6.7	6.0	1.2	1.5	0.8	0.7	58.71
4015	1966	10.3	9.5	0.0	11.4	9.1	3.4	7.8	7.9	1.4	1.5	0.8	0.7	63.92
4745	1968	11.2	9.7	0.0	11.6	9.5	3.6	8.8	9.9	1.7	1.6	0.8	0.8	69.22
5475	1970	12.1	10.0	0.0	11.9	9.9	3.8	9.6	11.8	2.1	1.7	0.9	0.8	74.46
6205	1972	12.7	10.0	0.0	11.9	9.8	3.7	10.0	13.6	2.5	1.8	0.9	0.8	77.71
6935	1974	13.0	9.6	0.0	11.3	9.4	3.7	10.3	15.3	2.9	2.0	0.9	0.7	79.13
7665	1976	13.2	9.4	0.0	11.1	9.4	3.7	10.7	16.8	3.4	2.2	0.9	0.7	81.29
8395	1978	13.4	9.3	0.0	11.0	9.4	3.7	11.0	18.1	3.9	2.4	0.9	0.7	83.89
9125	1980	13.7	9.3	0.0	11.0	9.5	3.8	11.4	19.3	4.3	2.7	0.9	0.7	86.61
9855	1982	13.9	9.4	0.0	11.1	9.6	3.9	11.8	20.3	4.7	2.9	0.9	0.7	89.29
10585	1984	14.2	9.4	0.0	11.2	9.7	4.0	12.1	21.3	5.1	3.2	1.0	0.7	91.91
11315	1986	14.4	9.5	0.0	11.3	9.9	4.0	12.4	22.3	5.5	3.5	1.0	0.7	94.49
12045	1988	14.7	9.6	0.0	11.4	10.0	4.1	12.8	23.2	5.9	3.8	1.0	0.7	97.02
12775	1990	15.0	9.6	0.0	11.5	10.1	4.1	13.1	24.2	6.3	4.0	1.0	0.7	99.56
13505	1992	14.9	9.2	0.0	10.9	9.6	4.0	13.1	25.1	6.6	4.3	1.0	0.6	99.42
14235	1994	14.8	8.9	0.0	10.5	9.4	4.0	13.2	25.9	7.0	4.6	1.1	0.6	99.96
14965	1996	14.0	7.6	0.0	9.0	8.4	3.7	12.8	26.5	7.4	4.9	1.1	0.3	95.79
15695	1998	13.3	6.8	0.0	8.0	7.8	3.5	12.5	26.9	7.8	5.2	1.1	0.2	93.15
16425	2000	12.7	6.4	0.0	7.6	7.4	3.4	12.3	27.2	8.1	5.5	1.1	0.2	91.84
17155	2002	12.3	6.1	0.0	7.3	7.2	3.3	12.2	27.5	8.3	5.7	1.2	0.1	91.23
17885	2004	11.9	5.9	0.0	6.9	6.9	3.2	12.0	27.4	8.4	6.0	1.2	0.1	89.89
18615	2006	11.6	5.7	0.0	6.7	6.7	3.2	11.7	26.6	8.4	6.1	1.2	0.1	87.93
19345	2008	11.3	5.5	0.0	6.5	6.6	3.1	11.4	25.8	8.2	6.2	1.3	0.1	86.02
20075	2010	11.1	5.4	0.0	6.4	6.5	3.0	11.1	25.1	8.0	6.3	1.3	0.0	84.35
20805	2012	10.9	5.4	0.0	6.3	6.4	3.0	10.9	24.6	7.8	6.3	1.3	0.0	82.92
21535	2014	10.9	5.3	0.0	6.3	6.3	2.9	10.7	24.1	7.7	6.2	1.4	0.0	81.85
22265	2016	11.0	5.2	0.0	6.2	6.2	2.9	10.5	23.8	7.6	6.2	1.4	0.0	81.08
22995	2018	11.0	5.2	0.0	6.2	6.2	2.9	10.4	23.5	7.5	6.2	1.4	0.0	80.55

Appendix A-6-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-6 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
23725	2020	11.1	5.2	0.0	6.1	6.1	2.9	10.3	23.4	7.5	6.2	1.4	0.0	80.24
24455	2022	11.1	5.2	0.0	6.1	6.1	2.8	10.2	23.3	7.5	6.2	1.4	0.0	80.10
25185	2024	11.2	5.2	0.0	6.1	6.1	2.8	10.2	23.3	7.5	6.3	1.5	0.0	80.10
25915	2026	11.3	5.1	0.0	6.1	6.1	2.8	10.2	23.3	7.5	6.3	1.5	0.0	80.20
26645	2028	11.3	5.1	0.0	6.1	6.1	2.8	10.2	23.4	7.5	6.3	1.5	0.0	80.38
27375	2030	11.4	5.2	0.0	6.1	6.1	2.8	10.2	23.5	7.5	6.3	1.5	0.0	80.63
28105	2032	11.5	5.2	0.0	6.1	6.1	2.8	10.3	23.5	7.6	6.3	1.5	0.0	80.93
28835	2034	11.6	5.2	0.0	6.1	6.1	2.8	10.3	23.6	7.6	6.4	1.6	0.0	81.26
29565	2036	11.6	5.2	0.0	6.1	6.1	2.8	10.3	23.7	7.6	6.4	1.6	0.0	81.62
30295	2038	11.7	5.2	0.0	6.1	6.1	2.9	10.4	23.8	7.7	6.4	1.6	0.0	82.00
31025	2040	11.8	5.2	0.0	6.1	6.1	2.9	10.4	23.9	7.7	6.5	1.6	0.0	82.38
31755	2042	11.9	5.2	0.0	6.2	6.2	2.9	10.5	24.0	7.8	6.5	1.6	0.0	82.78
32485	2044	12.0	5.3	0.0	6.2	6.2	2.9	10.5	24.1	7.8	6.6	1.6	0.0	83.18
33215	2046	12.0	5.3	0.0	6.2	6.2	2.9	10.6	24.2	7.8	6.6	1.7	0.0	83.58
33945	2048	12.1	5.3	0.0	6.2	6.2	2.9	10.6	24.3	7.9	6.6	1.7	0.0	83.97
34675	2050	12.2	5.3	0.0	6.3	6.3	2.9	10.7	24.4	7.9	6.7	1.7	0.0	84.37
35405	2052	12.3	5.3	0.0	6.3	6.3	2.9	10.7	24.5	8.0	6.7	1.7	0.0	84.76
36135	2054	12.3	5.3	0.0	6.3	6.3	3.0	10.8	24.6	8.0	6.7	1.7	0.0	85.15
36865	2056	12.4	5.4	0.0	6.3	6.3	3.0	10.8	24.7	8.0	6.8	1.7	0.0	85.53
37595	2058	12.5	5.4	0.0	6.3	6.4	3.0	10.9	24.8	8.1	6.8	1.7	0.0	85.90
38325	2060	12.5	5.4	0.0	6.4	6.4	3.0	10.9	24.9	8.1	6.9	1.7	0.0	86.26
39055	2062	12.6	5.4	0.0	6.4	6.4	3.0	10.9	25.0	8.2	6.9	1.8	0.0	86.62
39785	2064	12.6	5.4	0.0	6.4	6.4	3.0	11.0	25.1	8.2	6.9	1.8	0.0	86.97
40515	2066	12.7	5.4	0.0	6.4	6.5	3.0	11.0	25.2	8.2	7.0	1.8	0.0	87.31
41245	2068	12.8	5.5	0.0	6.4	6.5	3.0	11.1	25.3	8.3	7.0	1.8	0.0	87.64
41975	2070	12.8	5.5	0.0	6.4	6.5	3.1	11.1	25.4	8.3	7.0	1.8	0.0	87.96
42705	2072	12.9	5.5	0.0	6.5	6.5	3.1	11.2	25.5	8.3	7.1	1.8	0.1	88.28
43435	2074	12.9	5.5	0.0	6.5	6.5	3.1	11.2	25.5	8.4	7.1	1.8	0.1	88.58
44165	2076	12.9	5.5	0.0	6.5	6.6	3.1	11.2	25.6	8.4	7.1	1.8	0.1	88.88
44895	2078	13.0	5.5	0.0	6.5	6.6	3.1	11.3	25.7	8.4	7.2	1.9	0.1	89.16
45625	2080	13.0	5.5	0.0	6.5	6.6	3.1	11.3	25.8	8.5	7.2	1.9	0.1	89.44
46355	2082	13.1	5.5	0.0	6.5	6.6	3.1	11.4	25.9	8.5	7.2	1.9	0.1	89.71
47085	2084	13.1	5.6	0.0	6.6	6.6	3.1	11.4	25.9	8.5	7.3	1.9	0.1	89.98
47815	2086	13.1	5.6	0.0	6.6	6.6	3.1	11.4	26.0	8.6	7.3	1.9	0.1	90.23
48545	2088	13.1	5.6	0.0	6.6	6.6	3.1	11.5	26.1	8.6	7.3	1.9	0.1	90.48
49275	2090	13.2	5.6	0.0	6.6	6.7	3.1	11.5	26.1	8.6	7.3	1.9	0.1	90.72
50005	2092	13.2	5.6	0.0	6.6	6.7	3.1	11.5	26.2	8.6	7.4	1.9	0.1	90.95
50735	2094	13.2	5.6	0.0	6.6	6.7	3.2	11.5	26.3	8.7	7.4	1.9	0.1	91.18
51465	2096	13.3	5.6	0.0	6.6	6.7	3.2	11.6	26.3	8.7	7.4	1.9	0.1	91.40
52195	2098	13.3	5.6	0.0	6.6	6.7	3.2	11.6	26.4	8.7	7.5	2.0	0.1	91.61
52925	2100	13.3	5.6	0.0	6.6	6.7	3.2	11.6	26.5	8.8	7.5	2.0	0.1	91.82
53655	2102	13.3	5.6	0.0	6.6	6.7	3.2	11.7	26.5	8.8	7.5	2.0	0.1	92.02
54385	2104	13.4	5.6	0.0	6.7	6.7	3.2	11.7	26.6	8.8	7.5	2.0	0.1	92.22
TDS	mg/L	25807	29055	30760	39978	18716	4240	7710	35935	29140	24080	5620	8440	

Appendix A-6-3b Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-6 (Loxton Area)



Appendix A-6-3c Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-6 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	1945	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1946	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1947	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1948	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1949	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1950	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1951	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1952	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1953	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1954	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
30	1955	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
365	1956	6.4	2.2	2.0	2.7	1.7	3.1	4.4	4.3	2.6	4.2	5.0	38
1095	1958	10.3	4.6	2.3	5.5	2.9	4.8	5.9	4.8	2.6	4.3	5.0	53
1825	1960	15.7	6.3	2.6	7.3	3.7	5.9	7.6	5.5	2.7	4.5	5.1	67
2555	1962	21.0	7.4	3.0	8.4	4.3	6.8	9.2	6.6	2.9	4.8	5.2	80
3285	1964	24.7	7.6	3.3	8.7	4.5	7.4	10.7	7.8	3.2	5.1	5.3	88
4015	1966	27.3	7.9	3.4	9.0	4.7	7.9	11.8	8.9	3.7	5.4	5.4	95
4745	1968	29.5	8.2	3.7	9.3	4.9	8.4	12.7	10.1	4.2	5.8	5.5	102
5475	1970	31.3	8.4	3.9	9.6	5.0	8.7	13.5	11.1	4.8	6.2	5.6	108
6205	1972	32.8	8.6	4.0	9.8	5.1	8.8	14.1	12.1	5.5	6.6	5.7	113
6935	1974	33.6	8.5	4.1	9.7	5.0	8.9	14.5	13.0	6.2	7.1	5.8	116
7665	1976	34.2	8.5	4.2	9.7	5.0	9.0	15.0	13.7	6.9	7.6	5.9	120
8395	1978	34.7	8.6	4.3	9.8	5.1	9.1	15.4	14.5	7.5	8.1	6.0	123
9125	1980	35.2	8.7	4.5	9.9	5.2	9.3	15.8	15.1	8.2	8.6	6.1	127
9855	1982	35.8	8.9	4.6	10.1	5.2	9.4	16.2	15.7	8.7	9.1	6.2	130
10585	1984	36.4	9.0	4.7	10.2	5.3	9.6	16.6	16.2	9.2	9.6	6.3	133
11315	1986	36.9	9.1	4.9	10.3	5.4	9.7	16.9	16.8	9.7	10.1	6.3	136
12045	1988	37.5	9.3	5.0	10.5	5.4	9.9	17.3	17.3	10.2	10.6	6.4	139
12775	1990	38.0	9.4	5.1	10.6	5.5	10.0	17.6	17.8	10.7	11.0	6.5	142
13505	1992	38.0	9.2	5.2	10.4	5.4	9.9	17.7	18.3	11.2	11.5	6.6	143
14235	1994	37.8	9.1	5.2	10.4	5.3	9.9	17.9	18.7	11.6	12.0	6.7	145
14965	1996	36.8	8.4	5.1	9.7	5.0	9.6	17.8	19.0	12.1	12.5	6.8	143
15695	1998	35.5	8.0	5.0	9.3	4.9	9.4	17.6	19.2	12.4	12.9	6.9	141
16425	2000	34.4	7.8	5.0	9.1	4.8	9.3	17.5	19.4	12.7	13.3	7.0	140
17155	2002	33.7	7.6	5.0	9.0	4.7	9.2	17.5	19.5	13.0	13.6	7.1	140
17885	2004	33.0	7.5	5.0	8.8	4.6	9.1	17.3	19.5	13.1	13.9	7.1	139
18615	2006	32.3	7.3	4.9	8.7	4.5	9.0	17.1	19.1	13.1	14.1	7.2	137
19345	2008	31.8	7.2	4.9	8.6	4.5	8.9	16.9	18.8	12.9	14.1	7.2	136
20075	2010	31.4	7.1	4.8	8.5	4.4	8.8	16.6	18.5	12.7	14.2	7.2	134
20805	2012	31.0	7.1	4.8	8.4	4.4	8.7	16.5	18.3	12.5	14.2	7.3	133
21535	2014	30.9	7.0	4.8	8.4	4.4	8.6	16.3	18.1	12.4	14.1	7.3	132
22265	2016	30.9	7.1	4.8	8.4	4.3	8.6	16.2	18.0	12.3	14.2	7.3	132
22995	2018	31.0	7.1	4.9	8.4	4.3	8.5	16.2	17.9	12.2	14.2	7.4	132

Appendix A-6-4a Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-6 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
23725	2020	31.1	7.2	5.0	8.4	4.3	8.5	16.2	17.9	12.2	14.3	7.4	133
24455	2022	31.3	7.2	5.1	8.4	4.3	8.5	16.2	18.0	12.2	14.3	7.5	133
25185	2024	31.4	7.3	5.2	8.5	4.3	8.6	16.3	18.0	12.2	14.4	7.5	134
25915	2026	31.6	7.4	5.2	8.5	4.3	8.6	16.3	18.1	12.3	14.5	7.6	134
26645	2028	31.7	7.4	5.3	8.6	4.4	8.6	16.4	18.2	12.3	14.6	7.6	135
27375	2030	31.9	7.5	5.4	8.6	4.4	8.6	16.5	18.2	12.4	14.6	7.7	136
28105	2032	32.1	7.6	5.5	8.7	4.4	8.7	16.6	18.3	12.4	14.7	7.7	137
28835	2034	32.3	7.6	5.6	8.7	4.4	8.7	16.6	18.4	12.5	14.8	7.7	137
29565	2036	32.5	7.7	5.6	8.8	4.4	8.7	16.7	18.5	12.5	14.9	7.8	138
30295	2038	32.7	7.8	5.7	8.8	4.4	8.8	16.8	18.6	12.6	15.0	7.8	139
31025	2040	32.9	7.8	5.8	8.9	4.5	8.8	16.9	18.7	12.6	15.1	7.9	140
31755	2042	33.1	7.9	5.8	8.9	4.5	8.9	16.9	18.8	12.7	15.2	7.9	140
32485	2044	33.3	7.9	5.9	9.0	4.5	8.9	17.0	18.8	12.7	15.2	7.9	141
33215	2046	33.5	8.0	5.9	9.0	4.5	8.9	17.1	18.9	12.8	15.3	8.0	142
33945	2048	33.7	8.0	6.0	9.0	4.5	9.0	17.2	19.0	12.9	15.4	8.0	143
34675	2050	33.9	8.1	6.0	9.1	4.5	9.0	17.3	19.1	12.9	15.5	8.0	143
35405	2052	34.0	8.1	6.1	9.1	4.6	9.0	17.3	19.2	13.0	15.6	8.1	144
36135	2054	34.2	8.2	6.2	9.2	4.6	9.1	17.4	19.3	13.0	15.6	8.1	145
36865	2056	34.4	8.2	6.2	9.2	4.6	9.1	17.5	19.3	13.1	15.7	8.1	145
37595	2058	34.5	8.3	6.2	9.2	4.6	9.1	17.5	19.4	13.1	15.8	8.2	146
38325	2060	34.7	8.3	6.3	9.3	4.6	9.2	17.6	19.5	13.2	15.9	8.2	147
39055	2062	34.8	8.3	6.3	9.3	4.6	9.2	17.7	19.5	13.2	16.0	8.2	147
39785	2064	34.9	8.4	6.4	9.4	4.7	9.2	17.7	19.6	13.3	16.0	8.3	148
40515	2066	35.1	8.4	6.4	9.4	4.7	9.3	17.8	19.7	13.3	16.1	8.3	148
41245	2068	35.2	8.5	6.5	9.4	4.7	9.3	17.9	19.8	13.4	16.2	8.3	149
41975	2070	35.3	8.5	6.5	9.4	4.7	9.3	17.9	19.8	13.4	16.2	8.4	149
42705	2072	35.4	8.5	6.5	9.5	4.7	9.3	18.0	19.9	13.5	16.3	8.4	150
43435	2074	35.5	8.6	6.6	9.5	4.7	9.4	18.0	19.9	13.5	16.4	8.4	150
44165	2076	35.6	8.6	6.6	9.5	4.7	9.4	18.1	20.0	13.5	16.4	8.4	151
44895	2078	35.7	8.6	6.6	9.6	4.8	9.4	18.1	20.1	13.6	16.5	8.5	151
45625	2080	35.8	8.6	6.7	9.6	4.8	9.4	18.2	20.1	13.6	16.6	8.5	152
46355	2082	35.9	8.7	6.7	9.6	4.8	9.5	18.2	20.2	13.7	16.6	8.5	152
47085	2084	36.0	8.7	6.7	9.6	4.8	9.5	18.3	20.2	13.7	16.7	8.5	153
47815	2086	36.1	8.7	6.7	9.7	4.8	9.5	18.3	20.3	13.7	16.7	8.6	153
48545	2088	36.1	8.7	6.8	9.7	4.8	9.5	18.4	20.3	13.8	16.8	8.6	154
49275	2090	36.2	8.8	6.8	9.7	4.8	9.5	18.4	20.4	13.8	16.8	8.6	154
50005	2092	36.3	8.8	6.8	9.7	4.8	9.6	18.4	20.4	13.9	16.9	8.6	154
50735	2094	36.3	8.8	6.8	9.8	4.8	9.6	18.5	20.5	13.9	17.0	8.6	155
51465	2096	36.4	8.8	6.9	9.8	4.8	9.6	18.5	20.5	13.9	17.0	8.7	155
52195	2098	36.5	8.9	6.9	9.8	4.8	9.6	18.6	20.6	14.0	17.1	8.7	155
52925	2100	36.5	8.9	6.9	9.8	4.9	9.6	18.6	20.6	14.0	17.1	8.7	156
53655	2102	36.6	8.9	6.9	9.8	4.9	9.6	18.6	20.7	14.0	17.2	8.7	156
54385	2104	36.6	8.9	7.0	9.8	4.9	9.7	18.7	20.7	14.1	17.2	8.7	156
TDS	*mg/L*	*32267*	*32267*	*32267*	*32267*	*32267*	*29405*	*29405*	*9700*	*7550*	*3300*	*3140*	

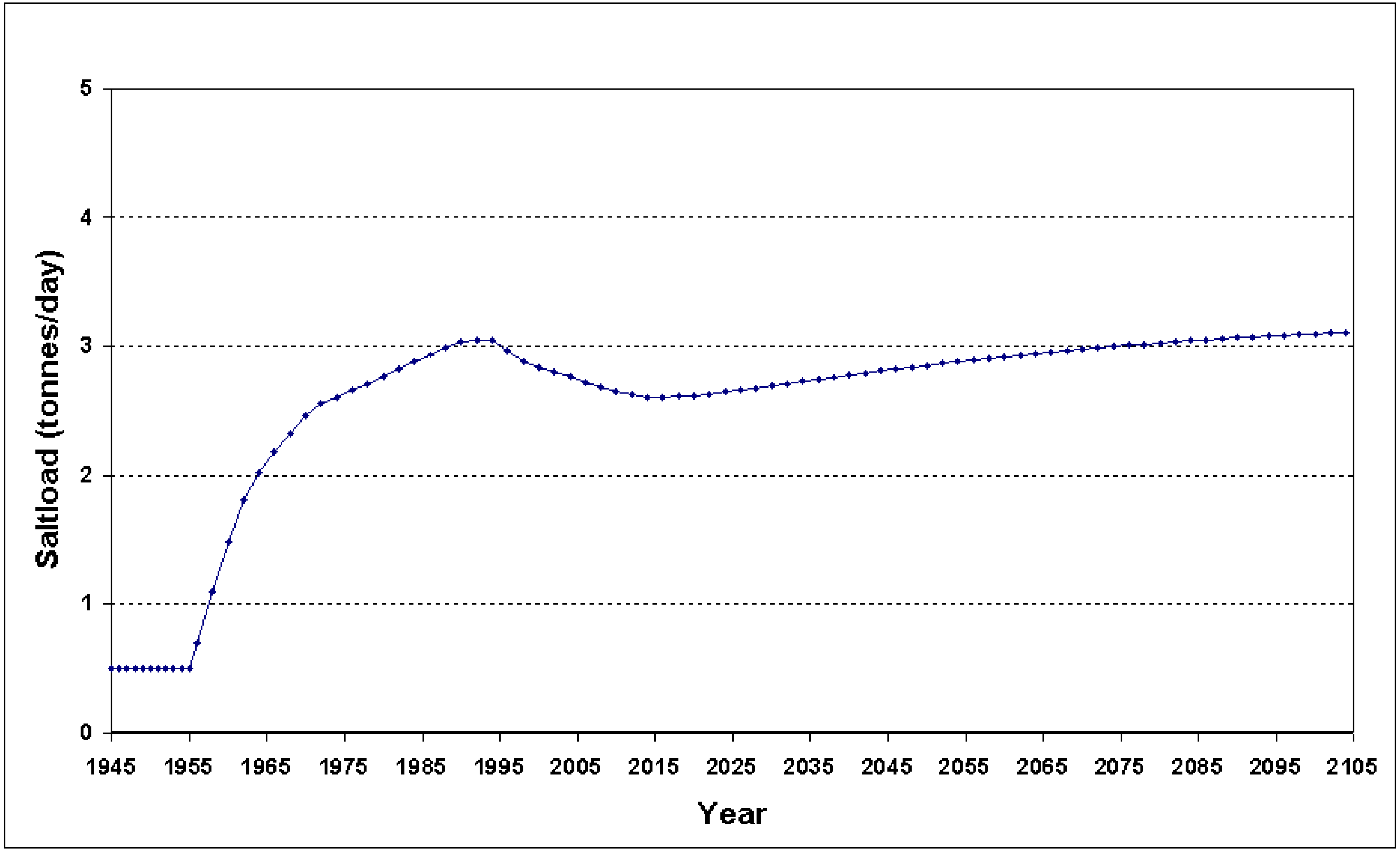
Appendix A-6-4b Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-6 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	1945	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1946	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1947	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1948	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1949	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1950	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1951	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1952	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1953	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1954	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
30	1955	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
365	1956	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.70
1095	1958	0.3	0.1	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	1.10
1825	1960	0.5	0.2	0.1	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	1.48
2555	1962	0.7	0.2	0.1	0.3	0.1	0.3	0.1	0.0	0.0	0.0	0.0	1.81
3285	1964	0.8	0.2	0.1	0.3	0.1	0.3	0.1	0.0	0.0	0.0	0.0	2.02
4015	1966	0.9	0.3	0.1	0.3	0.2	0.3	0.1	0.0	0.0	0.0	0.0	2.18
4745	1968	1.0	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.33
5475	1970	1.0	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.46
6205	1972	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.56
6935	1974	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.61
7665	1976	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.1	0.0	0.0	0.0	2.66
8395	1978	1.1	0.3	0.1	0.3	0.2	0.5	0.1	0.1	0.0	0.0	0.0	2.71
9125	1980	1.1	0.3	0.1	0.3	0.2	0.5	0.1	0.1	0.0	0.0	0.0	2.77
9855	1982	1.2	0.3	0.1	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.83
10585	1984	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.88
11315	1986	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.94
12045	1988	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.99
12775	1990	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.04
13505	1992	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.04
14235	1994	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.05
14965	1996	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.96
15695	1998	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.89
16425	2000	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.84
17155	2002	1.1	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.81
17885	2004	1.1	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.77
18615	2006	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.72
19345	2008	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.68
20075	2010	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.65
20805	2012	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.62
21535	2014	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.61
22265	2016	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.61
22995	2018	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.61

Appendix A-6-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-6 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
23725	2020	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.62
24455	2022	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.63
25185	2024	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.65
25915	2026	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.66
26645	2028	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.68
27375	2030	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.69
28105	2032	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.71
28835	2034	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.73
29565	2036	1.0	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.74
30295	2038	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.76
31025	2040	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.78
31755	2042	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.79
32485	2044	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.81
33215	2046	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.82
33945	2048	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.84
34675	2050	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.85
35405	2052	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.87
36135	2054	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.88
36865	2056	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.90
37595	2058	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.91
38325	2060	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.92
39055	2062	1.1	0.3	0.2	0.3	0.1	0.5	0.2	0.1	0.1	0.0	0.0	2.93
39785	2064	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.95
40515	2066	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.96
41245	2068	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.97
41975	2070	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.98
42705	2072	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	2.99
43435	2074	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.00
44165	2076	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.01
44895	2078	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.02
45625	2080	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.03
46355	2082	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.03
47085	2084	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.04
47815	2086	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.05
48545	2088	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.06
49275	2090	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.06
50005	2092	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.07
50735	2094	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.08
51465	2096	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.08
52195	2098	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.09
52925	2100	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.10
53655	2102	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.10
54385	2104	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.0	0.0	3.11
TDS	mg/L	32267	32267	32267	32267	32267	29405	29405	9700	7550	3300	3140	

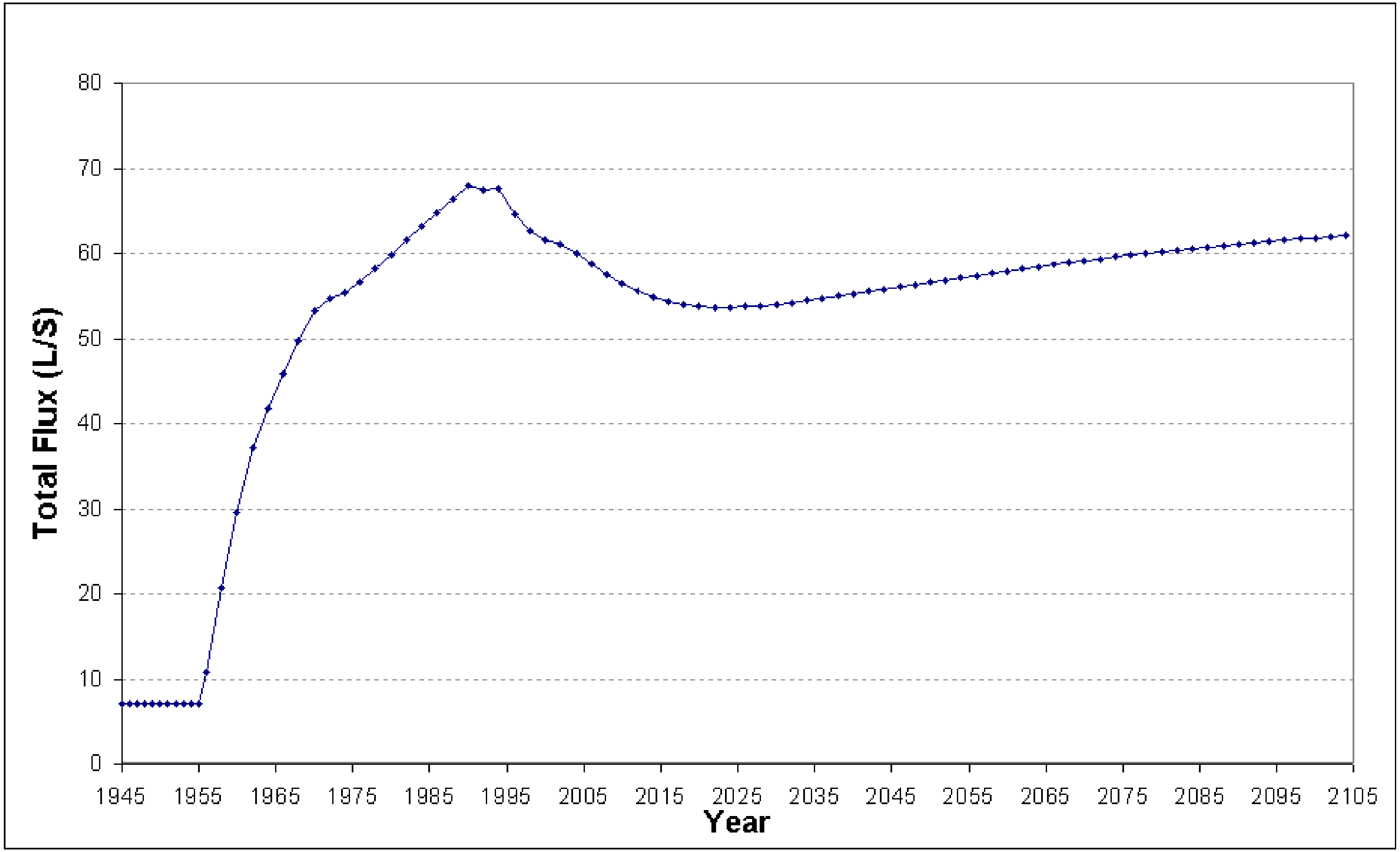
Appendix A-6-5b Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-6 (Loxton Area)



Appendix A-6-5c Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-6 (Loxton Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	1945	591	30	621	7.18
0	1946	591	30	621	7.18
0	1947	591	30	621	7.18
0	1948	591	30	621	7.18
0	1949	591	30	621	7.18
0	1950	591	30	621	7.18
0	1951	591	30	621	7.18
0	1952	591	30	621	7.18
0	1953	591	30	621	7.18
0	1954	591	30	621	7.18
30	1955	591	30	621	7.18
365	1956	903	38	942	10.90
1095	1958	1735	53	1788	20.69
1825	1960	2495	67	2562	29.66
2555	1962	3143	80	3222	37.29
3285	1964	3531	88	3619	41.88
4015	1966	3875	95	3970	45.95
4745	1968	4194	102	4296	49.73
5475	1970	4498	108	4607	53.32
6205	1972	4624	113	4738	54.83
6935	1974	4674	116	4790	55.44
7665	1976	4778	120	4897	56.68
8395	1978	4910	123	5033	58.25
9125	1980	5051	127	5178	59.93
9855	1982	5193	130	5323	61.61
10585	1984	5333	133	5466	63.26
11315	1986	5469	136	5605	64.88
12045	1988	5602	139	5741	66.44
12775	1990	5733	142	5875	68.00
13505	1992	5695	143	5839	67.58
14235	1994	5705	145	5849	67.70
14965	1996	5444	143	5586	64.66
15695	1998	5277	141	5418	62.71
16425	2000	5185	140	5325	61.63
17155	2002	5134	140	5274	61.04
17885	2004	5047	139	5185	60.02
18615	2006	4941	137	5079	58.78
19345	2008	4841	136	4977	57.60
20075	2010	4752	134	4887	56.56
20805	2012	4676	133	4809	55.66
21535	2014	4617	132	4749	54.96
22265	2016	4571	132	4703	54.44
22995	2018	4539	132	4671	54.07
23725	2020	4519	133	4652	53.84
24455	2022	4510	133	4643	53.74
25185	2024	4509	134	4643	53.74
25915	2026	4514	134	4649	53.81
26645	2028	4525	135	4660	53.93
27375	2030	4539	136	4674	54.10
28105	2032	4555	137	4692	54.30
28835	2034	4574	137	4712	54.53
29565	2036	4595	138	4733	54.78
30295	2038	4616	139	4755	55.04
31025	2040	4639	140	4778	55.30
31755	2042	4661	140	4802	55.58
32485	2044	4684	141	4826	55.85
33215	2046	4708	142	4850	56.13
33945	2048	4731	143	4873	56.41
34675	2050	4754	143	4897	56.68
35405	2052	4777	144	4921	56.95
36135	2054	4799	145	4944	57.22
36865	2056	4822	145	4967	57.49
37595	2058	4844	146	4990	57.75
38325	2060	4865	147	5012	58.01
39055	2062	4886	147	5033	58.26
39785	2064	4907	148	5055	58.50
40515	2066	4927	148	5075	58.74
41245	2068	4947	149	5096	58.98
41975	2070	4966	149	5115	59.20
42705	2072	4984	150	5134	59.43
43435	2074	5003	150	5153	59.64
44165	2076	5020	151	5171	59.85
44895	2078	5037	151	5189	60.06
45625	2080	5054	152	5206	60.25
46355	2082	5070	152	5222	60.44
47085	2084	5086	153	5238	60.63
47815	2086	5101	153	5254	60.81
48545	2088	5116	154	5269	60.99
49275	2090	5130	154	5284	61.15
50005	2092	5144	154	5298	61.32
50735	2094	5157	155	5312	61.48
51465	2096	5170	155	5325	61.63
52195	2098	5183	155	5338	61.79
52925	2100	5195	156	5351	61.93
53655	2102	5207	156	5363	62.07
54385	2104	5219	156	5375	62.21

Appendix A-6-6a Predicted total groundwater flux in Scenario-6 (Loxton Area)

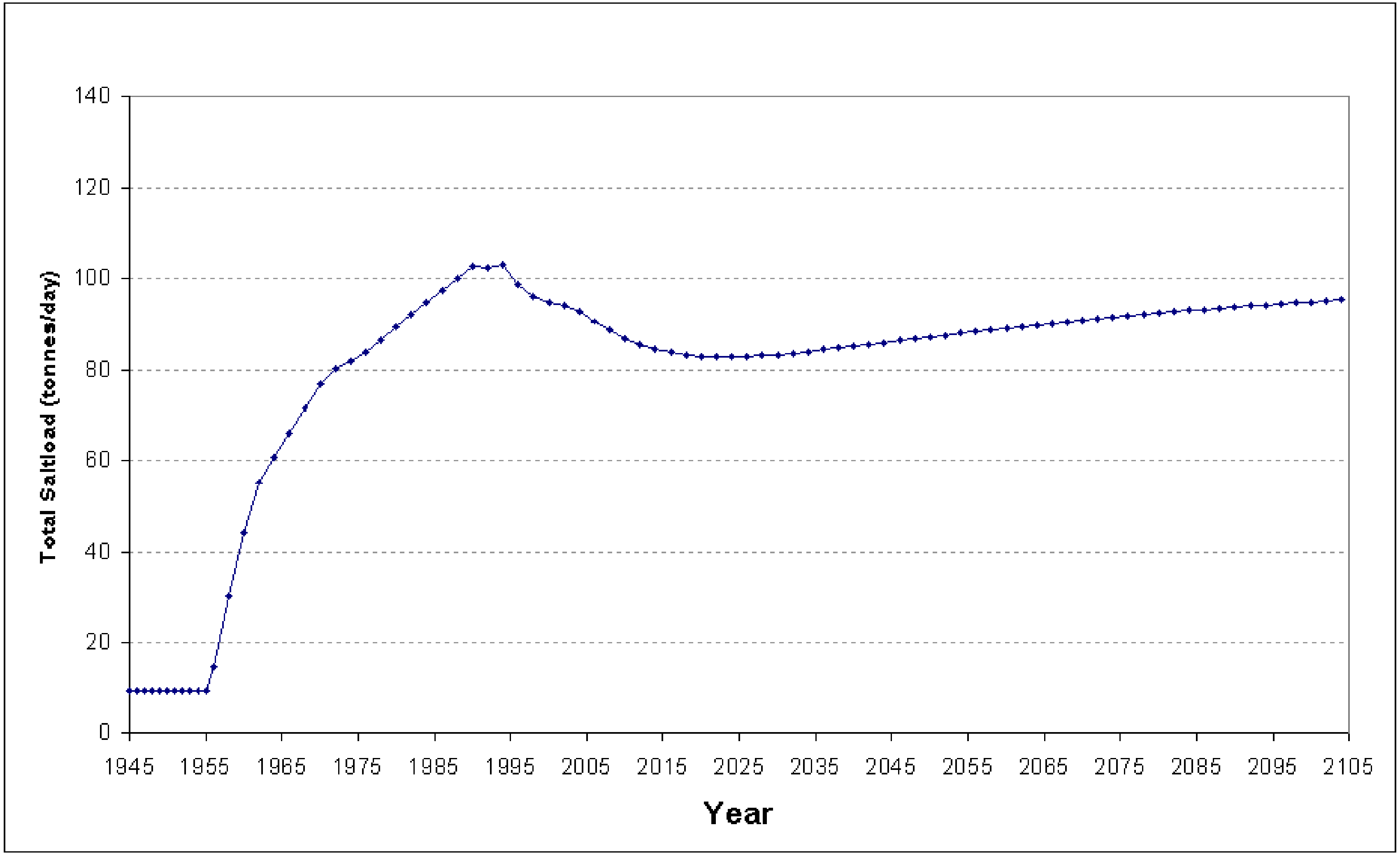


Appendix A-6-6b Graph of predicted total groundwater flux (L/second) entering the River Murray in Scenario-6 (Loxton Area)

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	9	0	9.54
0	1946	9	0	9.54
0	1947	9	0	9.54
0	1948	9	0	9.54
0	1949	9	0	9.54
0	1950	9	0	9.54
0	1951	9	0	9.54
0	1952	9	0	9.54
0	1953	9	0	9.54
0	1954	9	0	9.54
30	1955	9	0	9.54
365	1956	14	1	14.72
1095	1958	29	1	30.41
1825	1960	43	1	44.11
2555	1962	53	2	55.24
3285	1964	59	2	60.73
4015	1966	64	2	66.10
4745	1968	69	2	71.55
5475	1970	74	2	76.92
6205	1972	78	3	80.27
6935	1974	79	3	81.74
7665	1976	81	3	83.95
8395	1978	84	3	86.60
9125	1980	87	3	89.38
9855	1982	89	3	92.12
10585	1984	92	3	94.79
11315	1986	94	3	97.42
12045	1988	97	3	100.00
12775	1990	100	3	102.60
13505	1992	99	3	102.46
14235	1994	100	3	103.01
14965	1996	96	3	98.75
15695	1998	93	3	96.04
16425	2000	92	3	94.68
17155	2002	91	3	94.03
17885	2004	90	3	92.66
18615	2006	88	3	90.65
19345	2008	86	3	88.70
20075	2010	84	3	87.00
20805	2012	83	3	85.54
21535	2014	82	3	84.46
22265	2016	81	3	83.69
22995	2018	81	3	83.16

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
23725	2020	80	3	82.86
24455	2022	80	3	82.73
25185	2024	80	3	82.74
25915	2026	80	3	82.86
26645	2028	80	3	83.06
27375	2030	81	3	83.33
28105	2032	81	3	83.64
28835	2034	81	3	83.99
29565	2036	82	3	84.36
30295	2038	82	3	84.76
31025	2040	82	3	85.16
31755	2042	83	3	85.57
32485	2044	83	3	85.99
33215	2046	84	3	86.40
33945	2048	84	3	86.81
34675	2050	84	3	87.23
35405	2052	85	3	87.63
36135	2054	85	3	88.03
36865	2056	86	3	88.42
37595	2058	86	3	88.81
38325	2060	86	3	89.18
39055	2062	87	3	89.55
39785	2064	87	3	89.91
40515	2066	87	3	90.27
41245	2068	88	3	90.61
41975	2070	88	3	90.94
42705	2072	88	3	91.26
43435	2074	89	3	91.58
44165	2076	89	3	91.88
44895	2078	89	3	92.18
45625	2080	89	3	92.47
46355	2082	90	3	92.75
47085	2084	90	3	93.02
47815	2086	90	3	93.28
48545	2088	90	3	93.54
49275	2090	91	3	93.78
50005	2092	91	3	94.02
50735	2094	91	3	94.26
51465	2096	91	3	94.48
52195	2098	92	3	94.70
52925	2100	92	3	94.92
53655	2102	92	3	95.12
54385	2104	92	3	95.33

Appendix A-6-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-6 (Loxton Area)



Appendix A-6-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-6 (Loxton Area)

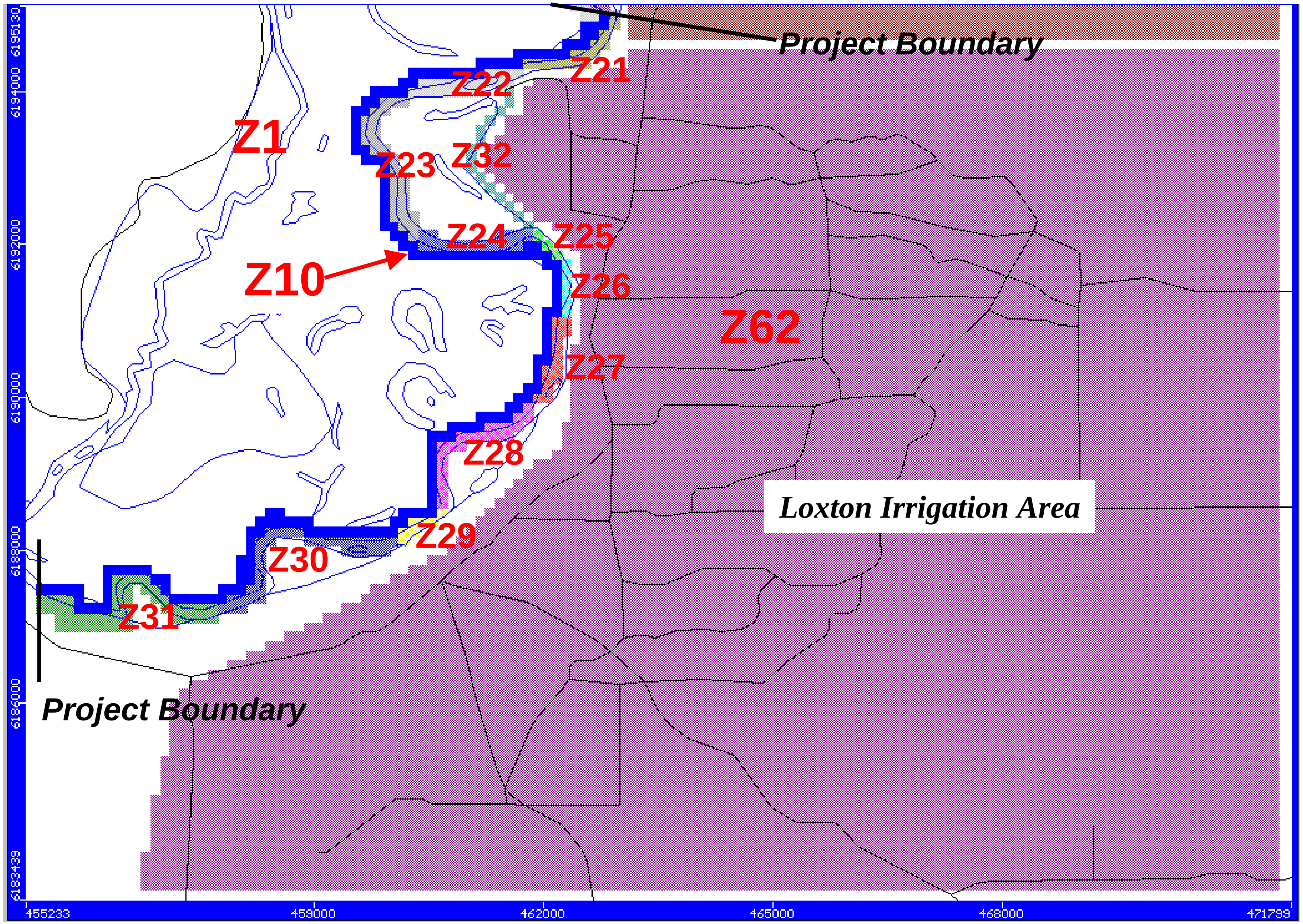
A7. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-7 (LOXTON AREA)

- Flow budget zones (Loxton Area)
- Predicted lateral groundwater flux (m3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)

Appendix A-7

Groundwater flux and salt load entering the River Murray
Scenario-7
(Loxton Area)

-Flow budget zones (Loxton Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)



Appendix A-7-1a Flow budget zones in model Layer-1 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1946	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1947	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1948	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1949	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1950	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1951	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1952	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1953	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1954	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
30	1955	50.2	7.6	0.0	5.9	26.9	62.8	144.2	66.0	35.4	76.5	146.8	0.0	622
365	1956	71.5	46.8	0.0	36.3	94.1	176.1	179.4	65.7	34.4	67.6	146.8	0.0	919
1095	1958	134.3	178.8	0.0	149.8	260.5	384.7	315.0	68.6	34.1	64.7	146.8	7.1	1744
1825	1960	215.6	270.8	0.0	233.5	373.6	525.2	499.2	86.2	34.3	64.3	147.0	56.4	2506
2555	1962	300.3	327.7	0.0	283.5	448.3	641.3	695.4	120.4	35.8	64.9	147.5	90.8	3156
3285	1964	355.6	326.5	0.0	282.2	465.3	724.1	882.5	169.6	39.7	66.1	148.2	87.4	3547
4015	1966	397.8	328.4	0.0	283.5	485.9	789.6	1031.0	224.6	46.2	68.4	149.2	88.0	3893
4745	1968	434.5	334.9	0.0	289.6	507.9	845.9	1151.8	279.4	55.5	71.9	150.4	91.7	4213
5475	1970	467.6	342.7	0.0	296.9	528.7	895.6	1262.5	332.9	67.3	77.0	151.9	96.2	4519
6205	1972	493.5	343.5	0.0	297.2	522.0	874.1	1320.2	383.1	80.7	83.7	153.6	96.0	4648
6935	1974	504.6	328.8	0.0	283.5	503.0	859.4	1359.6	430.3	95.3	91.9	155.6	85.9	4698
7665	1976	512.1	321.8	0.0	277.0	499.3	866.4	1402.9	473.2	110.9	101.7	157.8	81.4	4804
8395	1978	520.1	319.9	0.0	275.5	501.9	880.2	1450.2	510.4	126.5	112.7	160.3	80.2	4938
9125	1980	529.2	320.4	0.0	276.2	507.0	896.5	1498.3	543.3	141.3	124.7	163.0	80.5	5080
9855	1982	539.1	322.1	0.0	278.0	513.1	913.6	1545.7	573.1	155.2	137.1	165.9	81.5	5224
10585	1984	549.3	324.2	0.0	280.1	519.6	930.5	1591.3	600.3	167.9	149.8	169.1	82.8	5365
11315	1986	559.6	326.5	0.0	282.3	526.0	946.7	1635.5	626.8	180.1	162.4	172.6	84.2	5503
12045	1988	569.8	328.9	0.0	284.5	532.0	961.3	1677.8	653.0	192.1	175.1	176.3	85.6	5636
12775	1990	579.5	331.2	0.0	286.8	537.6	974.8	1719.5	680.7	204.5	187.9	180.3	86.9	5770
13505	1992	576.7	315.0	0.0	272.5	514.5	946.9	1723.3	705.9	217.0	201.0	184.5	76.1	5733
14235	1994	571.7	305.5	0.0	263.8	504.0	936.8	1728.5	729.4	230.0	214.4	189.0	70.1	5743
14965	1996	542.8	261.6	0.0	225.5	445.8	868.5	1685.9	746.9	242.3	228.1	193.7	41.1	5482
15695	1998	513.6	234.7	0.0	201.4	414.1	828.7	1644.9	757.3	253.1	241.5	198.6	26.4	5314
16425	2000	491.5	220.0	0.0	189.0	396.0	803.0	1617.3	765.7	262.3	254.2	203.8	19.0	5222
17155	2002	475.4	211.4	0.0	181.9	384.5	785.5	1599.1	773.1	270.1	266.1	209.2	15.0	5171
17885	2004	460.7	201.6	0.0	173.5	369.5	761.8	1570.2	769.7	274.5	276.7	214.7	10.7	5084
18615	2006	286.0	8.8	0.0	22.0	88.8	260.9	489.1	295.0	154.7	40.6	220.2	0.0	1866
19345	2008	231.1	7.7	0.0	12.8	77.9	234.1	430.1	248.8	148.1	47.7	225.6	0.0	1664
20075	2010	207.1	7.0	0.0	8.6	72.5	221.5	397.9	221.8	143.1	48.4	230.8	0.0	1559
20805	2012	192.8	6.5	0.0	6.1	68.9	212.8	374.5	201.8	138.9	48.0	235.8	0.0	1486
21535	2014	183.1	6.2	0.0	4.5	66.4	206.3	356.2	185.9	135.4	47.3	240.4	0.0	1432
22265	2016	176.2	6.0	0.0	3.5	64.6	201.1	341.2	173.0	132.4	46.3	244.7	0.0	1389
22995	2018	171.1	5.8	0.0	2.7	63.2	196.9	328.8	162.3	130.0	45.2	248.7	0.0	1355

Appendix A-7-2a Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-7 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
23725	2020	167.1	5.7	0.0	2.1	62.1	193.4	318.3	153.7	127.9	44.2	252.4	0.0	1327
24455	2022	164.0	5.6	0.0	1.7	61.2	190.5	309.3	146.3	126.1	43.2	255.8	0.0	1303
25185	2024	161.4	5.5	0.0	1.3	60.5	188.0	301.6	140.0	124.5	42.2	258.9	0.0	1284
25915	2026	159.2	5.4	0.0	1.0	59.8	185.8	294.9	134.5	123.2	41.3	261.7	0.0	1267
26645	2028	157.4	5.4	0.0	0.8	59.3	184.0	289.1	129.9	122.0	40.5	264.3	0.0	1253
27375	2030	155.8	5.3	0.0	0.6	58.9	182.4	284.1	125.9	121.0	39.8	266.8	0.0	1241
28105	2032	154.5	5.3	0.0	0.4	58.5	180.9	279.7	122.5	120.2	39.2	269.0	0.0	1230
28835	2034	150.0	5.3	0.0	0.2	58.1	179.7	275.8	119.6	119.4	38.6	271.1	0.0	1218
29565	2036	148.6	5.2	0.0	0.1	57.8	178.6	272.4	117.2	118.8	38.1	273.1	0.0	1210
30295	2038	147.5	5.2	0.0	0.0	57.5	177.6	269.6	115.0	118.2	37.7	274.9	0.0	1203
31025	2040	146.7	5.2	0.0	0.0	57.3	176.7	267.2	113.0	117.7	37.3	276.6	0.0	1198
31755	2042	146.0	5.2	0.0	0.0	57.1	176.0	265.1	111.4	117.2	37.0	278.3	0.0	1193
32485	2044	145.3	5.2	0.0	0.0	56.9	175.3	263.1	109.9	116.9	36.7	279.8	0.0	1189
33215	2046	144.8	5.1	0.0	0.0	56.7	174.7	261.4	108.6	116.5	36.5	281.2	0.0	1186
33945	2048	143.3	5.1	0.0	0.0	56.6	174.1	259.9	107.4	116.2	36.3	282.6	0.0	1182
34675	2050	142.6	5.1	0.0	0.0	56.5	173.6	258.6	106.4	116.0	36.2	283.8	0.0	1179
35405	2052	142.1	5.1	0.0	0.0	56.3	173.2	257.4	105.5	115.8	36.1	285.1	0.0	1176
36135	2054	141.7	5.1	0.0	0.0	56.2	172.8	256.3	104.7	115.6	36.0	286.2	0.0	1174
36865	2056	141.4	5.1	0.0	0.0	56.1	172.4	255.3	104.0	115.4	35.9	287.3	0.0	1173
37595	2058	141.1	5.1	0.0	0.5	56.2	172.1	254.4	103.4	115.3	35.9	288.3	0.0	1172
38325	2060	141.1	5.1	0.0	1.4	56.3	171.8	253.7	102.9	115.2	35.9	289.3	0.0	1173
39055	2062	141.1	5.1	0.0	1.8	56.4	171.6	253.0	102.4	115.1	35.9	290.3	0.0	1173
39785	2064	141.1	5.2	0.0	1.9	56.4	171.4	252.4	102.0	115.0	35.9	291.2	0.0	1172
40515	2066	141.0	5.2	0.0	1.9	56.4	171.2	251.9	101.7	114.9	35.9	292.1	0.0	1172
41245	2068	140.9	5.2	0.0	2.0	56.4	171.0	251.4	101.4	114.9	35.9	292.9	0.0	1172
41975	2070	140.8	5.2	0.0	2.0	56.3	170.8	251.0	101.1	114.8	36.0	293.7	0.0	1172
42705	2072	140.8	5.2	0.0	1.9	56.3	170.7	250.6	100.9	114.8	36.0	294.5	0.0	1172
43435	2074	140.7	5.2	0.0	1.9	56.3	170.6	250.3	100.7	114.8	36.1	295.2	0.0	1172
44165	2076	140.6	5.1	0.0	1.9	56.2	170.4	250.0	100.6	114.7	36.2	296.0	0.0	1172
44895	2078	140.5	5.1	0.0	1.9	56.2	170.3	249.7	100.5	114.7	36.3	296.6	0.0	1172
45625	2080	140.4	5.1	0.0	1.9	56.2	170.2	249.5	100.4	114.7	36.4	297.3	0.0	1172
46355	2082	140.4	5.1	0.0	1.9	56.2	170.2	249.3	100.3	114.7	36.5	297.9	0.0	1172
47085	2084	140.3	5.1	0.0	1.9	56.1	170.1	249.2	100.3	114.8	36.6	298.6	0.0	1173
47815	2086	140.2	5.1	0.0	1.9	56.1	170.0	249.1	100.2	114.8	36.7	299.2	0.0	1173
48545	2088	140.2	5.1	0.0	1.9	56.1	170.0	248.9	100.2	114.8	36.8	299.7	0.0	1174
49275	2090	140.1	5.1	0.0	1.9	56.1	169.9	248.9	100.2	114.8	36.9	300.3	0.0	1174
50005	2092	140.1	5.1	0.0	1.9	56.1	169.9	248.8	100.3	114.8	37.0	300.8	0.0	1175
50735	2094	140.1	5.1	0.0	1.9	56.1	169.8	248.7	100.3	114.9	37.1	301.4	0.0	1175
51465	2096	140.0	5.1	0.0	1.9	56.1	169.8	248.7	100.3	114.9	37.2	301.9	0.0	1176
52195	2098	140.0	5.1	0.0	1.9	56.1	169.8	248.7	100.4	114.9	37.3	302.4	0.0	1176
52925	2100	140.0	5.1	0.0	1.9	56.0	169.7	248.7	100.5	115.0	37.4	302.8	0.0	1177
53655	2102	140.0	5.1	0.0	1.8	56.0	169.7	248.7	100.5	115.0	37.5	303.3	0.0	1178
54385	2104	140.0	5.1	0.0	1.8	56.0	169.7	248.7	100.6	115.0	37.6	303.8	0.0	1178
TDS	*mg/L*	*25807*	*29055*	*30760*	*39978*	*18716*	*4240*	*7710*	*35935*	*29140*	*24080*	*5620*	*8440*	

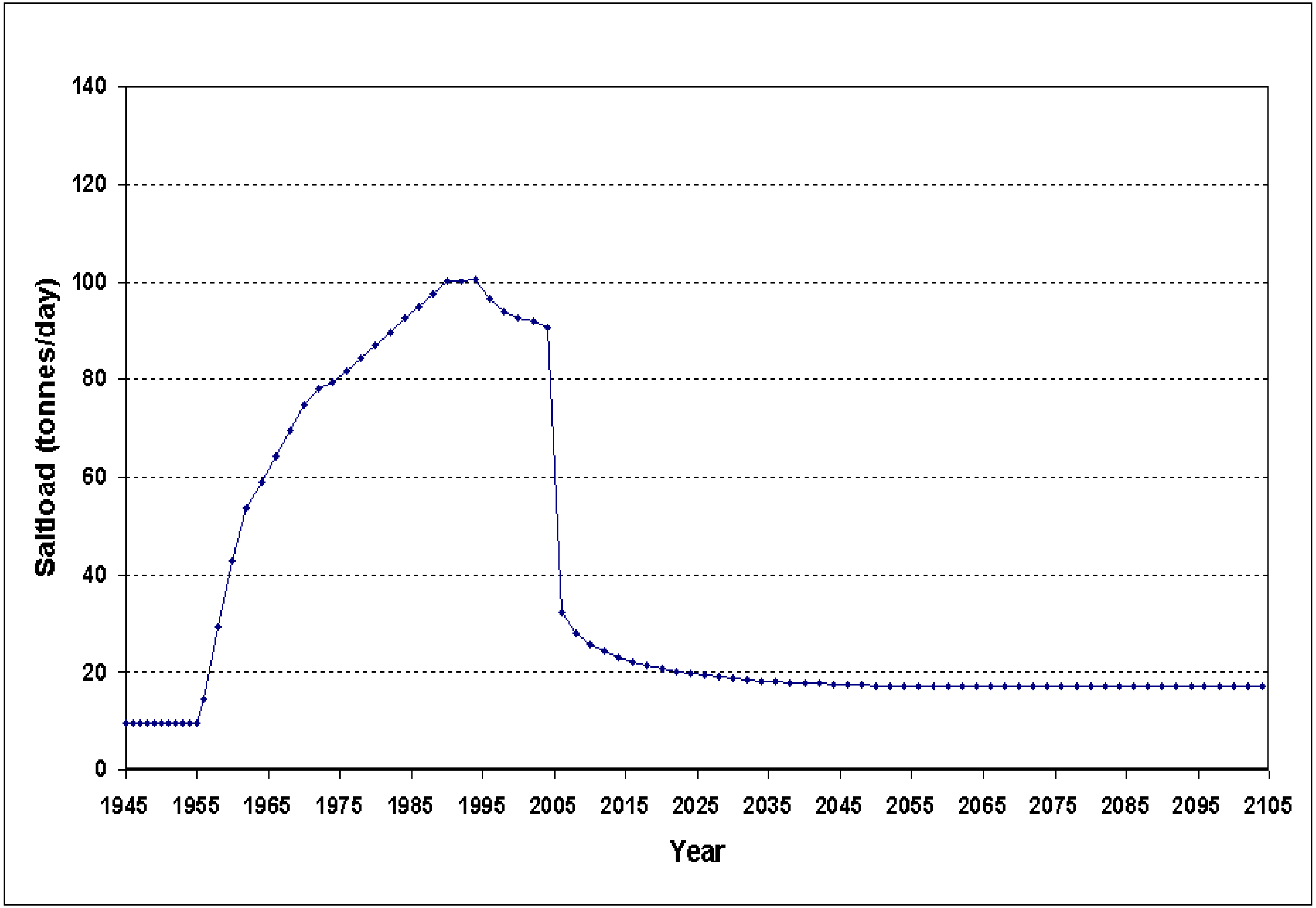
Appendix A-7-2b Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-7 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1946	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1947	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1948	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1949	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1950	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1951	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1952	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1953	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1954	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
30	1955	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
365	1956	1.8	1.4	0.0	1.5	1.8	0.7	1.4	2.4	1.0	1.6	0.8	0.0	14.36
1095	1958	3.5	5.2	0.0	6.0	4.9	1.6	2.4	2.5	1.0	1.6	0.8	0.1	29.49
1825	1960	5.6	7.9	0.0	9.3	7.0	2.2	3.8	3.1	1.0	1.5	0.8	0.5	42.78
2555	1962	7.8	9.5	0.0	11.3	8.4	2.7	5.4	4.3	1.0	1.6	0.8	0.8	53.60
3285	1964	9.2	9.5	0.0	11.3	8.7	3.1	6.8	6.1	1.2	1.6	0.8	0.7	58.94
4015	1966	10.3	9.5	0.0	11.3	9.1	3.3	7.9	8.1	1.3	1.6	0.8	0.7	64.18
4745	1968	11.2	9.7	0.0	11.6	9.5	3.6	8.9	10.0	1.6	1.7	0.8	0.8	69.50
5475	1970	12.1	10.0	0.0	11.9	9.9	3.8	9.7	12.0	2.0	1.9	0.9	0.8	74.77
6205	1972	12.7	10.0	0.0	11.9	9.8	3.7	10.2	13.8	2.4	2.0	0.9	0.8	78.06
6935	1974	13.0	9.6	0.0	11.3	9.4	3.6	10.5	15.5	2.8	2.2	0.9	0.7	79.50
7665	1976	13.2	9.3	0.0	11.1	9.3	3.7	10.8	17.0	3.2	2.4	0.9	0.7	81.73
8395	1978	13.4	9.3	0.0	11.0	9.4	3.7	11.2	18.3	3.7	2.7	0.9	0.7	84.35
9125	1980	13.7	9.3	0.0	11.0	9.5	3.8	11.6	19.5	4.1	3.0	0.9	0.7	87.09
9855	1982	13.9	9.4	0.0	11.1	9.6	3.9	11.9	20.6	4.5	3.3	0.9	0.7	89.82
10585	1984	14.2	9.4	0.0	11.2	9.7	3.9	12.3	21.6	4.9	3.6	1.0	0.7	92.45
11315	1986	14.4	9.5	0.0	11.3	9.8	4.0	12.6	22.5	5.2	3.9	1.0	0.7	95.04
12045	1988	14.7	9.6	0.0	11.4	10.0	4.1	12.9	23.5	5.6	4.2	1.0	0.7	97.59
12775	1990	15.0	9.6	0.0	11.5	10.1	4.1	13.3	24.5	6.0	4.5	1.0	0.7	100.18
13505	1992	14.9	9.2	0.0	10.9	9.6	4.0	13.3	25.4	6.3	4.8	1.0	0.6	100.07
14235	1994	14.8	8.9	0.0	10.5	9.4	4.0	13.3	26.2	6.7	5.2	1.1	0.6	100.63
14965	1996	14.0	7.6	0.0	9.0	8.3	3.7	13.0	26.8	7.1	5.5	1.1	0.3	96.48
15695	1998	13.3	6.8	0.0	8.0	7.7	3.5	12.7	27.2	7.4	5.8	1.1	0.2	93.81
16425	2000	12.7	6.4	0.0	7.6	7.4	3.4	12.5	27.5	7.6	6.1	1.1	0.2	92.50
17155	2002	12.3	6.1	0.0	7.3	7.2	3.3	12.3	27.8	7.9	6.4	1.2	0.1	91.90
17885	2004	11.9	5.9	0.0	6.9	6.9	3.2	12.1	27.7	8.0	6.7	1.2	0.1	90.55
18615	2006	7.4	0.3	0.0	0.9	1.7	1.1	3.8	10.6	4.5	1.0	1.2	0.0	32.38
19345	2008	6.0	0.2	0.0	0.5	1.5	1.0	3.3	8.9	4.3	1.1	1.3	0.0	28.14
20075	2010	5.3	0.2	0.0	0.3	1.4	0.9	3.1	8.0	4.2	1.2	1.3	0.0	25.86
20805	2012	5.0	0.2	0.0	0.2	1.3	0.9	2.9	7.3	4.0	1.2	1.3	0.0	24.27
21535	2014	4.7	0.2	0.0	0.2	1.2	0.9	2.7	6.7	3.9	1.1	1.4	0.0	23.07
22265	2016	4.5	0.2	0.0	0.1	1.2	0.9	2.6	6.2	3.9	1.1	1.4	0.0	22.12
22995	2018	4.4	0.2	0.0	0.1	1.2	0.8	2.5	5.8	3.8	1.1	1.4	0.0	21.35

Appendix A-7-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-7 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
23725	2020	4.3	0.2	0.0	0.1	1.2	0.8	2.5	5.5	3.7	1.1	1.4	0.0	20.73
24455	2022	4.2	0.2	0.0	0.1	1.1	0.8	2.4	5.3	3.7	1.0	1.4	0.0	20.21
25185	2024	4.2	0.2	0.0	0.1	1.1	0.8	2.3	5.0	3.6	1.0	1.5	0.0	19.76
25915	2026	4.1	0.2	0.0	0.0	1.1	0.8	2.3	4.8	3.6	1.0	1.5	0.0	19.38
26645	2028	4.1	0.2	0.0	0.0	1.1	0.8	2.2	4.7	3.6	1.0	1.5	0.0	19.05
27375	2030	4.0	0.2	0.0	0.0	1.1	0.8	2.2	4.5	3.5	1.0	1.5	0.0	18.77
28105	2032	4.0	0.2	0.0	0.0	1.1	0.8	2.2	4.4	3.5	0.9	1.5	0.0	18.53
28835	2034	3.9	0.2	0.0	0.0	1.1	0.8	2.1	4.3	3.5	0.9	1.5	0.0	18.24
29565	2036	3.8	0.2	0.0	0.0	1.1	0.8	2.1	4.2	3.5	0.9	1.5	0.0	18.05
30295	2038	3.8	0.2	0.0	0.0	1.1	0.8	2.1	4.1	3.4	0.9	1.5	0.0	17.90
31025	2040	3.8	0.2	0.0	0.0	1.1	0.7	2.1	4.1	3.4	0.9	1.6	0.0	17.76
31755	2042	3.8	0.2	0.0	0.0	1.1	0.7	2.0	4.0	3.4	0.9	1.6	0.0	17.65
32485	2044	3.8	0.1	0.0	0.0	1.1	0.7	2.0	3.9	3.4	0.9	1.6	0.0	17.55
33215	2046	3.7	0.1	0.0	0.0	1.1	0.7	2.0	3.9	3.4	0.9	1.6	0.0	17.46
33945	2048	3.7	0.1	0.0	0.0	1.1	0.7	2.0	3.9	3.4	0.9	1.6	0.0	17.36
34675	2050	3.7	0.1	0.0	0.0	1.1	0.7	2.0	3.8	3.4	0.9	1.6	0.0	17.28
35405	2052	3.7	0.1	0.0	0.0	1.1	0.7	2.0	3.8	3.4	0.9	1.6	0.0	17.22
36135	2054	3.7	0.1	0.0	0.0	1.1	0.7	2.0	3.8	3.4	0.9	1.6	0.0	17.17
36865	2056	3.6	0.1	0.0	0.0	1.1	0.7	2.0	3.7	3.4	0.9	1.6	0.0	17.13
37595	2058	3.6	0.1	0.0	0.0	1.1	0.7	2.0	3.7	3.4	0.9	1.6	0.0	17.11
38325	2060	3.6	0.1	0.0	0.1	1.1	0.7	2.0	3.7	3.4	0.9	1.6	0.0	17.13
39055	2062	3.6	0.1	0.0	0.1	1.1	0.7	2.0	3.7	3.4	0.9	1.6	0.0	17.12
39785	2064	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.7	3.4	0.9	1.6	0.0	17.11
40515	2066	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.7	3.3	0.9	1.6	0.0	17.10
41245	2068	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.6	3.3	0.9	1.6	0.0	17.08
41975	2070	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.07
42705	2072	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.06
43435	2074	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.06
44165	2076	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.05
44895	2078	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.05
45625	2080	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.04
46355	2082	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.04
47085	2084	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.04
47815	2086	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.05
48545	2088	3.6	0.1	0.0	0.1	1.1	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.05
49275	2090	3.6	0.1	0.0	0.1	1.0	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.05
50005	2092	3.6	0.1	0.0	0.1	1.0	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.06
50735	2094	3.6	0.1	0.0	0.1	1.0	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.06
51465	2096	3.6	0.1	0.0	0.1	1.0	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.07
52195	2098	3.6	0.1	0.0	0.1	1.0	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.08
52925	2100	3.6	0.1	0.0	0.1	1.0	0.7	1.9	3.6	3.3	0.9	1.7	0.0	17.08
53655	2102	3.6	0.1	0.0	0.1	1.0	0.7	1.9	3.6	3.4	0.9	1.7	0.0	17.09
54385	2104	3.6	0.1	0.0	0.1	1.0	0.7	1.9	3.6	3.4	0.9	1.7	0.0	17.10
TDS	mg/L	25807	29055	30760	39978	18716	4240	7710	35935	29140	24080	5620	8440	

Appendix A-7-3b Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-7 (Loxton Area)



Appendix A-7-3c Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-7 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	1945	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1946	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1947	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1948	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1949	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1950	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1951	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1952	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1953	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
0	1954	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.4	2.5	4.1	5.0	30
30	1955	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.5	2.5	4.1	5.0	30
365	1956	6.4	2.2	1.9	1.6	1.5	2.9	3.0	2.5	2.5	4.0	5.0	33
1095	1958	10.3	4.6	2.1	3.7	2.8	4.5	4.5	2.7	2.5	4.0	5.0	47
1825	1960	15.7	6.3	2.4	5.4	3.6	5.6	6.1	3.3	2.6	4.2	5.1	60
2555	1962	21.0	7.4	2.8	6.5	4.2	6.5	7.7	4.2	2.8	4.4	5.1	73
3285	1964	24.7	7.6	3.0	7.3	4.4	7.2	9.6	6.1	3.1	4.7	5.2	83
4015	1966	27.3	7.8	3.2	7.6	4.6	7.7	10.7	7.2	3.5	5.1	5.4	90
4745	1968	29.5	8.1	3.4	7.9	4.8	8.2	11.6	8.3	4.0	5.4	5.5	97
5475	1970	31.3	8.4	3.7	8.9	5.0	8.6	12.9	10.2	4.6	5.8	5.6	105
6205	1972	32.8	8.6	3.9	9.1	5.0	8.7	13.5	11.2	5.3	6.2	5.7	110
6935	1974	33.6	8.5	4.0	9.0	5.0	8.8	13.9	12.0	6.0	6.7	5.8	113
7665	1976	34.1	8.5	4.2	9.7	5.0	9.0	14.8	13.7	6.7	7.1	5.9	119
8395	1978	34.7	8.6	4.3	9.8	5.1	9.1	15.2	14.4	7.3	7.6	6.0	122
9125	1980	35.2	8.7	4.5	9.9	5.2	9.3	15.6	15.1	7.9	8.1	6.1	125
9855	1982	35.8	8.9	4.7	10.8	5.3	9.5	16.5	16.5	8.5	8.6	6.2	131
10585	1984	36.3	9.0	4.9	10.9	5.3	9.7	16.9	17.1	9.0	9.0	6.3	134
11315	1986	36.9	9.1	5.0	11.1	5.4	9.8	17.2	17.6	9.5	9.5	6.3	137
12045	1988	37.5	9.3	5.1	11.2	5.5	9.9	17.5	18.1	10.0	9.9	6.4	140
12775	1990	38.0	9.4	5.4	12.1	5.6	10.2	18.4	19.5	10.5	10.4	6.5	146
13505	1992	38.0	9.2	5.5	11.9	5.5	10.1	18.5	20.0	10.9	10.8	6.6	147
14235	1994	37.8	9.1	5.5	11.8	5.4	10.1	18.6	20.4	11.4	11.3	6.7	148
14965	1996	36.8	8.5	5.4	11.2	5.1	9.8	18.5	20.7	11.8	11.7	6.8	146
15695	1998	35.5	8.0	5.2	10.0	4.9	9.5	17.9	20.0	12.1	12.0	6.9	142
16425	2000	34.4	7.8	5.1	9.8	4.8	9.4	17.8	20.2	12.4	12.4	7.0	141
17155	2002	33.7	7.7	5.1	9.7	4.7	9.3	17.8	20.3	12.7	12.7	7.1	141
17885	2004	33.0	7.5	5.1	9.5	4.6	9.2	17.6	20.3	12.8	13.0	7.1	140
18615	2006	23.5	3.1	3.8	5.6	3.3	6.8	14.0	14.6	9.4	9.3	7.2	101
19345	2008	20.5	2.4	3.5	4.8	3.1	6.5	13.5	13.8	9.1	9.7	7.2	94
20075	2010	19.1	2.1	3.4	4.4	3.0	6.4	13.1	13.3	8.9	9.6	7.2	90
20805	2012	18.2	1.9	3.3	4.1	2.9	6.2	12.8	13.0	8.8	9.6	7.2	88
21535	2014	17.6	1.8	3.3	3.9	2.9	6.1	12.6	12.7	8.6	9.6	7.2	86
22265	2016	17.2	1.7	3.2	3.8	2.8	6.1	12.5	12.4	8.5	9.5	7.3	85
22995	2018	16.9	1.7	3.2	3.7	2.8	6.0	12.3	12.2	8.4	9.5	7.3	84

Appendix A-7-4a Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-7 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
23725	2020	16.6	1.6	3.2	3.6	2.8	5.9	12.2	12.0	8.3	9.4	7.3	83
24455	2022	16.4	1.6	3.2	3.6	2.7	5.9	12.1	11.9	8.2	9.4	7.3	82
25185	2024	16.2	1.6	3.2	3.5	2.7	5.9	12.0	11.7	8.2	9.3	7.3	82
25915	2026	16.1	1.6	3.1	3.5	2.7	5.8	11.9	11.6	8.1	9.3	7.3	81
26645	2028	15.9	1.6	3.1	3.5	2.7	5.8	11.8	11.5	8.1	9.3	7.3	81
27375	2030	15.8	1.5	3.1	3.4	2.7	5.8	11.8	11.5	8.0	9.2	7.4	80
28105	2032	15.7	1.5	3.1	3.4	2.7	5.8	11.7	11.4	8.0	9.2	7.4	80
28835	2034	15.6	1.5	3.1	3.4	2.7	5.7	11.7	11.3	8.0	9.2	7.4	80
29565	2036	15.5	1.5	3.1	3.4	2.7	5.7	11.6	11.3	7.9	9.2	7.4	79
30295	2038	15.4	1.5	3.1	3.3	2.6	5.7	11.6	11.2	7.9	9.2	7.4	79
31025	2040	15.3	1.5	3.1	3.3	2.6	5.7	11.6	11.2	7.9	9.1	7.4	79
31755	2042	15.3	1.5	3.1	3.3	2.6	5.7	11.5	11.1	7.9	9.1	7.4	79
32485	2044	15.2	1.5	3.1	3.3	2.6	5.7	11.5	11.1	7.9	9.1	7.4	78
33215	2046	15.2	1.5	3.1	3.3	2.6	5.7	11.5	11.1	7.9	9.1	7.4	78
33945	2048	15.1	1.5	3.1	3.3	2.6	5.6	11.5	11.0	7.8	9.1	7.5	78
34675	2050	15.1	1.5	3.1	3.3	2.6	5.6	11.5	11.0	7.8	9.1	7.5	78
35405	2052	15.0	1.5	3.1	3.3	2.6	5.6	11.4	11.0	7.8	9.1	7.5	78
36135	2054	15.0	1.5	3.1	3.3	2.6	5.6	11.4	11.0	7.8	9.1	7.5	78
36865	2056	15.0	1.5	3.1	3.3	2.6	5.6	11.4	11.0	7.8	9.1	7.5	78
37595	2058	15.0	1.5	3.2	3.5	2.6	5.6	11.4	11.0	7.8	9.1	7.5	78
38325	2060	15.0	1.6	3.2	3.6	2.6	5.6	11.4	11.0	7.8	9.1	7.5	78
39055	2062	15.0	1.6	3.2	3.6	2.6	5.6	11.4	10.9	7.8	9.1	7.5	78
39785	2064	15.0	1.6	3.2	3.7	2.6	5.6	11.4	10.9	7.8	9.1	7.5	79
40515	2066	15.0	1.6	3.2	3.7	2.6	5.6	11.4	10.9	7.8	9.1	7.5	79
41245	2068	15.0	1.6	3.2	3.7	2.6	5.6	11.4	10.9	7.8	9.1	7.5	79
41975	2070	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.1	7.5	79
42705	2072	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.2	7.6	79
43435	2074	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.2	7.6	79
44165	2076	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.2	7.6	79
44895	2078	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.2	7.6	79
45625	2080	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.2	7.6	79
46355	2082	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.2	7.6	79
47085	2084	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.2	7.6	79
47815	2086	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.2	7.6	79
48545	2088	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.2	7.6	79
49275	2090	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.2	7.6	79
50005	2092	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.2	7.6	79
50735	2094	14.9	1.6	3.3	3.7	2.6	5.6	11.4	10.9	7.8	9.2	7.6	79
51465	2096	14.9	1.6	3.3	3.7	2.6	5.6	11.4	11.0	7.8	9.3	7.6	79
52195	2098	14.9	1.6	3.3	3.7	2.6	5.6	11.4	11.0	7.8	9.3	7.6	79
52925	2100	14.9	1.6	3.3	3.7	2.6	5.6	11.4	11.0	7.8	9.3	7.6	79
53655	2102	14.9	1.6	3.3	3.7	2.6	5.6	11.4	11.0	7.8	9.3	7.6	79
54385	2104	14.9	1.6	3.3	3.7	2.6	5.6	11.4	11.0	7.8	9.3	7.6	79
TDS	*mg/L*	*32267*	*32267*	*32267*	*32267*	*32267*	*29405*	*29405*	*9700*	*7550*	*3300*	*3140*	

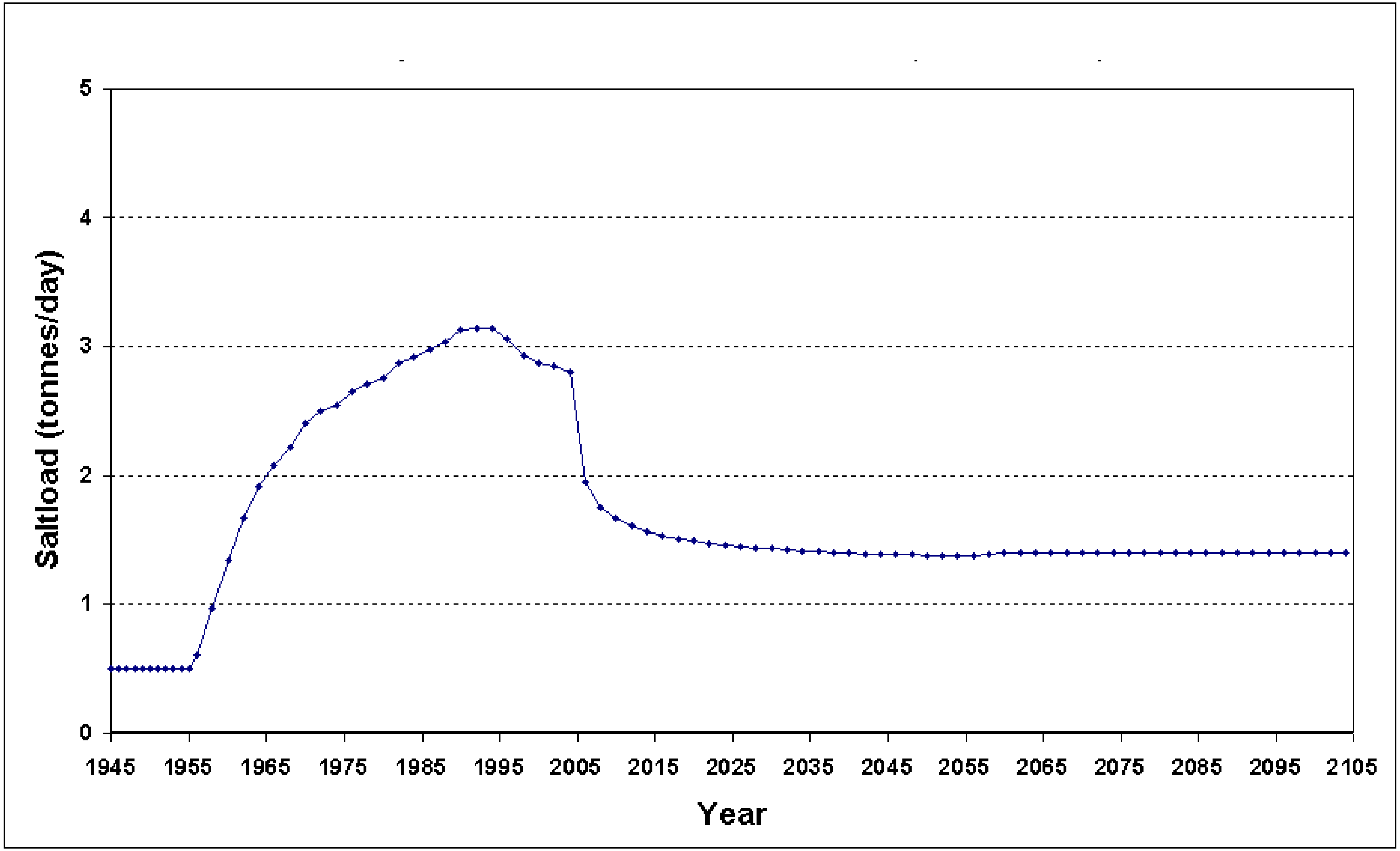
Appendix A-7-4b Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-7 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	1945	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1946	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1947	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1948	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1949	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1950	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1951	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1952	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1953	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1954	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
30	1955	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
365	1956	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.60
1095	1958	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.97
1825	1960	0.5	0.2	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	1.34
2555	1962	0.7	0.2	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	1.67
3285	1964	0.8	0.2	0.1	0.2	0.1	0.3	0.1	0.0	0.0	0.0	0.0	1.91
4015	1966	0.9	0.3	0.1	0.2	0.1	0.3	0.1	0.0	0.0	0.0	0.0	2.08
4745	1968	1.0	0.3	0.1	0.3	0.2	0.3	0.1	0.0	0.0	0.0	0.0	2.22
5475	1970	1.0	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.40
6205	1972	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.50
6935	1974	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.55
7665	1976	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.1	0.0	0.0	0.0	2.65
8395	1978	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.1	0.0	0.0	0.0	2.70
9125	1980	1.1	0.3	0.1	0.3	0.2	0.5	0.1	0.1	0.0	0.0	0.0	2.76
9855	1982	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.87
10585	1984	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.92
11315	1986	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.98
12045	1988	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.03
12775	1990	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.13
13505	1992	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.14
14235	1994	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.14
14965	1996	1.2	0.3	0.2	0.4	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.05
15695	1998	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.93
16425	2000	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.88
17155	2002	1.1	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.84
17885	2004	1.1	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.80
18615	2006	0.8	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.95
19345	2008	0.7	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.76
20075	2010	0.6	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.67
20805	2012	0.6	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.61
21535	2014	0.6	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.57
22265	2016	0.6	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.53
22995	2018	0.5	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.51

Appendix A-7-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-7 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
23725	2020	0.5	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.49
24455	2022	0.5	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.47
25185	2024	0.5	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.46
25915	2026	0.5	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.45
26645	2028	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.44
27375	2030	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.43
28105	2032	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.42
28835	2034	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.41
29565	2036	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.41
30295	2038	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
31025	2040	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
31755	2042	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.39
32485	2044	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.39
33215	2046	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.39
33945	2048	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.38
34675	2050	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.38
35405	2052	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.38
36135	2054	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.38
36865	2056	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.38
37595	2058	0.5	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.39
38325	2060	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.39
39055	2062	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
39785	2064	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
40515	2066	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
41245	2068	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
41975	2070	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
42705	2072	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
43435	2074	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
44165	2076	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
44895	2078	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
45625	2080	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
46355	2082	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
47085	2084	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
47815	2086	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
48545	2088	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
49275	2090	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
50005	2092	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
50735	2094	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
51465	2096	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
52195	2098	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
52925	2100	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
53655	2102	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
54385	2104	0.5	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.40
TDS	mg/L	32267	32267	32267	32267	32267	29405	29405	9700	7550	3300	3140	

Appendix A-7-5b Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-7 (Loxton Area)

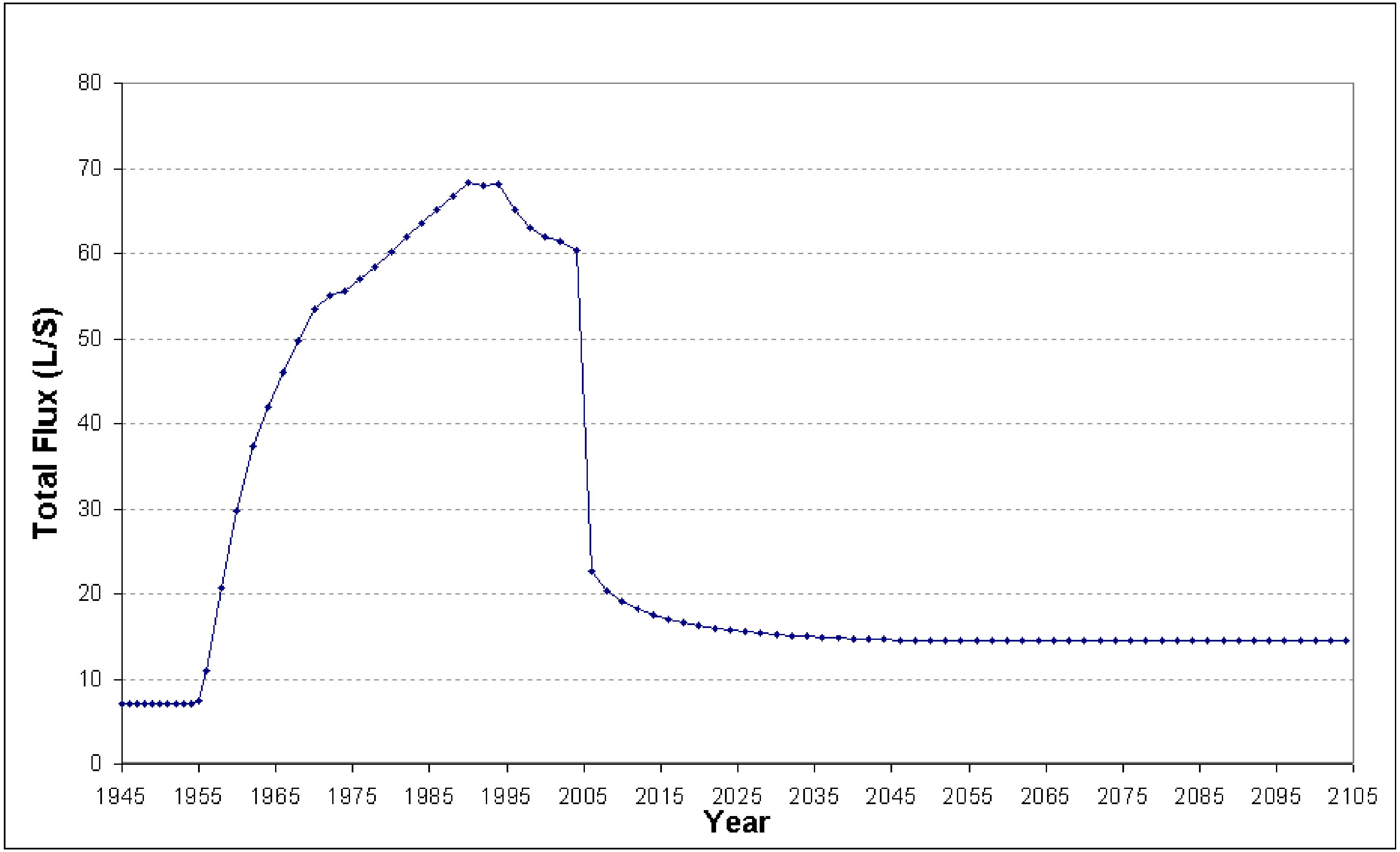


Appendix A-7-5c Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-7 (Loxton Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	1945	591	30	621	7.18
0	1946	591	30	621	7.18
0	1947	591	30	621	7.18
0	1948	591	30	621	7.18
0	1949	591	30	621	7.18
0	1950	591	30	621	7.18
0	1951	591	30	621	7.18
0	1952	591	30	621	7.18
0	1953	591	30	621	7.18
0	1954	591	30	621	7.18
30	1955	622	30	652	7.54
365	1956	919	33	952	11.02
1095	1958	1744	47	1791	20.73
1825	1960	2506	60	2566	29.70
2555	1962	3156	73	3228	37.37
3285	1964	3547	83	3630	42.01
4015	1966	3893	90	3983	46.10
4745	1968	4213	97	4310	49.89
5475	1970	4519	105	4625	53.53
6205	1972	4648	110	4758	55.07
6935	1974	4698	113	4811	55.68
7665	1976	4804	119	4923	56.98
8395	1978	4938	122	5060	58.56
9125	1980	5080	125	5206	60.25
9855	1982	5224	131	5356	61.99
10585	1984	5365	134	5499	63.65
11315	1986	5503	137	5640	65.28
12045	1988	5636	140	5777	66.86
12775	1990	5770	146	5915	68.47
13505	1992	5733	147	5880	68.06
14235	1994	5743	148	5891	68.19
14965	1996	5482	146	5628	65.14
15695	1998	5314	142	5456	63.15
16425	2000	5222	141	5363	62.07
17155	2002	5171	141	5312	61.48
17885	2004	5084	140	5223	60.46
18615	2006	1866	101	1967	22.76
19345	2008	1664	94	1758	20.35
20075	2010	1559	90	1649	19.09
20805	2012	1486	88	1574	18.22
21535	2014	1432	86	1518	17.57
22265	2016	1389	85	1474	17.06
22995	2018	1355	84	1439	16.65

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
23725	2020	1327	83	1410	16.32
24455	2022	1303	82	1386	16.04
25185	2024	1284	82	1365	15.80
25915	2026	1267	81	1348	15.60
26645	2028	1253	81	1333	15.43
27375	2030	1241	80	1321	15.29
28105	2032	1230	80	1310	15.16
28835	2034	1218	80	1297	15.02
29565	2036	1210	79	1289	14.92
30295	2038	1203	79	1282	14.84
31025	2040	1198	79	1277	14.78
31755	2042	1193	79	1272	14.72
32485	2044	1189	78	1267	14.67
33215	2046	1186	78	1264	14.63
33945	2048	1182	78	1260	14.58
34675	2050	1179	78	1257	14.55
35405	2052	1176	78	1254	14.52
36135	2054	1174	78	1252	14.50
36865	2056	1173	78	1251	14.48
37595	2058	1172	78	1251	14.47
38325	2060	1173	78	1251	14.48
39055	2062	1173	78	1251	14.48
39785	2064	1172	79	1251	14.48
40515	2066	1172	79	1251	14.47
41245	2068	1172	79	1250	14.47
41975	2070	1172	79	1250	14.47
42705	2072	1172	79	1250	14.47
43435	2074	1172	79	1250	14.47
44165	2076	1172	79	1250	14.47
44895	2078	1172	79	1250	14.47
45625	2080	1172	79	1251	14.48
46355	2082	1172	79	1251	14.48
47085	2084	1173	79	1251	14.48
47815	2086	1173	79	1252	14.49
48545	2088	1174	79	1252	14.49
49275	2090	1174	79	1253	14.50
50005	2092	1175	79	1253	14.51
50735	2094	1175	79	1254	14.51
51465	2096	1176	79	1255	14.52
52195	2098	1176	79	1255	14.53
52925	2100	1177	79	1256	14.54
53655	2102	1178	79	1257	14.54
54385	2104	1178	79	1257	14.55

Appendix A-7-6a Predicted total groundwater flux in Scenario-7 (Loxton Area)

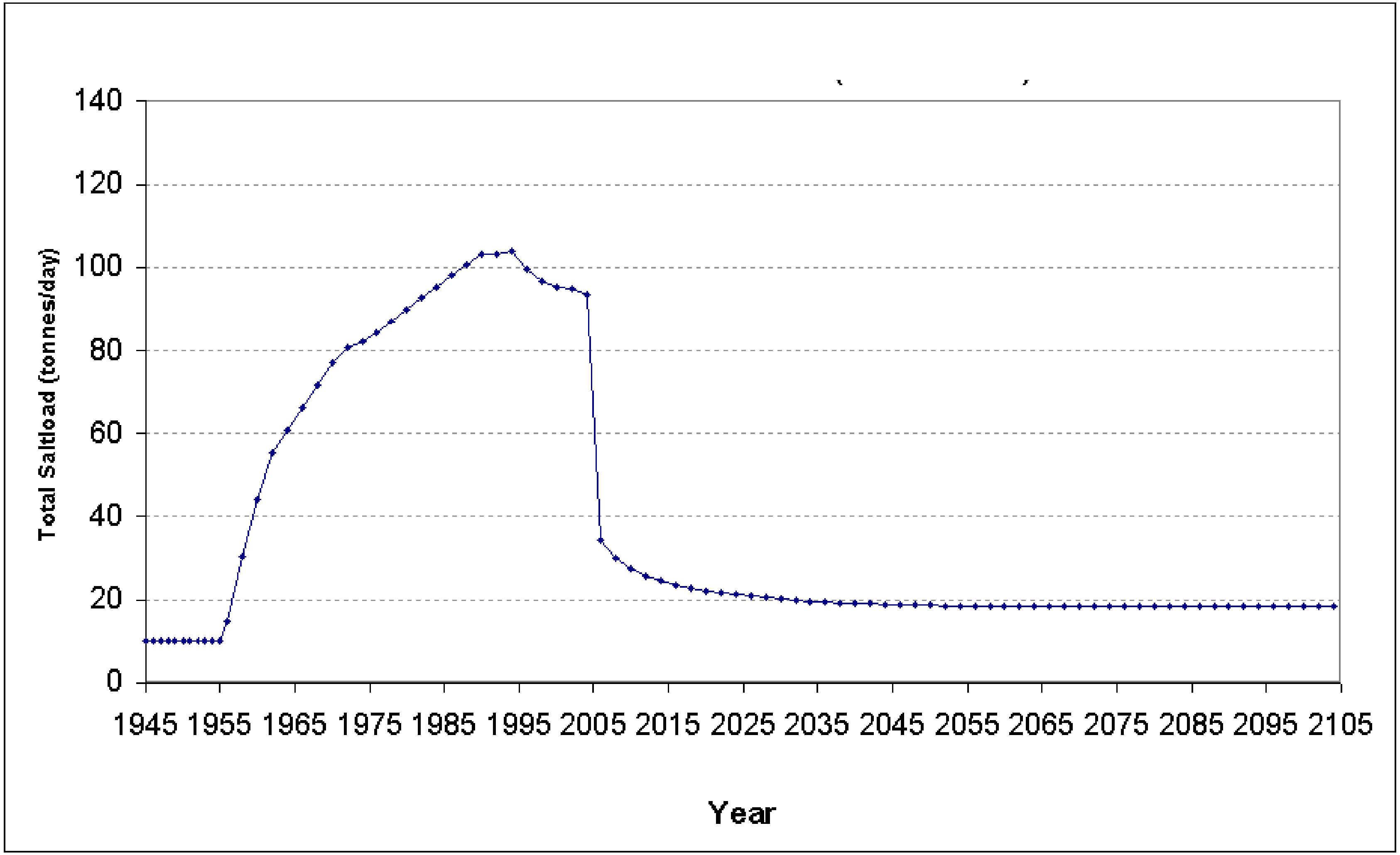


Appendix A-7-6b Graph of predicted total groundwater flux (L/second) entering the River Murray in Scenario-7 (Loxton Area)

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	10	0	10.20
0	1946	10	0	10.20
0	1947	10	0	10.20
0	1948	10	0	10.20
0	1949	10	0	10.20
0	1950	10	0	10.20
0	1951	10	0	10.20
0	1952	10	0	10.20
0	1953	10	0	10.20
0	1954	10	0	10.20
30	1955	10	0	10.20
365	1956	14	1	14.96
1095	1958	29	1	30.45
1825	1960	43	1	44.12
2555	1962	54	2	55.27
3285	1964	59	2	60.85
4015	1966	64	2	66.25
4745	1968	70	2	71.72
5475	1970	75	2	77.17
6205	1972	78	3	80.56
6935	1974	80	3	82.05
7665	1976	82	3	84.38
8395	1978	84	3	87.06
9125	1980	87	3	89.85
9855	1982	90	3	92.68
10585	1984	92	3	95.38
11315	1986	95	3	98.02
12045	1988	98	3	100.62
12775	1990	100	3	103.32
13505	1992	100	3	103.21
14235	1994	101	3	103.77
14965	1996	96	3	99.53
15695	1998	94	3	96.74
16425	2000	93	3	95.38
17155	2002	92	3	94.74
17885	2004	91	3	93.36
18615	2006	32	2	34.33
19345	2008	28	2	29.90
20075	2010	26	2	27.52
20805	2012	24	2	25.88
21535	2014	23	2	24.63
22265	2016	22	2	23.65
22995	2018	21	2	22.86

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
23725	2020	21	1	22.22
24455	2022	20	1	21.68
25185	2024	20	1	21.22
25915	2026	19	1	20.83
26645	2028	19	1	20.49
27375	2030	19	1	20.21
28105	2032	19	1	19.96
28835	2034	18	1	19.66
29565	2036	18	1	19.46
30295	2038	18	1	19.30
31025	2040	18	1	19.16
31755	2042	18	1	19.04
32485	2044	18	1	18.94
33215	2046	17	1	18.85
33945	2048	17	1	18.74
34675	2050	17	1	18.66
35405	2052	17	1	18.60
36135	2054	17	1	18.55
36865	2056	17	1	18.50
37595	2058	17	1	18.50
38325	2060	17	1	18.52
39055	2062	17	1	18.52
39785	2064	17	1	18.51
40515	2066	17	1	18.49
41245	2068	17	1	18.48
41975	2070	17	1	18.47
42705	2072	17	1	18.46
43435	2074	17	1	18.45
44165	2076	17	1	18.45
44895	2078	17	1	18.44
45625	2080	17	1	18.44
46355	2082	17	1	18.44
47085	2084	17	1	18.44
47815	2086	17	1	18.44
48545	2088	17	1	18.44
49275	2090	17	1	18.45
50005	2092	17	1	18.45
50735	2094	17	1	18.46
51465	2096	17	1	18.47
52195	2098	17	1	18.47
52925	2100	17	1	18.48
53655	2102	17	1	18.49
54385	2104	17	1	18.50

Appendix A-7-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-7 (Loxton Area)



Appendix A-7-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-7 (Loxton Area)

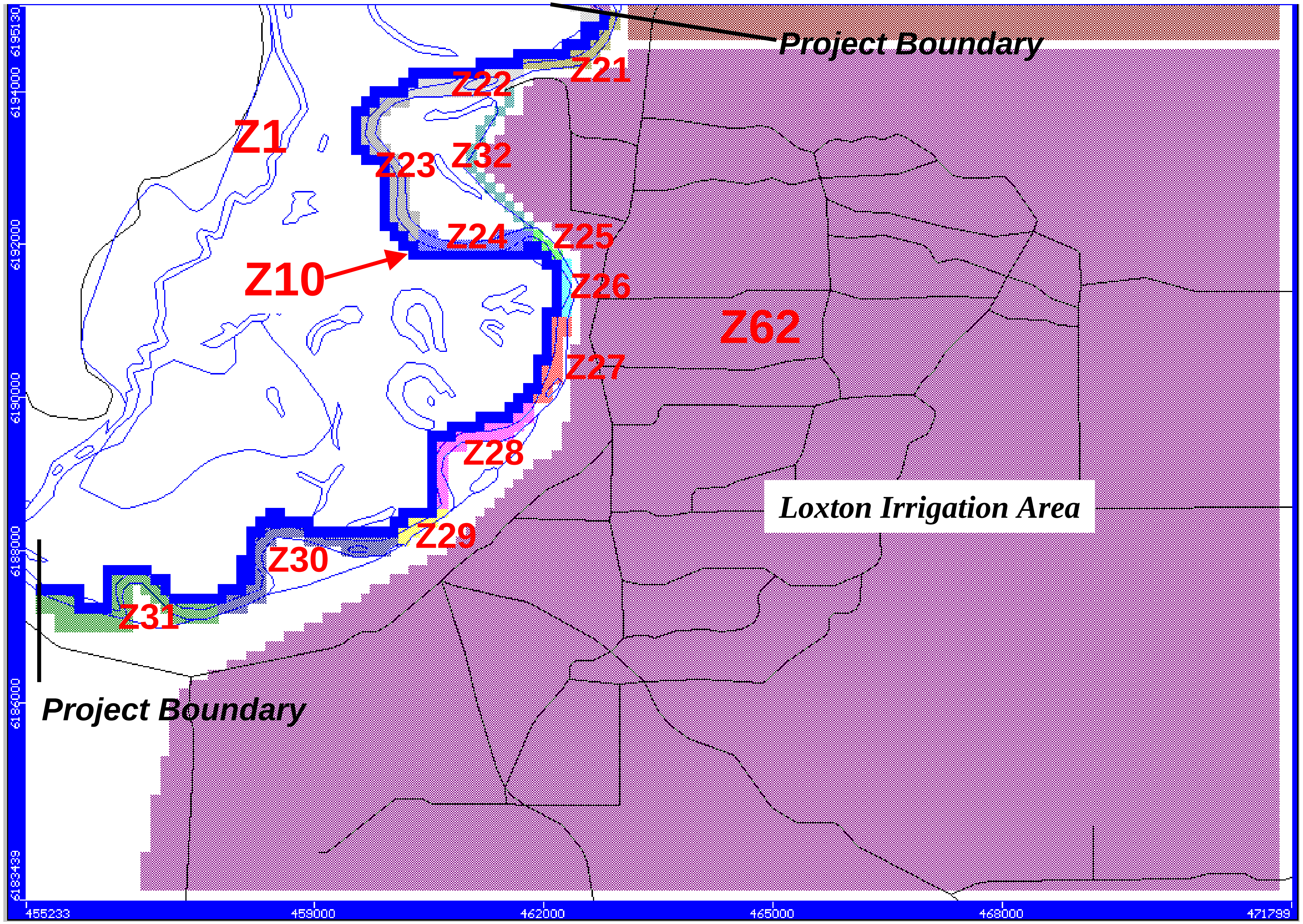
A8. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-8 (LOXTON AREA)

- Flow budget zones (Loxton Area)
- Predicted lateral groundwater flux (m3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)
- Borehole locations and pumping rates

Appendix A-8

Groundwater flux and salt load entering the River Murray Scenario-8 (Loxton Area)

-Flow budget zones (Loxton Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)
-Borehole locations and pumping rates



Appendix A-8-1 Flow budget zones in model Layer-1 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1946	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1947	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1948	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1949	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1950	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1951	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1952	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1953	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
0	1954	50.2	7.6	0.0	5.9	26.9	62.8	135.7	61.9	35.6	57.7	146.8	0.0	591
30	1955	50.2	7.6	0.0	5.9	26.9	62.8	144.2	66.0	35.4	76.5	146.8	0.0	622
365	1956	71.5	46.8	0.0	36.4	94.2	176.2	179.8	66.2	34.4	67.6	146.8	0.0	920
1095	1958	134.4	178.9	0.0	150.3	260.7	385.0	315.8	69.4	34.2	64.8	146.9	7.1	1747
1825	1960	215.6	270.9	0.0	234.1	373.9	525.6	500.3	87.1	34.4	64.5	147.1	56.6	2510
2555	1962	300.5	327.9	0.0	284.1	448.6	641.8	696.6	121.6	36.0	65.0	147.6	91.0	3160
3285	1964	355.8	326.6	0.0	282.6	465.5	724.5	883.5	170.7	39.8	66.3	148.3	87.5	3551
4015	1966	398.0	328.5	0.0	283.9	486.1	790.0	1032.0	225.6	46.3	68.6	149.3	88.1	3897
4745	1968	434.6	335.1	0.0	290.0	508.2	846.3	1152.8	280.5	55.7	72.1	150.5	91.8	4218
5475	1970	467.8	342.8	0.0	297.1	528.9	896.0	1263.3	333.7	67.5	77.2	152.0	96.3	4523
6205	1972	493.7	343.6	0.0	297.4	522.2	874.4	1320.9	383.8	80.8	83.8	153.7	96.1	4651
6935	1974	504.7	328.9	0.0	283.7	503.2	859.7	1360.3	431.0	95.5	92.1	155.7	86.0	4701
7665	1976	512.2	321.8	0.0	277.1	499.4	866.6	1403.3	473.5	111.0	101.8	157.9	81.4	4806
8395	1978	520.2	320.0	0.0	275.6	501.9	880.3	1450.5	510.5	126.6	112.9	160.4	80.2	4939
9125	1980	529.3	320.5	0.0	276.2	507.0	896.6	1498.6	543.5	141.4	124.8	163.1	80.5	5081
9855	1982	539.2	322.1	0.0	277.9	513.1	913.6	1545.6	572.9	155.2	137.2	166.0	81.5	5224
10585	1984	549.3	324.2	0.0	279.9	519.5	930.5	1591.1	600.1	167.9	149.8	169.2	82.8	5364
11315	1986	559.6	326.5	0.0	282.1	525.9	946.6	1635.3	626.4	180.1	162.4	172.6	84.1	5502
12045	1988	569.8	328.8	0.0	284.3	531.9	961.2	1677.5	652.7	192.0	175.1	176.3	85.5	5635
12775	1990	579.5	331.1	0.0	286.4	537.5	974.6	1718.9	680.0	204.4	187.9	180.3	86.9	5767
13505	1992	576.6	314.9	0.0	272.2	514.3	946.6	1722.6	705.1	216.9	200.9	184.5	76.0	5731
14235	1994	571.6	305.3	0.0	263.4	503.7	936.5	1727.7	728.5	229.8	214.3	189.0	70.0	5740
14965	1996	542.7	261.5	0.0	225.1	445.5	868.2	1685.0	746.0	242.1	227.9	193.7	41.0	5479
15695	1998	513.5	234.6	0.0	201.1	413.9	828.4	1644.3	756.8	253.0	241.4	198.6	26.3	5312
16425	2000	491.4	219.9	0.0	188.8	395.9	802.8	1616.8	765.2	262.2	254.1	203.8	18.9	5220
17155	2002	475.3	211.3	0.0	181.7	384.4	785.3	1598.5	772.6	270.0	266.0	209.1	15.0	5169
17885	2004	460.7	201.6	0.0	173.3	369.4	761.6	1569.6	769.2	274.4	276.5	214.6	10.7	5082
18615	2006	435.0	63.9	0.0	106.6	274.1	660.4	607.2	346.0	192.6	56.3	214.9	0.7	2958
19345	2008	322.0	9.3	0.0	45.9	102.3	300.5	178.9	69.5	156.9	13.7	217.4	0.0	1416
20075	2010	234.8	8.4	0.0	36.1	83.2	242.9	146.1	63.8	147.7	14.1	222.9	0.0	1200
20805	2012	206.0	7.8	0.0	32.2	76.9	226.3	136.1	60.6	142.0	14.6	228.2	0.0	1131
21535	2014	191.2	7.3	0.0	29.8	73.1	216.2	129.7	58.3	137.5	15.1	233.3	0.0	1091
22265	2016	182.4	7.0	0.0	28.2	70.5	209.0	125.1	56.5	134.2	15.6	238.2	0.0	1067
22995	2018	176.5	6.8	0.0	27.1	68.6	203.6	121.7	55.3	132.0	16.1	242.7	0.0	1050

Appendix A-8-2a Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-8 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
23725	**2020**	172.6	6.7	0.0	26.4	67.3	199.6	119.2	54.5	130.5	16.4	247.1	0.0	**1040**
24455	**2022**	169.9	6.6	0.0	25.9	66.4	196.7	117.6	54.0	129.4	16.8	251.2	0.0	**1034**
25185	**2024**	168.0	6.5	0.0	25.5	65.7	194.7	116.4	53.7	128.8	17.1	255.0	0.0	**1031**
25915	**2026**	166.9	6.5	0.0	25.2	65.3	193.3	115.7	53.5	128.5	17.4	258.7	0.0	**1031**
26645	**2028**	166.1	6.4	0.0	25.1	65.0	192.3	115.2	53.5	128.4	17.6	262.1	0.0	**1032**
27375	**2030**	165.8	6.4	0.0	25.0	64.8	191.8	115.0	53.5	128.4	17.8	265.4	0.0	**1034**
28105	**2032**	165.7	6.4	0.0	24.9	64.7	191.5	115.0	53.6	128.6	18.0	268.6	0.0	**1037**
28835	**2034**	165.8	6.4	0.0	24.9	64.7	191.5	115.1	53.7	128.9	18.1	271.7	0.0	**1041**
29565	**2036**	166.1	6.4	0.0	24.9	64.7	191.6	115.2	53.9	129.3	18.3	274.6	0.0	**1045**
30295	**2038**	166.5	6.4	0.0	24.9	64.8	191.9	115.5	54.1	129.7	18.4	277.4	0.0	**1049**
31025	**2040**	166.9	6.4	0.0	24.9	64.9	192.3	115.8	54.3	130.1	18.5	280.2	0.0	**1054**
31755	**2042**	167.5	6.4	0.0	25.0	65.0	192.8	116.2	54.5	130.6	18.7	282.8	0.0	**1059**
32485	**2044**	168.0	6.4	0.0	25.1	65.1	193.3	116.6	54.8	131.1	18.8	285.4	0.0	**1065**
33215	**2046**	168.6	6.5	0.0	25.1	65.3	193.9	117.1	55.0	131.6	19.0	288.0	0.0	**1070**
33945	**2048**	169.3	6.5	0.0	25.2	65.5	194.5	117.5	55.3	132.1	19.1	290.4	0.0	**1075**
34675	**2050**	169.9	6.5	0.0	25.3	65.6	195.2	118.0	55.5	132.7	19.3	292.8	0.0	**1081**
35405	**2052**	170.5	6.5	0.0	25.4	65.8	195.9	118.5	55.8	133.2	19.4	295.2	0.0	**1086**
36135	**2054**	171.2	6.5	0.0	25.5	66.0	196.5	119.0	56.0	133.8	19.6	297.5	0.0	**1092**
36865	**2056**	171.8	6.5	0.0	25.6	66.2	197.2	119.5	56.3	134.3	19.7	299.8	0.0	**1097**
37595	**2058**	172.4	6.6	0.0	25.7	66.4	197.9	120.0	56.6	134.8	19.9	302.0	0.0	**1102**
38325	**2060**	173.0	6.6	0.0	25.7	66.5	198.6	120.5	56.8	135.4	20.0	304.2	0.0	**1107**
39055	**2062**	173.6	6.6	0.0	25.8	66.7	199.3	121.0	57.0	135.9	20.2	306.4	0.0	**1112**
39785	**2064**	174.2	6.6	0.0	25.9	66.9	200.0	121.5	57.3	136.4	20.3	308.5	0.0	**1118**
40515	**2066**	174.7	6.6	0.0	26.0	67.1	200.6	122.0	57.5	137.0	20.5	310.5	0.0	**1122**
41245	**2068**	175.3	6.6	0.0	26.1	67.2	201.3	122.5	57.7	137.5	20.6	312.6	0.0	**1127**
41975	**2070**	175.8	6.6	0.0	26.1	67.4	201.9	123.0	58.0	138.0	20.8	314.6	0.0	**1132**
42705	**2072**	176.3	6.7	0.0	26.2	67.6	202.5	123.5	58.2	138.5	20.9	316.5	0.0	**1137**
43435	**2074**	176.8	6.7	0.0	26.3	67.7	203.1	123.9	58.4	139.0	21.0	318.4	0.0	**1141**
44165	**2076**	177.2	6.7	0.0	26.4	67.9	203.7	124.4	58.6	139.5	21.2	320.3	0.0	**1146**
44895	**2078**	177.7	6.7	0.0	26.4	68.0	204.3	124.8	58.9	139.9	21.3	322.2	0.0	**1150**
45625	**2080**	178.1	6.7	0.0	26.5	68.2	204.9	125.3	59.1	140.4	21.5	324.0	0.0	**1155**
46355	**2082**	178.6	6.7	0.0	26.6	68.3	205.4	125.7	59.3	140.9	21.6	325.8	0.0	**1159**
47085	**2084**	179.0	6.7	0.0	26.6	68.5	205.9	126.1	59.5	141.3	21.7	327.6	0.0	**1163**
47815	**2086**	179.3	6.7	0.0	26.7	68.6	206.5	126.5	59.7	141.8	21.9	329.3	0.0	**1167**
48545	**2088**	179.7	6.8	0.0	26.7	68.7	207.0	126.9	59.9	142.2	22.0	331.0	0.0	**1171**
49275	**2090**	180.1	6.8	0.0	26.8	68.8	207.4	127.3	60.1	142.6	22.1	332.7	0.0	**1175**
50005	**2092**	180.4	6.8	0.0	26.9	69.0	207.9	127.7	60.3	143.1	22.2	334.4	0.0	**1179**
50735	**2094**	180.7	6.8	0.0	26.9	69.1	208.4	128.1	60.5	143.5	22.4	336.0	0.0	**1182**
51465	**2096**	181.1	6.8	0.0	27.0	69.2	208.8	128.4	60.7	143.9	22.5	337.6	0.0	**1186**
52195	**2098**	181.4	6.8	0.0	27.0	69.3	209.2	128.8	60.8	144.3	22.6	339.1	0.0	**1189**
52925	**2100**	181.7	6.8	0.0	27.1	69.4	209.7	129.1	61.0	144.7	22.7	340.7	0.0	**1193**
53655	**2102**	182.0	6.8	0.0	27.1	69.5	210.1	129.4	61.2	145.1	22.8	342.2	0.0	**1196**
54385	**2104**	182.2	6.8	0.0	27.1	69.6	210.5	129.8	61.4	145.4	23.0	343.7	0.0	**1199**
TDS	***mg/L***	***25807***	***29055***	***30760***	***39978***	***18716***	***4240***	***7710***	***35935***	***29140***	***24080***	***5620***	***8440***	

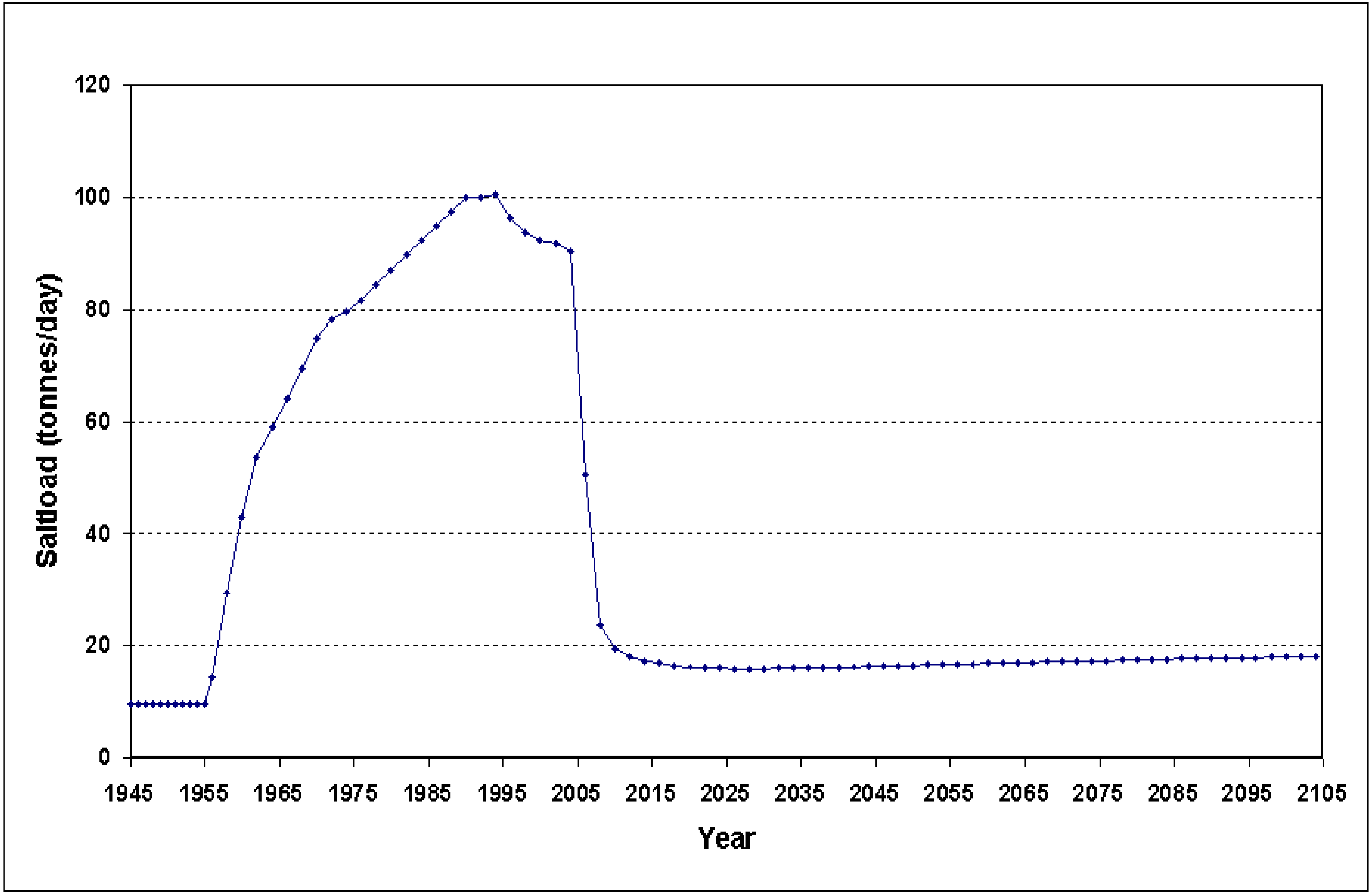
Appendix A-8-2b Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-8 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
0	1945	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1946	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1947	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1948	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1949	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1950	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1951	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1952	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1953	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
0	1954	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
30	1955	1.3	0.2	0.0	0.2	0.5	0.3	1.1	2.4	1.0	1.8	0.8	0.0	9.70
365	1956	1.8	1.4	0.0	1.5	1.8	0.7	1.4	2.4	1.0	1.6	0.8	0.0	14.39
1095	1958	3.5	5.2	0.0	6.0	4.9	1.6	2.4	2.5	1.0	1.6	0.8	0.1	29.55
1825	1960	5.6	7.9	0.0	9.4	7.0	2.2	3.9	3.1	1.0	1.6	0.8	0.5	42.87
2555	1962	7.8	9.5	0.0	11.4	8.4	2.7	5.4	4.4	1.0	1.6	0.8	0.8	53.70
3285	1964	9.2	9.5	0.0	11.3	8.7	3.1	6.8	6.1	1.2	1.6	0.8	0.7	59.03
4015	1966	10.3	9.5	0.0	11.4	9.1	3.3	8.0	8.1	1.4	1.7	0.8	0.7	64.26
4745	1968	11.2	9.7	0.0	11.6	9.5	3.6	8.9	10.1	1.6	1.7	0.8	0.8	69.59
5475	1970	12.1	10.0	0.0	11.9	9.9	3.8	9.7	12.0	2.0	1.9	0.9	0.8	74.83
6205	1972	12.7	10.0	0.0	11.9	9.8	3.7	10.2	13.8	2.4	2.0	0.9	0.8	78.12
6935	1974	13.0	9.6	0.0	11.3	9.4	3.6	10.5	15.5	2.8	2.2	0.9	0.7	79.56
7665	1976	13.2	9.4	0.0	11.1	9.3	3.7	10.8	17.0	3.2	2.5	0.9	0.7	81.76
8395	1978	13.4	9.3	0.0	11.0	9.4	3.7	11.2	18.3	3.7	2.7	0.9	0.7	84.38
9125	1980	13.7	9.3	0.0	11.0	9.5	3.8	11.6	19.5	4.1	3.0	0.9	0.7	87.11
9855	1982	13.9	9.4	0.0	11.1	9.6	3.9	11.9	20.6	4.5	3.3	0.9	0.7	89.81
10585	1984	14.2	9.4	0.0	11.2	9.7	3.9	12.3	21.6	4.9	3.6	1.0	0.7	92.43
11315	1986	14.4	9.5	0.0	11.3	9.8	4.0	12.6	22.5	5.2	3.9	1.0	0.7	95.02
12045	1988	14.7	9.6	0.0	11.4	10.0	4.1	12.9	23.5	5.6	4.2	1.0	0.7	97.57
12775	1990	15.0	9.6	0.0	11.5	10.1	4.1	13.3	24.4	6.0	4.5	1.0	0.7	100.13
13505	1992	14.9	9.1	0.0	10.9	9.6	4.0	13.3	25.3	6.3	4.8	1.0	0.6	100.00
14235	1994	14.8	8.9	0.0	10.5	9.4	4.0	13.3	26.2	6.7	5.2	1.1	0.6	100.56
14965	1996	14.0	7.6	0.0	9.0	8.3	3.7	13.0	26.8	7.1	5.5	1.1	0.3	96.40
15695	1998	13.3	6.8	0.0	8.0	7.7	3.5	12.7	27.2	7.4	5.8	1.1	0.2	93.76
16425	2000	12.7	6.4	0.0	7.5	7.4	3.4	12.5	27.5	7.6	6.1	1.1	0.2	92.46
17155	2002	12.3	6.1	0.0	7.3	7.2	3.3	12.3	27.8	7.9	6.4	1.2	0.1	91.85
17885	2004	11.9	5.9	0.0	6.9	6.9	3.2	12.1	27.6	8.0	6.7	1.2	0.1	90.51
18615	2006	11.2	1.9	0.0	4.3	5.1	2.8	4.7	12.4	5.6	1.4	1.2	0.0	50.57
19345	2008	8.3	0.3	0.0	1.8	1.9	1.3	1.4	2.5	4.6	0.3	1.2	0.0	23.60
20075	2010	6.1	0.2	0.0	1.4	1.6	1.0	1.1	2.3	4.3	0.3	1.3	0.0	19.65
20805	2012	5.3	0.2	0.0	1.3	1.4	1.0	1.0	2.2	4.1	0.4	1.3	0.0	18.23
21535	2014	4.9	0.2	0.0	1.2	1.4	0.9	1.0	2.1	4.0	0.4	1.3	0.0	17.40
22265	2016	4.7	0.2	0.0	1.1	1.3	0.9	1.0	2.0	3.9	0.4	1.3	0.0	16.86
22995	2018	4.6	0.2	0.0	1.1	1.3	0.9	0.9	2.0	3.8	0.4	1.4	0.0	16.51

Appendix A-8-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-8 (Loxton Area)

day	year	Z1 to Z21	Z1 to Z22	Z1 to Z23	Z1 to Z24	Z1 to Z25	Z1 to Z26	Z1 to Z27	Z1 to Z28	Z1 to Z29	Z1 to Z30	Z1 to Z31	Drain Out Z32	Total
23725	2020	4.5	0.2	0.0	1.1	1.3	0.8	0.9	2.0	3.8	0.4	1.4	0.0	16.27
24455	2022	4.4	0.2	0.0	1.0	1.2	0.8	0.9	1.9	3.8	0.4	1.4	0.0	16.12
25185	2024	4.3	0.2	0.0	1.0	1.2	0.8	0.9	1.9	3.8	0.4	1.4	0.0	16.03
25915	2026	4.3	0.2	0.0	1.0	1.2	0.8	0.9	1.9	3.7	0.4	1.5	0.0	15.97
26645	2028	4.3	0.2	0.0	1.0	1.2	0.8	0.9	1.9	3.7	0.4	1.5	0.0	15.95
27375	2030	4.3	0.2	0.0	1.0	1.2	0.8	0.9	1.9	3.7	0.4	1.5	0.0	15.96
28105	2032	4.3	0.2	0.0	1.0	1.2	0.8	0.9	1.9	3.7	0.4	1.5	0.0	15.98
28835	2034	4.3	0.2	0.0	1.0	1.2	0.8	0.9	1.9	3.8	0.4	1.5	0.0	16.02
29565	2036	4.3	0.2	0.0	1.0	1.2	0.8	0.9	1.9	3.8	0.4	1.5	0.0	16.06
30295	2038	4.3	0.2	0.0	1.0	1.2	0.8	0.9	1.9	3.8	0.4	1.6	0.0	16.12
31025	2040	4.3	0.2	0.0	1.0	1.2	0.8	0.9	2.0	3.8	0.4	1.6	0.0	16.18
31755	2042	4.3	0.2	0.0	1.0	1.2	0.8	0.9	2.0	3.8	0.4	1.6	0.0	16.24
32485	2044	4.3	0.2	0.0	1.0	1.2	0.8	0.9	2.0	3.8	0.5	1.6	0.0	16.31
33215	2046	4.4	0.2	0.0	1.0	1.2	0.8	0.9	2.0	3.8	0.5	1.6	0.0	16.38
33945	2048	4.4	0.2	0.0	1.0	1.2	0.8	0.9	2.0	3.9	0.5	1.6	0.0	16.45
34675	2050	4.4	0.2	0.0	1.0	1.2	0.8	0.9	2.0	3.9	0.5	1.6	0.0	16.52
35405	2052	4.4	0.2	0.0	1.0	1.2	0.8	0.9	2.0	3.9	0.5	1.7	0.0	16.59
36135	2054	4.4	0.2	0.0	1.0	1.2	0.8	0.9	2.0	3.9	0.5	1.7	0.0	16.67
36865	2056	4.4	0.2	0.0	1.0	1.2	0.8	0.9	2.0	3.9	0.5	1.7	0.0	16.74
37595	2058	4.4	0.2	0.0	1.0	1.2	0.8	0.9	2.0	3.9	0.5	1.7	0.0	16.81
38325	2060	4.5	0.2	0.0	1.0	1.2	0.8	0.9	2.0	3.9	0.5	1.7	0.0	16.88
39055	2062	4.5	0.2	0.0	1.0	1.2	0.8	0.9	2.0	4.0	0.5	1.7	0.0	16.95
39785	2064	4.5	0.2	0.0	1.0	1.3	0.8	0.9	2.1	4.0	0.5	1.7	0.0	17.02
40515	2066	4.5	0.2	0.0	1.0	1.3	0.9	0.9	2.1	4.0	0.5	1.7	0.0	17.08
41245	2068	4.5	0.2	0.0	1.0	1.3	0.9	0.9	2.1	4.0	0.5	1.8	0.0	17.15
41975	2070	4.5	0.2	0.0	1.0	1.3	0.9	0.9	2.1	4.0	0.5	1.8	0.0	17.21
42705	2072	4.5	0.2	0.0	1.0	1.3	0.9	1.0	2.1	4.0	0.5	1.8	0.0	17.28
43435	2074	4.6	0.2	0.0	1.1	1.3	0.9	1.0	2.1	4.0	0.5	1.8	0.0	17.34
44165	2076	4.6	0.2	0.0	1.1	1.3	0.9	1.0	2.1	4.1	0.5	1.8	0.0	17.40
44895	2078	4.6	0.2	0.0	1.1	1.3	0.9	1.0	2.1	4.1	0.5	1.8	0.0	17.46
45625	2080	4.6	0.2	0.0	1.1	1.3	0.9	1.0	2.1	4.1	0.5	1.8	0.0	17.51
46355	2082	4.6	0.2	0.0	1.1	1.3	0.9	1.0	2.1	4.1	0.5	1.8	0.0	17.57
47085	2084	4.6	0.2	0.0	1.1	1.3	0.9	1.0	2.1	4.1	0.5	1.8	0.0	17.63
47815	2086	4.6	0.2	0.0	1.1	1.3	0.9	1.0	2.1	4.1	0.5	1.9	0.0	17.68
48545	2088	4.6	0.2	0.0	1.1	1.3	0.9	1.0	2.2	4.1	0.5	1.9	0.0	17.73
49275	2090	4.6	0.2	0.0	1.1	1.3	0.9	1.0	2.2	4.2	0.5	1.9	0.0	17.78
50005	2092	4.7	0.2	0.0	1.1	1.3	0.9	1.0	2.2	4.2	0.5	1.9	0.0	17.83
50735	2094	4.7	0.2	0.0	1.1	1.3	0.9	1.0	2.2	4.2	0.5	1.9	0.0	17.88
51465	2096	4.7	0.2	0.0	1.1	1.3	0.9	1.0	2.2	4.2	0.5	1.9	0.0	17.93
52195	2098	4.7	0.2	0.0	1.1	1.3	0.9	1.0	2.2	4.2	0.5	1.9	0.0	17.98
52925	2100	4.7	0.2	0.0	1.1	1.3	0.9	1.0	2.2	4.2	0.5	1.9	0.0	18.02
53655	2102	4.7	0.2	0.0	1.1	1.3	0.9	1.0	2.2	4.2	0.6	1.9	0.0	18.07
54385	2104	4.7	0.2	0.0	1.1	1.3	0.9	1.0	2.2	4.2	0.6	1.9	0.0	18.11
TDS	*mg/L*	*25807*	*29055*	*30760*	*39978*	*18716*	*4240*	*7710*	*35935*	*29140*	*24080*	*5620*	*8440*	

Appendix A-8-3b Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-8 (Loxton Area)



Appendix A-8-3c Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-8 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	*1945*	5.6	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1946*	5.6	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1947*	5.6	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1948*	5.6	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1949*	5.6	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1950*	5.6	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1951*	5.6	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1952*	5.6	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1953*	5.6	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
0	*1954*	5.6	*1.4*	*1.8*	*0.9*	*1.0*	*2.1*	*2.7*	*2.4*	*2.5*	*4.1*	*5.0*	30
30	1955	5.6	1.4	1.8	0.9	1.0	2.1	2.7	2.5	2.5	4.1	5.0	30
365	1956	6.4	2.2	2.0	2.7	1.7	3.1	4.3	4.3	2.5	4.0	5.0	38
1095	1958	10.3	4.6	2.3	5.5	2.9	4.8	5.9	4.8	2.6	4.1	5.0	53
1825	1960	15.7	6.3	2.6	7.2	3.7	5.9	7.6	5.5	2.7	4.3	5.1	67
2555	1962	21.0	7.4	3.0	8.4	4.3	6.8	9.2	6.6	2.9	4.6	5.2	79
3285	1964	24.7	7.6	3.3	8.7	4.5	7.4	10.6	7.8	3.2	4.8	5.3	88
4015	1966	27.3	7.9	3.4	9.0	4.7	7.9	11.7	8.9	3.6	5.2	5.4	95
4745	1968	29.5	8.2	3.7	9.3	4.9	8.3	12.6	10.0	4.1	5.5	5.5	101
5475	1970	31.3	8.4	3.9	9.6	5.0	8.7	13.4	11.1	4.7	5.9	5.6	108
6205	1972	32.8	8.6	4.0	9.8	5.1	8.8	14.0	12.0	5.3	6.3	5.7	112
6935	1974	33.6	8.5	4.1	9.7	5.0	8.9	14.4	12.9	6.0	6.7	5.8	116
7665	1976	34.2	8.5	4.2	9.7	5.0	9.0	14.8	13.7	6.7	7.1	5.9	119
8395	1978	34.7	8.6	4.3	9.8	5.1	9.1	15.2	14.4	7.4	7.6	6.0	122
9125	1980	35.2	8.7	4.5	9.9	5.2	9.3	15.6	15.1	8.0	8.1	6.1	126
9855	1982	35.8	8.9	4.6	10.1	5.2	9.4	16.0	15.6	8.5	8.5	6.2	129
10585	1984	36.3	9.0	4.7	10.2	5.3	9.6	16.4	16.2	9.0	9.0	6.2	132
11315	1986	36.9	9.1	4.9	10.3	5.4	9.7	16.7	16.7	9.5	9.4	6.3	135
12045	1988	37.5	9.3	5.0	10.5	5.4	9.8	17.1	17.2	9.9	9.9	6.4	138
12775	1990	38.0	9.4	5.1	10.6	5.5	10.0	17.4	17.7	10.4	10.3	6.5	141
13505	1992	38.0	9.2	5.2	10.4	5.4	9.9	17.5	18.2	10.8	10.8	6.6	142
14235	1994	37.8	9.1	5.2	10.3	5.3	9.9	17.7	18.6	11.3	11.2	6.7	143
14965	1996	36.8	8.4	5.1	9.7	5.0	9.6	17.5	18.9	11.7	11.6	6.8	141
15695	1998	35.5	8.0	5.0	9.3	4.9	9.4	17.4	19.1	12.1	12.0	6.9	140
16425	2000	34.4	7.8	5.0	9.1	4.8	9.3	17.3	19.3	12.4	12.4	7.0	139
17155	2002	33.6	7.6	5.0	9.0	4.7	9.2	17.3	19.5	12.6	12.7	7.1	138
17885	2004	33.0	7.5	5.0	8.8	4.6	9.1	17.1	19.4	12.7	12.9	7.1	137
18615	2006	32.6	6.1	4.9	7.5	4.4	8.9	15.2	14.9	10.7	10.0	7.1	122
19345	2008	26.6	4.6	4.4	6.6	3.4	7.1	13.3	11.9	9.4	8.8	7.1	103
20075	2010	21.3	4.2	4.1	6.1	3.2	6.6	12.6	11.5	9.1	8.8	7.2	95
20805	2012	19.5	4.0	4.0	5.9	3.1	6.4	12.3	11.2	8.9	8.7	7.2	91
21535	2014	18.6	3.9	3.9	5.7	3.0	6.3	12.1	11.0	8.7	8.7	7.2	89
22265	2016	18.2	3.9	3.9	5.7	3.0	6.2	12.0	10.9	8.6	8.7	7.2	88
22995	2018	18.0	3.9	4.0	5.7	2.9	6.2	11.9	10.9	8.5	8.8	7.3	88

Appendix A-8-4a Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-8 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
23725	2020	17.8	3.9	4.0	5.6	2.9	6.2	11.9	10.9	8.5	8.8	7.3	88
24455	2022	17.7	3.9	4.1	5.7	2.9	6.1	11.9	10.9	8.4	8.9	7.4	88
25185	2024	17.7	4.0	4.1	5.7	2.9	6.1	11.9	10.9	8.4	8.9	7.4	88
25915	2026	17.7	4.0	4.2	5.7	2.9	6.1	11.9	10.9	8.4	9.0	7.5	88
26645	2028	17.8	4.1	4.3	5.7	2.9	6.2	11.9	11.0	8.5	9.0	7.5	89
27375	2030	17.8	4.1	4.3	5.8	2.9	6.2	12.0	11.0	8.5	9.1	7.5	89
28105	2032	17.9	4.2	4.4	5.8	2.9	6.2	12.0	11.1	8.5	9.1	7.6	90
28835	2034	18.0	4.2	4.4	5.8	3.0	6.2	12.1	11.1	8.5	9.2	7.6	90
29565	2036	18.1	4.3	4.5	5.9	3.0	6.2	12.1	11.2	8.6	9.3	7.7	91
30295	2038	18.2	4.3	4.6	5.9	3.0	6.3	12.2	11.2	8.6	9.3	7.7	91
31025	2040	18.3	4.4	4.6	5.9	3.0	6.3	12.2	11.3	8.6	9.4	7.7	92
31755	2042	18.3	4.4	4.7	6.0	3.0	6.3	12.3	11.3	8.6	9.4	7.8	92
32485	2044	18.4	4.4	4.7	6.0	3.0	6.3	12.4	11.4	8.7	9.5	7.8	93
33215	2046	18.5	4.5	4.8	6.1	3.0	6.4	12.4	11.4	8.7	9.5	7.8	93
33945	2048	18.6	4.5	4.8	6.1	3.0	6.4	12.5	11.5	8.7	9.6	7.9	94
34675	2050	18.7	4.6	4.9	6.1	3.0	6.4	12.5	11.5	8.8	9.7	7.9	94
35405	2052	18.8	4.6	4.9	6.1	3.1	6.4	12.6	11.6	8.8	9.7	7.9	95
36135	2054	18.9	4.6	4.9	6.2	3.1	6.4	12.6	11.6	8.8	9.8	8.0	95
36865	2056	18.9	4.7	5.0	6.2	3.1	6.5	12.7	11.7	8.9	9.8	8.0	95
37595	2058	19.0	4.7	5.0	6.2	3.1	6.5	12.7	11.7	8.9	9.9	8.0	96
38325	2060	19.1	4.7	5.1	6.3	3.1	6.5	12.8	11.8	8.9	9.9	8.1	96
39055	2062	19.2	4.7	5.1	6.3	3.1	6.5	12.8	11.8	9.0	10.0	8.1	97
39785	2064	19.2	4.8	5.1	6.3	3.1	6.6	12.8	11.9	9.0	10.0	8.1	97
40515	2066	19.3	4.8	5.2	6.3	3.1	6.6	12.9	11.9	9.0	10.1	8.1	97
41245	2068	19.4	4.8	5.2	6.4	3.1	6.6	12.9	12.0	9.1	10.1	8.2	98
41975	2070	19.4	4.9	5.2	6.4	3.1	6.6	13.0	12.0	9.1	10.2	8.2	98
42705	2072	19.5	4.9	5.3	6.4	3.2	6.6	13.0	12.1	9.1	10.2	8.2	98
43435	2074	19.5	4.9	5.3	6.4	3.2	6.6	13.1	12.1	9.2	10.3	8.3	99
44165	2076	19.6	4.9	5.3	6.5	3.2	6.7	13.1	12.1	9.2	10.3	8.3	99
44895	2078	19.6	4.9	5.3	6.5	3.2	6.7	13.1	12.2	9.2	10.3	8.3	99
45625	2080	19.7	5.0	5.4	6.5	3.2	6.7	13.2	12.2	9.2	10.4	8.3	100
46355	2082	19.7	5.0	5.4	6.5	3.2	6.7	13.2	12.3	9.3	10.4	8.3	100
47085	2084	19.8	5.0	5.4	6.5	3.2	6.7	13.2	12.3	9.3	10.5	8.4	100
47815	2086	19.8	5.0	5.4	6.5	3.2	6.7	13.3	12.3	9.3	10.5	8.4	101
48545	2088	19.9	5.0	5.5	6.6	3.2	6.8	13.3	12.4	9.3	10.6	8.4	101
49275	2090	19.9	5.1	5.5	6.6	3.2	6.8	13.3	12.4	9.4	10.6	8.4	101
50005	2092	19.9	5.1	5.5	6.6	3.2	6.8	13.4	12.4	9.4	10.6	8.5	101
50735	2094	20.0	5.1	5.5	6.6	3.2	6.8	13.4	12.5	9.4	10.7	8.5	102
51465	2096	20.0	5.1	5.6	6.6	3.2	6.8	13.4	12.5	9.4	10.7	8.5	102
52195	2098	20.1	5.1	5.6	6.6	3.2	6.8	13.5	12.5	9.5	10.7	8.5	102
52925	2100	20.1	5.1	5.6	6.7	3.2	6.8	13.5	12.6	9.5	10.8	8.5	102
53655	2102	20.1	5.1	5.6	6.7	3.3	6.8	13.5	12.6	9.5	10.8	8.6	103
54385	2104	20.2	5.2	5.6	6.7	3.3	6.9	13.5	12.6	9.5	10.8	8.6	103
TDS	*mg/L*	*32267*	*32267*	*32267*	*32267*	*32267*	*29405*	*29405*	*9700*	*7550*	*3300*	*3140*	

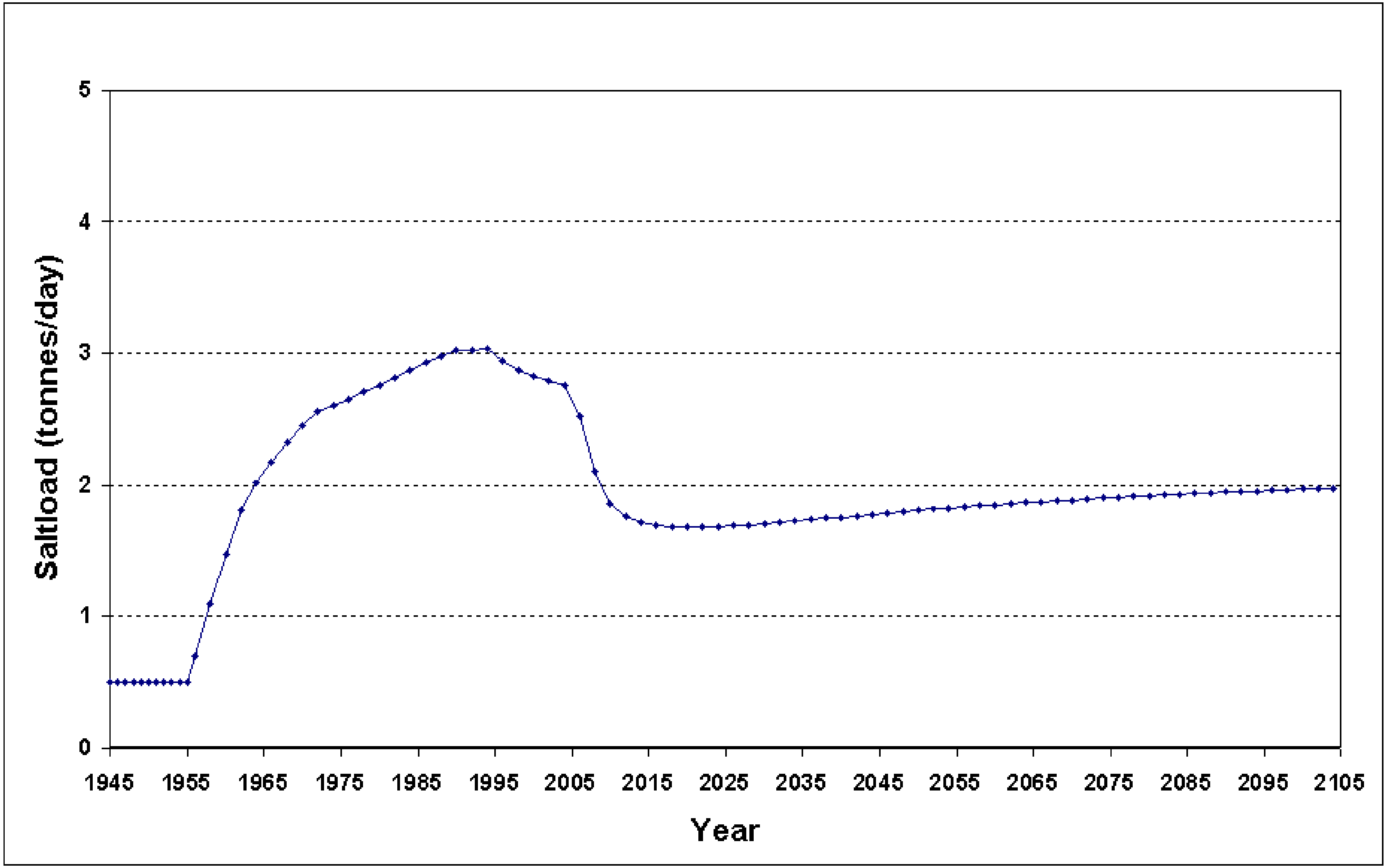
Appendix A-8-4b Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-8 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
0	1945	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1946	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1947	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1948	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1949	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1950	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1951	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1952	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1953	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
0	1954	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
30	1955	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.50
365	1956	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.70
1095	1958	0.3	0.1	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	1.09
1825	1960	0.5	0.2	0.1	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	1.47
2555	1962	0.7	0.2	0.1	0.3	0.1	0.3	0.1	0.0	0.0	0.0	0.0	1.81
3285	1964	0.8	0.2	0.1	0.3	0.1	0.3	0.1	0.0	0.0	0.0	0.0	2.01
4015	1966	0.9	0.3	0.1	0.3	0.2	0.3	0.1	0.0	0.0	0.0	0.0	2.18
4745	1968	1.0	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.32
5475	1970	1.0	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.45
6205	1972	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.55
6935	1974	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	2.60
7665	1976	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.1	0.0	0.0	0.0	2.65
8395	1978	1.1	0.3	0.1	0.3	0.2	0.4	0.1	0.1	0.0	0.0	0.0	2.70
9125	1980	1.1	0.3	0.1	0.3	0.2	0.5	0.1	0.1	0.0	0.0	0.0	2.76
9855	1982	1.2	0.3	0.1	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.82
10585	1984	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.87
11315	1986	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.92
12045	1988	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.98
12775	1990	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.03
13505	1992	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.03
14235	1994	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	3.03
14965	1996	1.2	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.95
15695	1998	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.87
16425	2000	1.1	0.3	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.82
17155	2002	1.1	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.0	0.0	0.0	2.79
17885	2004	1.1	0.2	0.2	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	2.75
18615	2006	1.1	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	2.52
19345	2008	0.9	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	2.10
20075	2010	0.7	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.86
20805	2012	0.6	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.76
21535	2014	0.6	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.72
22265	2016	0.6	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.69
22995	2018	0.6	0.1	0.1	0.2	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.68

Appendix A-8-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-8 (Loxton Area)

day	year	Z2 to Z21	Z2 to Z22	Z2 to Z23	Z2 to Z24	Z2 to Z25	Z2 to Z26	Z2 to Z27	Z2 to Z28	Z2 to Z29	Z2 to Z30	Z2 to Z31	Total
23725	2020	0.6	0.1	0.1	0.2	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.68
24455	2022	0.6	0.1	0.1	0.2	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.68
25185	2024	0.6	0.1	0.1	0.2	0.1	0.3	0.1	0.1	0.0	0.0	0.0	1.68
25915	2026	0.6	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.69
26645	2028	0.6	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.70
27375	2030	0.6	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.71
28105	2032	0.6	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.72
28835	2034	0.6	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.73
29565	2036	0.6	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.74
30295	2038	0.6	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.75
31025	2040	0.6	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.76
31755	2042	0.6	0.1	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.77
32485	2044	0.6	0.1	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.78
33215	2046	0.6	0.1	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.79
33945	2048	0.6	0.1	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.80
34675	2050	0.6	0.1	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.81
35405	2052	0.6	0.1	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.81
36135	2054	0.6	0.1	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.82
36865	2056	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.83
37595	2058	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.84
38325	2060	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.85
39055	2062	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.86
39785	2064	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.86
40515	2066	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.87
41245	2068	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.88
41975	2070	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.89
42705	2072	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.89
43435	2074	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.90
44165	2076	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.90
44895	2078	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.91
45625	2080	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.92
46355	2082	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.92
47085	2084	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.93
47815	2086	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.93
48545	2088	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.94
49275	2090	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.94
50005	2092	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.95
50735	2094	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.95
51465	2096	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.96
52195	2098	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.96
52925	2100	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.97
53655	2102	0.6	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.97
54385	2104	0.7	0.2	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	1.98
TDS	mg/L	32267	32267	32267	32267	32267	29405	29405	9700	7550	3300	3140	

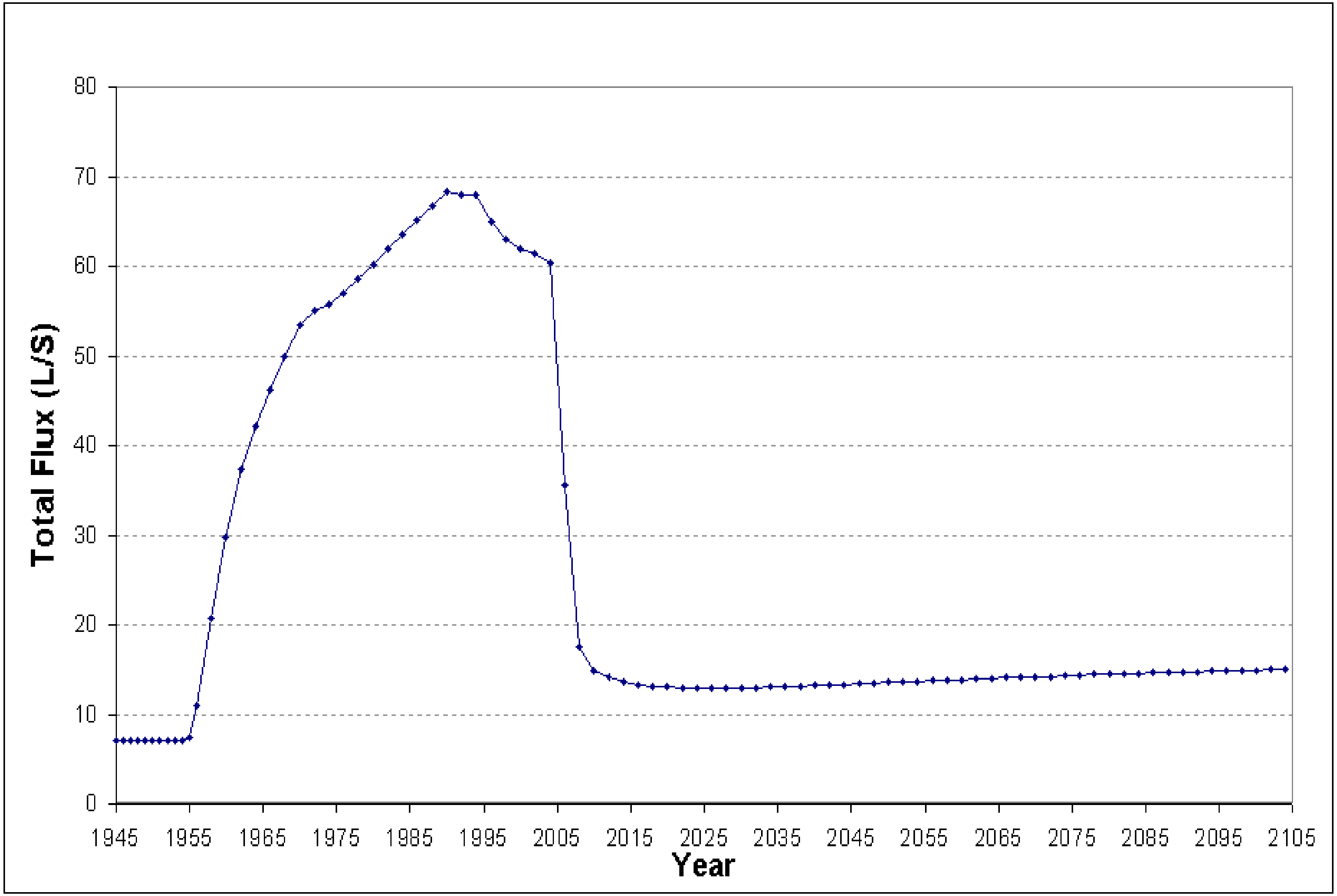
Appendix A-8-5b Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-8 (Loxton Area)



Appendix A-8-5c Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-8 (Loxton Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	1945	591	30	621	7.18
0	1946	591	30	621	7.18
0	1947	591	30	621	7.18
0	1948	591	30	621	7.18
0	1949	591	30	621	7.18
0	1950	591	30	621	7.18
0	1951	591	30	621	7.18
0	1952	591	30	621	7.18
0	1953	591	30	621	7.18
0	1954	591	30	621	7.18
30	1955	622	30	652	7.54
365	1956	920	38	958	11.09
1095	1958	1747	53	1800	20.83
1825	1960	2510	67	2577	29.82
2555	1962	3160	79	3240	37.50
3285	1964	3551	88	3639	42.12
4015	1966	3897	95	3991	46.20
4745	1968	4218	101	4319	49.99
5475	1970	4523	108	4630	53.59
6205	1972	4651	112	4763	55.13
6935	1974	4701	116	4816	55.74
7665	1976	4806	119	4925	57.00
8395	1978	4939	122	5061	58.58
9125	1980	5081	126	5207	60.27
9855	1982	5224	129	5353	61.95
10585	1984	5364	132	5496	63.61
11315	1986	5502	135	5637	65.24
12045	1988	5635	138	5773	66.82
12775	1990	5767	141	5908	68.38
13505	1992	5731	142	5873	67.97
14235	1994	5740	143	5883	68.09
14965	1996	5479	141	5620	65.05
15695	1998	5312	140	5451	63.09
16425	2000	5220	139	5358	62.02
17155	2002	5169	138	5307	61.43
17885	2004	5082	137	5219	60.40
18615	2006	2958	122	3080	35.65
19345	2008	1416	103	1520	17.59
20075	2010	1200	95	1295	14.98
20805	2012	1131	91	1222	14.14
21535	2014	1091	89	1181	13.67
22265	2016	1067	88	1155	13.37
22995	2018	1050	88	1138	13.17
23725	2020	1040	88	1128	13.06
24455	2022	1034	88	1122	12.99
25185	2024	1031	88	1120	12.96
25915	2026	1031	88	1119	12.95
26645	2028	1032	89	1121	12.97
27375	2030	1034	89	1123	13.00
28105	2032	1037	90	1127	13.04
28835	2034	1041	90	1131	13.09
29565	2036	1045	91	1136	13.14
30295	2038	1049	91	1141	13.20
31025	2040	1054	92	1146	13.26
31755	2042	1059	92	1152	13.33
32485	2044	1065	93	1157	13.40
33215	2046	1070	93	1163	13.46
33945	2048	1075	94	1169	13.53
34675	2050	1081	94	1175	13.60
35405	2052	1086	95	1181	13.67
36135	2054	1092	95	1187	13.73
36865	2056	1097	95	1192	13.80
37595	2058	1102	96	1198	13.87
38325	2060	1107	96	1204	13.93
39055	2062	1112	97	1209	13.99
39785	2064	1118	97	1215	14.06
40515	2066	1122	97	1220	14.12
41245	2068	1127	98	1225	14.18
41975	2070	1132	98	1230	14.24
42705	2072	1137	98	1235	14.30
43435	2074	1141	99	1240	14.35
44165	2076	1146	99	1245	14.41
44895	2078	1150	99	1250	14.46
45625	2080	1155	100	1254	14.52
46355	2082	1159	100	1259	14.57
47085	2084	1163	100	1263	14.62
47815	2086	1167	101	1268	14.67
48545	2088	1171	101	1272	14.72
49275	2090	1175	101	1276	14.77
50005	2092	1179	101	1280	14.81
50735	2094	1182	102	1284	14.86
51465	2096	1186	102	1288	14.90
52195	2098	1189	102	1291	14.95
52925	2100	1193	102	1295	14.99
53655	2102	1196	103	1299	15.03
54385	2104	1199	103	1302	15.07

Appendix A-8-6a Predicted total groundwater flux in Scenario-8 (Loxton Area)

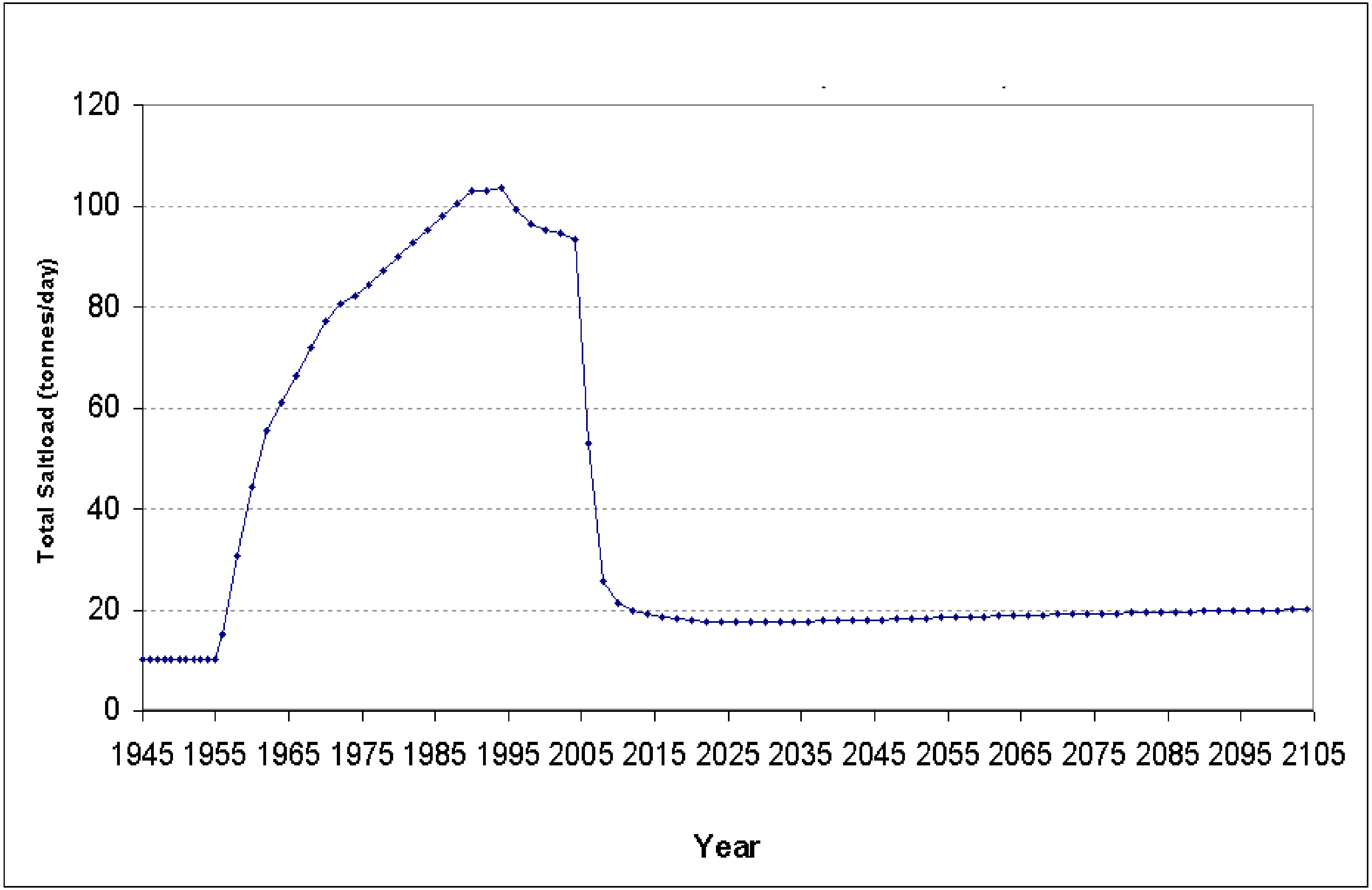


Appendix A-8-6b Graph of predicted total groundwater flux (L/sec) entering the River Murray in Scenario-8 (Loxton Area)

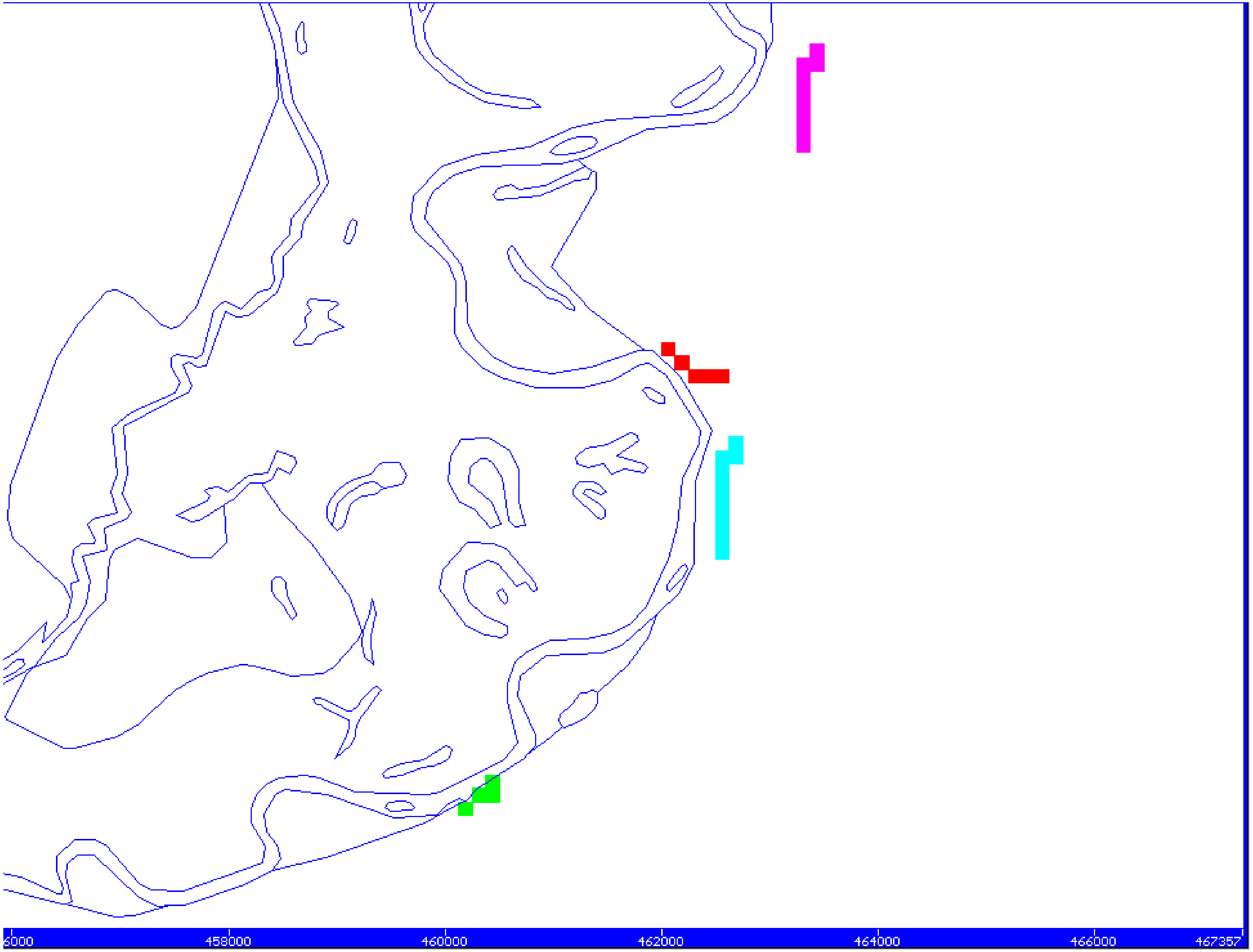
day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	10	0	10.20
0	1946	10	0	10.20
0	1947	10	0	10.20
0	1948	10	0	10.20
0	1949	10	0	10.20
0	1950	10	0	10.20
0	1951	10	0	10.20
0	1952	10	0	10.20
0	1953	10	0	10.20
0	1954	10	0	10.20
30	1955	10	0	10.20
365	1956	14	1	15.09
1095	1958	30	1	30.65
1825	1960	43	1	44.34
2555	1962	54	2	55.51
3285	1964	59	2	61.04
4015	1966	64	2	66.44
4745	1968	70	2	71.91
5475	1970	75	2	77.29
6205	1972	78	3	80.67
6935	1974	80	3	82.16
7665	1976	82	3	84.41
8395	1978	84	3	87.08
9125	1980	87	3	89.87
9855	1982	90	3	92.62
10585	1984	92	3	95.30
11315	1986	95	3	97.94
12045	1988	98	3	100.54
12775	1990	100	3	103.16
13505	1992	100	3	103.03
14235	1994	101	3	103.60
14965	1996	96	3	99.35
15695	1998	94	3	96.63
16425	2000	92	3	95.28
17155	2002	92	3	94.64
17885	2004	91	3	93.26
18615	2006	51	3	53.08
19345	2008	24	2	25.71
20075	2010	20	2	21.50
20805	2012	18	2	19.99
21535	2014	17	2	19.11
22265	2016	17	2	18.55
22995	2018	17	2	18.19

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
23725	2020	16	2	17.95
24455	2022	16	2	17.80
25185	2024	16	2	17.71
25915	2026	16	2	17.66
26645	2028	16	2	17.65
27375	2030	16	2	17.67
28105	2032	16	2	17.70
28835	2034	16	2	17.74
29565	2036	16	2	17.80
30295	2038	16	2	17.86
31025	2040	16	2	17.93
31755	2042	16	2	18.01
32485	2044	16	2	18.09
33215	2046	16	2	18.16
33945	2048	16	2	18.25
34675	2050	17	2	18.33
35405	2052	17	2	18.41
36135	2054	17	2	18.49
36865	2056	17	2	18.57
37595	2058	17	2	18.65
38325	2060	17	2	18.73
39055	2062	17	2	18.80
39785	2064	17	2	18.88
40515	2066	17	2	18.95
41245	2068	17	2	19.03
41975	2070	17	2	19.10
42705	2072	17	2	19.17
43435	2074	17	2	19.24
44165	2076	17	2	19.30
44895	2078	17	2	19.37
45625	2080	18	2	19.43
46355	2082	18	2	19.49
47085	2084	18	2	19.55
47815	2086	18	2	19.61
48545	2088	18	2	19.67
49275	2090	18	2	19.73
50005	2092	18	2	19.78
50735	2094	18	2	19.83
51465	2096	18	2	19.89
52195	2098	18	2	19.94
52925	2100	18	2	19.99
53655	2102	18	2	20.04
54385	2104	18	2	20.08

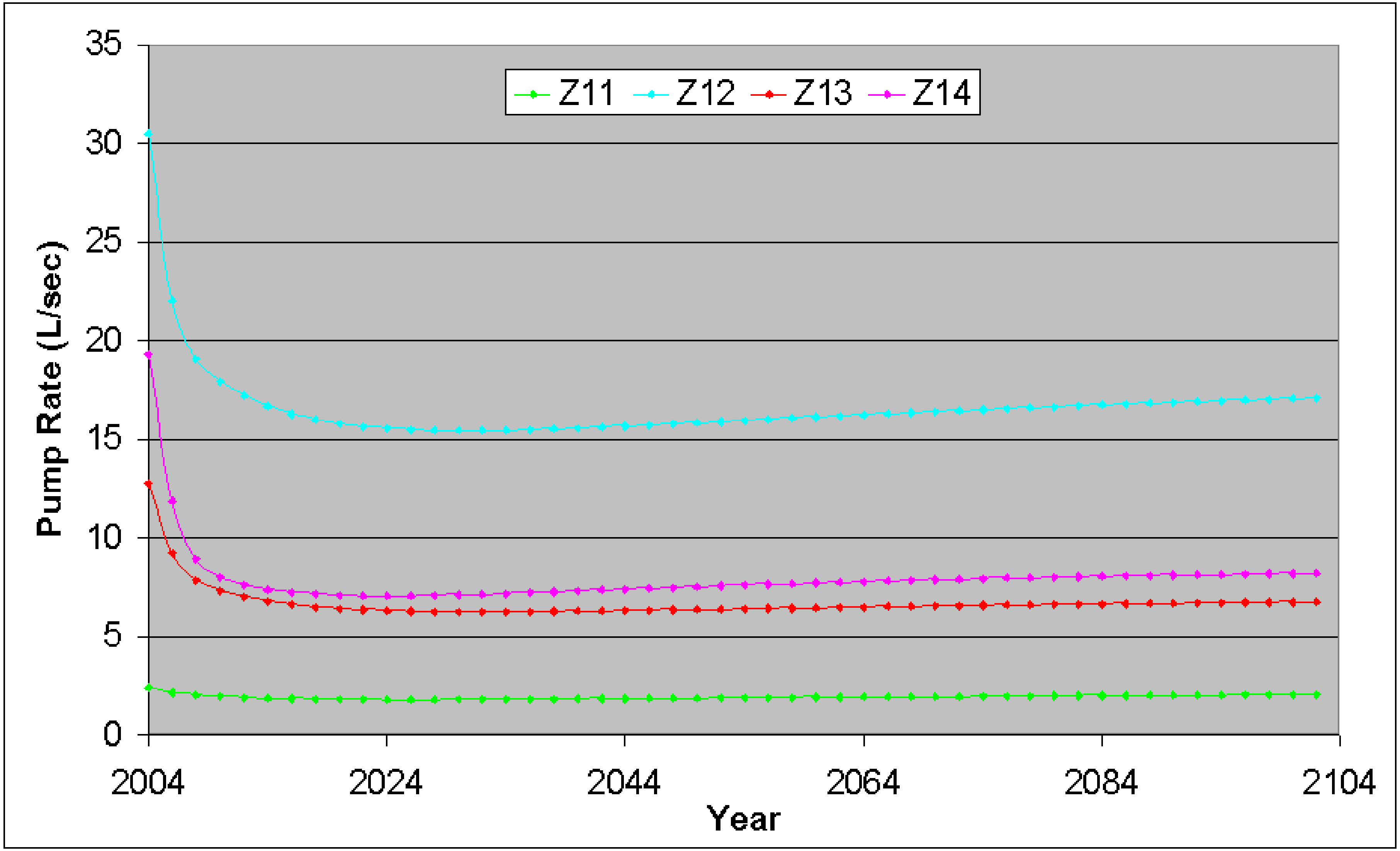
Appendix A-8-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-8 (Loxton Area)



Appendix A-8-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-8 (Loxton Area)



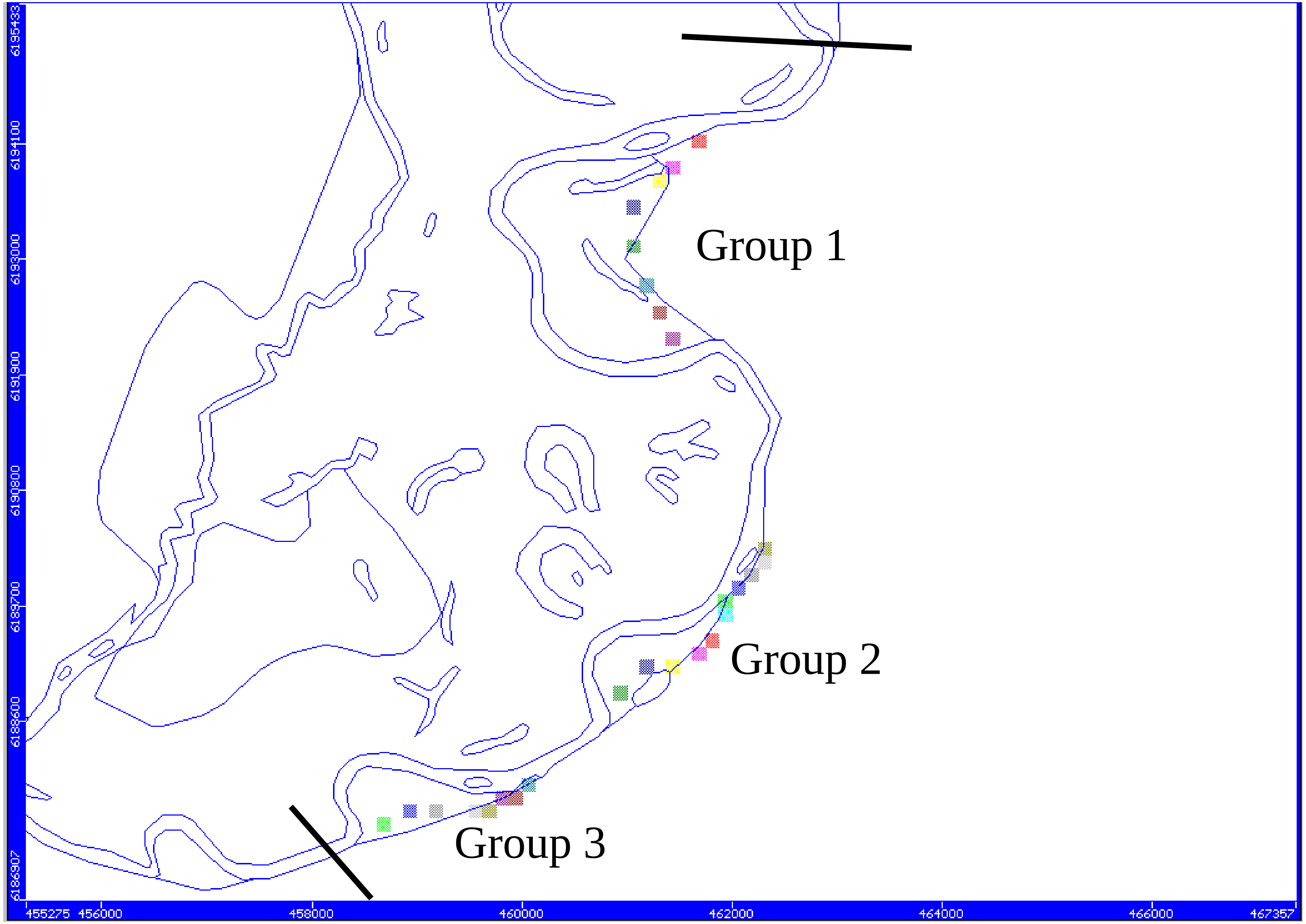
Appendix A-8-8a Potential locations of highland SIS horizontal production wells Scenario-8 (Loxton Area)



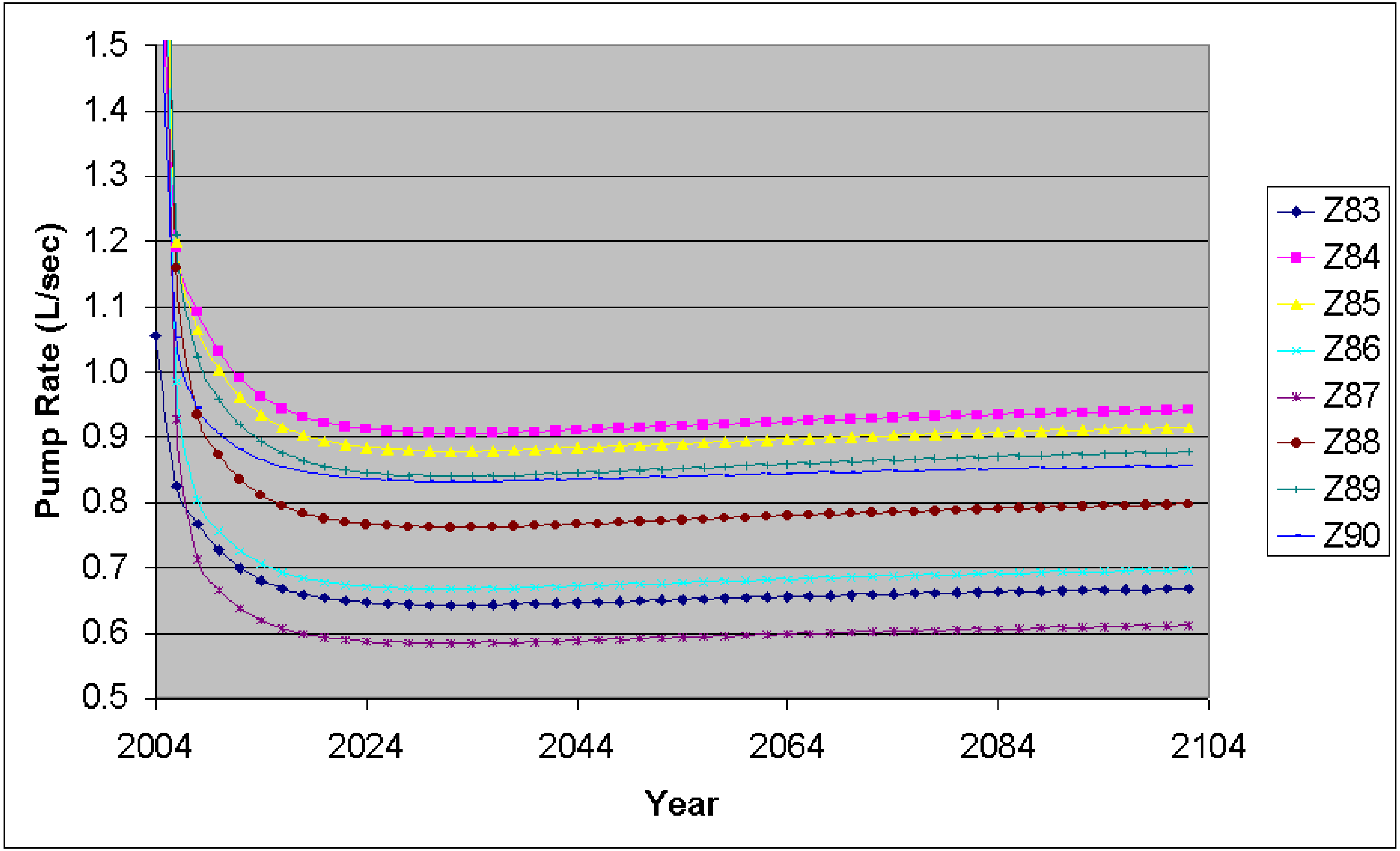
Appendix A-8-8b Graph of predicted range of pumping rates from highland SIS horizontal production wells Scenario-8 (Loxton Area)

	Z11	Z12	Z13	Z14	Total
2004	2.4	30.5	12.7	19.3	65.0
2006	2.1	22.0	9.2	11.9	45.3
2008	2.0	19.1	7.9	8.9	37.9
2010	2.0	18.0	7.3	8.0	35.3
2012	1.9	17.2	7.0	7.6	33.8
2014	1.9	16.7	6.8	7.4	32.7
2016	1.9	16.3	6.6	7.2	32.0
2018	1.8	16.0	6.5	7.2	31.5
2020	1.8	15.8	6.4	7.1	31.1
2022	1.8	15.6	6.4	7.1	30.9
2024	1.8	15.6	6.3	7.1	30.7
2026	1.8	15.5	6.3	7.1	30.7
2028	1.8	15.5	6.3	7.1	30.6
2030	1.8	15.4	6.3	7.1	30.6
2032	1.8	15.5	6.3	7.2	30.7
2034	1.8	15.5	6.3	7.2	30.7
2036	1.8	15.5	6.3	7.2	30.8
2038	1.8	15.5	6.3	7.3	30.9
2040	1.8	15.6	6.3	7.3	31.0
2042	1.9	15.6	6.3	7.4	31.1
2044	1.9	15.7	6.3	7.4	31.3
2046	1.9	15.7	6.3	7.4	31.4
2048	1.9	15.8	6.4	7.5	31.5
2050	1.9	15.8	6.4	7.5	31.6
2052	1.9	15.9	6.4	7.6	31.8
2054	1.9	16.0	6.4	7.6	31.9
2056	1.9	16.0	6.4	7.7	32.0
2058	1.9	16.1	6.4	7.7	32.1
2060	1.9	16.1	6.5	7.7	32.2
2062	1.9	16.2	6.5	7.8	32.4
2064	1.9	16.2	6.5	7.8	32.5
2066	1.9	16.3	6.5	7.8	32.6
2068	2.0	16.3	6.5	7.9	32.7
2070	2.0	16.4	6.6	7.9	32.8
2072	2.0	16.5	6.6	7.9	32.9
2074	2.0	16.5	6.6	7.9	33.0
2076	2.0	16.6	6.6	8.0	33.1
2078	2.0	16.6	6.6	8.0	33.2
2080	2.0	16.6	6.6	8.0	33.3
2082	2.0	16.7	6.6	8.0	33.4
2084	2.0	16.7	6.7	8.1	33.5
2086	2.0	16.8	6.7	8.1	33.5
2088	2.0	16.8	6.7	8.1	33.6
2090	2.0	16.9	6.7	8.1	33.7
2092	2.0	16.9	6.7	8.1	33.8
2094	2.0	17.0	6.7	8.1	33.9
2096	2.0	17.0	6.7	8.2	33.9
2098	2.1	17.0	6.7	8.2	34.0
2100	2.1	17.1	6.7	8.2	34.1
2102	2.1	17.1	6.8	8.2	34.1

Appendix A-8-8c Predicted range of pumping rates from Group-1 highland SIS production wells Scenario-8 (Loxton Area)



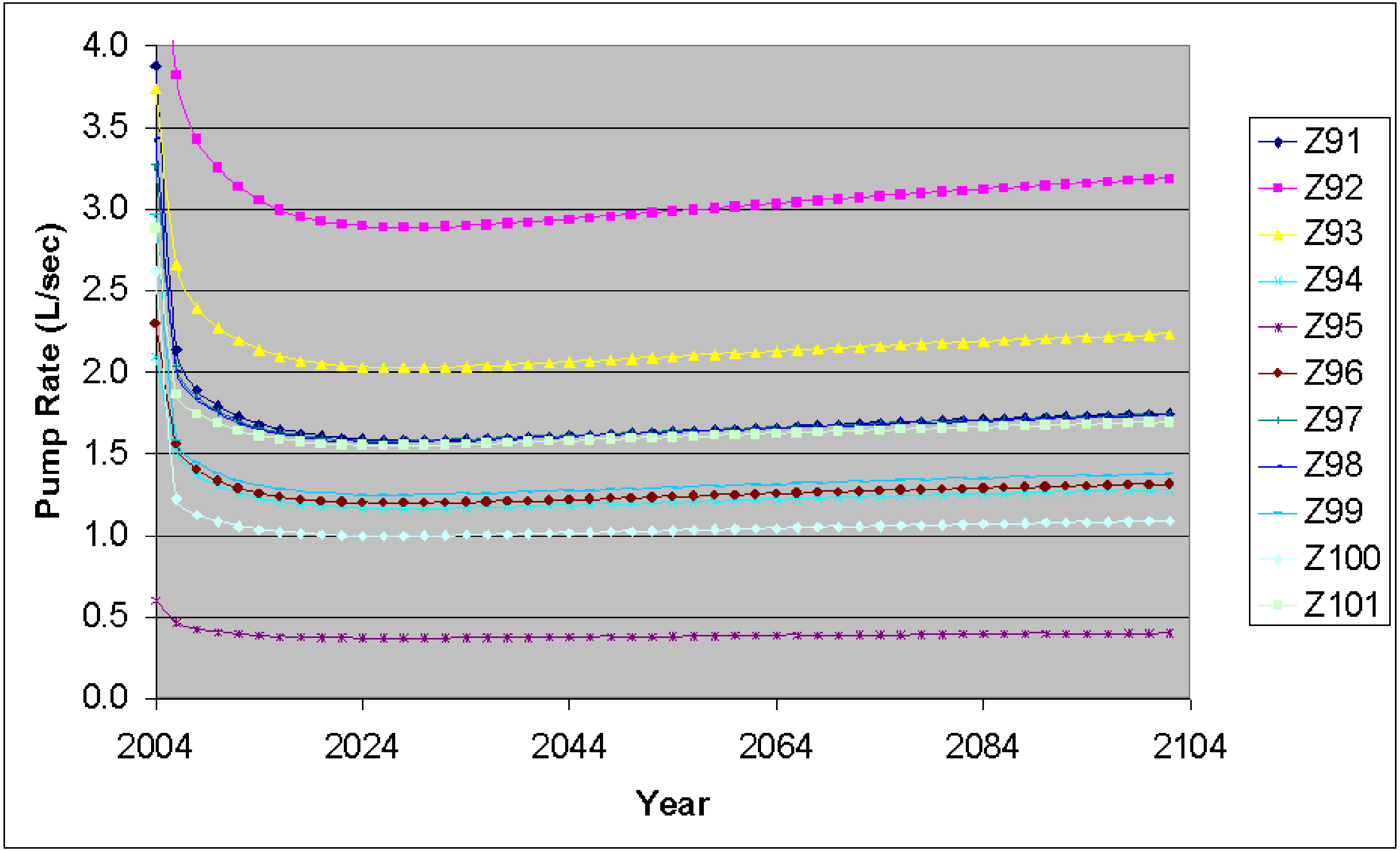
Appendix A-8-9a Potential locations of floodplain SIS production wells Scenario-8 (Loxton Area)



Appendix A-8-9b Graph of predicted range of pumping rates from group-1 floodplain SIS production wells Scenario-8 (Loxton Area)

	Z83	Z84	Z85	Z86	Z87	Z88	Z89	Z90	Total
2004	1.1	1.8	2.3	2.5	2.5	2.9	2.7	1.8	17.6
2006	0.8	1.2	1.2	1.0	0.9	1.2	1.2	1.1	8.6
2008	0.8	1.1	1.1	0.8	0.7	0.9	1.0	0.9	7.3
2010	0.7	1.0	1.0	0.8	0.7	0.9	1.0	0.9	6.9
2012	0.7	1.0	1.0	0.7	0.6	0.8	0.9	0.9	6.7
2014	0.7	1.0	0.9	0.7	0.6	0.8	0.9	0.9	6.5
2016	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.4
2018	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.3
2020	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.2
2022	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.2
2024	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.1
2026	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.1
2028	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.1
2030	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.1
2032	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.1
2034	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.1
2036	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.1
2038	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.1
2040	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.1
2042	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.1
2044	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.1
2046	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.2
2048	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.2
2050	0.6	0.9	0.9	0.7	0.6	0.8	0.8	0.8	6.2
2052	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.2
2054	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.2
2056	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.2
2058	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.2
2060	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.2
2062	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.2
2064	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.2
2066	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.2
2068	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.3
2070	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.3
2072	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.3
2074	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.3
2076	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.3
2078	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.8	6.3
2080	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.3
2082	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.3
2084	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.3
2086	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.3
2088	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.3
2090	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.3
2092	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.3
2094	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.3
2096	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.4
2098	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.4
2100	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.4
2102	0.7	0.9	0.9	0.7	0.6	0.8	0.9	0.9	6.4

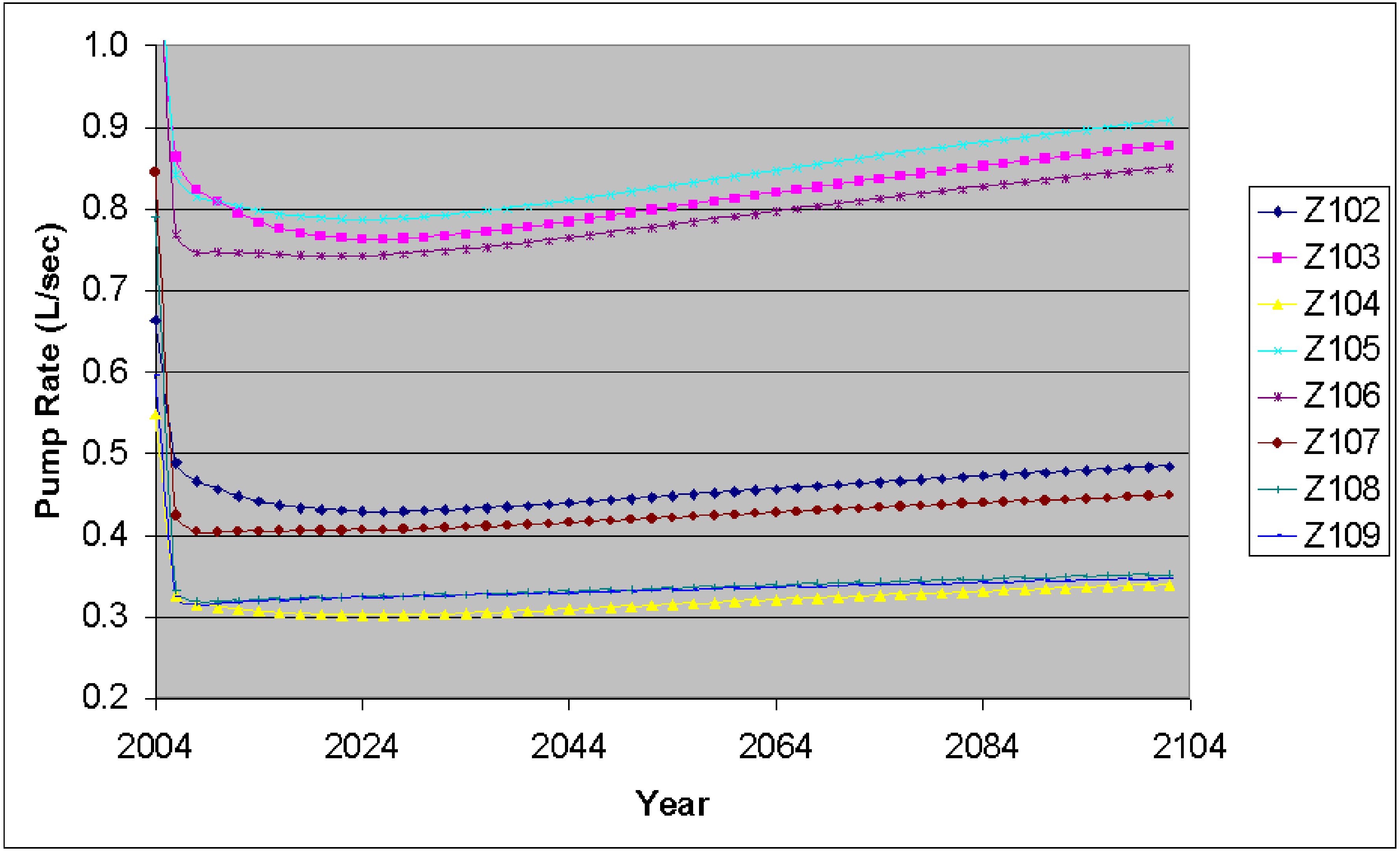
Appendix A-8-9c Predicted range of pumping rates from group-1 floodplain SIS production wells Scenario-8 (Loxton Area)



Appendix A-8-10a Graph of predicted range of pumping rates from group-2 floodplain SIS production wells Scenario-8 (Loxton Area)

	Z91	Z92	Z93	Z94	Z95	Z96	Z97	Z98	Z99	Z100	Z101	Total
2004	3.9	5.4	3.7	2.1	0.6	2.3	3.3	3.4	3.0	2.6	2.9	33.2
2006	2.1	3.8	2.7	1.5	0.5	1.6	2.0	2.0	1.6	1.2	1.9	20.9
2008	1.9	3.4	2.4	1.4	0.4	1.4	1.8	1.8	1.4	1.1	1.7	18.9
2010	1.8	3.3	2.3	1.3	0.4	1.3	1.8	1.7	1.4	1.1	1.7	18.0
2012	1.7	3.1	2.2	1.3	0.4	1.3	1.7	1.7	1.3	1.1	1.6	17.4
2014	1.7	3.1	2.1	1.2	0.4	1.3	1.7	1.6	1.3	1.0	1.6	17.0
2016	1.6	3.0	2.1	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.7
2018	1.6	2.9	2.1	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.5
2020	1.6	2.9	2.0	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.3
2022	1.6	2.9	2.0	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.3
2024	1.6	2.9	2.0	1.2	0.4	1.2	1.6	1.6	1.2	1.0	1.6	16.2
2026	1.6	2.9	2.0	1.2	0.4	1.2	1.6	1.6	1.2	1.0	1.6	16.2
2028	1.6	2.9	2.0	1.2	0.4	1.2	1.6	1.6	1.2	1.0	1.6	16.2
2030	1.6	2.9	2.0	1.2	0.4	1.2	1.6	1.6	1.2	1.0	1.6	16.2
2032	1.6	2.9	2.0	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.2
2034	1.6	2.9	2.0	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.2
2036	1.6	2.9	2.0	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.3
2038	1.6	2.9	2.0	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.3
2040	1.6	2.9	2.0	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.4
2042	1.6	2.9	2.1	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.4
2044	1.6	2.9	2.1	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.5
2046	1.6	2.9	2.1	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.5
2048	1.6	3.0	2.1	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.6
2050	1.6	3.0	2.1	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.6
2052	1.6	3.0	2.1	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.7
2054	1.6	3.0	2.1	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.7
2056	1.6	3.0	2.1	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.8
2058	1.6	3.0	2.1	1.2	0.4	1.2	1.6	1.6	1.3	1.0	1.6	16.8
2060	1.7	3.0	2.1	1.2	0.4	1.2	1.7	1.6	1.3	1.0	1.6	16.9
2062	1.7	3.0	2.1	1.2	0.4	1.3	1.7	1.6	1.3	1.0	1.6	16.9
2064	1.7	3.0	2.1	1.2	0.4	1.3	1.7	1.7	1.3	1.0	1.6	17.0
2066	1.7	3.0	2.1	1.2	0.4	1.3	1.7	1.7	1.3	1.0	1.6	17.0
2068	1.7	3.0	2.1	1.2	0.4	1.3	1.7	1.7	1.3	1.0	1.6	17.1
2070	1.7	3.1	2.1	1.2	0.4	1.3	1.7	1.7	1.3	1.1	1.6	17.1
2072	1.7	3.1	2.2	1.2	0.4	1.3	1.7	1.7	1.3	1.1	1.6	17.2
2074	1.7	3.1	2.2	1.2	0.4	1.3	1.7	1.7	1.3	1.1	1.6	17.2
2076	1.7	3.1	2.2	1.2	0.4	1.3	1.7	1.7	1.3	1.1	1.6	17.3
2078	1.7	3.1	2.2	1.2	0.4	1.3	1.7	1.7	1.3	1.1	1.7	17.3
2080	1.7	3.1	2.2	1.2	0.4	1.3	1.7	1.7	1.3	1.1	1.7	17.4
2082	1.7	3.1	2.2	1.3	0.4	1.3	1.7	1.7	1.3	1.1	1.7	17.4
2084	1.7	3.1	2.2	1.3	0.4	1.3	1.7	1.7	1.4	1.1	1.7	17.4
2086	1.7	3.1	2.2	1.3	0.4	1.3	1.7	1.7	1.4	1.1	1.7	17.5
2088	1.7	3.1	2.2	1.3	0.4	1.3	1.7	1.7	1.4	1.1	1.7	17.5
2090	1.7	3.1	2.2	1.3	0.4	1.3	1.7	1.7	1.4	1.1	1.7	17.6
2092	1.7	3.1	2.2	1.3	0.4	1.3	1.7	1.7	1.4	1.1	1.7	17.6
2094	1.7	3.2	2.2	1.3	0.4	1.3	1.7	1.7	1.4	1.1	1.7	17.6
2096	1.7	3.2	2.2	1.3	0.4	1.3	1.7	1.7	1.4	1.1	1.7	17.7
2098	1.7	3.2	2.2	1.3	0.4	1.3	1.7	1.7	1.4	1.1	1.7	17.7
2100	1.7	3.2	2.2	1.3	0.4	1.3	1.7	1.7	1.4	1.1	1.7	17.8
2102	1.7	3.2	2.2	1.3	0.4	1.3	1.7	1.7	1.4	1.1	1.7	17.8

Appendix A-8-10b Predicted range of pumping rates from group-2 floodplain SIS production wells Scenario-8 (Loxton Area)



Appendix A-8-11a Graph of predicted range of pumping rates from group-3 floodplain SIS production wells Scenario-8 (Loxton Area)

	Z102	Z103	Z104	Z105	Z106	Z107	Z108	Z109	Total
2004	0.7	1.1	0.5	1.2	1.2	0.8	0.8	0.6	7.0
2006	0.5	0.9	0.3	0.8	0.8	0.4	0.3	0.3	4.4
2008	0.5	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.2
2010	0.5	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.2
2012	0.4	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.1
2014	0.4	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.1
2016	0.4	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.1
2018	0.4	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.1
2020	0.4	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.1
2022	0.4	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.1
2024	0.4	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.1
2026	0.4	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.1
2028	0.4	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.1
2030	0.4	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.1
2032	0.4	0.8	0.3	0.8	0.7	0.4	0.3	0.3	4.1
2034	0.4	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.1
2036	0.4	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.1
2038	0.4	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.1
2040	0.4	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.2
2042	0.4	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.2
2044	0.4	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.2
2046	0.4	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.2
2048	0.4	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.2
2050	0.4	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.2
2052	0.4	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.2
2054	0.4	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.3
2056	0.4	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.3
2058	0.5	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.3
2060	0.5	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.3
2062	0.5	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.3
2064	0.5	0.8	0.3	0.8	0.8	0.4	0.3	0.3	4.3
2066	0.5	0.8	0.3	0.9	0.8	0.4	0.3	0.3	4.4
2068	0.5	0.8	0.3	0.9	0.8	0.4	0.3	0.3	4.4
2070	0.5	0.8	0.3	0.9	0.8	0.4	0.3	0.3	4.4
2072	0.5	0.8	0.3	0.9	0.8	0.4	0.3	0.3	4.4
2074	0.5	0.8	0.3	0.9	0.8	0.4	0.3	0.3	4.4
2076	0.5	0.8	0.3	0.9	0.8	0.4	0.3	0.3	4.4
2078	0.5	0.8	0.3	0.9	0.8	0.4	0.3	0.3	4.4
2080	0.5	0.8	0.3	0.9	0.8	0.4	0.3	0.3	4.5
2082	0.5	0.8	0.3	0.9	0.8	0.4	0.3	0.3	4.5
2084	0.5	0.9	0.3	0.9	0.8	0.4	0.3	0.3	4.5
2086	0.5	0.9	0.3	0.9	0.8	0.4	0.3	0.3	4.5
2088	0.5	0.9	0.3	0.9	0.8	0.4	0.3	0.3	4.5
2090	0.5	0.9	0.3	0.9	0.8	0.4	0.3	0.3	4.5
2092	0.5	0.9	0.3	0.9	0.8	0.4	0.3	0.3	4.5
2094	0.5	0.9	0.3	0.9	0.8	0.4	0.3	0.3	4.6
2096	0.5	0.9	0.3	0.9	0.8	0.4	0.4	0.3	4.6
2098	0.5	0.9	0.3	0.9	0.8	0.4	0.4	0.3	4.6
2100	0.5	0.9	0.3	0.9	0.8	0.4	0.4	0.3	4.6
2102	0.5	0.9	0.3	0.9	0.9	0.4	0.4	0.3	4.6

Appendix A-8-11b Predicted range of pumping rates from group-3 floodplain SIS production wells Scenario-8 (Loxton Area)

B. MODEL INPUTS AND OUTPUTS (BOOKPURNONG AREA)

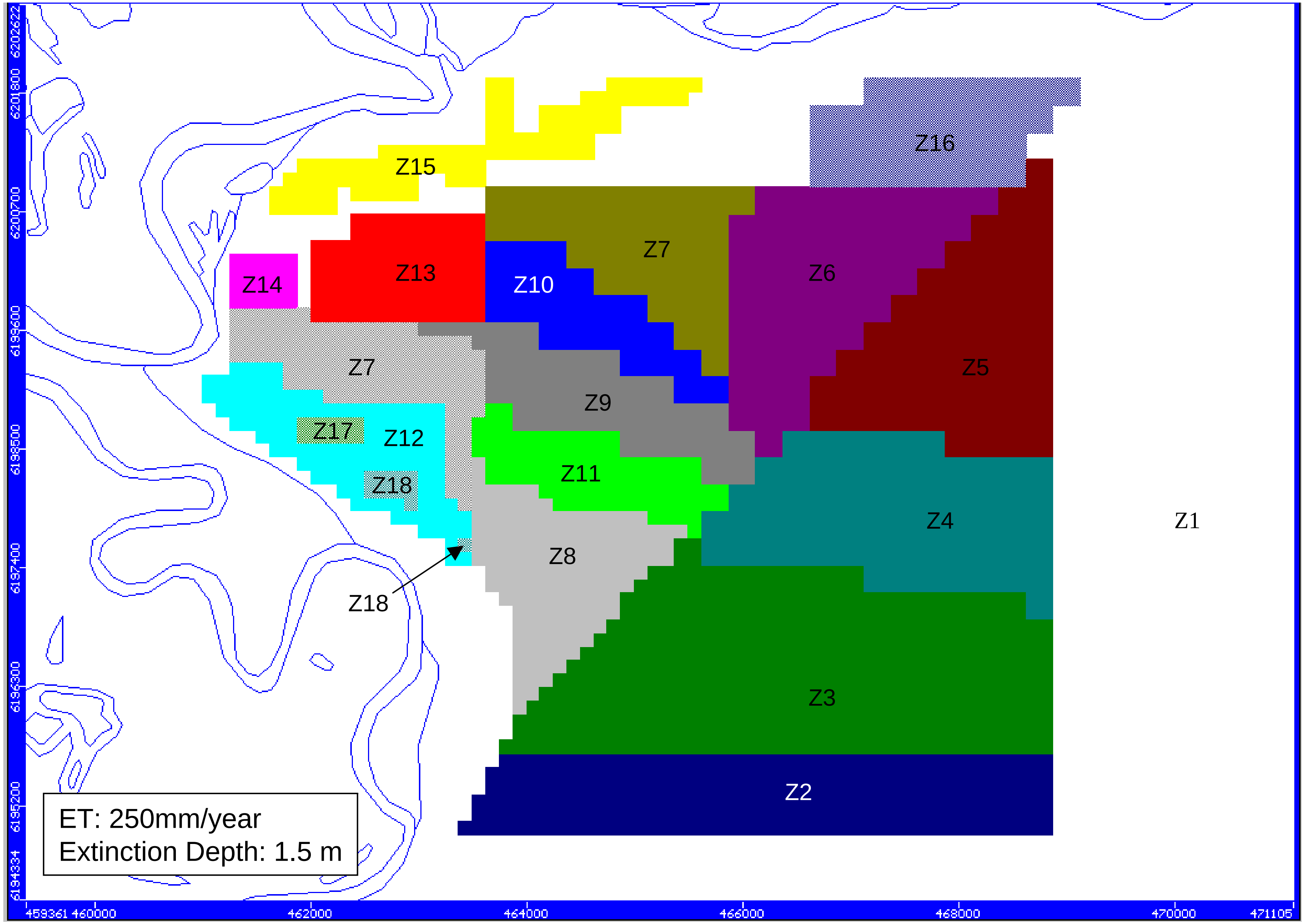
B1. MODEL RECHARGE (BOOKPURNONG AREA)

- Model recharge zones
- Zone number and recharge rates (mm/year)
- Total recharge volumes (ML/year)

Appendix B-1

Model Recharge (Bookpurnong Area)

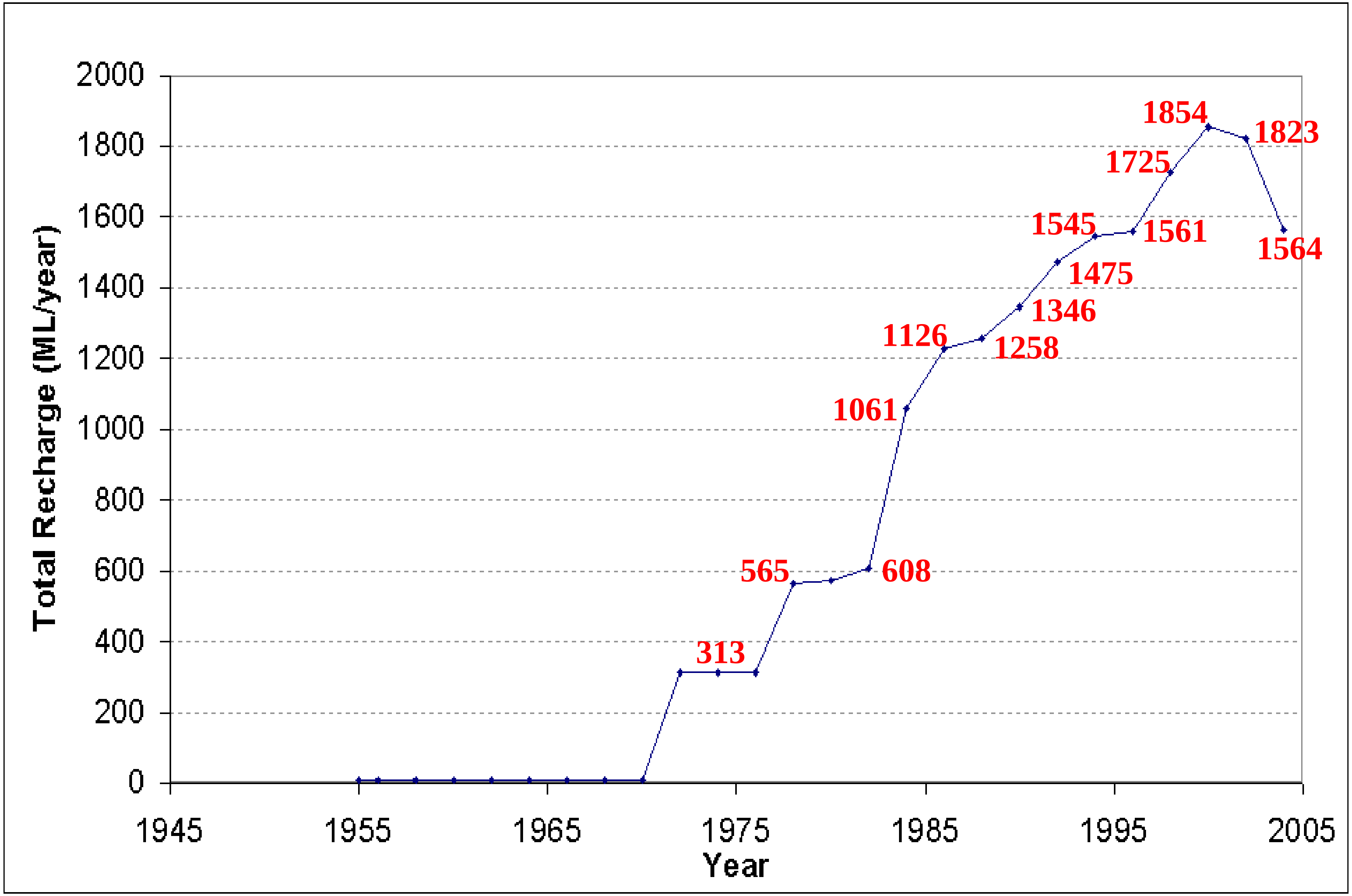
-Model recharge zones
-Zone number and recharge rates (mm/year)
-Total recharge volumes (ML/year)



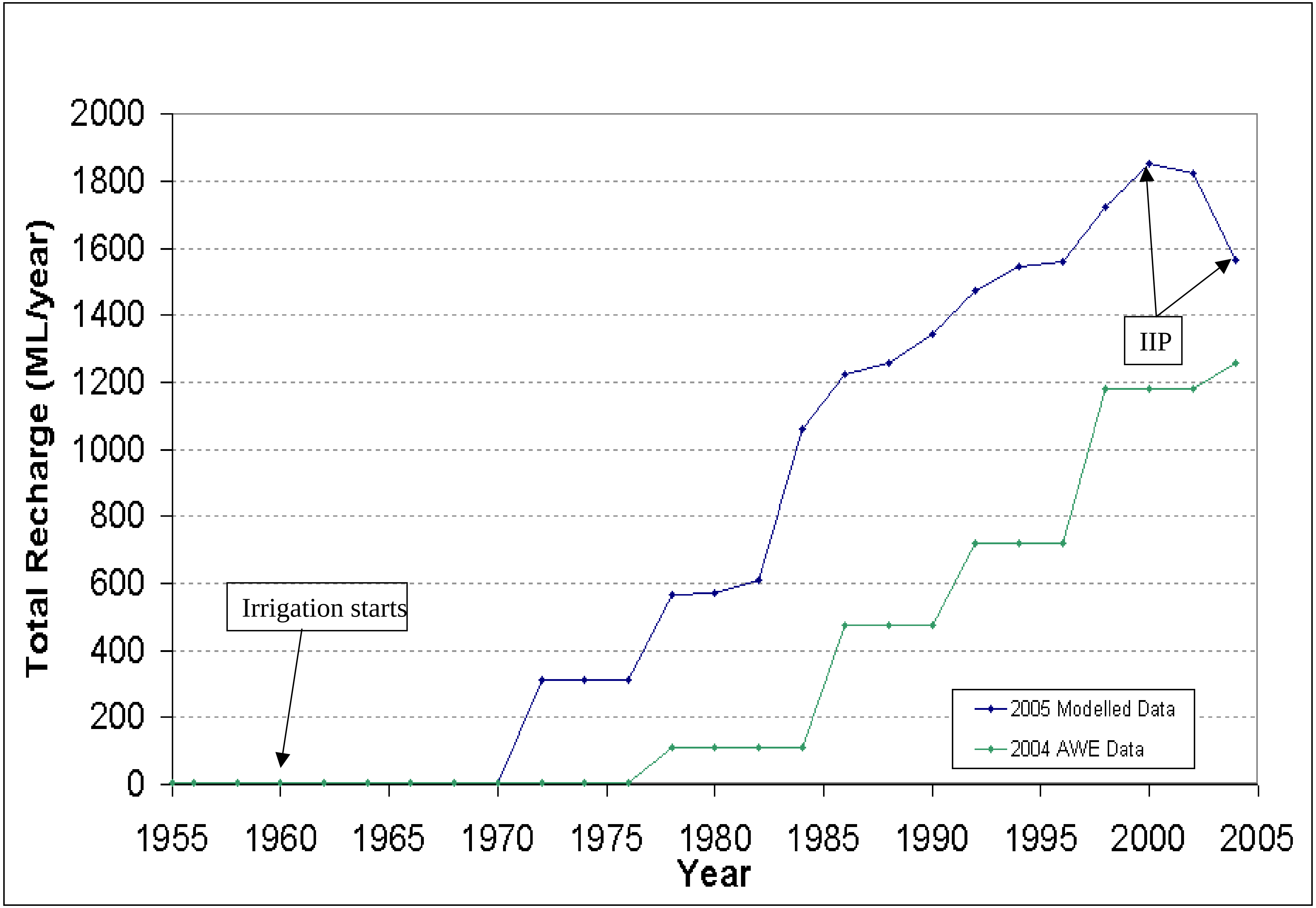
Appendix B-1-1 Model recharge zones in the Bookpurnong Area

Start Day	End Day	Zone1	Zone2	Zone3	Zone4	Zone5	Zone6	Zone7	Zone8	Zone9	Zone10	Zone11	Zone12	Zone13	Zone14	Zone15	Zone16	Zone17	Zone18	Zone37	Start Year	End Year
0	30	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1955	1955
30	365	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1955	1956
365	1095	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1956	1958
1095	1825	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1958	1960
1825	2555	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1960	1962
2555	3285	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1962	1964
3285	4015	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1964	1966
4015	4745	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1966	1968
4745	5475	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1968	1970
5475	6205	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	161.6	0.1	161.6	0.1	0.1	0.1	0.1	0.1	1970	1972
6205	6935	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	161.6	0.1	161.6	0.1	0.1	0.1	0.1	0.1	1972	1974
6935	7665	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	161.6	0.1	161.6	0.1	0.1	0.1	0.1	0.1	1974	1976
7665	8395	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	264.8	0.1	264.8	6.7	0.1	100.0	124.8	0.1	1976	1978
8395	9125	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	264.8	0.1	264.8	6.7	0.1	150.0	124.8	0.1	1978	1980
9125	9855	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	264.8	0.1	264.8	6.7	0.1	200.0	300.2	0.1	1980	1982
9855	10585	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	500.0	0.1	500.0	6.7	0.1	250.0	300.2	0.1	1982	1984
10585	11315	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.4	0.1	0.1	0.1	500.0	0.1	550.0	48.5	0.1	300.0	300.2	0.1	1984	1986
11315	12045	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.4	0.1	0.1	0.1	500.0	0.1	600.0	48.5	0.1	350.0	355.0	0.1	1986	1988
12045	12775	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.4	0.1	0.1	0.1	540.8	0.1	650.0	48.5	0.1	400.0	355.0	0.1	1988	1990
12775	13505	0.1	0.1	0.1	0.1	0.1	0.1	0.1	66.2	0.1	0.1	0.1	540.8	0.1	700.0	79.4	0.1	450.0	355.0	0.1	1990	1992
13505	14235	0.1	0.1	0.1	0.1	0.1	0.1	0.1	66.2	0.1	0.1	0.1	540.8	0.1	750.0	79.4	0.1	800.0	355.0	0.1	1992	1994
14235	14965	0.1	0.1	0.1	0.1	0.1	0.1	0.1	66.2	0.1	0.1	0.1	540.8	0.1	750.0	79.4	0.1	900.0	355.0	0.1	1994	1996
14965	15695	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	650.0	132.8	0.1	1000.0	355.0	0.1	1996	1998
15695	16425	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	1100.0	500.0	0.1	1998	2000
16425	17155	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	500.0	0.1	500.0	250.0	0.1	900.0	600.0	0.1	2000	2002
17155	17885	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	450.0	0.1	300.0	200.0	0.1	700.0	700.0	0.1	2002	2004
17885	18615	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	0.1	2004	2006

Appendix B-1-2a Model recharge zones and recharge rates (mm/year) Scenario-2 (Bookpurnong Area)



Appendix B-1-2b Total recharge volume to the Loxton Sands from all sources in Scenario-2 (Bookpurnong Area)



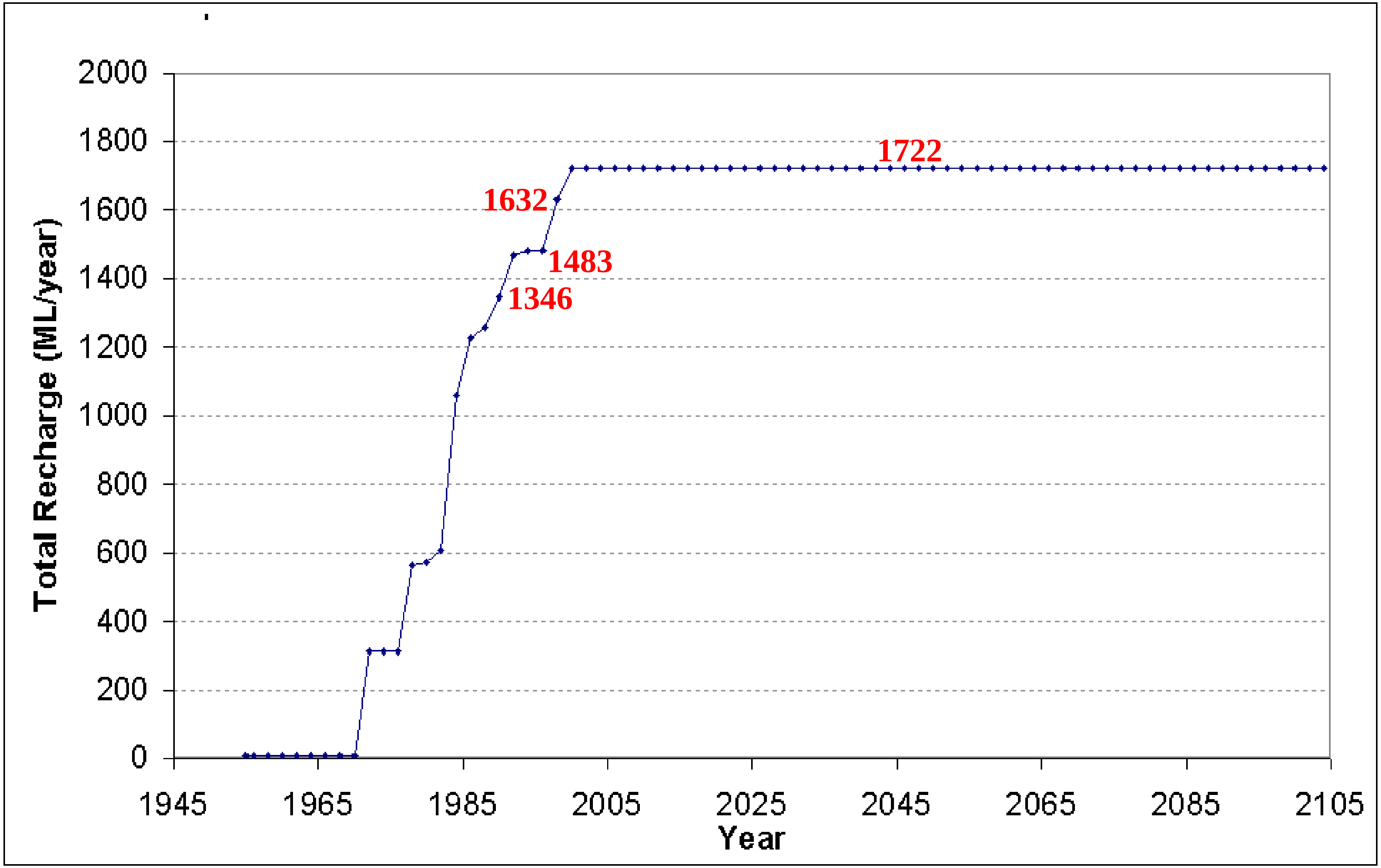
Appendix B-1-2c: Modelled recharge volume to the Loxton Sands in the Bookpurnong Area

Start Day	End Day	Zone1	Zone2	Zone3	Zone4	Zone5	Zone6	Zone7	Zone8	Zone9	Zone10	Zone11	Zone12	Zone13	Zone14	Zone15	Zone16	Zone17	Zone18	Zone37	Start Year	End Year
0	**30**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	**1955**	**1955**
30	**365**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	**1955**	**1956**
365	**1095**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	**1956**	**1958**
1095	**1825**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	**1958**	**1960**
1825	**2555**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	**1960**	**1962**
2555	**3285**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	**1962**	**1964**
3285	**4015**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	**1964**	**1966**
4015	**4745**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	**1966**	**1968**
4745	**5475**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	**1968**	**1970**
5475	**6205**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	161.6	0.1	161.6	0.1	0.1	0.1	0.1	0.1	**1970**	**1972**
6205	**6935**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	161.6	0.1	161.6	0.1	0.1	0.1	0.1	0.1	**1972**	**1974**
6935	**7665**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	161.6	0.1	161.6	0.1	0.1	0.1	0.1	0.1	**1974**	**1976**
7665	**8395**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	264.8	0.1	264.8	6.7	0.1	100.0	124.8	0.1	**1976**	**1978**
8395	**9125**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	264.8	0.1	264.8	6.7	0.1	150.0	124.8	0.1	**1978**	**1980**
9125	**9855**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	264.8	0.1	264.8	6.7	0.1	200.0	300.2	0.1	**1980**	**1982**
9855	**10585**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	500.0	0.1	500.0	6.7	0.1	250.0	300.2	0.1	**1982**	**1984**
10585	**11315**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.4	0.1	0.1	0.1	500.0	0.1	550.0	48.5	0.1	300.0	300.2	0.1	**1984**	**1986**
11315	**12045**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.4	0.1	0.1	0.1	500.0	0.1	600.0	48.5	0.1	350.0	355.0	0.1	**1986**	**1988**
12045	**12775**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.4	0.1	0.1	0.1	540.8	0.1	650.0	48.5	0.1	400.0	355.0	0.1	**1988**	**1990**
12775	**13505**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	66.2	0.1	0.1	0.1	540.8	0.1	700.0	79.4	0.1	400.0	355.0	0.1	**1990**	**1992**
13505	**14235**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	66.2	0.1	0.1	0.1	540.8	0.1	750.0	79.4	0.1	400.0	355.0	0.1	**1992**	**1994**
14235	**14965**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	66.2	0.1	0.1	0.1	540.8	0.1	750.0	79.4	0.1	400.0	355.0	0.1	**1994**	**1996**
14965	**15695**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	650.0	132.8	0.1	400.0	355.0	0.1	**1996**	**1998**
15695	**16425**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	0.1	**1998**	**2000**
16425	**17155**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	0.1	**2000**	**2002**
17155	**17885**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	0.1	**2002**	**2004**
17885	**18615**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	0.1	**2004**	**2006**
18615	**19345**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	0.1	**2006**	**2008**
19345	**20075**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	0.1	**2008**	**2010**
20075	**20805**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	0.1	**2010**	**2012**
20805	**21535**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	**2012**	**2014**
21535	**22265**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	**2014**	**2016**
22265	**22995**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	**2016**	**2018**
22995	**23725**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	**2018**	**2020**
23725	**24455**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	**2020**	**2022**
24455	**25185**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	**2022**	**2024**
25185	**25915**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	**2024**	**2026**
25915	**26645**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	**2026**	**2028**
26645	**27375**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	**2028**	**2030**

Appendix B-1-3a Recharge zones and rates (mm/year) in Scenario-3 (Bookpurnong Area)

Start Day	End Day	Zone1	Zone2	Zone3	Zone4	Zone5	Zone6	Zone7	Zone8	Zone9	Zone10	Zone11	Zone12	Zone13	Zone14	Zone15	Zone16	Zone17	Zone18	Zone37	Start Year	End Year
27375	28105	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2030	2032
28105	28835	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2032	2034
28835	29565	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2034	2036
29565	30295	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2036	2038
30295	31025	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2038	2040
31025	31755	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2040	2042
31755	32485	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2042	2044
32485	33215	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2044	2046
33215	33945	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2046	2048
33945	34675	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2048	2050
34675	35405	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2050	2052
35405	36135	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2052	2054
36135	36865	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2054	2056
36865	37595	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2056	2058
37595	38325	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2058	2060
38325	39055	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2060	2062
39055	39785	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2062	2064
39785	40515	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2064	2066
40515	41245	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2066	2068
41245	41975	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2068	2070
41975	42705	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2070	2072
42705	43435	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2072	2074
43435	44165	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2074	2076
44165	44895	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2076	2078
44895	45625	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2078	2080
45625	46355	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2080	2082
46355	47085	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2082	2084
47085	47815	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2084	2086
47815	48545	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2086	2088
48545	49275	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2088	2090
49275	50005	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2090	2092
50005	50735	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2092	2094
50735	51465	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2094	2096
51465	52195	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2096	2098
52195	52925	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2098	2100
52925	53655	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2100	2102
53655	54385	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2102	2104
54385	54400	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	400.0	355.0	274.5	2104	2106

Appendix B-1-3b Recharge zones and rates (mm/year) in Scenario-3 (Bookpurnong Area)



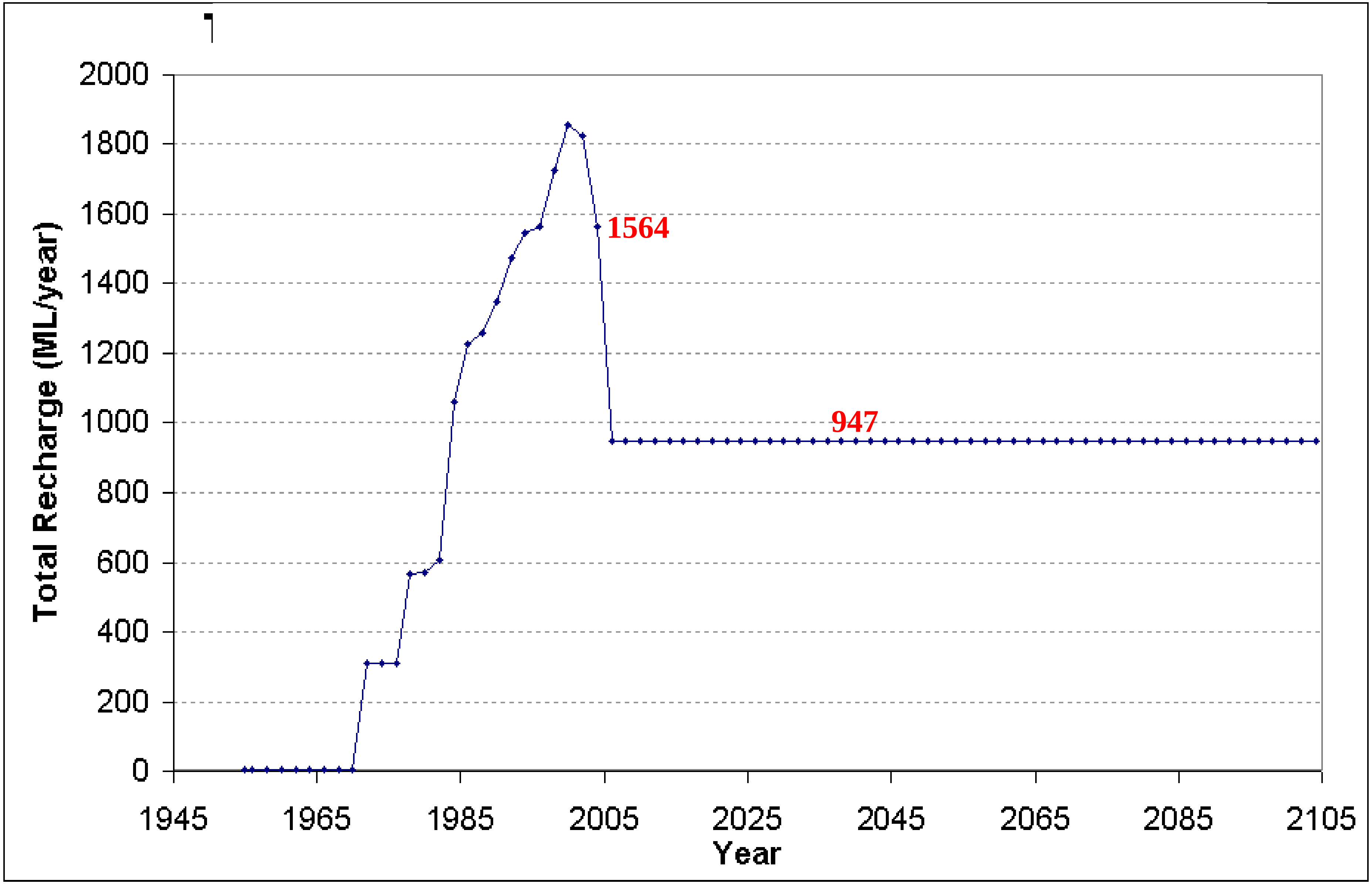
Appendix B-1-3c Total recharge volume to the Loxton Sands from all sources in Scenario-3 (Bookpurnong Area)

Start Day	End Day	Zone1	Zone2	Zone3	Zone4	Zone5	Zone6	Zone7	Zone8	Zone9	Zone10	Zone11	Zone12	Zone13	Zone14	Zone15	Zone16	Zone17	Zone18	Zone37	Start Year	End Year
0	30	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1955	1955
30	365	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1955	1956
365	1095	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1956	1958
1095	1825	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1958	1960
1825	2555	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1960	1962
2555	3285	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1962	1964
3285	4015	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1964	1966
4015	4745	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1966	1968
4745	5475	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1968	1970
5475	6205	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	161.6	0.1	161.6	0.1	0.1	0.1	0.1	0.1	1970	1972
6205	6935	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	161.6	0.1	161.6	0.1	0.1	0.1	0.1	0.1	1972	1974
6935	7665	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	161.6	0.1	161.6	0.1	0.1	0.1	0.1	0.1	1974	1976
7665	8395	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	264.8	0.1	264.8	6.7	0.1	100.0	124.8	0.1	1976	1978
8395	9125	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	264.8	0.1	264.8	6.7	0.1	150.0	124.8	0.1	1978	1980
9125	9855	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	264.8	0.1	264.8	6.7	0.1	200.0	300.2	0.1	1980	1982
9855	10585	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	500.0	0.1	500.0	6.7	0.1	250.0	300.2	0.1	1982	1984
10585	11315	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.4	0.1	0.1	0.1	500.0	0.1	550.0	48.5	0.1	300.0	300.2	0.1	1984	1986
11315	12045	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.4	0.1	0.1	0.1	500.0	0.1	600.0	48.5	0.1	350.0	355.0	0.1	1986	1988
12045	12775	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.4	0.1	0.1	0.1	540.8	0.1	650.0	48.5	0.1	400.0	355.0	0.1	1988	1990
12775	13505	0.1	0.1	0.1	0.1	0.1	0.1	0.1	66.2	0.1	0.1	0.1	540.8	0.1	700.0	79.4	0.1	450.0	355.0	0.1	1990	1992
13505	14235	0.1	0.1	0.1	0.1	0.1	0.1	0.1	66.2	0.1	0.1	0.1	540.8	0.1	750.0	79.4	0.1	800.0	355.0	0.1	1992	1994
14235	14965	0.1	0.1	0.1	0.1	0.1	0.1	0.1	66.2	0.1	0.1	0.1	540.8	0.1	750.0	79.4	0.1	900.0	355.0	0.1	1994	1996
14965	15695	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	650.0	132.8	0.1	1000.0	355.0	0.1	1996	1998
15695	16425	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	1100.0	500.0	0.1	1998	2000
16425	17155	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	500.0	0.1	500.0	250.0	0.1	900.0	600.0	0.1	2000	2002
17155	17885	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	450.0	0.1	300.0	200.0	0.1	700.0	700.0	0.1	2002	2004
17885	18615	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	0.1	2004	2006
18615	19345	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	0.1	2006	2008
19345	20075	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	0.1	2008	2010
20075	20805	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	0.1	2010	2012
20805	21535	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2012	2014
21535	22265	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2014	2016
22265	22995	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2016	2018
22995	23725	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2018	2020
23725	24455	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2020	2022
24455	25185	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2022	2024
25185	25915	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2024	2026
25915	26645	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2026	2028
26645	27375	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2028	2030

Appendix B-1-4a Recharge zones and rates (mm/year) in Scenario-4 (Bookpurnong Area)

Start Day	End Day	Zone1	Zone2	Zone3	Zone4	Zone5	Zone6	Zone7	Zone8	Zone9	Zone10	Zone11	Zone12	Zone13	Zone14	Zone15	Zone16	Zone17	Zone18	Zone37	Start Year	End Year
27375	28105	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2030	2032
28105	28835	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2032	2034
28835	29565	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2034	2036
29565	30295	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2036	2038
30295	31025	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2038	2040
31025	31755	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2040	2042
31755	32485	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2042	2044
32485	33215	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2044	2046
33215	33945	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2046	2048
33945	34675	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2048	2050
34675	35405	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2050	2052
35405	36135	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2052	2054
36135	36865	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2054	2056
36865	37595	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2056	2058
37595	38325	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2058	2060
38325	39055	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2060	2062
39055	39785	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2062	2064
39785	40515	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2064	2066
40515	41245	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2066	2068
41245	41975	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2068	2070
41975	42705	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2070	2072
42705	43435	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2072	2074
43435	44165	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2074	2076
44165	44895	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2076	2078
44895	45625	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2078	2080
45625	46355	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2080	2082
46355	47085	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2082	2084
47085	47815	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2084	2086
47815	48545	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2086	2088
48545	49275	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2088	2090
49275	50005	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2090	2092
50005	50735	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2092	2094
50735	51465	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2094	2096
51465	52195	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2096	2098
52195	52925	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2098	2100
52925	53655	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2100	2102
53655	54385	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2102	2104
54385	59999	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	220.0	0.1	220.0	150.0	0.1	220.0	220.0	274.5	2104	2106

Appendix B-1-4b Recharge zones and rates (mm/year) in Scenario-4 (Bookpurnong Area)



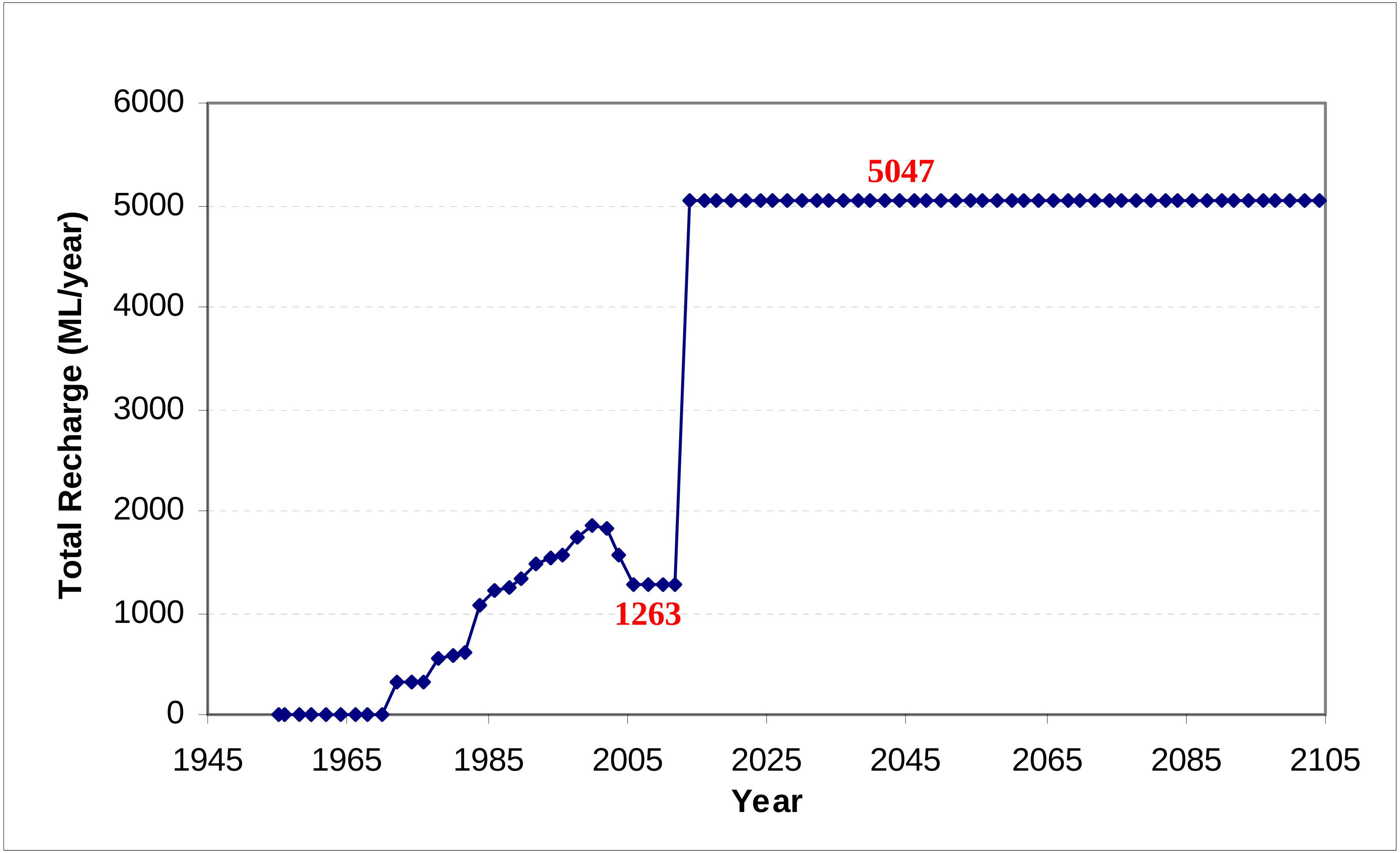
Appendix B-1-4c Total recharge volume to the Loxton Sands from all sources in Scenario-4 (Bookpurnong Area)

Start Day	End Day	Zone1	Zone2	Zone3	Zone4	Zone5	Zone6	Zone7	Zone8	Zone9	Zone10	Zone11	Zone12	Zone13	Zone14	Zone15	Zone16	Zone17	Zone18	zone37	Start Year	EndYear
0	30	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1955	1955
30	365	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1955	1956
365	1095	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1956	1958
1095	1825	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1958	1960
1825	2555	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1960	1962
2555	3285	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1962	1964
3285	4015	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1964	1966
4015	4745	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1966	1968
4745	5475	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1968	1970
5475	6205	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	161.6	0.1	161.6	0.1	0.1	0.1	0.1	0.1	1970	1972
6205	6935	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	161.6	0.1	161.6	0.1	0.1	0.1	0.1	0.1	1972	1974
6935	7665	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	161.6	0.1	161.6	0.1	0.1	0.1	0.1	0.1	1974	1976
7665	8395	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	264.8	0.1	264.8	6.7	0.1	100.0	124.8	0.1	1976	1978
8395	9125	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	264.8	0.1	264.8	6.7	0.1	150.0	124.8	0.1	1978	1980
9125	9855	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	264.8	0.1	264.8	6.7	0.1	200.0	300.2	0.1	1980	1982
9855	10585	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.6	0.1	0.1	0.1	500.0	0.1	500.0	6.7	0.1	250.0	300.2	0.1	1982	1984
10585	11315	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.4	0.1	0.1	0.1	500.0	0.1	550.0	48.5	0.1	300.0	300.2	0.1	1984	1986
11315	12045	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.4	0.1	0.1	0.1	500.0	0.1	600.0	48.5	0.1	350.0	355.0	0.1	1986	1988
12045	12775	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.4	0.1	0.1	0.1	540.8	0.1	650.0	48.5	0.1	400.0	355.0	0.1	1988	1990
12775	13505	0.1	0.1	0.1	0.1	0.1	0.1	0.1	66.2	0.1	0.1	0.1	540.8	0.1	700.0	79.4	0.1	450.0	355.0	0.1	1990	1992
13505	14235	0.1	0.1	0.1	0.1	0.1	0.1	0.1	66.2	0.1	0.1	0.1	540.8	0.1	750.0	79.4	0.1	800.0	355.0	0.1	1992	1994
14235	14965	0.1	0.1	0.1	0.1	0.1	0.1	0.1	66.2	0.1	0.1	0.1	540.8	0.1	750.0	79.4	0.1	900.0	355.0	0.1	1994	1996
14965	15695	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	650.0	132.8	0.1	1000.0	355.0	0.1	1996	1998
15695	16425	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	540.0	0.1	600.0	200.0	0.1	1100.0	500.0	0.1	1998	2000
16425	17155	0.1	0.1	0.1	0.1	0.1	0.1	0.1	110.7	0.1	0.1	0.1	500.0	0.1	500.0	250.0	0.1	900.0	600.0	0.1	2000	2002
17155	17885	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	450.0	0.1	300.0	200.0	0.1	700.0	700.0	0.1	2002	2004
17885	18615	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	274.5	0.1	274.5	274.5	0.1	274.5	274.5	0.1	2004	2006
18615	19345	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	274.5	0.1	274.5	274.5	0.1	274.5	274.5	0.1	2006	2008
19345	20075	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	274.5	0.1	274.5	274.5	0.1	274.5	274.5	0.1	2008	2010
20075	20805	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100.0	0.1	0.1	0.1	274.5	0.1	274.5	274.5	0.1	274.5	274.5	0.1	2010	2012
20805	21535	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2012	2014
21535	22265	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2014	2016
22265	22995	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2016	2018
22995	23725	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2018	2020
23725	24455	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2020	2022
24455	25185	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2022	2024
25185	25915	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2024	2026
25915	26645	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2026	2028
26645	27375	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2028	2030

Appendix B-1-6a Recharge zones and rates (mm/year) in Scenario-6 (Bookpurnong Area)

Start Day	End Day	Zone1	Zone2	Zone3	Zone4	Zone5	Zone6	Zone7	Zone8	Zone9	Zone10	Zone11	Zone12	Zone13	Zone14	Zone15	Zone16	Zone17	Zone18	zone37	Start Year	EndYear
27375	28105	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2030	2032
28105	28835	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2032	2034
28835	29565	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2034	2036
29565	30295	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2036	2038
30295	31025	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2038	2040
31025	31755	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2040	2042
31755	32485	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2042	2044
32485	33215	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2044	2046
33215	33945	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2046	2048
33945	34675	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2048	2050
34675	35405	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2050	2052
35405	36135	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2052	2054
36135	36865	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2054	2056
36865	37595	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2056	2058
37595	38325	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2058	2060
38325	39055	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2060	2062
39055	39785	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2062	2064
39785	40515	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2064	2066
40515	41245	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2066	2068
41245	41975	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2068	2070
41975	42705	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2070	2072
42705	43435	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2072	2074
43435	44165	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2074	2076
44165	44895	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2076	2078
44895	45625	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2078	2080
45625	46355	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2080	2082
46355	47085	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2082	2084
47085	47815	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2084	2086
47815	48545	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2086	2088
48545	49275	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2088	2090
49275	50005	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2090	2092
50005	50735	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2092	2094
50735	51465	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2094	2096
51465	52195	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2096	2098
52195	52925	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2098	2100
52925	53655	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2100	2102
53655	54385	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2102	2104
54385	55115	0.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	274.5	100.0	274.5	274.5	100.0	274.5	274.5	274.5	2104	2106

Appendix B-1-6b Recharge zones and rates (mm/year) in Scenario-6 (Bookpurnong Area)



Appendix B-1-6c Total recharge volume to the Loxton Sands from all sources in Scenario-6 (Bookpurnong Area)

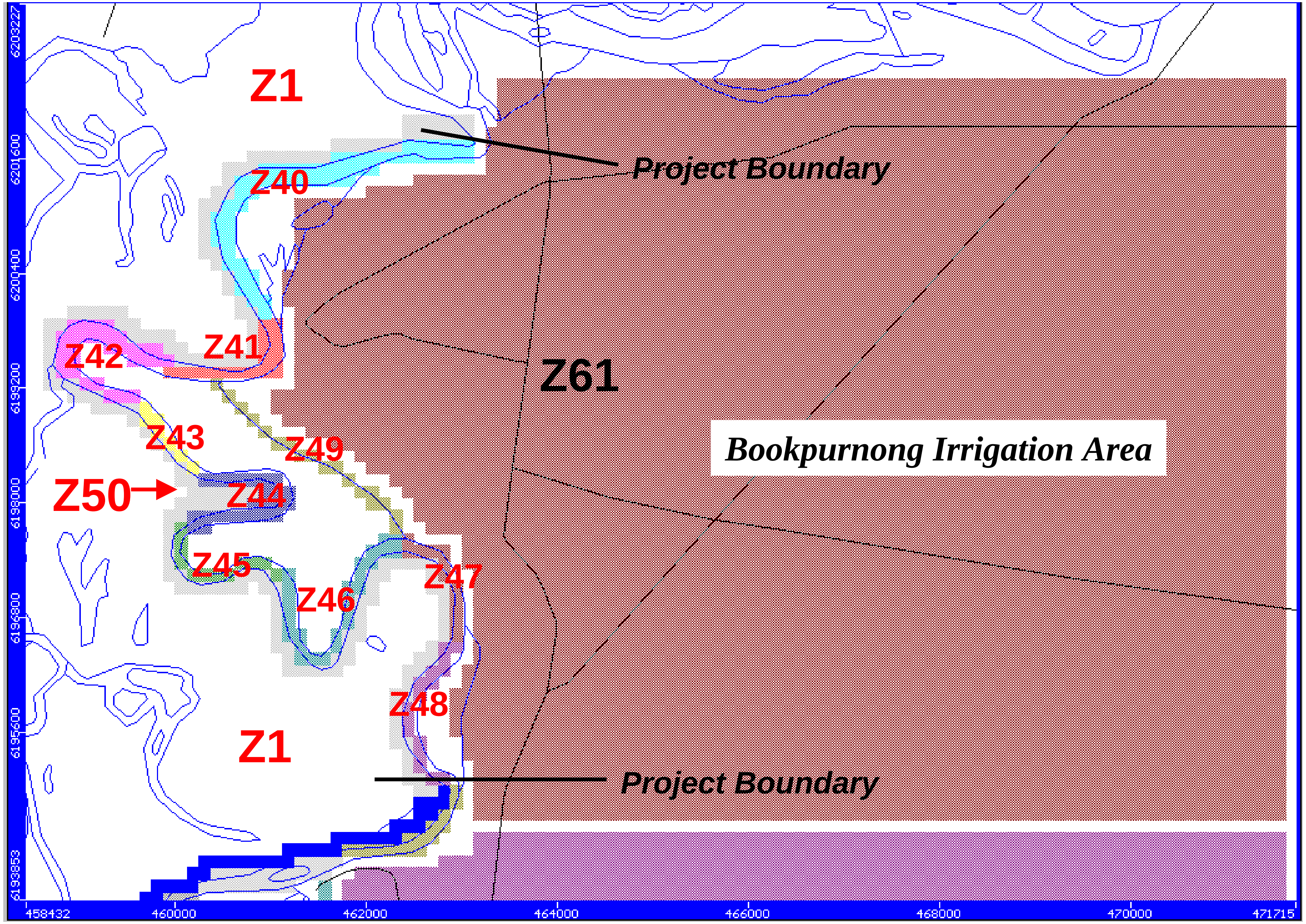
B2. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-2 (BOOKPURNONG AREA)

- Flow budget zones (Bookpurnong Area)
- Predicted lateral groundwater flux (m3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)

Appendix B-2

Groundwater flux and salt load entering the River Murray Scenario-2 (Bookpurnong Area)

-Flow budget zones (Bookpurnong Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)



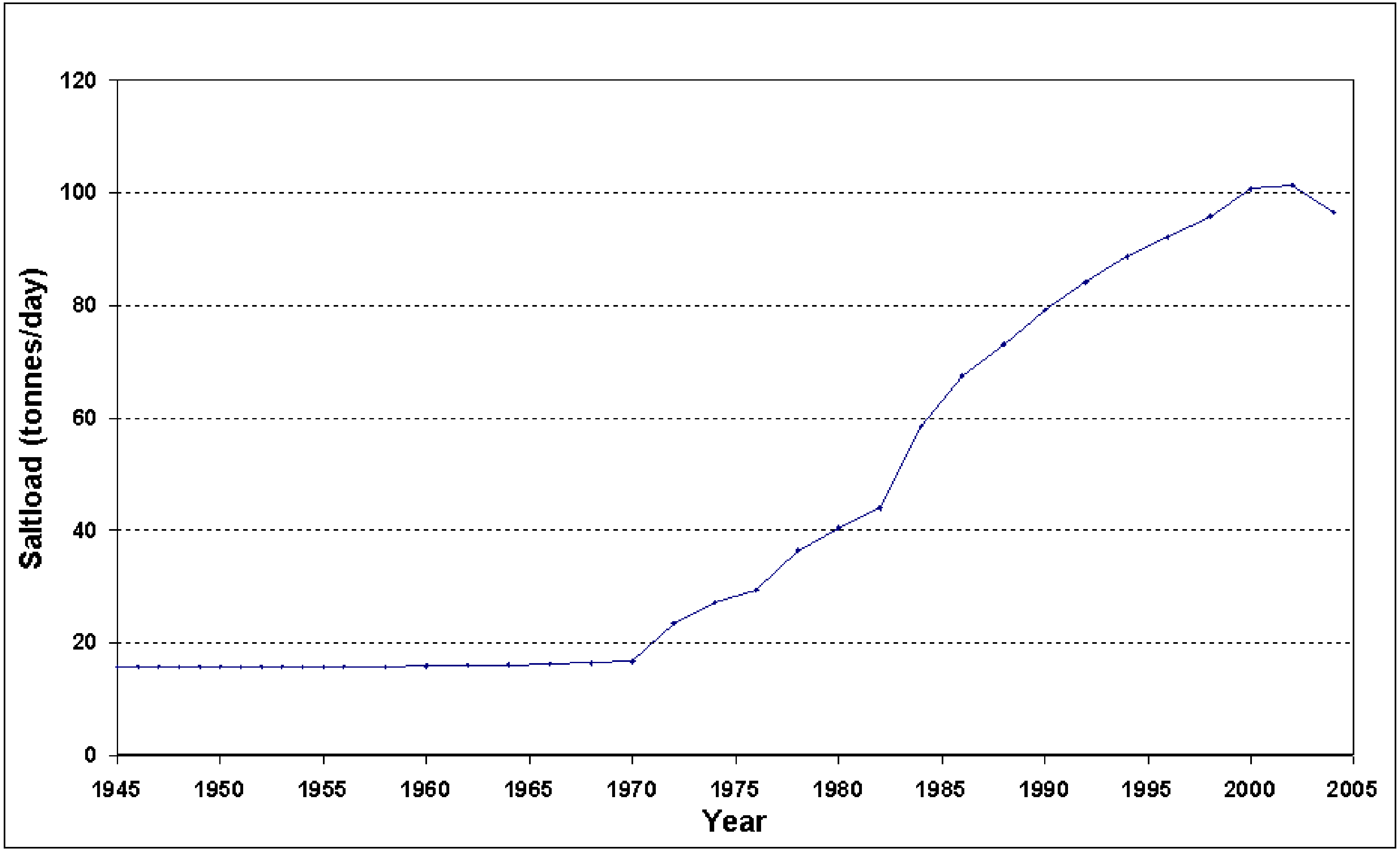
Appendix B-2-1 Flow budget zones in model Layer-1 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	1945	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1946	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1947	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1948	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1949	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1950	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1951	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1952	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1953	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1954	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
30	1955	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
365	1956	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
1095	1958	0.0	405.8	0.0	0.0	15.0	0.0	7.1	103.3	50.6	0.0	582
1825	1960	0.0	406.0	0.0	0.0	15.1	0.0	7.2	104.0	52.1	0.0	584
2555	1962	0.0	406.2	0.0	0.0	15.3	0.0	7.3	105.1	55.0	0.0	589
3285	1964	0.0	406.4	0.0	0.0	15.6	0.0	7.5	106.7	60.2	0.0	596
4015	1966	0.0	406.7	0.0	0.0	15.8	0.0	7.6	108.8	68.0	0.0	607
4745	1968	0.0	406.9	0.0	0.0	16.1	0.0	7.7	111.6	77.3	0.0	620
5475	1970	0.0	407.2	0.0	0.0	16.3	0.0	7.9	114.8	87.4	0.0	634
6205	1972	0.0	464.0	0.0	0.0	67.3	0.0	29.5	183.5	98.4	0.0	843
6935	1974	0.0	488.1	0.0	0.0	99.9	0.0	43.4	219.5	109.9	0.0	961
7665	1976	0.0	500.6	0.0	0.0	115.3	0.0	50.9	240.8	121.6	0.0	1029
8395	1978	0.0	547.3	0.0	0.0	168.2	0.0	77.1	315.5	133.9	0.0	1242
9125	1980	1.9	569.3	0.0	0.0	200.3	1.1	93.0	355.4	146.2	2.6	1368
9855	1982	12.7	582.4	0.0	0.0	219.0	1.8	105.3	398.0	157.7	7.9	1472
10585	1984	39.7	684.2	0.0	0.5	323.9	4.0	153.0	530.8	169.5	48.5	1914
11315	1986	112.2	735.2	0.0	1.4	374.3	5.6	178.8	601.0	185.0	68.9	2150
12045	1988	154.9	768.4	0.0	1.9	399.3	6.4	193.4	653.0	201.6	80.1	2304
12775	1990	191.7	804.1	0.0	3.5	432.0	7.3	210.1	707.4	216.9	94.7	2476
13505	1992	253.7	830.6	0.0	4.5	450.4	7.9	220.0	747.6	233.8	102.5	2597
14235	1994	290.7	854.2	0.0	5.5	473.4	8.6	233.4	785.4	250.2	114.2	2725
14965	1996	318.1	868.9	0.0	6.4	491.7	9.2	243.8	815.8	263.7	122.7	2822
15695	1998	379.7	863.4	0.0	7.0	504.6	9.6	251.4	852.5	279.8	129.1	2897
16425	2000	461.5	862.0	0.0	7.5	516.7	10.0	261.7	903.6	295.0	136.9	2993
17155	2002	526.2	840.1	0.0	6.7	500.4	9.8	256.6	919.6	306.0	129.4	2969
17885	2004	478.5	788.1	0.0	4.8	466.4	9.0	242.2	910.2	312.4	114.6	2848
TDS	mg/L	22900	26200	30000	38100	38100	30000	30000	38740	8870	13500	

Appendix B-2-2 Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-2 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	1945	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.8
0	1946	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.8
0	1947	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.8
0	1948	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.8
0	1949	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.8
0	1950	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.8
0	1951	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.8
0	1952	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.8
0	1953	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.8
0	1954	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.8
30	1955	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.8
365	1956	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.9
1095	1958	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.9
1825	1960	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.5	0.0	15.9
2555	1962	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	16.0
3285	1964	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	16.1
4015	1966	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.2	0.6	0.0	16.3
4745	1968	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.3	0.7	0.0	16.5
5475	1970	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.4	0.8	0.0	16.8
6205	1972	0.0	12.2	0.0	0.0	2.6	0.0	0.9	7.1	0.9	0.0	23.6
6935	1974	0.0	12.8	0.0	0.0	3.8	0.0	1.3	8.5	1.0	0.0	27.4
7665	1976	0.0	13.1	0.0	0.0	4.4	0.0	1.5	9.3	1.1	0.0	29.4
8395	1978	0.0	14.3	0.0	0.0	6.4	0.0	2.3	12.2	1.2	0.0	36.5
9125	1980	0.0	14.9	0.0	0.0	7.6	0.0	2.8	13.8	1.3	0.0	40.5
9855	1982	0.3	15.3	0.0	0.0	8.3	0.1	3.2	15.4	1.4	0.1	44.0
10585	1984	0.9	17.9	0.0	0.0	12.3	0.1	4.6	20.6	1.5	0.7	58.6
11315	1986	2.6	19.3	0.0	0.1	14.3	0.2	5.4	23.3	1.6	0.9	67.5
12045	1988	3.5	20.1	0.0	0.1	15.2	0.2	5.8	25.3	1.8	1.1	73.1
12775	1990	4.4	21.1	0.0	0.1	16.5	0.2	6.3	27.4	1.9	1.3	79.2
13505	1992	5.8	21.8	0.0	0.2	17.2	0.2	6.6	29.0	2.1	1.4	84.2
14235	1994	6.7	22.4	0.0	0.2	18.0	0.3	7.0	30.4	2.2	1.5	88.7
14965	1996	7.3	22.8	0.0	0.2	18.7	0.3	7.3	31.6	2.3	1.7	92.2
15695	1998	8.7	22.6	0.0	0.3	19.2	0.3	7.5	33.0	2.5	1.7	95.9
16425	2000	10.6	22.6	0.0	0.3	19.7	0.3	7.9	35.0	2.6	1.8	100.7
17155	2002	12.0	22.0	0.0	0.3	19.1	0.3	7.7	35.6	2.7	1.7	101.5
17885	2004	11.0	20.6	0.0	0.2	17.8	0.3	7.3	35.3	2.8	1.5	96.7
TDS	mg/L	22900	26200	30000	38100	38100	30000	30000	38740	8870	13500	

Appendix B-2-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-2 (Bookpurnong Area)



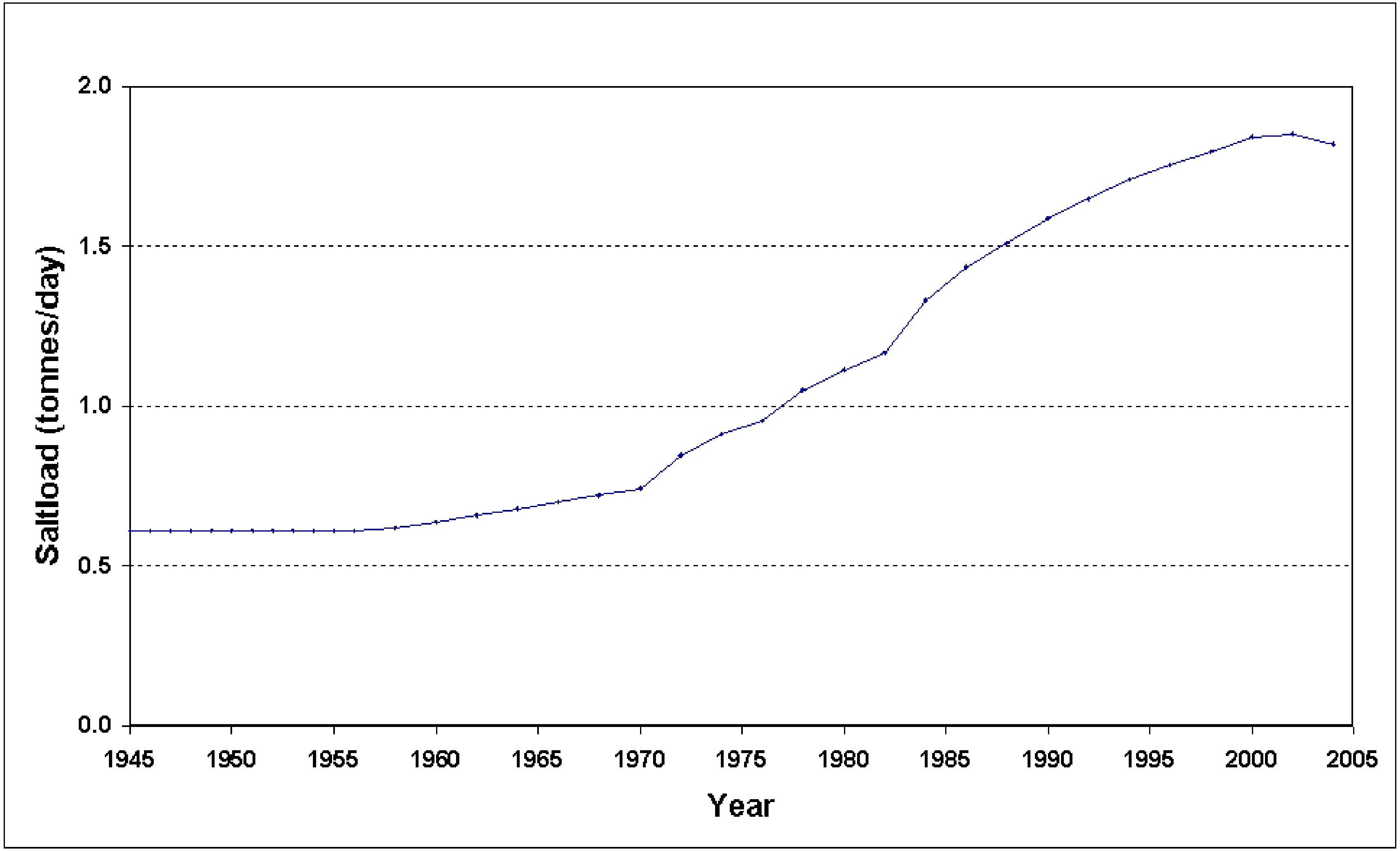
Appendix B-2-3b Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-2 (Bookpurnong Area)

day	year	Z2 to Z40	Z2 to Z41	Z2 to Z42	Z2 to Z43	Z2 to Z44	Z2 to Z45	Z2 to Z46	Z2 to Z47	Z2 to Z48	Total
0	*1945*	*0.0*	*9.7*	*5.9*	*0.5*	*2.6*	*0.4*	*1.4*	*2.3*	*1.4*	*24*
0	*1946*	*0.0*	*9.7*	*5.9*	*0.5*	*2.6*	*0.4*	*1.4*	*2.3*	*1.4*	*24*
0	*1947*	*0.0*	*9.7*	*5.9*	*0.5*	*2.6*	*0.4*	*1.4*	*2.3*	*1.4*	*24*
0	*1948*	*0.0*	*9.7*	*5.9*	*0.5*	*2.6*	*0.4*	*1.4*	*2.3*	*1.4*	*24*
0	*1949*	*0.0*	*9.7*	*5.9*	*0.5*	*2.6*	*0.4*	*1.4*	*2.3*	*1.4*	*24*
0	*1950*	*0.0*	*9.7*	*5.9*	*0.5*	*2.6*	*0.4*	*1.4*	*2.3*	*1.4*	*24*
0	*1951*	*0.0*	*9.7*	*5.9*	*0.5*	*2.6*	*0.4*	*1.4*	*2.3*	*1.4*	*24*
0	*1952*	*0.0*	*9.7*	*5.9*	*0.5*	*2.6*	*0.4*	*1.4*	*2.3*	*1.4*	*24*
0	*1953*	*0.0*	*9.7*	*5.9*	*0.5*	*2.6*	*0.4*	*1.4*	*2.3*	*1.4*	*24*
0	*1954*	*0.0*	*9.7*	*5.9*	*0.5*	*2.6*	*0.4*	*1.4*	*2.3*	*1.4*	*24*
30	1955	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
365	1956	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
1095	1958	0.0	9.7	6.0	0.5	2.6	0.5	1.5	2.4	1.5	25
1825	1960	0.0	9.8	6.0	0.5	2.7	0.5	1.6	2.4	1.7	25
2555	1962	0.0	9.9	6.1	0.5	2.8	0.5	1.7	2.5	1.9	26
3285	1964	0.0	9.9	6.2	0.5	2.9	0.6	1.8	2.6	2.1	27
4015	1966	0.0	10.0	6.2	0.6	3.0	0.6	1.9	2.7	2.4	28
4745	1968	0.0	10.1	6.3	0.6	3.1	0.7	2.1	2.8	2.7	28
5475	1970	0.0	10.1	6.4	0.6	3.2	0.7	2.2	2.9	2.9	29
6205	1972	0.0	11.3	6.5	0.7	3.9	0.8	2.8	3.9	3.2	33
6935	1974	0.0	11.9	6.6	0.7	4.3	0.9	3.2	4.4	3.5	35
7665	1976	0.0	12.3	6.7	0.7	4.6	0.9	3.4	4.7	3.8	37
8395	1978	0.0	13.2	6.8	0.8	5.2	1.0	4.0	5.7	4.0	41
9125	1980	0.0	13.8	6.8	0.8	5.6	1.1	4.4	6.2	4.3	43
9855	1982	0.0	14.1	6.9	0.9	5.9	1.1	4.8	6.8	4.6	45
10585	1984	0.1	16.0	7.0	1.0	7.0	1.2	5.8	8.4	4.8	51
11315	1986	0.5	17.1	7.2	1.0	7.5	1.3	6.4	9.3	5.2	55
12045	1988	0.8	17.7	7.3	1.1	7.9	1.4	6.7	10.0	5.5	58
12775	1990	1.2	18.4	7.3	1.1	8.3	1.5	7.1	10.7	5.8	61
13505	1992	1.6	18.9	7.4	1.1	8.5	1.5	7.4	11.3	6.1	64
14235	1994	1.9	19.4	7.5	1.2	8.8	1.6	7.7	11.8	6.3	66
14965	1996	2.2	19.8	7.6	1.2	9.1	1.6	7.9	12.2	6.5	68
15695	1998	2.5	19.8	7.6	1.2	9.2	1.7	8.1	12.6	6.7	69
16425	2000	3.0	19.9	7.6	1.2	9.4	1.7	8.4	13.2	6.9	71
17155	2002	3.3	19.6	7.7	1.2	9.3	1.7	8.4	13.4	7.0	72
17885	2004	3.3	18.9	7.7	1.2	9.0	1.7	8.2	13.4	7.1	70
STD	*mg/L*	*20000*	*20000*	*28600*	*28600*	*28600*	*28600*	*28600*	*28600*	*28600*	

Appendix B-2-4 Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-2 (Bookpurnong Area)

day	year	Z2 to Z40	Z2 to Z41	Z2 to Z42	Z2 to Z43	Z2 to Z44	Z2 to Z45	Z2 to Z46	Z2 to Z47	Z2 to Z48	Total
0	*1945*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*1*
0	*1946*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*1*
0	*1947*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*1*
0	*1948*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*1*
0	*1949*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*1*
0	*1950*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*1*
0	*1951*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*1*
0	*1952*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*1*
0	*1953*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*1*
0	*1954*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*1*
30	1955	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	1
365	1956	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	1
1095	1958	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	1
1825	1960	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	1
2555	1962	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.1	1
3285	1964	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	1
4015	1966	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	1
4745	1968	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	1
5475	1970	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	1
6205	1972	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	1
6935	1974	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	1
7665	1976	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	1
8395	1978	0.0	0.3	0.2	0.0	0.1	0.0	0.1	0.2	0.1	1
9125	1980	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1
9855	1982	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1
10585	1984	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.2	0.1	1
11315	1986	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.1	1
12045	1988	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	2
12775	1990	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	2
13505	1992	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	2
14235	1994	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	2
14965	1996	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	2
15695	1998	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	2
16425	2000	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	2
17155	2002	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	2
17885	2004	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	2
STD	*mg/L*	*20000*	*20000*	*28600*	*28600*	*28600*	*28600*	*28600*	*28600*	*28600*	

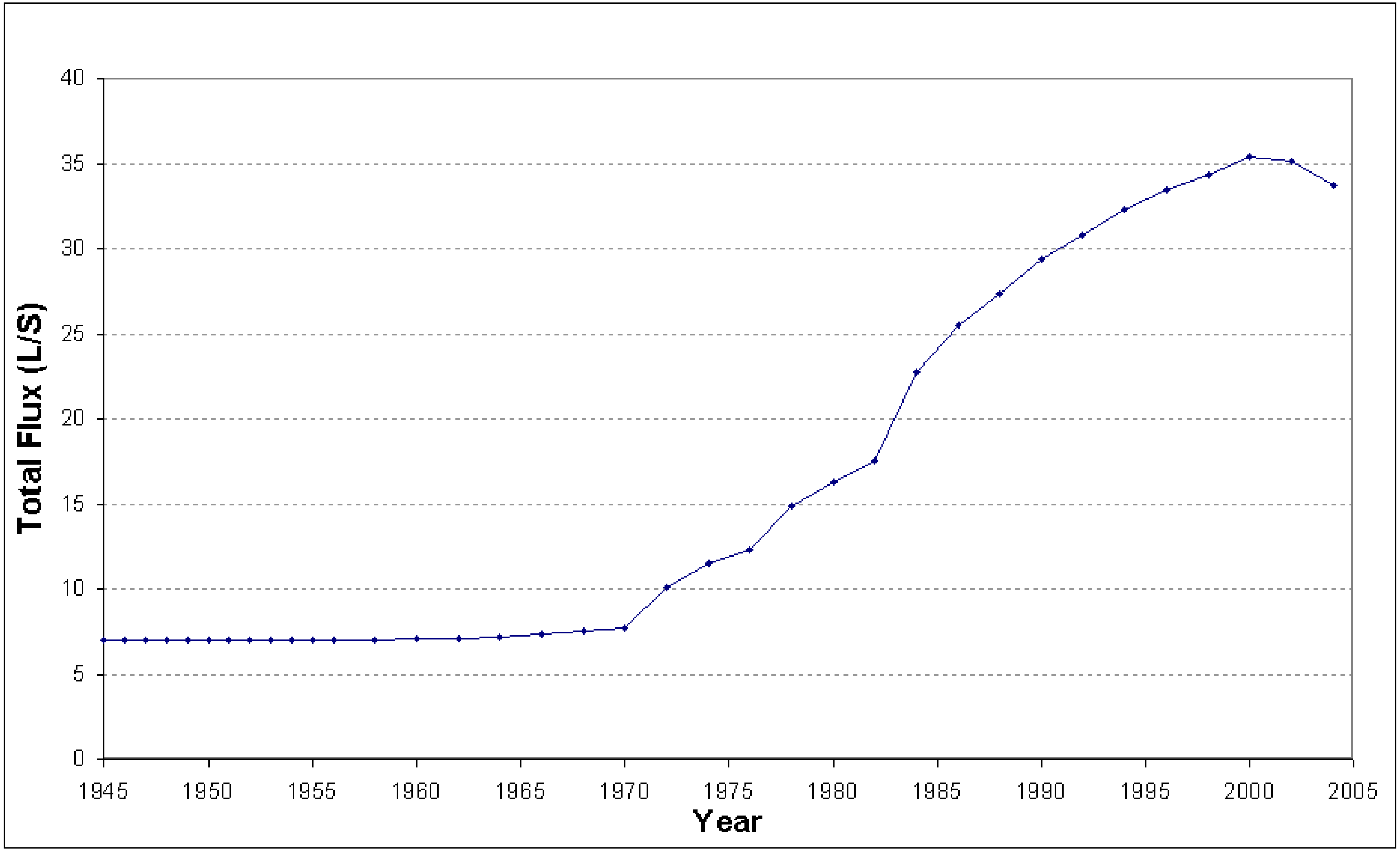
Appendix B-2-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-2 (Bookpurnong Area)



Appendix B-2-5b Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-2 (Bookpurnong Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	*1945*	*581*	*24*	*605*	*7.00*
0	*1946*	*581*	*24*	*605*	*7.00*
0	*1947*	*581*	*24*	*605*	*7.00*
0	*1948*	*581*	*24*	*605*	*7.00*
0	*1949*	*581*	*24*	*605*	*7.00*
0	*1950*	*581*	*24*	*605*	*7.00*
0	*1951*	*581*	*24*	*605*	*7.00*
0	*1952*	*581*	*24*	*605*	*7.00*
0	*1953*	*581*	*24*	*605*	*7.00*
0	*1954*	*581*	*24*	*605*	*7.00*
30	1955	581	24	605	7.00
365	1956	581	24	605	7.01
1095	1958	582	25	607	7.02
1825	1960	584	25	610	7.06
2555	1962	589	26	615	7.12
3285	1964	596	27	623	7.21
4015	1966	607	28	635	7.34
4745	1968	620	28	648	7.50
5475	1970	634	29	663	7.67
6205	1972	843	33	876	10.14
6935	1974	961	35	996	11.53
7665	1976	1029	37	1066	12.34
8395	1978	1242	41	1283	14.85
9125	1980	1368	43	1411	16.33
9855	1982	1472	45	1517	17.56
10585	1984	1914	51	1966	22.75
11315	1986	2150	55	2206	25.53
12045	1988	2304	58	2363	27.34
12775	1990	2476	61	2537	29.37
13505	1992	2597	64	2661	30.80
14235	1994	2725	66	2791	32.30
14965	1996	2822	68	2890	33.45
15695	1998	2897	69	2967	34.34
16425	2000	2993	71	3065	35.47
17155	2002	2969	72	3040	35.19
17885	2004	2848	70	2918	33.77

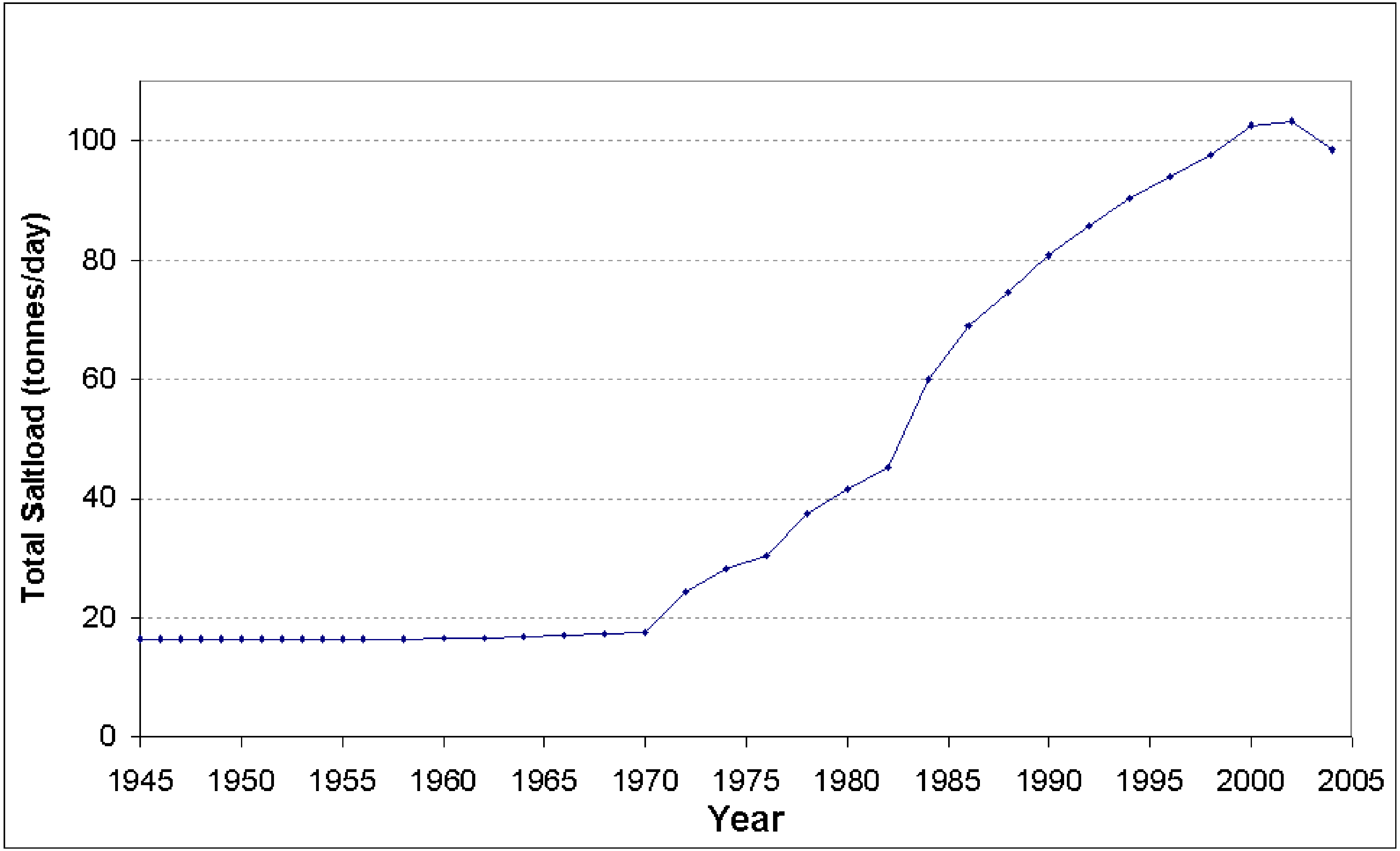
Appendix B-2-6a Predicted total groundwater flux in Scenario-2 (Bookpurnong Area)



Appendix B-2-6b Graph of predicted total groundwater flux (L/second) entering the River Murray in Scenario-2 (Bookpurnong Area)

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	15.8	0.6	16.46
0	1946	15.8	0.6	16.46
0	1947	15.8	0.6	16.46
0	1948	15.8	0.6	16.46
0	1949	15.8	0.6	16.46
0	1950	15.8	0.6	16.46
0	1951	15.8	0.6	16.46
0	1952	15.8	0.6	16.46
0	1953	15.8	0.6	16.46
0	1954	15.8	0.6	16.46
30	1955	15.8	0.6	16.46
365	1956	15.9	0.6	16.46
1095	1958	15.9	0.6	16.49
1825	1960	15.9	0.6	16.56
2555	1962	16.0	0.7	16.66
3285	1964	16.1	0.7	16.81
4015	1966	16.3	0.7	17.01
4745	1968	16.5	0.7	17.24
5475	1970	16.8	0.7	17.49
6205	1972	23.6	0.8	24.44
6935	1974	27.4	0.9	28.29
7665	1976	29.4	1.0	30.40
8395	1978	36.5	1.1	37.52
9125	1980	40.5	1.1	41.63
9855	1982	44.0	1.2	45.19
10585	1984	58.6	1.3	59.96
11315	1986	67.5	1.4	68.97
12045	1988	73.1	1.5	74.64
12775	1990	79.2	1.6	80.76
13505	1992	84.2	1.6	85.81
14235	1994	88.7	1.7	90.44
14965	1996	92.2	1.8	93.97
15695	1998	95.9	1.8	97.68
16425	2000	100.7	1.8	102.59
17155	2002	101.5	1.9	103.31
17885	2004	96.7	1.8	98.49

Appendix B-2-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-2 (Bookpurnong Area)



Appendix B-2-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-2 (Bookpurnong Area)

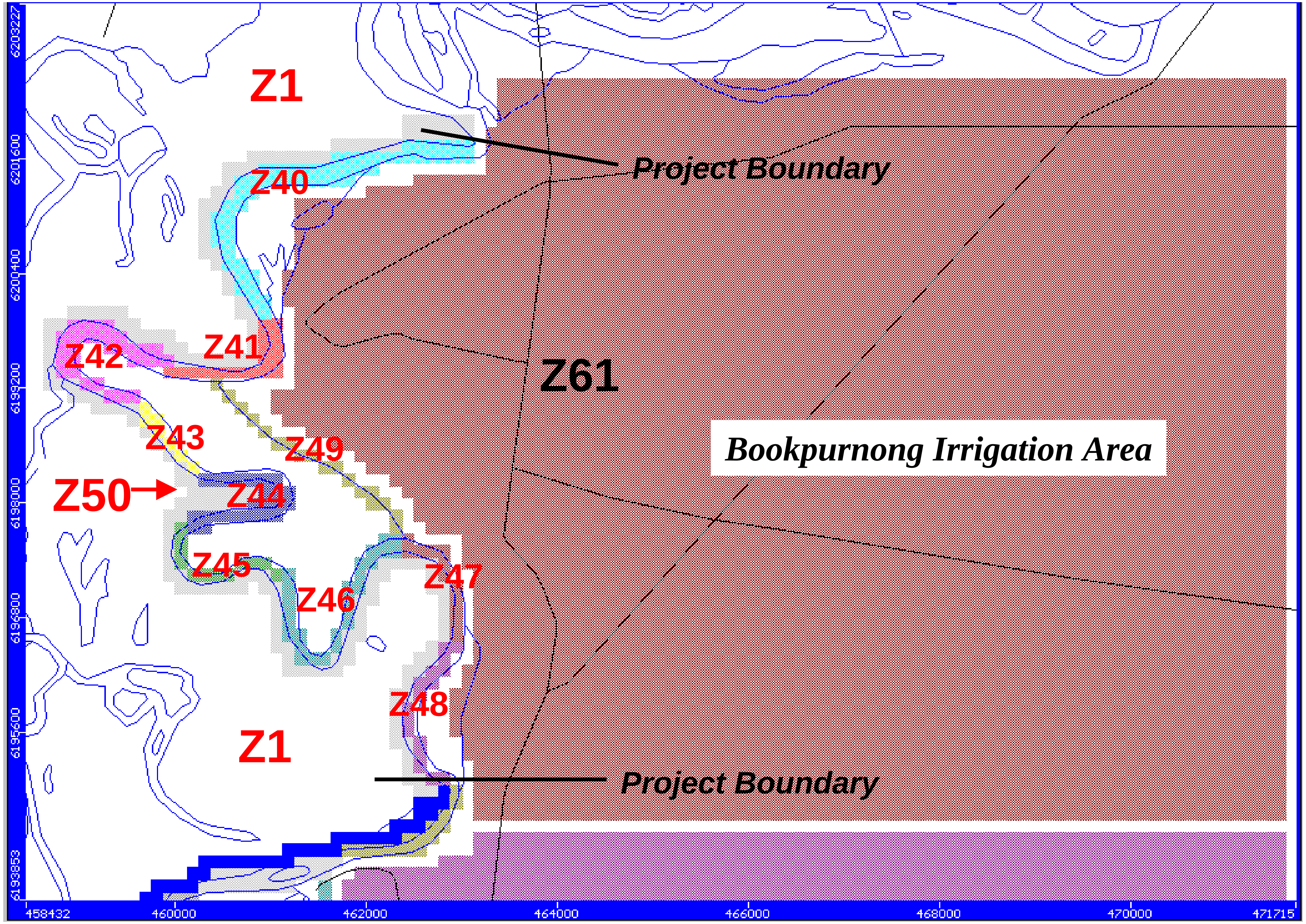
B3. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-3 (BOOKPURNONG AREA)

- Flow budget zones (Bookpurnong Area)
- Predicted lateral groundwater flux (m3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)

Appendix B-3

Groundwater flux and salt load entering the River Murray Scenario-3 (Bookpurnong Area)

-Flow budget zones (Bookpurnong Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)



Appendix B-3-1 Flow budget zones in model Layer-1 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	1945	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1946	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1947	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1948	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1949	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1950	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1951	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1952	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1953	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1954	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
30	1955	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
365	1956	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
1095	1958	0.0	405.8	0.0	0.0	15.0	0.0	7.1	103.3	50.6	0.0	582
1825	1960	0.0	406.0	0.0	0.0	15.1	0.0	7.2	104.0	52.1	0.0	584
2555	1962	0.0	406.2	0.0	0.0	15.3	0.0	7.3	105.1	55.0	0.0	589
3285	1964	0.0	406.4	0.0	0.0	15.6	0.0	7.5	106.7	60.2	0.0	596
4015	1966	0.0	406.7	0.0	0.0	15.8	0.0	7.6	108.8	68.0	0.0	607
4745	1968	0.0	406.9	0.0	0.0	16.1	0.0	7.7	111.6	77.3	0.0	620
5475	1970	0.0	407.2	0.0	0.0	16.3	0.0	7.9	114.8	87.4	0.0	634
6205	1972	0.0	464.0	0.0	0.0	67.3	0.0	29.5	183.5	98.4	0.0	843
6935	1974	0.0	488.1	0.0	0.0	99.9	0.0	43.4	219.5	109.9	0.0	961
7665	1976	0.0	500.6	0.0	0.0	115.3	0.0	50.9	240.8	121.6	0.0	1029
8395	1978	0.0	547.3	0.0	0.0	168.2	0.0	77.1	315.5	133.9	0.0	1242
9125	1980	1.9	569.3	0.0	0.0	200.3	1.1	93.0	355.4	146.2	2.6	1370
9855	1982	12.7	582.4	0.0	0.0	219.0	1.8	105.3	398.0	157.7	7.9	1485
10585	1984	39.7	684.2	0.0	0.5	323.9	4.0	153.0	530.8	169.5	48.5	1954
11315	1986	112.2	735.2	0.0	1.4	374.3	5.6	178.8	601.0	185.0	68.9	2262
12045	1988	154.9	768.4	0.0	1.9	399.3	6.4	193.4	653.0	201.6	80.1	2459
12775	1990	191.7	804.1	0.0	3.5	432.0	7.3	210.1	707.4	216.9	94.7	2668
13505	1992	253.7	830.3	0.0	4.5	448.6	7.8	219.0	746.8	233.8	101.5	2846
14235	1994	290.2	851.2	0.0	5.1	457.6	8.1	224.0	777.7	250.1	105.3	2969
14965	1996	315.3	860.6	0.0	5.5	463.6	8.3	227.4	801.0	263.8	107.9	3054
15695	1998	373.3	850.3	0.0	5.8	467.4	8.4	229.9	832.1	280.7	109.6	3157
16425	2000	451.1	844.6	0.0	5.9	469.9	8.5	231.9	861.7	297.6	110.9	3282
17155	2002	474.9	846.7	0.0	6.0	471.8	8.6	233.5	883.8	311.3	112.0	3349
17885	2004	489.9	849.4	0.0	6.1	473.7	8.7	234.9	900.7	322.3	112.9	3399
18615	2006	501.3	851.9	0.0	6.2	475.4	8.8	236.1	913.4	330.7	113.8	3438
19345	2008	510.4	854.1	0.0	6.3	477.0	8.8	237.2	923.4	337.4	114.6	3469
20075	2010	518.0	855.9	0.0	6.4	478.3	8.9	238.2	931.7	342.8	115.2	3495
20805	2012	524.4	857.5	0.0	6.5	479.5	8.9	239.0	938.5	347.1	115.8	3517
21535	2014	529.8	858.9	0.0	6.6	480.5	8.9	239.6	944.3	350.6	116.3	3535
22265	2016	534.5	860.0	0.0	6.6	481.3	9.0	240.2	949.3	353.7	116.7	3551
22995	2018	538.5	861.0	0.0	6.7	482.1	9.0	240.8	953.7	356.5	117.1	3565

Appendix B-3-2a Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-3 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
23725	2020	542.1	861.9	0.0	6.7	482.7	9.0	241.2	957.6	359.1	117.5	3578
24455	2022	545.2	862.6	0.0	6.8	483.3	9.1	241.6	961.1	361.5	117.8	3589
25185	2024	548.0	863.3	0.0	6.8	483.8	9.1	241.9	964.3	363.8	118.0	3599
25915	2026	550.5	863.9	0.0	6.8	484.3	9.1	242.3	967.2	365.8	118.3	3608
26645	2028	552.7	864.4	0.0	6.9	484.7	9.1	242.5	969.9	367.8	118.5	3616
27375	2030	554.7	864.9	0.0	6.9	485.0	9.1	242.8	972.3	369.6	118.7	3624
28105	2032	556.6	865.4	0.0	6.9	485.4	9.1	243.0	974.5	371.3	118.8	3631
28835	2034	558.3	865.8	0.0	7.0	485.7	9.2	243.3	976.6	372.9	119.0	3638
29565	2036	559.9	866.1	0.0	7.0	486.0	9.2	243.5	978.6	374.4	119.1	3644
30295	2038	561.4	866.5	0.0	7.0	486.2	9.2	243.6	980.4	375.9	119.3	3649
31025	2040	562.7	866.8	0.0	7.0	486.5	9.2	243.8	982.0	377.2	119.4	3655
31755	2042	564.0	867.1	0.0	7.0	486.7	9.2	244.0	983.5	378.4	119.5	3659
32485	2044	565.2	867.3	0.0	7.1	486.9	9.2	244.1	984.9	379.5	119.6	3664
33215	2046	566.3	867.6	0.0	7.1	487.1	9.2	244.3	986.2	380.5	119.7	3668
33945	2048	567.3	867.8	0.0	7.1	487.3	9.2	244.4	987.4	381.5	119.8	3672
34675	2050	568.3	868.1	0.0	7.1	487.5	9.2	244.5	988.5	382.4	119.9	3676
35405	2052	569.2	868.3	0.0	7.1	487.7	9.2	244.6	989.6	383.3	120.0	3679
36135	2054	570.0	868.5	0.0	7.1	487.8	9.3	244.7	990.7	384.1	120.1	3682
36865	2056	570.9	868.7	0.0	7.2	488.0	9.3	244.8	991.6	384.9	120.2	3685
37595	2058	571.6	868.8	0.0	7.2	488.1	9.3	244.9	992.6	385.7	120.2	3688
38325	2060	572.4	869.0	0.0	7.2	488.2	9.3	245.0	993.4	386.4	120.3	3691
39055	2062	573.1	869.2	0.0	7.2	488.4	9.3	245.1	994.3	387.1	120.4	3694
39785	2064	573.8	869.3	0.0	7.2	488.5	9.3	245.2	995.1	387.7	120.4	3696
40515	2066	574.4	869.5	0.0	7.2	488.6	9.3	245.3	995.8	388.3	120.5	3699
41245	2068	575.0	869.6	0.0	7.2	488.7	9.3	245.4	996.5	388.9	120.5	3701
41975	2070	575.6	869.7	0.0	7.2	488.8	9.3	245.4	997.2	389.5	120.6	3703
42705	2072	576.1	869.9	0.0	7.3	488.9	9.3	245.5	997.9	390.0	120.6	3706
43435	2074	576.7	870.0	0.0	7.3	489.0	9.3	245.6	998.5	390.5	120.7	3708
44165	2076	577.2	870.1	0.0	7.3	489.1	9.3	245.7	999.1	390.9	120.7	3709
44895	2078	577.7	870.2	0.0	7.3	489.2	9.3	245.7	999.7	391.4	120.8	3711
45625	2080	578.1	870.3	0.0	7.3	489.3	9.3	245.8	1000.2	391.8	120.8	3713
46355	2082	578.6	870.5	0.0	7.3	489.4	9.3	245.8	1000.7	392.2	120.9	3715
47085	2084	579.0	870.6	0.0	7.3	489.5	9.3	245.9	1001.2	392.5	120.9	3716
47815	2086	579.4	870.6	0.0	7.3	489.6	9.3	246.0	1001.7	392.9	121.0	3718
48545	2088	579.8	870.7	0.0	7.3	489.6	9.3	246.0	1002.1	393.2	121.0	3719
49275	2090	580.2	870.8	0.0	7.3	489.7	9.3	246.1	1002.6	393.5	121.0	3721
50005	2092	580.6	870.9	0.0	7.3	489.8	9.3	246.1	1003.0	393.8	121.1	3722
50735	2094	581.0	871.0	0.0	7.3	489.9	9.4	246.1	1003.4	394.1	121.1	3723
51465	2096	581.3	871.1	0.0	7.3	489.9	9.4	246.2	1003.8	394.4	121.1	3725
52195	2098	581.6	871.2	0.0	7.4	490.0	9.4	246.2	1004.2	394.7	121.2	3726
52925	2100	581.9	871.2	0.0	7.4	490.0	9.4	246.3	1004.5	395.0	121.2	3727
53655	2102	582.3	871.3	0.0	7.4	490.1	9.4	246.3	1004.9	395.2	121.2	3728
54385	2104	582.6	871.4	0.0	7.4	490.2	9.4	246.4	1005.2	395.4	121.2	3729
TDS	*mg/L*	*22900*	*26200*	*30000*	*38100*	*38100*	*30000*	*30000*	*38740*	*8870*	*13500*	

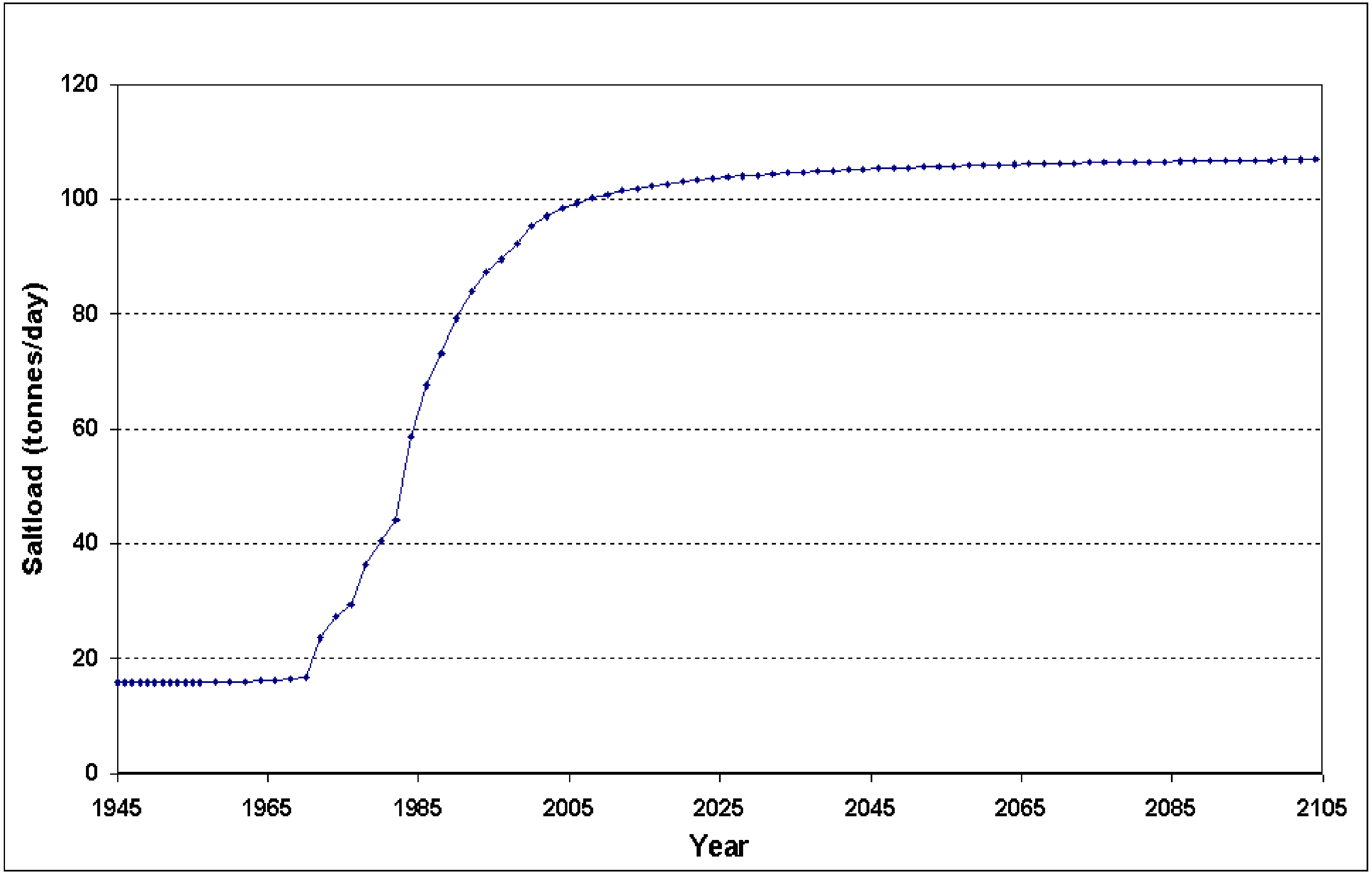
Appendix B-3-2b Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-3 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	1945	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1946	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1947	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1948	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1949	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1950	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1951	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1952	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1953	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1954	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
30	1955	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
365	1956	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
1095	1958	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.87
1825	1960	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.5	0.0	15.92
2555	1962	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	16.01
3285	1964	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	16.13
4015	1966	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.2	0.6	0.0	16.31
4745	1968	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.3	0.7	0.0	16.51
5475	1970	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.4	0.8	0.0	16.75
6205	1972	0.0	12.2	0.0	0.0	2.6	0.0	0.9	7.1	0.9	0.0	23.59
6935	1974	0.0	12.8	0.0	0.0	3.8	0.0	1.3	8.5	1.0	0.0	27.37
7665	1976	0.0	13.1	0.0	0.0	4.4	0.0	1.5	9.3	1.1	0.0	29.44
8395	1978	0.0	14.3	0.0	0.0	6.4	0.0	2.3	12.2	1.2	0.0	36.47
9125	1980	0.0	14.9	0.0	0.0	7.6	0.0	2.8	13.8	1.3	0.0	40.51
9855	1982	0.3	15.3	0.0	0.0	8.3	0.1	3.2	15.4	1.4	0.1	44.03
10585	1984	0.9	17.9	0.0	0.0	12.3	0.1	4.6	20.6	1.5	0.7	58.63
11315	1986	2.6	19.3	0.0	0.1	14.3	0.2	5.4	23.3	1.6	0.9	67.53
12045	1988	3.5	20.1	0.0	0.1	15.2	0.2	5.8	25.3	1.8	1.1	73.13
12775	1990	4.4	21.1	0.0	0.1	16.5	0.2	6.3	27.4	1.9	1.3	79.18
13505	1992	5.8	21.8	0.0	0.2	17.1	0.2	6.6	28.9	2.1	1.4	84.00
14235	1994	6.6	22.3	0.0	0.2	17.4	0.2	6.7	30.1	2.2	1.4	87.31
14965	1996	7.2	22.5	0.0	0.2	17.7	0.2	6.8	31.0	2.3	1.5	89.54
15695	1998	8.5	22.3	0.0	0.2	17.8	0.3	6.9	32.2	2.5	1.5	92.21
16425	2000	10.3	22.1	0.0	0.2	17.9	0.3	7.0	33.4	2.6	1.5	95.31
17155	2002	10.9	22.2	0.0	0.2	18.0	0.3	7.0	34.2	2.8	1.5	97.04
17885	2004	11.2	22.3	0.0	0.2	18.0	0.3	7.0	34.9	2.9	1.5	98.34
18615	2006	11.5	22.3	0.0	0.2	18.1	0.3	7.1	35.4	2.9	1.5	99.35
19345	2008	11.7	22.4	0.0	0.2	18.2	0.3	7.1	35.8	3.0	1.5	100.17
20075	2010	11.9	22.4	0.0	0.2	18.2	0.3	7.1	36.1	3.0	1.6	100.86
20805	2012	12.0	22.5	0.0	0.2	18.3	0.3	7.2	36.4	3.1	1.6	101.43
21535	2014	12.1	22.5	0.0	0.3	18.3	0.3	7.2	36.6	3.1	1.6	101.91
22265	2016	12.2	22.5	0.0	0.3	18.3	0.3	7.2	36.8	3.1	1.6	102.33
22995	2018	12.3	22.6	0.0	0.3	18.4	0.3	7.2	36.9	3.2	1.6	102.69

Appendix B-3-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-3 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
23725	2020	12.4	22.6	0.0	0.3	18.4	0.3	7.2	37.1	3.2	1.6	103.02
24455	2022	12.5	22.6	0.0	0.3	18.4	0.3	7.2	37.2	3.2	1.6	103.31
25185	2024	12.5	22.6	0.0	0.3	18.4	0.3	7.3	37.4	3.2	1.6	103.57
25915	2026	12.6	22.6	0.0	0.3	18.4	0.3	7.3	37.5	3.2	1.6	103.80
26645	2028	12.7	22.6	0.0	0.3	18.5	0.3	7.3	37.6	3.3	1.6	104.02
27375	2030	12.7	22.7	0.0	0.3	18.5	0.3	7.3	37.7	3.3	1.6	104.21
28105	2032	12.7	22.7	0.0	0.3	18.5	0.3	7.3	37.8	3.3	1.6	104.39
28835	2034	12.8	22.7	0.0	0.3	18.5	0.3	7.3	37.8	3.3	1.6	104.56
29565	2036	12.8	22.7	0.0	0.3	18.5	0.3	7.3	37.9	3.3	1.6	104.71
30295	2038	12.9	22.7	0.0	0.3	18.5	0.3	7.3	38.0	3.3	1.6	104.86
31025	2040	12.9	22.7	0.0	0.3	18.5	0.3	7.3	38.0	3.3	1.6	104.99
31755	2042	12.9	22.7	0.0	0.3	18.5	0.3	7.3	38.1	3.4	1.6	105.11
32485	2044	12.9	22.7	0.0	0.3	18.6	0.3	7.3	38.2	3.4	1.6	105.22
33215	2046	13.0	22.7	0.0	0.3	18.6	0.3	7.3	38.2	3.4	1.6	105.33
33945	2048	13.0	22.7	0.0	0.3	18.6	0.3	7.3	38.3	3.4	1.6	105.43
34675	2050	13.0	22.7	0.0	0.3	18.6	0.3	7.3	38.3	3.4	1.6	105.52
35405	2052	13.0	22.7	0.0	0.3	18.6	0.3	7.3	38.3	3.4	1.6	105.61
36135	2054	13.1	22.8	0.0	0.3	18.6	0.3	7.3	38.4	3.4	1.6	105.69
36865	2056	13.1	22.8	0.0	0.3	18.6	0.3	7.3	38.4	3.4	1.6	105.77
37595	2058	13.1	22.8	0.0	0.3	18.6	0.3	7.3	38.5	3.4	1.6	105.85
38325	2060	13.1	22.8	0.0	0.3	18.6	0.3	7.4	38.5	3.4	1.6	105.92
39055	2062	13.1	22.8	0.0	0.3	18.6	0.3	7.4	38.5	3.4	1.6	105.98
39785	2064	13.1	22.8	0.0	0.3	18.6	0.3	7.4	38.5	3.4	1.6	106.05
40515	2066	13.2	22.8	0.0	0.3	18.6	0.3	7.4	38.6	3.4	1.6	106.11
41245	2068	13.2	22.8	0.0	0.3	18.6	0.3	7.4	38.6	3.4	1.6	106.17
41975	2070	13.2	22.8	0.0	0.3	18.6	0.3	7.4	38.6	3.5	1.6	106.23
42705	2072	13.2	22.8	0.0	0.3	18.6	0.3	7.4	38.7	3.5	1.6	106.28
43435	2074	13.2	22.8	0.0	0.3	18.6	0.3	7.4	38.7	3.5	1.6	106.33
44165	2076	13.2	22.8	0.0	0.3	18.6	0.3	7.4	38.7	3.5	1.6	106.38
44895	2078	13.2	22.8	0.0	0.3	18.6	0.3	7.4	38.7	3.5	1.6	106.43
45625	2080	13.2	22.8	0.0	0.3	18.6	0.3	7.4	38.7	3.5	1.6	106.47
46355	2082	13.2	22.8	0.0	0.3	18.6	0.3	7.4	38.8	3.5	1.6	106.51
47085	2084	13.3	22.8	0.0	0.3	18.6	0.3	7.4	38.8	3.5	1.6	106.55
47815	2086	13.3	22.8	0.0	0.3	18.7	0.3	7.4	38.8	3.5	1.6	106.59
48545	2088	13.3	22.8	0.0	0.3	18.7	0.3	7.4	38.8	3.5	1.6	106.63
49275	2090	13.3	22.8	0.0	0.3	18.7	0.3	7.4	38.8	3.5	1.6	106.67
50005	2092	13.3	22.8	0.0	0.3	18.7	0.3	7.4	38.9	3.5	1.6	106.70
50735	2094	13.3	22.8	0.0	0.3	18.7	0.3	7.4	38.9	3.5	1.6	106.73
51465	2096	13.3	22.8	0.0	0.3	18.7	0.3	7.4	38.9	3.5	1.6	106.77
52195	2098	13.3	22.8	0.0	0.3	18.7	0.3	7.4	38.9	3.5	1.6	106.80
52925	2100	13.3	22.8	0.0	0.3	18.7	0.3	7.4	38.9	3.5	1.6	106.83
53655	2102	13.3	22.8	0.0	0.3	18.7	0.3	7.4	38.9	3.5	1.6	106.86
54385	2104	13.3	22.8	0.0	0.3	18.7	0.3	7.4	38.9	3.5	1.6	106.88
TDS	mg/L	22900	26200	30000	38100	38100	30000	30000	38740	8870	13500	

Appendix B-3-3b Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-3 (Bookpurnong Area)



Appendix B-3-3c Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-3 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
0	1945	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1946	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1947	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1948	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1949	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1950	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1951	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1952	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1953	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1954	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
30	1955	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
365	1956	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
1095	1958	0.0	9.7	6.0	0.5	2.6	0.5	1.5	2.4	1.5	25
1825	1960	0.0	9.8	6.0	0.5	2.7	0.5	1.6	2.4	1.7	25
2555	1962	0.0	9.9	6.1	0.5	2.8	0.5	1.7	2.5	1.9	26
3285	1964	0.0	9.9	6.2	0.5	2.9	0.6	1.8	2.6	2.1	27
4015	1966	0.0	10.0	6.2	0.6	3.0	0.6	1.9	2.7	2.4	28
4745	1968	0.0	10.1	6.3	0.6	3.1	0.7	2.1	2.8	2.7	28
5475	1970	0.0	10.1	6.4	0.6	3.2	0.7	2.2	2.9	2.9	29
6205	1972	0.0	11.3	6.5	0.7	3.9	0.8	2.8	3.9	3.2	33
6935	1974	0.0	11.9	6.6	0.7	4.3	0.9	3.2	4.4	3.5	35
7665	1976	0.0	12.3	6.7	0.7	4.6	0.9	3.4	4.7	3.8	37
8395	1978	0.0	13.2	6.8	0.8	5.2	1.0	4.0	5.7	4.0	41
9125	1980	0.0	13.8	6.8	0.8	5.6	1.1	4.4	6.2	4.3	43
9855	1982	0.0	14.1	6.9	0.9	5.9	1.1	4.8	6.8	4.6	45
10585	1984	0.1	16.0	7.0	1.0	7.0	1.2	5.8	8.4	4.8	51
11315	1986	0.5	17.1	7.2	1.0	7.5	1.3	6.4	9.3	5.2	55
12045	1988	0.8	17.7	7.3	1.1	7.9	1.4	6.7	10.0	5.5	58
12775	1990	1.2	18.4	7.3	1.1	8.3	1.5	7.1	10.7	5.8	61
13505	1992	1.6	18.9	7.4	1.1	8.5	1.5	7.4	11.3	6.1	64
14235	1994	1.9	19.3	7.5	1.2	8.7	1.6	7.6	11.7	6.3	66
14965	1996	2.1	19.5	7.5	1.2	8.8	1.6	7.7	12.0	6.5	67
15695	1998	2.5	19.5	7.6	1.2	8.9	1.6	7.8	12.4	6.8	68
16425	2000	2.9	19.5	7.6	1.2	8.9	1.7	7.9	12.8	7.1	70
17155	2002	3.1	19.6	7.7	1.2	9.0	1.7	8.0	13.1	7.3	71
17885	2004	3.3	19.7	7.7	1.2	9.1	1.7	8.1	13.3	7.5	72
18615	2006	3.5	19.8	7.7	1.2	9.1	1.7	8.2	13.5	7.6	72
19345	2008	3.6	19.9	7.8	1.3	9.2	1.8	8.3	13.7	7.7	73
20075	2010	3.7	19.9	7.8	1.3	9.2	1.8	8.4	13.8	7.8	74
20805	2012	3.8	20.0	7.8	1.3	9.3	1.8	8.4	13.9	7.9	74
21535	2014	3.9	20.0	7.9	1.3	9.3	1.8	8.5	14.0	8.0	75
22265	2016	4.0	20.1	7.9	1.3	9.4	1.8	8.5	14.1	8.1	75
22995	2018	4.1	20.1	7.9	1.3	9.4	1.9	8.6	14.1	8.2	76

Appendix B-3-4a Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-3 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
23725	2020	4.1	20.1	8.0	1.3	9.4	1.9	8.6	14.2	8.2	76
24455	2022	4.2	20.2	8.0	1.3	9.5	1.9	8.7	14.3	8.3	76
25185	2024	4.3	20.2	8.0	1.3	9.5	1.9	8.7	14.3	8.3	77
25915	2026	4.3	20.2	8.0	1.3	9.5	1.9	8.7	14.4	8.4	77
26645	2028	4.4	20.3	8.0	1.3	9.6	1.9	8.8	14.4	8.4	77
27375	2030	4.4	20.3	8.1	1.3	9.6	1.9	8.8	14.4	8.5	77
28105	2032	4.5	20.3	8.1	1.3	9.6	1.9	8.8	14.5	8.5	78
28835	2034	4.5	20.3	8.1	1.3	9.6	2.0	8.9	14.5	8.6	78
29565	2036	4.6	20.4	8.1	1.4	9.6	2.0	8.9	14.6	8.6	78
30295	2038	4.6	20.4	8.1	1.4	9.7	2.0	8.9	14.6	8.6	78
31025	2040	4.6	20.4	8.1	1.4	9.7	2.0	8.9	14.6	8.7	78
31755	2042	4.7	20.4	8.2	1.4	9.7	2.0	9.0	14.6	8.7	79
32485	2044	4.7	20.4	8.2	1.4	9.7	2.0	9.0	14.7	8.7	79
33215	2046	4.7	20.4	8.2	1.4	9.7	2.0	9.0	14.7	8.8	79
33945	2048	4.8	20.5	8.2	1.4	9.8	2.0	9.0	14.7	8.8	79
34675	2050	4.8	20.5	8.2	1.4	9.8	2.0	9.0	14.7	8.8	79
35405	2052	4.8	20.5	8.2	1.4	9.8	2.0	9.1	14.8	8.8	79
36135	2054	4.9	20.5	8.2	1.4	9.8	2.0	9.1	14.8	8.9	80
36865	2056	4.9	20.5	8.2	1.4	9.8	2.0	9.1	14.8	8.9	80
37595	2058	4.9	20.5	8.3	1.4	9.8	2.1	9.1	14.8	8.9	80
38325	2060	4.9	20.5	8.3	1.4	9.8	2.1	9.1	14.8	8.9	80
39055	2062	5.0	20.5	8.3	1.4	9.9	2.1	9.1	14.9	8.9	80
39785	2064	5.0	20.6	8.3	1.4	9.9	2.1	9.2	14.9	9.0	80
40515	2066	5.0	20.6	8.3	1.4	9.9	2.1	9.2	14.9	9.0	80
41245	2068	5.0	20.6	8.3	1.4	9.9	2.1	9.2	14.9	9.0	80
41975	2070	5.0	20.6	8.3	1.4	9.9	2.1	9.2	14.9	9.0	80
42705	2072	5.1	20.6	8.3	1.4	9.9	2.1	9.2	14.9	9.0	81
43435	2074	5.1	20.6	8.3	1.4	9.9	2.1	9.2	14.9	9.1	81
44165	2076	5.1	20.6	8.3	1.4	9.9	2.1	9.2	15.0	9.1	81
44895	2078	5.1	20.6	8.3	1.4	9.9	2.1	9.2	15.0	9.1	81
45625	2080	5.1	20.6	8.4	1.4	9.9	2.1	9.3	15.0	9.1	81
46355	2082	5.2	20.6	8.4	1.4	10.0	2.1	9.3	15.0	9.1	81
47085	2084	5.2	20.6	8.4	1.4	10.0	2.1	9.3	15.0	9.1	81
47815	2086	5.2	20.7	8.4	1.4	10.0	2.1	9.3	15.0	9.1	81
48545	2088	5.2	20.7	8.4	1.4	10.0	2.1	9.3	15.0	9.1	81
49275	2090	5.2	20.7	8.4	1.4	10.0	2.1	9.3	15.0	9.2	81
50005	2092	5.2	20.7	8.4	1.4	10.0	2.1	9.3	15.0	9.2	81
50735	2094	5.3	20.7	8.4	1.4	10.0	2.1	9.3	15.1	9.2	81
51465	2096	5.3	20.7	8.4	1.4	10.0	2.1	9.3	15.1	9.2	82
52195	2098	5.3	20.7	8.4	1.4	10.0	2.2	9.3	15.1	9.2	82
52925	2100	5.3	20.7	8.4	1.4	10.0	2.2	9.4	15.1	9.2	82
53655	2102	5.3	20.7	8.4	1.4	10.0	2.2	9.4	15.1	9.2	82
54385	2104	5.3	20.7	8.4	1.4	10.0	2.2	9.4	15.1	9.2	82
TDS	mg/L	20000	20000	28600	28600	28600	28600	28600	28600	28600	

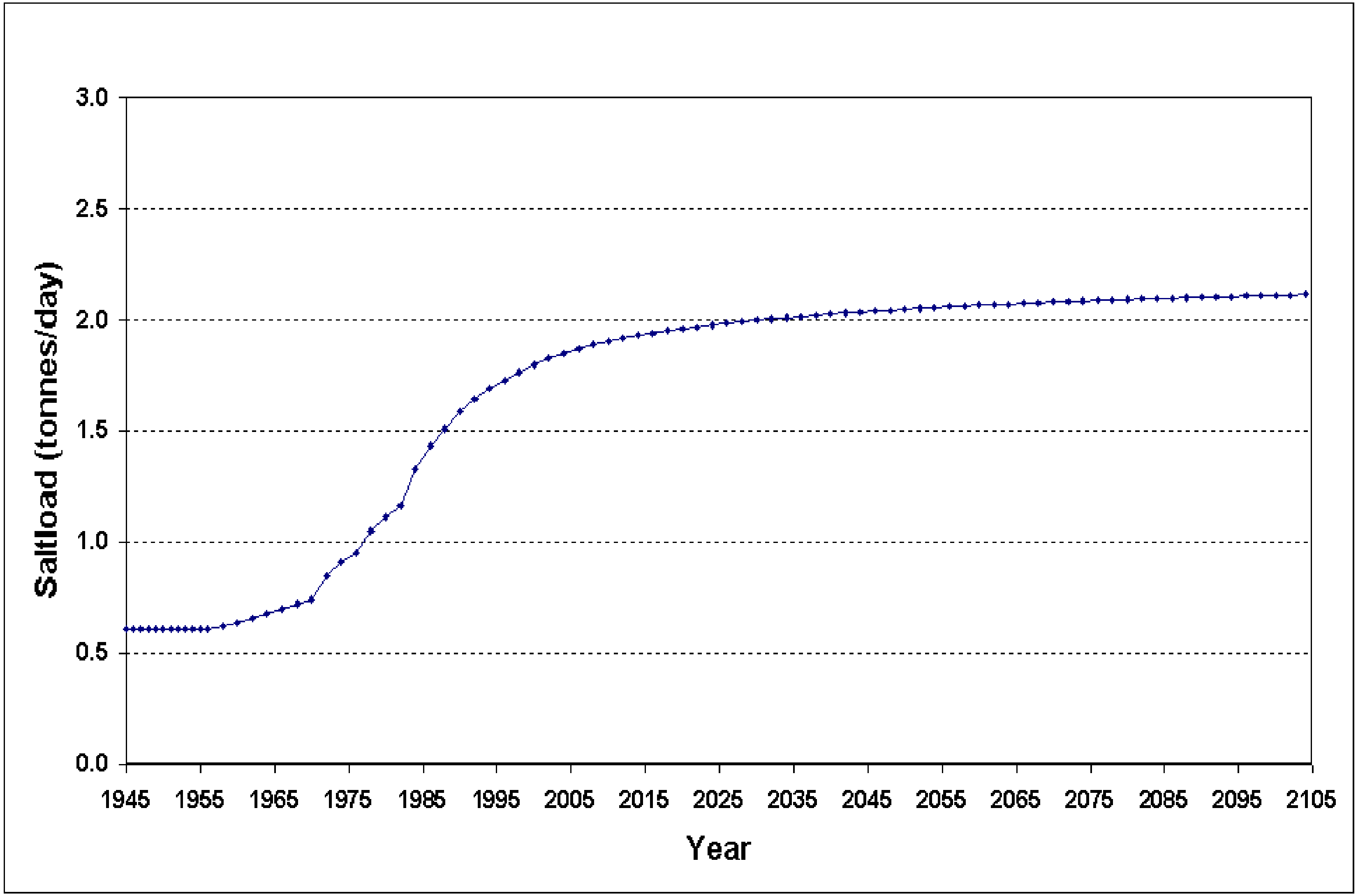
Appendix B-3-4b Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-3 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
0	1945	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1946	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1947	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1948	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1949	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1950	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1951	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1952	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1953	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1954	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
30	1955	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
365	1956	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
1095	1958	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.62
1825	1960	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.64
2555	1962	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.1	0.66
3285	1964	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.68
4015	1966	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.70
4745	1968	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.72
5475	1970	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.74
6205	1972	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.85
6935	1974	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.91
7665	1976	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.95
8395	1978	0.0	0.3	0.2	0.0	0.1	0.0	0.1	0.2	0.1	1.05
9125	1980	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1.11
9855	1982	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1.17
10585	1984	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.2	0.1	1.33
11315	1986	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.1	1.44
12045	1988	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.51
12775	1990	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.59
13505	1992	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.65
14235	1994	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.69
14965	1996	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	1.73
15695	1998	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.76
16425	2000	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.80
17155	2002	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.83
17885	2004	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.85
18615	2006	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.87
19345	2008	0.1	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.2	1.89
20075	2010	0.1	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.2	1.90
20805	2012	0.1	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.2	1.92
21535	2014	0.1	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.2	1.93
22265	2016	0.1	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.2	1.94
22995	2018	0.1	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.2	1.95

Appendix B-3-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-3 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
23725	2020	0.1	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.2	1.96
24455	2022	0.1	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.2	1.97
25185	2024	0.1	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.2	1.98
25915	2026	0.1	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.2	1.99
26645	2028	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.2	1.99
27375	2030	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.2	2.00
28105	2032	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.2	2.01
28835	2034	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.2	2.01
29565	2036	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.2	2.02
30295	2038	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.2	2.02
31025	2040	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.2	2.03
31755	2042	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.2	2.03
32485	2044	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.2	2.04
33215	2046	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.04
33945	2048	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.05
34675	2050	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.05
35405	2052	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.05
36135	2054	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.06
36865	2056	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.06
37595	2058	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.06
38325	2060	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.07
39055	2062	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.07
39785	2064	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.07
40515	2066	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.08
41245	2068	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.08
41975	2070	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.08
42705	2072	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.08
43435	2074	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.09
44165	2076	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.09
44895	2078	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.09
45625	2080	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.09
46355	2082	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.10
47085	2084	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.10
47815	2086	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.10
48545	2088	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.10
49275	2090	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.10
50005	2092	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.11
50735	2094	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.11
51465	2096	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.11
52195	2098	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.11
52925	2100	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.11
53655	2102	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.11
54385	2104	0.1	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.12
TDS	mg/L	20000	20000	28600	28600	28600	28600	28600	28600	28600	

Appendix B-3-5b Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-3 (Bookpurnong Area)

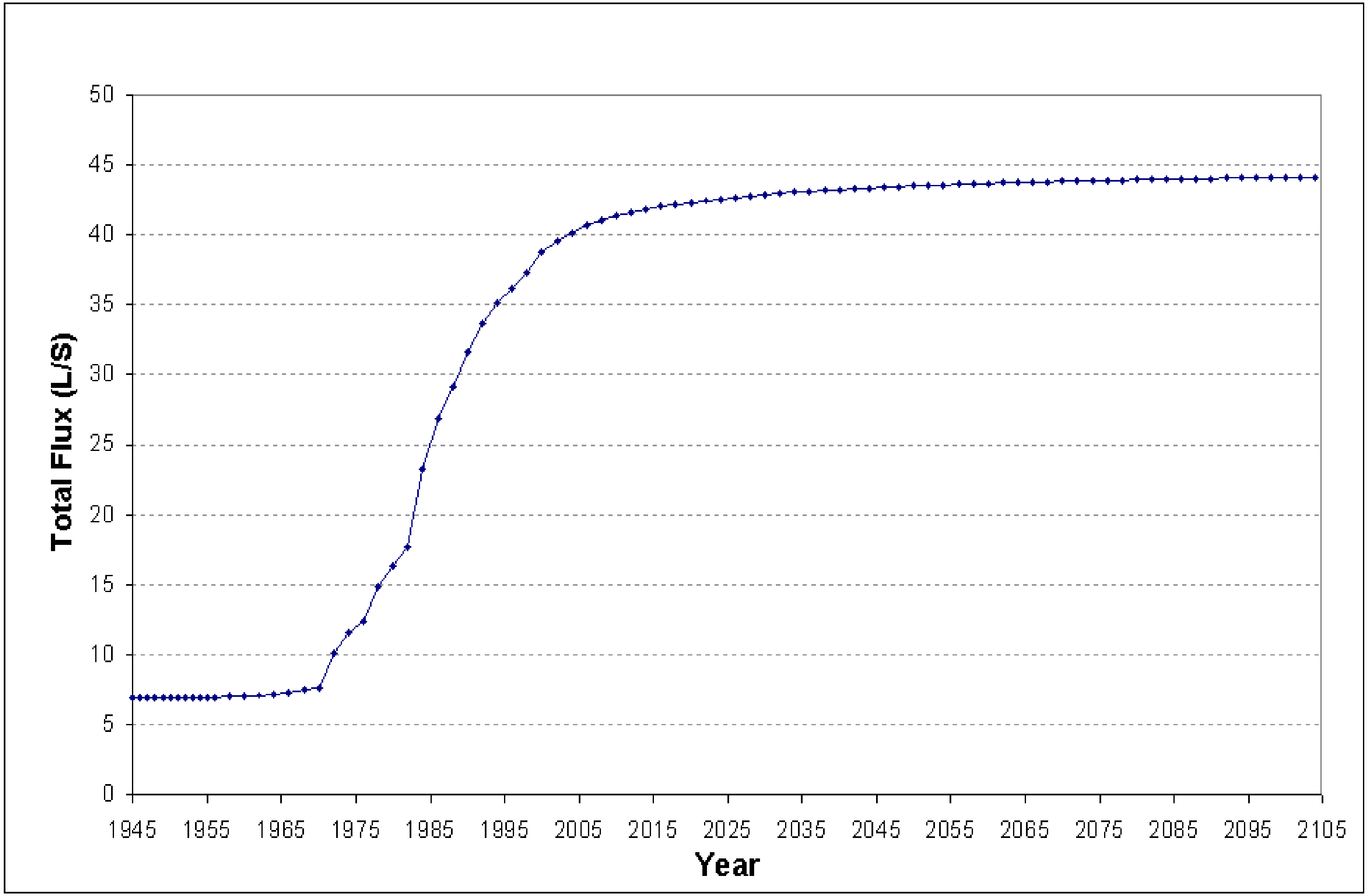


Appendix B-3-5c Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-3 (Bookpurnong Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	1945	581	24	605	7.00
0	1946	581	24	605	7.00
0	1947	581	24	605	7.00
0	1948	581	24	605	7.00
0	1949	581	24	605	7.00
0	1950	581	24	605	7.00
0	1951	581	24	605	7.00
0	1952	581	24	605	7.00
0	1953	581	24	605	7.00
0	1954	581	24	605	7.00
30	1955	581	24	605	7.00
365	1956	581	24	605	7.01
1095	1958	582	25	607	7.02
1825	1960	584	25	610	7.06
2555	1962	589	26	615	7.12
3285	1964	596	27	623	7.21
4015	1966	607	28	635	7.34
4745	1968	620	28	648	7.50
5475	1970	634	29	663	7.67
6205	1972	843	33	876	10.14
6935	1974	961	35	996	11.53
7665	1976	1029	37	1066	12.34
8395	1978	1242	41	1283	14.85
9125	1980	1370	43	1413	16.35
9855	1982	1485	45	1530	17.71
10585	1984	1954	51	2006	23.21
11315	1986	2262	55	2318	26.83
12045	1988	2459	58	2517	29.14
12775	1990	2668	61	2729	31.59
13505	1992	2846	64	2910	33.68
14235	1994	2969	66	3035	35.13
14965	1996	3054	67	3121	36.12
15695	1998	3157	68	3226	37.34
16425	2000	3282	70	3352	38.79
17155	2002	3349	71	3419	39.58
17885	2004	3399	72	3470	40.17
18615	2006	3438	72	3510	40.63
19345	2008	3469	73	3542	41.00
20075	2010	3495	74	3569	41.31
20805	2012	3517	74	3591	41.57
21535	2014	3535	75	3610	41.78
22265	2016	3551	75	3626	41.97
22995	2018	3565	76	3641	42.14

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
23725	2020	3578	76	3654	42.29
24455	2022	3589	76	3665	42.42
25185	2024	3599	77	3676	42.54
25915	2026	3608	77	3685	42.65
26645	2028	3616	77	3694	42.75
27375	2030	3624	77	3701	42.84
28105	2032	3631	78	3709	42.92
28835	2034	3638	78	3715	43.00
29565	2036	3644	78	3722	43.08
30295	2038	3649	78	3728	43.14
31025	2040	3655	78	3733	43.21
31755	2042	3659	79	3738	43.26
32485	2044	3664	79	3743	43.32
33215	2046	3668	79	3747	43.37
33945	2048	3672	79	3751	43.41
34675	2050	3676	79	3755	43.46
35405	2052	3679	79	3758	43.50
36135	2054	3682	80	3762	43.54
36865	2056	3685	80	3765	43.58
37595	2058	3688	80	3768	43.61
38325	2060	3691	80	3771	43.65
39055	2062	3694	80	3774	43.68
39785	2064	3696	80	3777	43.71
40515	2066	3699	80	3779	43.74
41245	2068	3701	80	3782	43.77
41975	2070	3703	80	3784	43.80
42705	2072	3706	81	3786	43.82
43435	2074	3708	81	3788	43.85
44165	2076	3709	81	3790	43.87
44895	2078	3711	81	3792	43.89
45625	2080	3713	81	3794	43.91
46355	2082	3715	81	3796	43.93
47085	2084	3716	81	3797	43.95
47815	2086	3718	81	3799	43.97
48545	2088	3719	81	3800	43.99
49275	2090	3721	81	3802	44.00
50005	2092	3722	81	3803	44.02
50735	2094	3723	81	3805	44.04
51465	2096	3725	82	3806	44.05
52195	2098	3726	82	3807	44.07
52925	2100	3727	82	3809	44.08
53655	2102	3728	82	3810	44.09
54385	2104	3729	82	3811	44.11

Appendix B-3-6a Predicted total groundwater flux in Scenario-3 (Bookpurnong Area)

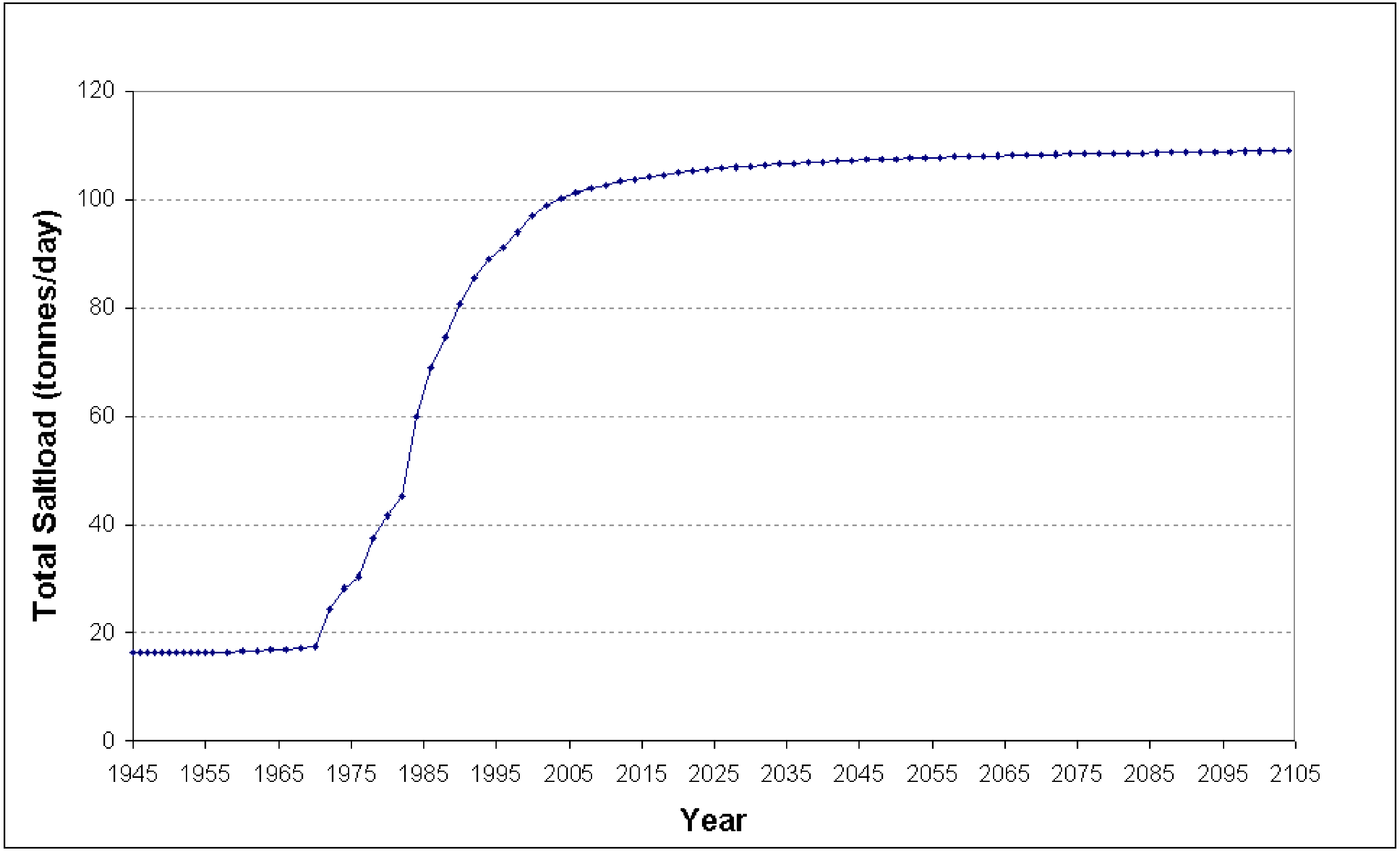


Appendix B-3-6b Graph of predicted total groundwater flux (L/second) entering the River Murray in Scenario-3 (Bookpurnong Area)

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	16	1	16.46
0	1946	16	1	16.46
0	1947	16	1	16.46
0	1948	16	1	16.46
0	1949	16	1	16.46
0	1950	16	1	16.46
0	1951	16	1	16.46
0	1952	16	1	16.46
0	1953	16	1	16.46
0	1954	16	1	16.46
30	1955	16	1	16.46
365	1956	16	1	16.46
1095	1958	16	1	16.49
1825	1960	16	1	16.56
2555	1962	16	1	16.66
3285	1964	16	1	16.81
4015	1966	16	1	17.01
4745	1968	17	1	17.24
5475	1970	17	1	17.49
6205	1972	24	1	24.44
6935	1974	27	1	28.29
7665	1976	29	1	30.40
8395	1978	36	1	37.52
9125	1980	41	1	41.63
9855	1982	44	1	45.19
10585	1984	59	1	59.96
11315	1986	68	1	68.97
12045	1988	73	2	74.64
12775	1990	79	2	80.76
13505	1992	84	2	85.65
14235	1994	87	2	89.00
14965	1996	90	2	91.27
15695	1998	92	2	93.97
16425	2000	95	2	97.11
17155	2002	97	2	98.87
17885	2004	98	2	100.19
18615	2006	99	2	101.22
19345	2008	100	2	102.06
20075	2010	101	2	102.76
20805	2012	101	2	103.34
21535	2014	102	2	103.84
22265	2016	102	2	104.27
22995	2018	103	2	104.65

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
23725	2020	103	2	104.98
24455	2022	103	2	105.28
25185	2024	104	2	105.54
25915	2026	104	2	105.79
26645	2028	104	2	106.01
27375	2030	104	2	106.21
28105	2032	104	2	106.40
28835	2034	105	2	106.57
29565	2036	105	2	106.73
30295	2038	105	2	106.88
31025	2040	105	2	107.02
31755	2042	105	2	107.14
32485	2044	105	2	107.26
33215	2046	105	2	107.37
33945	2048	105	2	107.47
34675	2050	106	2	107.57
35405	2052	106	2	107.66
36135	2054	106	2	107.75
36865	2056	106	2	107.83
37595	2058	106	2	107.91
38325	2060	106	2	107.98
39055	2062	106	2	108.05
39785	2064	106	2	108.12
40515	2066	106	2	108.19
41245	2068	106	2	108.25
41975	2070	106	2	108.31
42705	2072	106	2	108.36
43435	2074	106	2	108.42
44165	2076	106	2	108.47
44895	2078	106	2	108.52
45625	2080	106	2	108.56
46355	2082	107	2	108.61
47085	2084	107	2	108.65
47815	2086	107	2	108.69
48545	2088	107	2	108.73
49275	2090	107	2	108.77
50005	2092	107	2	108.81
50735	2094	107	2	108.84
51465	2096	107	2	108.88
52195	2098	107	2	108.91
52925	2100	107	2	108.94
53655	2102	107	2	108.97
54385	2104	107	2	109.00

Appendix B-3-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-3 (Bookpurnong Area)



Appendix B-3-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-3 (Bookpurnong Area)

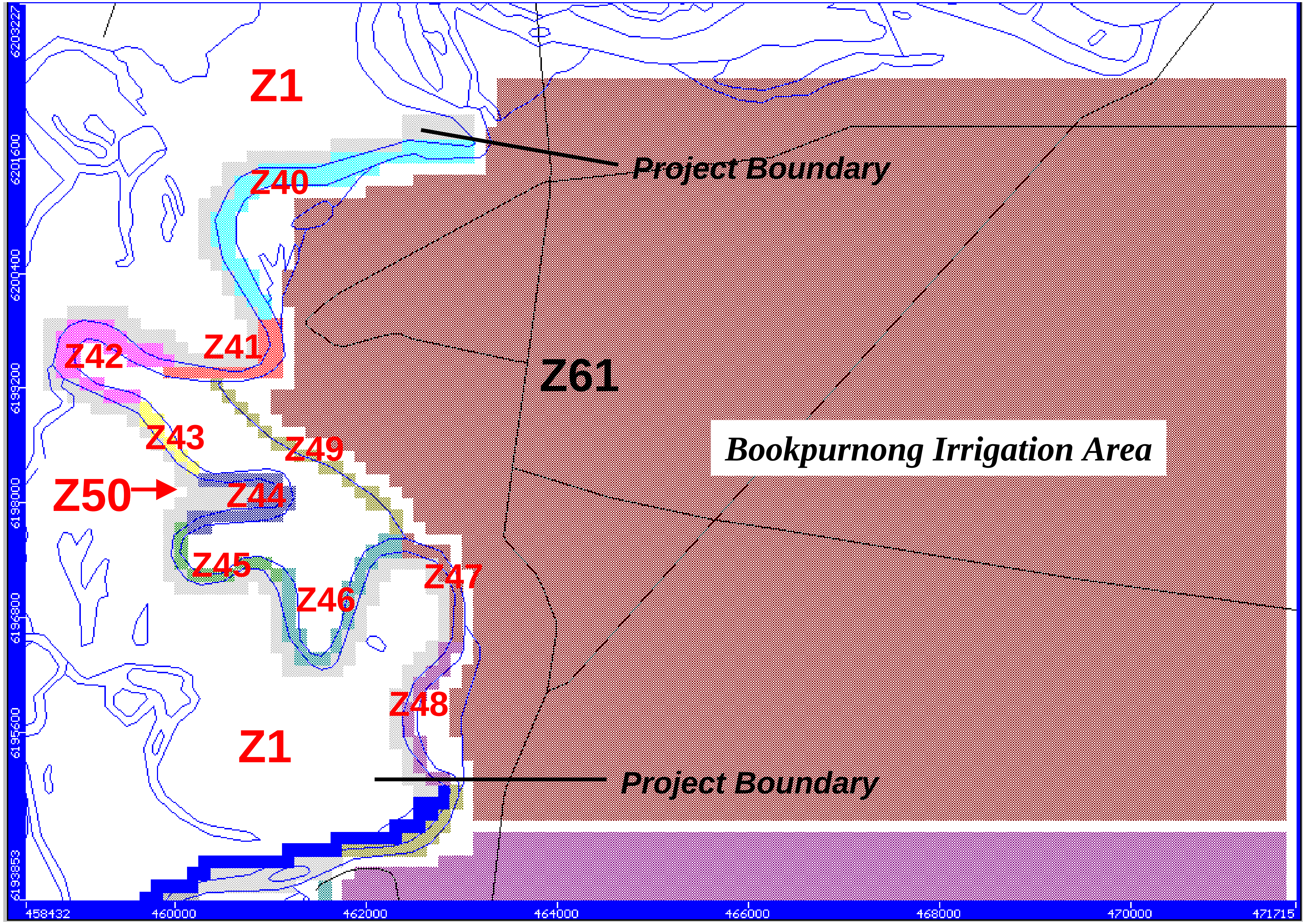
B4. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-4 (BOOKPURNONG AREA)

- Flow budget zones (Bookpurnong Area)
- Predicted lateral groundwater flux (m3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)

Appendix B-4

Groundwater flux and salt load entering the River Murray Scenario-4 (Bookpurnong Area)

-Flow budget zones (Bookpurnong Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)



Appendix B-4-1 Flow budget zones in model Layer-1 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	1945	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1946	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1947	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1948	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1949	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1950	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1951	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1952	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1953	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
0	1954	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
30	1955	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
365	1956	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	581
1095	1958	0.0	405.8	0.0	0.0	15.0	0.0	7.1	103.3	50.6	0.0	582
1825	1960	0.0	406.0	0.0	0.0	15.1	0.0	7.2	104.0	52.1	0.0	584
2555	1962	0.0	406.2	0.0	0.0	15.3	0.0	7.3	105.1	55.0	0.0	589
3285	1964	0.0	406.4	0.0	0.0	15.6	0.0	7.5	106.7	60.2	0.0	596
4015	1966	0.0	406.7	0.0	0.0	15.8	0.0	7.6	108.8	68.0	0.0	607
4745	1968	0.0	406.9	0.0	0.0	16.1	0.0	7.7	111.6	77.3	0.0	620
5475	1970	0.0	407.2	0.0	0.0	16.3	0.0	7.9	114.8	87.4	0.0	634
6205	1972	0.0	464.0	0.0	0.0	67.3	0.0	29.5	183.5	98.4	0.0	843
6935	1974	0.0	488.1	0.0	0.0	99.9	0.0	43.4	219.5	109.9	0.0	961
7665	1976	0.0	500.6	0.0	0.0	115.3	0.0	50.9	240.8	121.6	0.0	1029
8395	1978	0.0	547.3	0.0	0.0	168.2	0.0	77.1	315.5	133.9	0.0	1242
9125	1980	1.9	569.3	0.0	0.0	200.3	1.1	93.0	355.4	146.2	2.6	1370
9855	1982	12.7	582.4	0.0	0.0	219.0	1.8	105.3	398.0	157.7	7.9	1485
10585	1984	39.7	684.2	0.0	0.5	323.9	4.0	153.0	530.8	169.5	48.5	1954
11315	1986	112.2	735.2	0.0	1.4	374.3	5.6	178.8	601.0	185.0	68.9	2262
12045	1988	154.9	768.4	0.0	1.9	399.3	6.4	193.4	653.0	201.6	80.1	2459
12775	1990	191.7	804.1	0.0	3.5	432.0	7.3	210.1	707.4	216.9	94.7	2668
13505	1992	253.7	830.6	0.0	4.5	450.4	7.9	220.0	747.6	233.8	102.5	2851
14235	1994	290.7	854.2	0.0	5.5	473.4	8.6	233.4	785.4	250.2	114.2	3016
14965	1996	318.1	868.9	0.0	6.4	491.7	9.2	243.8	815.8	263.7	122.7	3140
15695	1998	379.7	863.4	0.0	7.0	504.6	9.6	251.4	852.5	279.8	129.1	3277
16425	2000	461.5	862.0	0.0	7.5	516.7	10.0	261.7	903.6	295.0	136.9	3455
17155	2002	526.2	840.1	0.0	6.7	500.4	9.8	256.6	919.6	306.0	129.4	3495
17885	2004	478.5	788.1	0.0	4.8	466.4	9.0	242.2	910.2	312.4	114.6	3326
18615	2006	409.3	699.7	0.0	0.9	338.1	5.9	170.5	730.6	314.5	51.9	2721
19345	2008	379.5	658.6	0.0	0.0	281.1	4.0	140.3	671.5	314.8	30.8	2481
20075	2010	355.8	637.4	0.0	0.0	258.1	3.3	128.6	647.0	314.7	22.4	2367
20805	2012	337.4	625.2	0.0	0.0	246.8	2.9	123.0	634.4	314.7	18.2	2303
21535	2014	324.1	617.7	0.0	0.0	240.6	2.8	119.9	627.1	314.6	16.0	2263
22265	2016	314.6	613.0	0.0	0.0	236.9	2.6	118.0	622.6	314.6	14.6	2237
22995	2018	307.9	610.0	0.0	0.0	234.6	2.6	116.8	619.8	314.7	13.9	2220

Appendix B-4-2a Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-4 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
23725	2020	303.3	607.9	0.0	0.0	233.0	2.5	116.1	618.0	314.8	13.4	2209
24455	2022	300.0	606.6	0.0	0.0	232.0	2.5	115.6	617.0	314.9	13.0	2202
25185	2024	297.8	605.6	0.0	0.0	231.3	2.5	115.3	616.4	315.2	12.8	2197
25915	2026	296.3	605.0	0.0	0.0	230.9	2.5	115.1	616.2	315.4	12.7	2194
26645	2028	295.4	604.6	0.0	0.0	230.6	2.5	114.9	616.2	315.7	12.6	2193
27375	2030	294.8	604.4	0.0	0.0	230.4	2.5	114.9	616.4	316.1	12.5	2192
28105	2032	294.5	604.2	0.0	0.0	230.3	2.5	114.8	616.7	316.5	12.5	2192
28835	2034	294.4	604.1	0.0	0.0	230.3	2.5	114.8	617.1	316.9	12.5	2193
29565	2036	294.4	604.1	0.0	0.0	230.3	2.5	114.8	617.5	317.4	12.5	2194
30295	2038	294.6	604.1	0.0	0.0	230.3	2.5	114.8	618.0	317.9	12.5	2195
31025	2040	294.8	604.2	0.0	0.0	230.4	2.5	114.9	618.6	318.4	12.5	2196
31755	2042	295.1	604.2	0.0	0.0	230.4	2.5	114.9	619.1	318.9	12.5	2198
32485	2044	295.4	604.3	0.0	0.0	230.5	2.5	114.9	619.7	319.4	12.5	2199
33215	2046	295.7	604.4	0.0	0.0	230.5	2.5	115.0	620.3	320.0	12.6	2201
33945	2048	296.1	604.4	0.0	0.0	230.6	2.5	115.0	620.8	320.5	12.6	2203
34675	2050	296.4	604.5	0.0	0.0	230.7	2.5	115.1	621.4	321.1	12.6	2204
35405	2052	296.8	604.6	0.0	0.0	230.8	2.5	115.1	622.0	321.7	12.6	2206
36135	2054	297.2	604.7	0.0	0.0	230.9	2.5	115.2	622.5	322.2	12.7	2208
36865	2056	297.5	604.8	0.0	0.0	230.9	2.5	115.2	623.1	322.8	12.7	2210
37595	2058	297.9	604.9	0.0	0.0	231.0	2.5	115.3	623.6	323.4	12.7	2211
38325	2060	298.2	605.0	0.0	0.0	231.1	2.5	115.3	624.2	323.9	12.7	2213
39055	2062	298.6	605.1	0.0	0.0	231.2	2.5	115.3	624.7	324.5	12.8	2215
39785	2064	298.9	605.2	0.0	0.0	231.3	2.5	115.4	625.2	325.0	12.8	2216
40515	2066	299.2	605.2	0.0	0.0	231.3	2.5	115.4	625.7	325.6	12.8	2218
41245	2068	299.5	605.3	0.0	0.0	231.4	2.5	115.5	626.2	326.1	12.8	2219
41975	2070	299.8	605.4	0.0	0.0	231.5	2.5	115.5	626.7	326.6	12.9	2221
42705	2072	300.2	605.5	0.0	0.0	231.6	2.5	115.6	627.1	327.1	12.9	2222
43435	2074	300.4	605.6	0.0	0.0	231.6	2.5	115.6	627.5	327.5	12.9	2224
44165	2076	300.7	605.6	0.0	0.0	231.7	2.6	115.6	628.0	328.0	12.9	2225
44895	2078	301.0	605.7	0.0	0.0	231.8	2.6	115.7	628.4	328.4	13.0	2226
45625	2080	301.3	605.8	0.0	0.0	231.8	2.6	115.7	628.8	328.8	13.0	2228
46355	2082	301.5	605.9	0.0	0.0	231.9	2.6	115.7	629.2	329.2	13.0	2229
47085	2084	301.8	605.9	0.0	0.0	231.9	2.6	115.8	629.5	329.6	13.0	2230
47815	2086	302.1	606.0	0.0	0.0	232.0	2.6	115.8	629.9	330.0	13.0	2231
48545	2088	302.3	606.1	0.0	0.0	232.1	2.6	115.9	630.3	330.4	13.1	2233
49275	2090	302.5	606.1	0.0	0.0	232.1	2.6	115.9	630.6	330.8	13.1	2234
50005	2092	302.8	606.2	0.0	0.0	232.2	2.6	115.9	631.0	331.1	13.1	2235
50735	2094	303.0	606.2	0.0	0.0	232.2	2.6	116.0	631.3	331.5	13.1	2236
51465	2096	303.2	606.3	0.0	0.0	232.3	2.6	116.0	631.6	331.9	13.1	2237
52195	2098	303.4	606.4	0.0	0.0	232.3	2.6	116.0	632.0	332.2	13.1	2238
52925	2100	303.6	606.4	0.0	0.0	232.4	2.6	116.1	632.3	332.5	13.2	2239
53655	2102	303.8	606.5	0.0	0.0	232.4	2.6	116.1	632.6	332.9	13.2	2240
54385	2104	304.0	606.5	0.0	0.0	232.5	2.6	116.1	632.9	333.2	13.2	2241
TDS	*mg/L*	*22900*	*26200*	*30000*	*38100*	*38100*	*30000*	*30000*	*38740*	*8870*	*13500*	

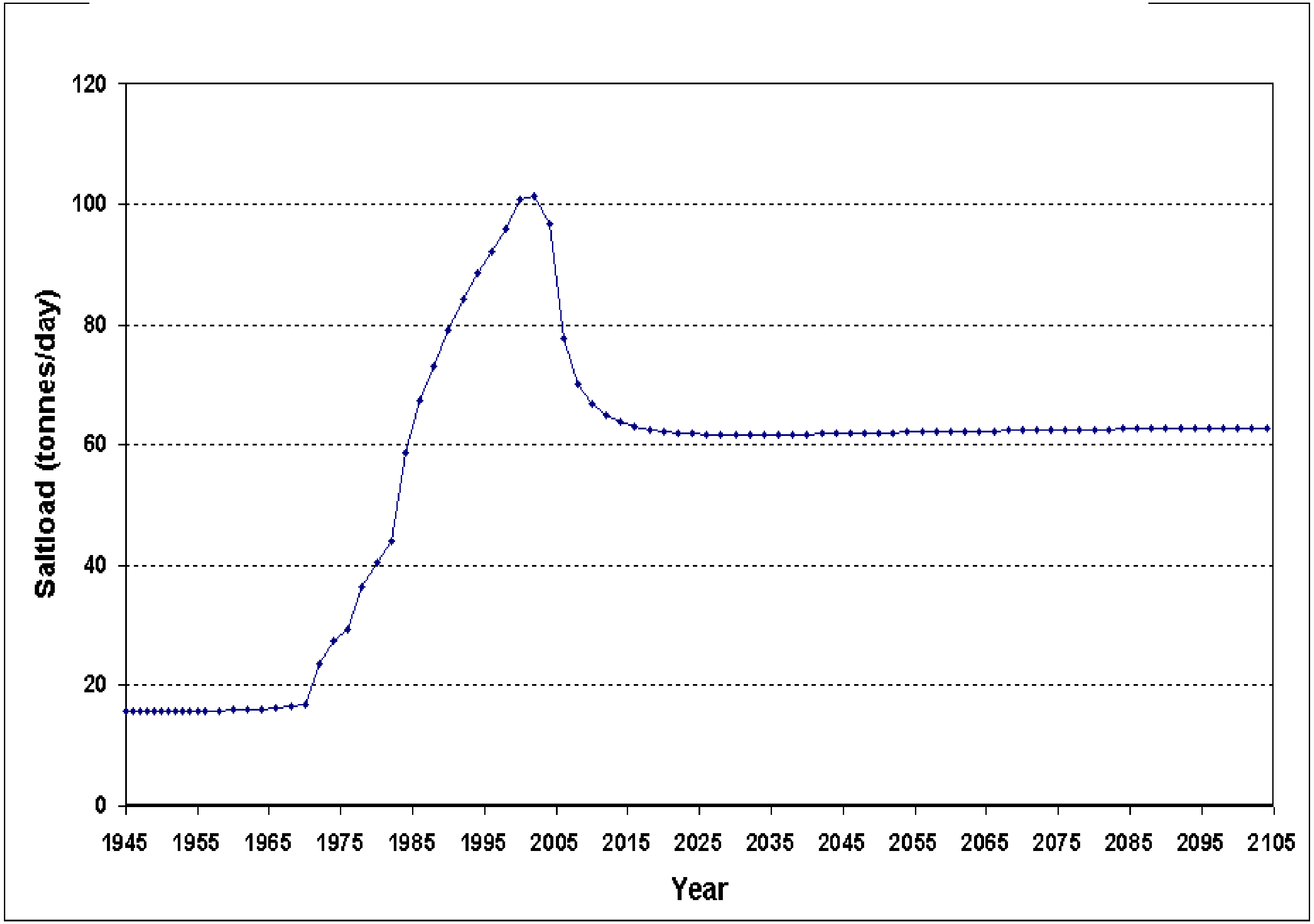
Appendix B-4-2b Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-4 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	1945	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1946	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1947	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1948	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1949	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1950	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1951	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1952	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1953	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1954	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
30	1955	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
365	1956	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
1095	1958	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.87
1825	1960	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.5	0.0	15.92
2555	1962	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	16.01
3285	1964	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	16.13
4015	1966	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.2	0.6	0.0	16.31
4745	1968	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.3	0.7	0.0	16.51
5475	1970	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.4	0.8	0.0	16.75
6205	1972	0.0	12.2	0.0	0.0	2.6	0.0	0.9	7.1	0.9	0.0	23.59
6935	1974	0.0	12.8	0.0	0.0	3.8	0.0	1.3	8.5	1.0	0.0	27.37
7665	1976	0.0	13.1	0.0	0.0	4.4	0.0	1.5	9.3	1.1	0.0	29.44
8395	1978	0.0	14.3	0.0	0.0	6.4	0.0	2.3	12.2	1.2	0.0	36.47
9125	1980	0.0	14.9	0.0	0.0	7.6	0.0	2.8	13.8	1.3	0.0	40.51
9855	1982	0.3	15.3	0.0	0.0	8.3	0.1	3.2	15.4	1.4	0.1	44.03
10585	1984	0.9	17.9	0.0	0.0	12.3	0.1	4.6	20.6	1.5	0.7	58.63
11315	1986	2.6	19.3	0.0	0.1	14.3	0.2	5.4	23.3	1.6	0.9	67.53
12045	1988	3.5	20.1	0.0	0.1	15.2	0.2	5.8	25.3	1.8	1.1	73.13
12775	1990	4.4	21.1	0.0	0.1	16.5	0.2	6.3	27.4	1.9	1.3	79.18
13505	1992	5.8	21.8	0.0	0.2	17.2	0.2	6.6	29.0	2.1	1.4	84.16
14235	1994	6.7	22.4	0.0	0.2	18.0	0.3	7.0	30.4	2.2	1.5	88.73
14965	1996	7.3	22.8	0.0	0.2	18.7	0.3	7.3	31.6	2.3	1.7	92.22
15695	1998	8.7	22.6	0.0	0.3	19.2	0.3	7.5	33.0	2.5	1.7	95.89
16425	2000	10.6	22.6	0.0	0.3	19.7	0.3	7.9	35.0	2.6	1.8	100.75
17155	2002	12.0	22.0	0.0	0.3	19.1	0.3	7.7	35.6	2.7	1.7	101.46
17885	2004	11.0	20.6	0.0	0.2	17.8	0.3	7.3	35.3	2.8	1.5	96.67
18615	2006	9.4	18.3	0.0	0.0	12.9	0.2	5.1	28.3	2.8	0.7	77.71
19345	2008	8.7	17.3	0.0	0.0	10.7	0.1	4.2	26.0	2.8	0.4	70.21
20075	2010	8.1	16.7	0.0	0.0	9.8	0.1	3.9	25.1	2.8	0.3	66.79
20805	2012	7.7	16.4	0.0	0.0	9.4	0.1	3.7	24.6	2.8	0.2	64.90
21535	2014	7.4	16.2	0.0	0.0	9.2	0.1	3.6	24.3	2.8	0.2	63.75
22265	2016	7.2	16.1	0.0	0.0	9.0	0.1	3.5	24.1	2.8	0.2	63.02
22995	2018	7.1	16.0	0.0	0.0	8.9	0.1	3.5	24.0	2.8	0.2	62.54

Appendix B-4-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-4 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
23725	2020	6.9	15.9	0.0	0.0	8.9	0.1	3.5	23.9	2.8	0.2	62.22
24455	2022	6.9	15.9	0.0	0.0	8.8	0.1	3.5	23.9	2.8	0.2	62.02
25185	2024	6.8	15.9	0.0	0.0	8.8	0.1	3.5	23.9	2.8	0.2	61.88
25915	2026	6.8	15.9	0.0	0.0	8.8	0.1	3.5	23.9	2.8	0.2	61.80
26645	2028	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.9	2.8	0.2	61.76
27375	2030	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.9	2.8	0.2	61.74
28105	2032	6.7	15.8	0.0	0.0	8.8	0.1	3.4	23.9	2.8	0.2	61.73
28835	2034	6.7	15.8	0.0	0.0	8.8	0.1	3.4	23.9	2.8	0.2	61.75
29565	2036	6.7	15.8	0.0	0.0	8.8	0.1	3.4	23.9	2.8	0.2	61.77
30295	2038	6.7	15.8	0.0	0.0	8.8	0.1	3.4	23.9	2.8	0.2	61.80
31025	2040	6.8	15.8	0.0	0.0	8.8	0.1	3.4	24.0	2.8	0.2	61.83
31755	2042	6.8	15.8	0.0	0.0	8.8	0.1	3.4	24.0	2.8	0.2	61.87
32485	2044	6.8	15.8	0.0	0.0	8.8	0.1	3.4	24.0	2.8	0.2	61.91
33215	2046	6.8	15.8	0.0	0.0	8.8	0.1	3.4	24.0	2.8	0.2	61.95
33945	2048	6.8	15.8	0.0	0.0	8.8	0.1	3.5	24.1	2.8	0.2	61.99
34675	2050	6.8	15.8	0.0	0.0	8.8	0.1	3.5	24.1	2.8	0.2	62.03
35405	2052	6.8	15.8	0.0	0.0	8.8	0.1	3.5	24.1	2.9	0.2	62.08
36135	2054	6.8	15.8	0.0	0.0	8.8	0.1	3.5	24.1	2.9	0.2	62.12
36865	2056	6.8	15.8	0.0	0.0	8.8	0.1	3.5	24.1	2.9	0.2	62.16
37595	2058	6.8	15.8	0.0	0.0	8.8	0.1	3.5	24.2	2.9	0.2	62.20
38325	2060	6.8	15.9	0.0	0.0	8.8	0.1	3.5	24.2	2.9	0.2	62.24
39055	2062	6.8	15.9	0.0	0.0	8.8	0.1	3.5	24.2	2.9	0.2	62.28
39785	2064	6.8	15.9	0.0	0.0	8.8	0.1	3.5	24.2	2.9	0.2	62.32
40515	2066	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.2	2.9	0.2	62.36
41245	2068	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.3	2.9	0.2	62.40
41975	2070	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.3	2.9	0.2	62.44
42705	2072	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.3	2.9	0.2	62.47
43435	2074	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.3	2.9	0.2	62.50
44165	2076	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.3	2.9	0.2	62.54
44895	2078	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.3	2.9	0.2	62.57
45625	2080	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.4	2.9	0.2	62.60
46355	2082	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.4	2.9	0.2	62.63
47085	2084	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.4	2.9	0.2	62.66
47815	2086	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.4	2.9	0.2	62.69
48545	2088	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.4	2.9	0.2	62.72
49275	2090	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.4	2.9	0.2	62.75
50005	2092	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.4	2.9	0.2	62.77
50735	2094	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.5	2.9	0.2	62.80
51465	2096	6.9	15.9	0.0	0.0	8.8	0.1	3.5	24.5	2.9	0.2	62.83
52195	2098	6.9	15.9	0.0	0.0	8.9	0.1	3.5	24.5	2.9	0.2	62.85
52925	2100	7.0	15.9	0.0	0.0	8.9	0.1	3.5	24.5	2.9	0.2	62.87
53655	2102	7.0	15.9	0.0	0.0	8.9	0.1	3.5	24.5	3.0	0.2	62.90
54385	2104	7.0	15.9	0.0	0.0	8.9	0.1	3.5	24.5	3.0	0.2	62.92
TDS	*mg/L*	*22900*	*26200*	*30000*	*38100*	*38100*	*30000*	*30000*	*38740*	*8870*	*13500*	

Appendix B-4-3b Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-4 (Bookpurnong Area)



Appendix B-4-3c Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-4 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
0	1945	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1946	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1947	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1948	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1949	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1950	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1951	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1952	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1953	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1954	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
30	1955	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
365	1956	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
1095	1958	0.0	9.7	6.0	0.5	2.6	0.5	1.5	2.4	1.5	25
1825	1960	0.0	9.8	6.0	0.5	2.7	0.5	1.6	2.4	1.7	25
2555	1962	0.0	9.9	6.1	0.5	2.8	0.5	1.7	2.5	1.9	26
3285	1964	0.0	9.9	6.2	0.5	2.9	0.6	1.8	2.6	2.1	27
4015	1966	0.0	10.0	6.2	0.6	3.0	0.6	1.9	2.7	2.4	28
4745	1968	0.0	10.1	6.3	0.6	3.1	0.7	2.1	2.8	2.7	28
5475	1970	0.0	10.1	6.4	0.6	3.2	0.7	2.2	2.9	2.9	29
6205	1972	0.0	11.3	6.5	0.7	3.9	0.8	2.8	3.9	3.2	33
6935	1974	0.0	11.9	6.6	0.7	4.3	0.9	3.2	4.4	3.5	35
7665	1976	0.0	12.3	6.7	0.7	4.6	0.9	3.4	4.7	3.8	37
8395	1978	0.0	13.2	6.8	0.8	5.2	1.0	4.0	5.7	4.0	41
9125	1980	0.0	13.8	6.8	0.8	5.6	1.1	4.4	6.2	4.3	43
9855	1982	0.0	14.1	6.9	0.9	5.9	1.1	4.8	6.8	4.6	45
10585	1984	0.1	16.0	7.0	1.0	7.0	1.2	5.8	8.4	4.8	51
11315	1986	0.5	17.1	7.2	1.0	7.5	1.3	6.4	9.3	5.2	55
12045	1988	0.8	17.7	7.3	1.1	7.9	1.4	6.7	10.0	5.5	58
12775	1990	1.2	18.4	7.3	1.1	8.3	1.5	7.1	10.7	5.8	61
13505	1992	1.6	18.9	7.4	1.1	8.5	1.5	7.4	11.3	6.1	64
14235	1994	1.9	19.4	7.5	1.2	8.8	1.6	7.7	11.8	6.3	66
14965	1996	2.2	19.8	7.6	1.2	9.1	1.6	7.9	12.2	6.5	68
15695	1998	2.5	19.8	7.6	1.2	9.2	1.7	8.1	12.6	6.7	69
16425	2000	3.0	19.9	7.6	1.2	9.4	1.7	8.4	13.2	6.9	71
17155	2002	3.3	19.6	7.7	1.2	9.3	1.7	8.4	13.4	7.0	72
17885	2004	3.3	18.9	7.7	1.2	9.0	1.7	8.2	13.4	7.1	70
18615	2006	2.9	17.2	7.6	1.1	7.8	1.6	6.9	11.4	7.1	64
19345	2008	2.7	16.4	7.5	1.1	7.2	1.5	6.4	10.7	7.1	61
20075	2010	2.6	15.9	7.5	1.1	7.0	1.5	6.2	10.4	7.0	59
20805	2012	2.4	15.6	7.5	1.1	6.8	1.5	6.1	10.3	7.0	58
21535	2014	2.4	15.5	7.5	1.0	6.8	1.5	6.0	10.2	7.0	58
22265	2016	2.3	15.4	7.5	1.0	6.7	1.5	6.0	10.1	7.0	58
22995	2018	2.3	15.3	7.5	1.0	6.7	1.5	6.0	10.1	7.0	57

Appendix B-4-4a Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-4 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
23725	2020	2.3	15.3	7.5	1.0	6.7	1.5	6.0	10.1	7.0	57
24455	2022	2.3	15.3	7.5	1.1	6.7	1.5	6.0	10.1	7.1	57
25185	2024	2.3	15.2	7.5	1.1	6.7	1.5	6.0	10.1	7.1	57
25915	2026	2.3	15.2	7.5	1.1	6.7	1.5	6.0	10.1	7.1	57
26645	2028	2.3	15.2	7.6	1.1	6.7	1.5	6.0	10.1	7.1	58
27375	2030	2.3	15.2	7.6	1.1	6.7	1.5	6.0	10.1	7.1	58
28105	2032	2.3	15.2	7.6	1.1	6.8	1.5	6.0	10.1	7.1	58
28835	2034	2.3	15.3	7.6	1.1	6.8	1.5	6.0	10.1	7.1	58
29565	2036	2.3	15.3	7.6	1.1	6.8	1.5	6.0	10.1	7.2	58
30295	2038	2.3	15.3	7.6	1.1	6.8	1.5	6.0	10.1	7.2	58
31025	2040	2.4	15.3	7.6	1.1	6.8	1.6	6.1	10.1	7.2	58
31755	2042	2.4	15.3	7.6	1.1	6.8	1.6	6.1	10.2	7.2	58
32485	2044	2.4	15.3	7.6	1.1	6.8	1.6	6.1	10.2	7.2	58
33215	2046	2.4	15.3	7.6	1.1	6.8	1.6	6.1	10.2	7.2	58
33945	2048	2.4	15.3	7.7	1.1	6.8	1.6	6.1	10.2	7.3	58
34675	2050	2.4	15.3	7.7	1.1	6.9	1.6	6.1	10.2	7.3	59
35405	2052	2.5	15.3	7.7	1.1	6.9	1.6	6.1	10.2	7.3	59
36135	2054	2.5	15.3	7.7	1.1	6.9	1.6	6.2	10.2	7.3	59
36865	2056	2.5	15.4	7.7	1.1	6.9	1.6	6.2	10.3	7.3	59
37595	2058	2.5	15.4	7.7	1.1	6.9	1.6	6.2	10.3	7.3	59
38325	2060	2.5	15.4	7.7	1.1	6.9	1.6	6.2	10.3	7.4	59
39055	2062	2.5	15.4	7.7	1.1	6.9	1.6	6.2	10.3	7.4	59
39785	2064	2.6	15.4	7.7	1.1	6.9	1.6	6.2	10.3	7.4	59
40515	2066	2.6	15.4	7.7	1.1	6.9	1.6	6.2	10.3	7.4	59
41245	2068	2.6	15.4	7.7	1.1	6.9	1.6	6.2	10.3	7.4	59
41975	2070	2.6	15.4	7.8	1.1	7.0	1.6	6.3	10.3	7.4	59
42705	2072	2.6	15.4	7.8	1.1	7.0	1.6	6.3	10.3	7.5	60
43435	2074	2.6	15.4	7.8	1.1	7.0	1.6	6.3	10.4	7.5	60
44165	2076	2.6	15.4	7.8	1.1	7.0	1.7	6.3	10.4	7.5	60
44895	2078	2.7	15.4	7.8	1.1	7.0	1.7	6.3	10.4	7.5	60
45625	2080	2.7	15.4	7.8	1.1	7.0	1.7	6.3	10.4	7.5	60
46355	2082	2.7	15.5	7.8	1.1	7.0	1.7	6.3	10.4	7.5	60
47085	2084	2.7	15.5	7.8	1.1	7.0	1.7	6.3	10.4	7.5	60
47815	2086	2.7	15.5	7.8	1.1	7.0	1.7	6.3	10.4	7.6	60
48545	2088	2.7	15.5	7.8	1.1	7.0	1.7	6.3	10.4	7.6	60
49275	2090	2.7	15.5	7.8	1.1	7.0	1.7	6.3	10.4	7.6	60
50005	2092	2.7	15.5	7.8	1.1	7.0	1.7	6.4	10.4	7.6	60
50735	2094	2.8	15.5	7.8	1.1	7.0	1.7	6.4	10.4	7.6	60
51465	2096	2.8	15.5	7.8	1.1	7.1	1.7	6.4	10.5	7.6	60
52195	2098	2.8	15.5	7.8	1.1	7.1	1.7	6.4	10.5	7.6	60
52925	2100	2.8	15.5	7.8	1.1	7.1	1.7	6.4	10.5	7.6	61
53655	2102	2.8	15.5	7.9	1.1	7.1	1.7	6.4	10.5	7.6	61
54385	2104	2.8	15.5	7.9	1.1	7.1	1.7	6.4	10.5	7.7	61
TDS	*mg/L*	20000	20000	28600	28600	28600	28600	28600	28600	28600	

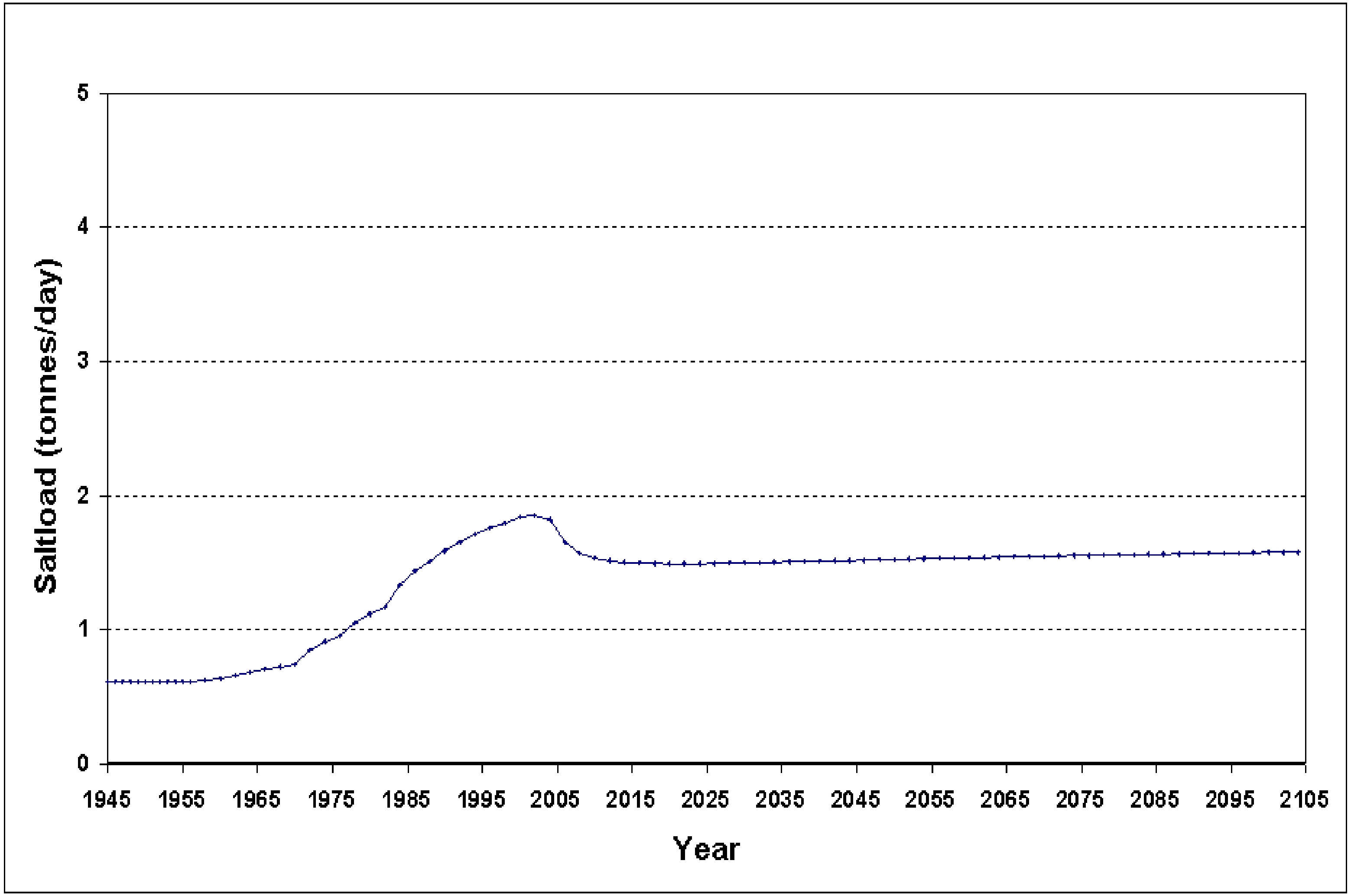
Appendix B-4-4b Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-4 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
0	1945	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1946	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1947	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1948	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1949	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1950	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1951	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1952	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1953	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1954	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
30	1955	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
365	1956	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
1095	1958	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.62
1825	1960	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.64
2555	1962	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.1	0.66
3285	1964	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.68
4015	1966	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.70
4745	1968	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.72
5475	1970	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.74
6205	1972	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.85
6935	1974	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.91
7665	1976	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.95
8395	1978	0.0	0.3	0.2	0.0	0.1	0.0	0.1	0.2	0.1	1.05
9125	1980	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1.11
9855	1982	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1.17
10585	1984	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.2	0.1	1.33
11315	1986	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.1	1.44
12045	1988	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.51
12775	1990	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.59
13505	1992	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.65
14235	1994	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	1.71
14965	1996	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	1.75
15695	1998	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.80
16425	2000	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.84
17155	2002	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.85
17885	2004	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.82
18615	2006	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.65
19345	2008	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.57
20075	2010	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.53
20805	2012	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.51
21535	2014	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.50
22265	2016	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.50
22995	2018	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.49

Appendix B-4-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-4 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
23725	2020	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.49
24455	2022	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.49
25185	2024	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.49
25915	2026	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.49
26645	2028	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.49
27375	2030	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.50
28105	2032	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.50
28835	2034	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.50
29565	2036	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.50
30295	2038	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.51
31025	2040	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.51
31755	2042	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.51
32485	2044	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.51
33215	2046	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.52
33945	2048	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.52
34675	2050	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.52
35405	2052	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.53
36135	2054	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.53
36865	2056	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.53
37595	2058	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.53
38325	2060	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.54
39055	2062	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.54
39785	2064	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.54
40515	2066	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.54
41245	2068	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.54
41975	2070	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.55
42705	2072	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.55
43435	2074	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.55
44165	2076	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.55
44895	2078	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.55
45625	2080	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.56
46355	2082	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.56
47085	2084	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.56
47815	2086	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.56
48545	2088	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.56
49275	2090	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.57
50005	2092	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.57
50735	2094	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.57
51465	2096	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.57
52195	2098	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.57
52925	2100	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.57
53655	2102	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.58
54385	2104	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.58
TDS	*mg/L*	*20000*	*20000*	*28600*	*28600*	*28600*	*28600*	*28600*	*28600*	*28600*	

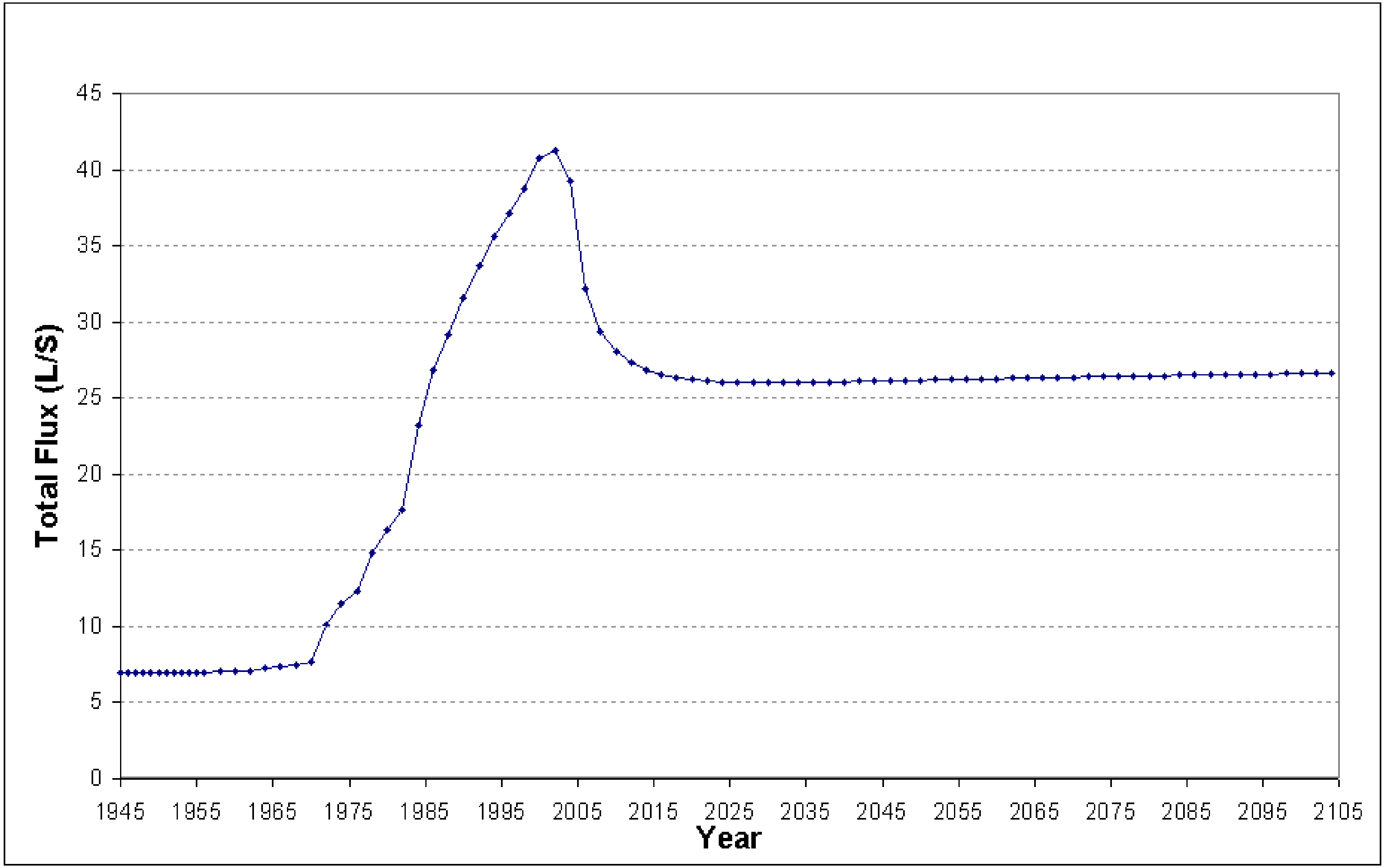
Appendix B-4-5b Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-4 (Bookpurnong Area)



Appendix B-4-5c Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-4 (Bookpurnong Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	1945	581	24	605	7.00
0	1946	581	24	605	7.00
0	1947	581	24	605	7.00
0	1948	581	24	605	7.00
0	1949	581	24	605	7.00
0	1950	581	24	605	7.00
0	1951	581	24	605	7.00
0	1952	581	24	605	7.00
0	1953	581	24	605	7.00
0	1954	581	24	605	7.00
30	1955	581	24	605	7.00
365	1956	581	24	605	7.01
1095	1958	582	25	607	7.02
1825	1960	584	25	610	7.06
2555	1962	589	26	615	7.12
3285	1964	596	27	623	7.21
4015	1966	607	28	635	7.34
4745	1968	620	28	648	7.50
5475	1970	634	29	663	7.67
6205	1972	843	33	876	10.14
6935	1974	961	35	996	11.53
7665	1976	1029	37	1066	12.34
8395	1978	1242	41	1283	14.85
9125	1980	1370	43	1413	16.35
9855	1982	1485	45	1530	17.71
10585	1984	1954	51	2006	23.21
11315	1986	2262	55	2318	26.83
12045	1988	2459	58	2517	29.14
12775	1990	2668	61	2729	31.59
13505	1992	2851	64	2915	33.74
14235	1994	3016	66	3082	35.67
14965	1996	3140	68	3208	37.13
15695	1998	3277	69	3347	38.73
16425	2000	3455	71	3526	40.81
17155	2002	3495	72	3566	41.28
17885	2004	3326	70	3396	39.31
18615	2006	2721	64	2785	32.23
19345	2008	2481	61	2541	29.41
20075	2010	2367	59	2426	28.08
20805	2012	2303	58	2361	27.32
21535	2014	2263	58	2321	26.86
22265	2016	2237	58	2295	26.56
22995	2018	2220	57	2278	26.36
23725	2020	2209	57	2266	26.23
24455	2022	2202	57	2259	26.15
25185	2024	2197	57	2254	26.09
25915	2026	2194	57	2252	26.06
26645	2028	2193	58	2250	26.04
27375	2030	2192	58	2250	26.04
28105	2032	2192	58	2250	26.04
28835	2034	2193	58	2250	26.05
29565	2036	2194	58	2251	26.06
30295	2038	2195	58	2253	26.07
31025	2040	2196	58	2254	26.09
31755	2042	2198	58	2256	26.11
32485	2044	2199	58	2257	26.13
33215	2046	2201	58	2259	26.15
33945	2048	2203	58	2261	26.17
34675	2050	2204	59	2263	26.19
35405	2052	2206	59	2265	26.21
36135	2054	2208	59	2267	26.23
36865	2056	2210	59	2268	26.25
37595	2058	2211	59	2270	26.28
38325	2060	2213	59	2272	26.30
39055	2062	2215	59	2274	26.32
39785	2064	2216	59	2275	26.34
40515	2066	2218	59	2277	26.36
41245	2068	2219	59	2279	26.38
41975	2070	2221	59	2280	26.39
42705	2072	2222	60	2282	26.41
43435	2074	2224	60	2283	26.43
44165	2076	2225	60	2285	26.44
44895	2078	2226	60	2286	26.46
45625	2080	2228	60	2288	26.48
46355	2082	2229	60	2289	26.49
47085	2084	2230	60	2290	26.51
47815	2086	2231	60	2291	26.52
48545	2088	2233	60	2293	26.54
49275	2090	2234	60	2294	26.55
50005	2092	2235	60	2295	26.56
50735	2094	2236	60	2296	26.58
51465	2096	2237	60	2297	26.59
52195	2098	2238	60	2298	26.60
52925	2100	2239	61	2300	26.61
53655	2102	2240	61	2301	26.63
54385	2104	2241	61	2302	26.64

Appendix B-4-6a Predicted total groundwater flux in Scenario-4 (Bookpurnong Area)

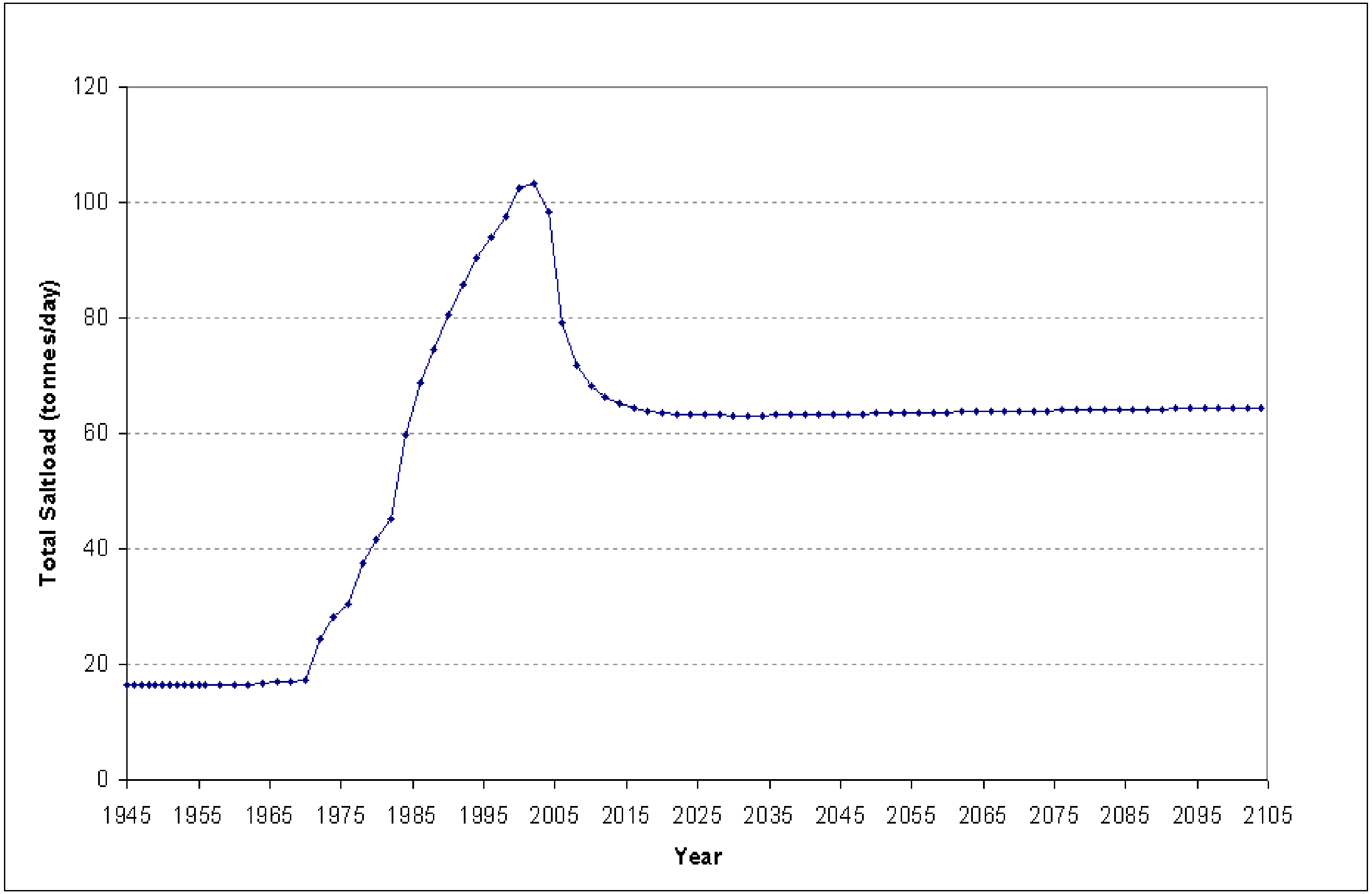


Appendix B-4-6b Graph of predicted total groundwater flux (L/second) entering the River Murray in Scenario-4 (Bookpurnong Area)

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	16	1	16.46
0	1946	16	1	16.46
0	1947	16	1	16.46
0	1948	16	1	16.46
0	1949	16	1	16.46
0	1950	16	1	16.46
0	1951	16	1	16.46
0	1952	16	1	16.46
0	1953	16	1	16.46
0	1954	16	1	16.46
30	1955	16	1	16.46
365	1956	16	1	16.46
1095	1958	16	1	16.49
1825	1960	16	1	16.56
2555	1962	16	1	16.66
3285	1964	16	1	16.81
4015	1966	16	1	17.01
4745	1968	17	1	17.24
5475	1970	17	1	17.49
6205	1972	24	1	24.44
6935	1974	27	1	28.29
7665	1976	29	1	30.40
8395	1978	36	1	37.52
9125	1980	41	1	41.63
9855	1982	44	1	45.19
10585	1984	59	1	59.96
11315	1986	68	1	68.97
12045	1988	73	2	74.64
12775	1990	79	2	80.76
13505	1992	84	2	85.81
14235	1994	89	2	90.44
14965	1996	92	2	93.97
15695	1998	96	2	97.68
16425	2000	101	2	102.59
17155	2002	101	2	103.31
17885	2004	97	2	98.49
18615	2006	78	2	79.35
19345	2008	70	2	71.78
20075	2010	67	2	68.33
20805	2012	65	2	66.41
21535	2014	64	2	65.25
22265	2016	63	1	64.52
22995	2018	63	1	64.03

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
23725	2020	62	1	63.71
24455	2022	62	1	63.51
25185	2024	62	1	63.37
25915	2026	62	1	63.29
26645	2028	62	1	63.25
27375	2030	62	1	63.23
28105	2032	62	1	63.23
28835	2034	62	2	63.25
29565	2036	62	2	63.27
30295	2038	62	2	63.31
31025	2040	62	2	63.34
31755	2042	62	2	63.38
32485	2044	62	2	63.42
33215	2046	62	2	63.47
33945	2048	62	2	63.51
34675	2050	62	2	63.56
35405	2052	62	2	63.60
36135	2054	62	2	63.65
36865	2056	62	2	63.69
37595	2058	62	2	63.74
38325	2060	62	2	63.78
39055	2062	62	2	63.82
39785	2064	62	2	63.86
40515	2066	62	2	63.90
41245	2068	62	2	63.94
41975	2070	62	2	63.98
42705	2072	62	2	64.02
43435	2074	63	2	64.06
44165	2076	63	2	64.09
44895	2078	63	2	64.12
45625	2080	63	2	64.16
46355	2082	63	2	64.19
47085	2084	63	2	64.22
47815	2086	63	2	64.25
48545	2088	63	2	64.28
49275	2090	63	2	64.31
50005	2092	63	2	64.34
50735	2094	63	2	64.37
51465	2096	63	2	64.40
52195	2098	63	2	64.42
52925	2100	63	2	64.45
53655	2102	63	2	64.47
54385	2104	63	2	64.50

Appendix B-4-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-4 (Bookpurnong Area)



Appendix B-4-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-4 (Bookpurnong Area)

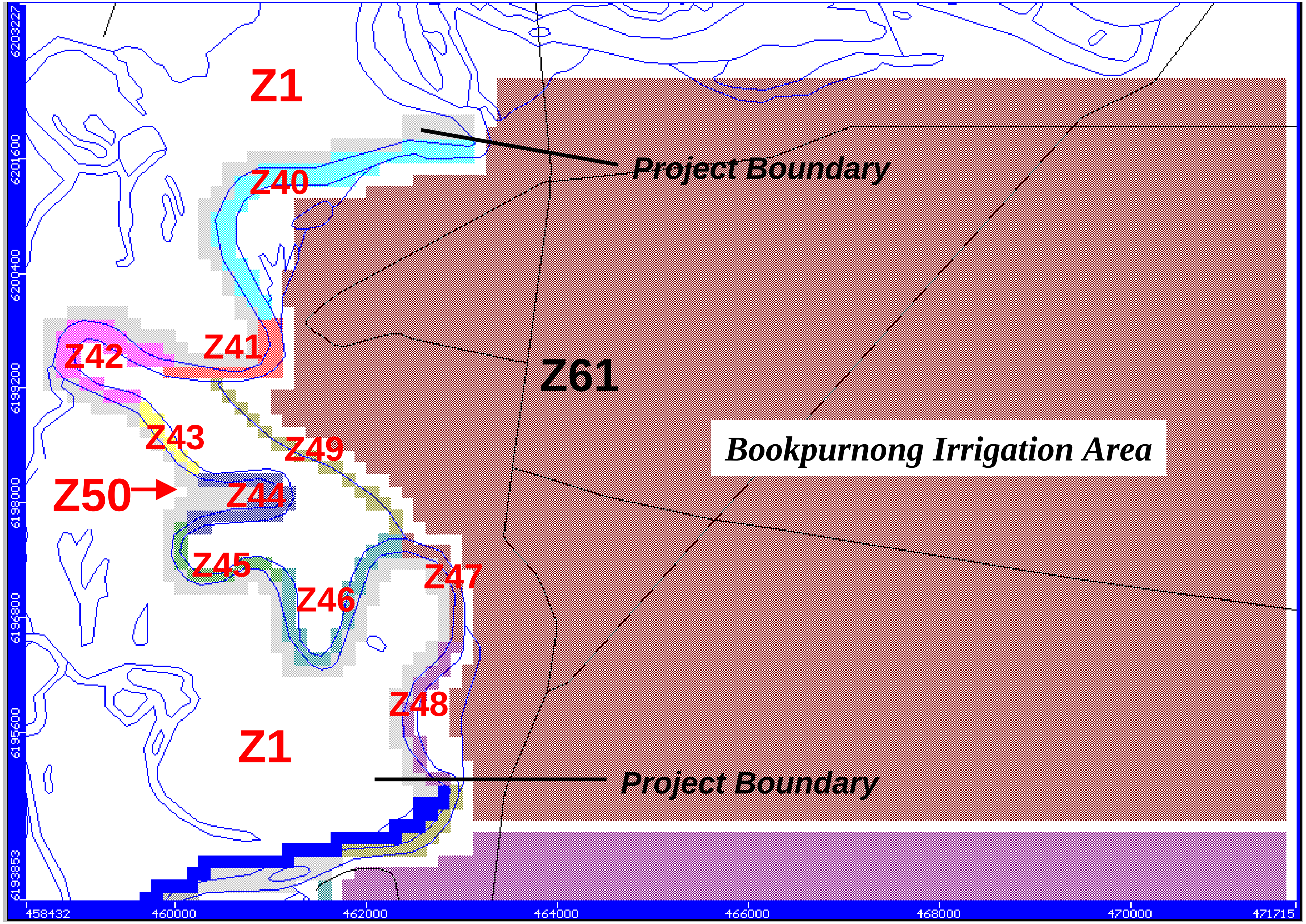
B5. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-5 (BOOKPURNONG AREA)

- Flow budget zones (Bookpurnong Area)
- Predicted lateral groundwater flux (m3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)

Appendix B-5

Groundwater flux and salt load entering the River Murray Scenario-5 (Bookpurnong Area)

-Flow budget zones (Bookpurnong Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)



Appendix B-5-1 Flow budget zones in model Layer-1 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	***1945***	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	***581***
0	***1946***	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	***581***
0	***1947***	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	***581***
0	***1948***	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	***581***
0	***1949***	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	***581***
0	***1950***	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	***581***
0	***1951***	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	***581***
0	***1952***	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	***581***
0	***1953***	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	***581***
0	***1954***	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	***581***
30	**1955**	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	**581**
365	**1956**	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	**581**
1095	**1958**	0.0	405.9	0.0	0.0	15.0	0.0	7.1	103.3	50.6	0.0	**582**
1825	**1960**	0.0	406.0	0.0	0.0	15.1	0.0	7.2	104.0	52.1	0.0	**584**
2555	**1962**	0.0	406.2	0.0	0.0	15.4	0.0	7.3	105.2	55.0	0.0	**589**
3285	**1964**	0.0	406.4	0.0	0.0	15.6	0.0	7.5	106.8	60.3	0.0	**597**
4015	**1966**	0.0	406.7	0.0	0.0	15.8	0.0	7.6	108.9	68.1	0.0	**607**
4745	**1968**	0.0	407.0	0.0	0.0	16.1	0.0	7.8	111.6	77.3	0.0	**620**
5475	**1970**	0.0	407.2	0.0	0.0	16.3	0.0	7.9	114.9	87.4	0.0	**634**
6205	**1972**	0.0	464.0	0.0	0.0	67.3	0.0	29.6	183.6	98.5	0.0	**843**
6935	**1974**	0.0	488.1	0.0	0.0	99.9	0.0	43.4	219.6	110.0	0.0	**961**
7665	**1976**	0.0	500.7	0.0	0.0	115.3	0.0	50.9	240.8	121.7	0.0	**1029**
8395	**1978**	0.0	547.3	0.0	0.0	168.2	0.0	77.1	315.5	133.9	0.0	**1242**
9125	**1980**	1.9	569.3	0.0	0.0	200.3	1.1	93.0	355.4	146.3	2.6	**1370**
9855	**1982**	12.7	582.4	0.0	0.0	219.0	1.8	105.3	398.0	157.8	7.9	**1485**
10585	**1984**	39.8	684.2	0.0	0.5	323.9	4.0	153.0	530.8	169.6	48.5	**1954**
11315	**1986**	112.2	735.2	0.0	1.4	374.3	5.6	178.8	601.0	185.0	68.9	**2262**
12045	**1988**	154.9	768.4	0.0	1.9	399.3	6.4	193.3	653.0	201.7	80.1	**2459**
12775	**1990**	191.7	804.1	0.0	3.5	432.0	7.3	210.1	707.4	217.0	94.7	**2668**
13505	**1992**	253.7	830.5	0.0	4.5	450.4	7.9	220.0	747.6	233.8	102.5	**2851**
14235	**1994**	290.7	854.2	0.0	5.5	473.4	8.6	233.4	785.4	250.1	114.2	**3015**
14965	**1996**	318.1	868.9	0.0	6.4	491.7	9.2	243.8	815.7	263.7	122.7	**3140**
15695	**1998**	379.6	863.4	0.0	7.0	504.5	9.6	251.4	852.4	279.8	129.1	**3277**
16425	**2000**	461.5	862.0	0.0	7.5	516.6	10.0	261.7	903.6	294.9	136.9	**3455**
17155	**2002**	526.2	840.1	0.0	6.7	500.4	9.8	256.6	919.5	306.0	129.4	**3495**
17885	**2004**	478.4	788.1	0.0	4.8	466.4	9.0	242.2	910.2	312.3	114.6	**3326**
18615	**2006**	409.3	699.7	0.0	0.9	338.1	5.9	170.5	730.5	314.3	51.9	**2721**
19345	**2008**	379.4	658.6	0.0	0.0	281.0	4.0	140.2	671.3	314.2	30.8	**2480**
20075	**2010**	355.7	637.3	0.0	0.0	258.0	3.3	128.5	646.7	313.7	22.4	**2365**
20805	**2012**	337.2	625.0	0.0	0.0	246.6	2.9	123.0	633.8	312.9	18.1	**2300**
21535	**2014**	323.8	617.6	0.0	0.0	240.4	2.7	119.8	626.2	312.1	15.9	**2259**
22265	**2016**	314.2	612.8	0.0	0.0	236.7	2.6	117.9	621.4	311.3	14.6	**2231**
22995	**2018**	307.4	609.7	0.0	0.0	234.2	2.5	116.7	618.2	310.4	13.8	**2213**

Appendix B-5-2a Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-5 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
23725	2020	302.7	607.6	0.0	0.0	232.6	2.5	115.9	616.1	309.5	13.3	2200
24455	2022	299.3	606.2	0.0	0.0	231.6	2.5	115.4	614.6	308.7	12.9	2191
25185	2024	297.0	605.2	0.0	0.0	230.8	2.4	115.0	613.6	307.9	12.7	2185
25915	2026	295.4	604.6	0.0	0.0	230.3	2.4	114.8	613.0	307.1	12.6	2180
26645	2028	294.3	604.1	0.0	0.0	230.0	2.4	114.6	612.5	306.4	12.4	2177
27375	2030	293.6	603.8	0.0	0.0	229.8	2.4	114.5	612.2	305.7	12.4	2174
28105	2032	293.1	603.6	0.0	0.0	229.6	2.4	114.5	612.0	305.1	12.3	2173
28835	2034	292.9	603.5	0.0	0.0	229.5	2.4	114.4	612.0	304.5	12.3	2171
29565	2036	292.8	603.4	0.0	0.0	229.5	2.4	114.4	611.9	304.0	12.3	2171
30295	2038	292.8	603.3	0.0	0.0	229.4	2.4	114.4	611.9	303.5	12.3	2170
31025	2040	292.9	603.3	0.0	0.0	229.4	2.4	114.4	612.0	303.1	12.3	2170
31755	2042	293.0	603.3	0.0	0.0	229.4	2.4	114.4	612.1	302.7	12.3	2170
32485	2044	293.2	603.4	0.0	0.0	229.5	2.4	114.4	612.1	302.3	12.3	2169
33215	2046	293.3	603.4	0.0	0.0	229.5	2.4	114.4	612.2	302.0	12.3	2170
33945	2048	293.5	603.4	0.0	0.0	229.5	2.4	114.4	612.4	301.7	12.3	2170
34675	2050	293.7	603.5	0.0	0.0	229.5	2.4	114.5	612.5	301.5	12.3	2170
35405	2052	293.9	603.5	0.0	0.0	229.6	2.4	114.5	612.6	301.2	12.3	2170
36135	2054	294.2	603.5	0.0	0.0	229.6	2.4	114.5	612.7	301.1	12.3	2170
36865	2056	294.4	603.6	0.0	0.0	229.6	2.4	114.5	612.8	300.9	12.3	2171
37595	2058	294.5	603.6	0.0	0.0	229.7	2.4	114.5	612.9	300.7	12.4	2171
38325	2060	294.7	603.7	0.0	0.0	229.7	2.4	114.6	613.0	300.6	12.4	2171
39055	2062	294.9	603.7	0.0	0.0	229.7	2.4	114.6	613.2	300.5	12.4	2171
39785	2064	295.1	603.7	0.0	0.0	229.8	2.4	114.6	613.3	300.4	12.4	2172
40515	2066	295.3	603.8	0.0	0.0	229.8	2.4	114.6	613.4	300.4	12.4	2172
41245	2068	295.4	603.8	0.0	0.0	229.8	2.4	114.6	613.5	300.3	12.4	2172
41975	2070	295.6	603.9	0.0	0.0	229.9	2.4	114.6	613.6	300.3	12.4	2173
42705	2072	295.7	603.9	0.0	0.0	229.9	2.4	114.7	613.7	300.2	12.4	2173
43435	2074	295.8	603.9	0.0	0.0	229.9	2.4	114.7	613.8	300.2	12.4	2173
44165	2076	296.0	604.0	0.0	0.0	229.9	2.4	114.7	613.9	300.2	12.5	2174
44895	2078	296.1	604.0	0.0	0.0	230.0	2.4	114.7	614.0	300.2	12.5	2174
45625	2080	296.2	604.0	0.0	0.0	230.0	2.4	114.7	614.1	300.2	12.5	2174
46355	2082	296.3	604.0	0.0	0.0	230.0	2.4	114.7	614.2	300.3	12.5	2175
47085	2084	296.5	604.1	0.0	0.0	230.0	2.4	114.7	614.3	300.3	12.5	2175
47815	2086	296.6	604.1	0.0	0.0	230.1	2.4	114.8	614.4	300.3	12.5	2175
48545	2088	296.7	604.1	0.0	0.0	230.1	2.4	114.8	614.5	300.4	12.5	2175
49275	2090	296.8	604.2	0.0	0.0	230.1	2.4	114.8	614.6	300.4	12.5	2176
50005	2092	296.9	604.2	0.0	0.0	230.1	2.4	114.8	614.7	300.5	12.5	2176
50735	2094	296.9	604.2	0.0	0.0	230.2	2.4	114.8	614.8	300.5	12.5	2176
51465	2096	297.0	604.2	0.0	0.0	230.2	2.4	114.8	614.9	300.6	12.5	2177
52195	2098	297.1	604.2	0.0	0.0	230.2	2.4	114.8	615.0	300.6	12.5	2177
52925	2100	297.2	604.3	0.0	0.0	230.2	2.4	114.8	615.1	300.7	12.5	2177
53655	2102	297.3	604.3	0.0	0.0	230.2	2.4	114.9	615.2	300.8	12.5	2178
54385	2104	297.3	604.3	0.0	0.0	230.2	2.4	114.9	615.3	300.8	12.5	2178
TDS	*mg/L*	*22900*	*26200*	*30000*	*38100*	*38100*	*30000*	*30000*	*38740*	*8870*	*13500*	

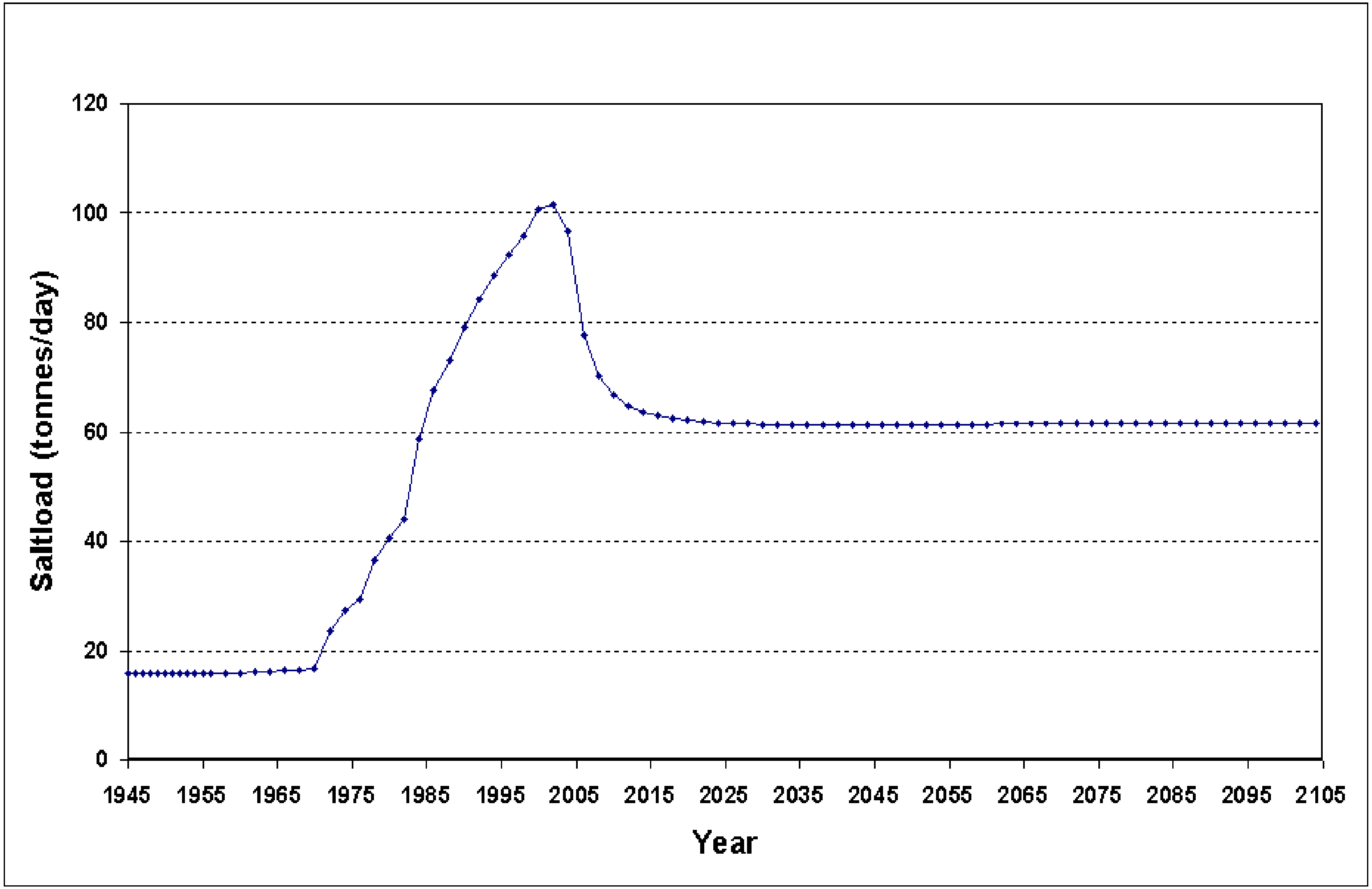
Appendix B-5-2b Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-5 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	1945	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1946	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1947	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1948	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1949	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1950	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1951	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1952	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1953	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1954	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
30	1955	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
365	1956	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
1095	1958	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.87
1825	1960	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.5	0.0	15.92
2555	1962	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	16.01
3285	1964	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	16.14
4015	1966	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.2	0.6	0.0	16.31
4745	1968	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.3	0.7	0.0	16.52
5475	1970	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.5	0.8	0.0	16.75
6205	1972	0.0	12.2	0.0	0.0	2.6	0.0	0.9	7.1	0.9	0.0	23.59
6935	1974	0.0	12.8	0.0	0.0	3.8	0.0	1.3	8.5	1.0	0.0	27.38
7665	1976	0.0	13.1	0.0	0.0	4.4	0.0	1.5	9.3	1.1	0.0	29.45
8395	1978	0.0	14.3	0.0	0.0	6.4	0.0	2.3	12.2	1.2	0.0	36.47
9125	1980	0.0	14.9	0.0	0.0	7.6	0.0	2.8	13.8	1.3	0.0	40.52
9855	1982	0.3	15.3	0.0	0.0	8.3	0.1	3.2	15.4	1.4	0.1	44.03
10585	1984	0.9	17.9	0.0	0.0	12.3	0.1	4.6	20.6	1.5	0.7	58.63
11315	1986	2.6	19.3	0.0	0.1	14.3	0.2	5.4	23.3	1.6	0.9	67.53
12045	1988	3.5	20.1	0.0	0.1	15.2	0.2	5.8	25.3	1.8	1.1	73.13
12775	1990	4.4	21.1	0.0	0.1	16.5	0.2	6.3	27.4	1.9	1.3	79.18
13505	1992	5.8	21.8	0.0	0.2	17.2	0.2	6.6	29.0	2.1	1.4	84.16
14235	1994	6.7	22.4	0.0	0.2	18.0	0.3	7.0	30.4	2.2	1.5	88.73
14965	1996	7.3	22.8	0.0	0.2	18.7	0.3	7.3	31.6	2.3	1.7	92.21
15695	1998	8.7	22.6	0.0	0.3	19.2	0.3	7.5	33.0	2.5	1.7	95.88
16425	2000	10.6	22.6	0.0	0.3	19.7	0.3	7.9	35.0	2.6	1.8	100.74
17155	2002	12.0	22.0	0.0	0.3	19.1	0.3	7.7	35.6	2.7	1.7	101.45
17885	2004	11.0	20.6	0.0	0.2	17.8	0.3	7.3	35.3	2.8	1.5	96.67
18615	2006	9.4	18.3	0.0	0.0	12.9	0.2	5.1	28.3	2.8	0.7	77.70
19345	2008	8.7	17.3	0.0	0.0	10.7	0.1	4.2	26.0	2.8	0.4	70.19
20075	2010	8.1	16.7	0.0	0.0	9.8	0.1	3.9	25.1	2.8	0.3	66.76
20805	2012	7.7	16.4	0.0	0.0	9.4	0.1	3.7	24.6	2.8	0.2	64.84
21535	2014	7.4	16.2	0.0	0.0	9.2	0.1	3.6	24.3	2.8	0.2	63.67
22265	2016	7.2	16.1	0.0	0.0	9.0	0.1	3.5	24.1	2.8	0.2	62.91
22995	2018	7.0	16.0	0.0	0.0	8.9	0.1	3.5	23.9	2.8	0.2	62.40

Appendix B-5-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-5 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
23725	2020	6.9	15.9	0.0	0.0	8.9	0.1	3.5	23.9	2.7	0.2	62.06
24455	2022	6.9	15.9	0.0	0.0	8.8	0.1	3.5	23.8	2.7	0.2	61.82
25185	2024	6.8	15.9	0.0	0.0	8.8	0.1	3.5	23.8	2.7	0.2	61.65
25915	2026	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.7	2.7	0.2	61.53
26645	2028	6.7	15.8	0.0	0.0	8.8	0.1	3.4	23.7	2.7	0.2	61.45
27375	2030	6.7	15.8	0.0	0.0	8.8	0.1	3.4	23.7	2.7	0.2	61.40
28105	2032	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.36
28835	2034	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.34
29565	2036	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.33
30295	2038	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.32
31025	2040	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.32
31755	2042	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.32
32485	2044	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.33
33215	2046	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.34
33945	2048	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.35
34675	2050	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.35
35405	2052	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.37
36135	2054	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.38
36865	2056	6.7	15.8	0.0	0.0	8.7	0.1	3.4	23.7	2.7	0.2	61.39
37595	2058	6.7	15.8	0.0	0.0	8.8	0.1	3.4	23.7	2.7	0.2	61.40
38325	2060	6.7	15.8	0.0	0.0	8.8	0.1	3.4	23.7	2.7	0.2	61.41
39055	2062	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.42
39785	2064	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.43
40515	2066	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.44
41245	2068	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.45
41975	2070	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.46
42705	2072	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.47
43435	2074	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.48
44165	2076	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.49
44895	2078	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.50
45625	2080	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.51
46355	2082	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.52
47085	2084	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.53
47815	2086	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.54
48545	2088	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.54
49275	2090	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.55
50005	2092	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.56
50735	2094	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.57
51465	2096	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.58
52195	2098	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.58
52925	2100	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.59
53655	2102	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.60
54385	2104	6.8	15.8	0.0	0.0	8.8	0.1	3.4	23.8	2.7	0.2	61.61
TDS	*mg/L*	*22900*	*26200*	*30000*	*38100*	*38100*	*30000*	*30000*	*38740*	*8870*	*13500*	

Appendix B-5-3b Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-5 (Bookpurnong Area)



Appendix B-5-3c Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-5 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
0	1945	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1946	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1947	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1948	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1949	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1950	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1951	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1952	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1953	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1954	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
30	1955	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
365	1956	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
1095	1958	0.0	9.7	6.0	0.5	2.6	0.5	1.5	2.4	1.5	25
1825	1960	0.0	9.8	6.0	0.5	2.7	0.5	1.6	2.4	1.7	25
2555	1962	0.0	9.9	6.1	0.5	2.8	0.6	1.7	2.5	1.9	26
3285	1964	0.0	9.9	6.2	0.5	2.9	0.6	1.8	2.6	2.1	27
4015	1966	0.0	10.0	6.2	0.6	3.0	0.7	2.0	2.7	2.4	28
4745	1968	0.0	10.1	6.3	0.6	3.1	0.7	2.1	2.8	2.7	28
5475	1970	0.0	10.1	6.4	0.6	3.2	0.7	2.2	2.9	2.9	29
6205	1972	0.0	11.3	6.5	0.7	3.9	0.8	2.8	3.9	3.2	33
6935	1974	0.0	11.9	6.6	0.7	4.3	0.9	3.2	4.4	3.5	36
7665	1976	0.0	12.3	6.7	0.7	4.6	0.9	3.4	4.7	3.8	37
8395	1978	0.0	13.2	6.8	0.8	5.2	1.0	4.0	5.7	4.0	41
9125	1980	0.0	13.8	6.8	0.8	5.6	1.1	4.4	6.2	4.3	43
9855	1982	0.0	14.1	6.9	0.9	5.9	1.1	4.8	6.8	4.6	45
10585	1984	0.1	16.0	7.0	1.0	7.0	1.2	5.8	8.4	4.8	51
11315	1986	0.5	17.1	7.2	1.0	7.5	1.3	6.4	9.3	5.2	55
12045	1988	0.8	17.7	7.3	1.1	7.9	1.4	6.7	10.0	5.5	58
12775	1990	1.2	18.4	7.3	1.1	8.3	1.5	7.1	10.7	5.8	61
13505	1992	1.6	18.9	7.4	1.1	8.5	1.5	7.4	11.3	6.0	64
14235	1994	1.9	19.4	7.5	1.2	8.8	1.6	7.7	11.8	6.3	66
14965	1996	2.2	19.7	7.5	1.2	9.0	1.6	7.9	12.1	6.5	68
15695	1998	2.5	19.8	7.6	1.2	9.2	1.7	8.1	12.6	6.7	69
16425	2000	3.0	19.9	7.6	1.2	9.4	1.7	8.4	13.2	6.9	71
17155	2002	3.3	19.6	7.7	1.2	9.3	1.7	8.3	13.4	7.0	72
17885	2004	3.3	18.9	7.7	1.2	9.0	1.7	8.2	13.3	7.1	70
18615	2006	2.9	17.2	7.6	1.1	7.8	1.6	6.9	11.4	7.1	64
19345	2008	2.7	16.4	7.5	1.1	7.2	1.5	6.4	10.7	7.0	60
20075	2010	2.5	15.9	7.5	1.1	6.9	1.5	6.1	10.4	7.0	59
20805	2012	2.4	15.6	7.5	1.0	6.8	1.5	6.0	10.2	6.9	58
21535	2014	2.3	15.4	7.5	1.0	6.7	1.4	5.9	10.1	6.9	57
22265	2016	2.2	15.3	7.4	1.0	6.7	1.4	5.9	10.1	6.9	57
22995	2018	2.2	15.3	7.4	1.0	6.6	1.4	5.8	10.0	6.8	57

Appendix B-5-4a Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-5 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
23725	2020	2.2	15.2	7.4	1.0	6.6	1.4	5.8	10.0	6.8	56
24455	2022	2.1	15.2	7.4	1.0	6.6	1.4	5.8	10.0	6.8	56
25185	2024	2.1	15.2	7.4	1.0	6.6	1.4	5.8	9.9	6.8	56
25915	2026	2.1	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.8	56
26645	2028	2.1	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
27375	2030	2.1	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
28105	2032	2.1	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
28835	2034	2.1	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
29565	2036	2.1	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
30295	2038	2.1	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
31025	2040	2.1	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
31755	2042	2.1	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
32485	2044	2.1	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
33215	2046	2.2	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
33945	2048	2.2	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
34675	2050	2.2	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
35405	2052	2.2	15.1	7.4	1.0	6.6	1.4	5.8	9.9	6.7	56
36135	2054	2.2	15.1	7.5	1.0	6.6	1.4	5.8	9.9	6.6	56
36865	2056	2.2	15.1	7.5	1.0	6.6	1.4	5.8	9.9	6.6	56
37595	2058	2.2	15.1	7.5	1.0	6.6	1.4	5.8	9.9	6.6	56
38325	2060	2.2	15.2	7.5	1.0	6.6	1.4	5.8	9.9	6.6	56
39055	2062	2.2	15.2	7.5	1.0	6.6	1.4	5.8	10.0	6.6	56
39785	2064	2.2	15.2	7.5	1.0	6.6	1.4	5.8	10.0	6.6	56
40515	2066	2.2	15.2	7.5	1.0	6.6	1.4	5.8	10.0	6.6	56
41245	2068	2.2	15.2	7.5	1.0	6.6	1.4	5.8	10.0	6.6	56
41975	2070	2.2	15.2	7.5	1.0	6.6	1.4	5.8	10.0	6.7	56
42705	2072	2.2	15.2	7.5	1.0	6.6	1.4	5.8	10.0	6.7	56
43435	2074	2.2	15.2	7.5	1.0	6.6	1.4	5.8	10.0	6.7	56
44165	2076	2.2	15.2	7.5	1.0	6.6	1.4	5.8	10.0	6.7	56
44895	2078	2.2	15.2	7.5	1.0	6.6	1.5	5.8	10.0	6.7	56
45625	2080	2.2	15.2	7.5	1.0	6.6	1.5	5.8	10.0	6.7	56
46355	2082	2.3	15.2	7.5	1.0	6.6	1.5	5.8	10.0	6.7	57
47085	2084	2.3	15.2	7.5	1.0	6.6	1.5	5.8	10.0	6.7	57
47815	2086	2.3	15.2	7.5	1.0	6.6	1.5	5.8	10.0	6.7	57
48545	2088	2.3	15.2	7.5	1.0	6.6	1.5	5.8	10.0	6.7	57
49275	2090	2.3	15.2	7.5	1.0	6.6	1.5	5.8	10.0	6.7	57
50005	2092	2.3	15.2	7.5	1.0	6.6	1.5	5.8	10.0	6.7	57
50735	2094	2.3	15.2	7.5	1.0	6.6	1.5	5.8	10.0	6.7	57
51465	2096	2.3	15.2	7.5	1.0	6.6	1.5	5.9	10.0	6.7	57
52195	2098	2.3	15.2	7.5	1.0	6.7	1.5	5.9	10.0	6.7	57
52925	2100	2.3	15.2	7.5	1.0	6.7	1.5	5.9	10.0	6.7	57
53655	2102	2.3	15.2	7.5	1.0	6.7	1.5	5.9	10.0	6.7	57
54385	2104	2.3	15.2	7.5	1.0	6.7	1.5	5.9	10.0	6.7	57
TDS	mg/L	20000	20000	28600	28600	28600	28600	28600	28600	28600	

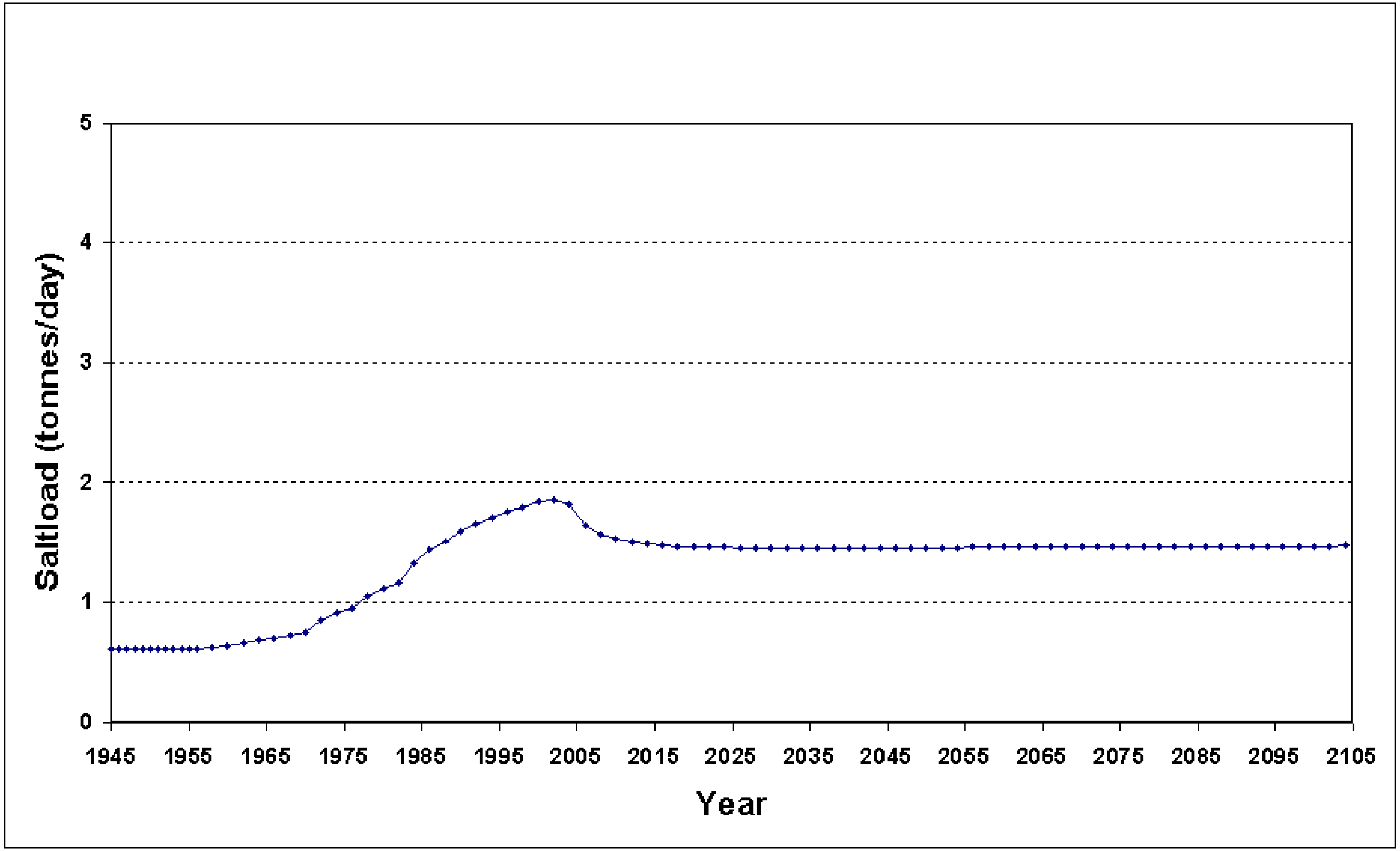
Appendix B-5-4b Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-5 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
0	1945	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1946	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1947	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1948	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1949	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1950	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1951	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1952	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1953	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1954	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
30	1955	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
365	1956	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
1095	1958	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.62
1825	1960	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.64
2555	1962	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.1	0.66
3285	1964	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.68
4015	1966	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.70
4745	1968	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.72
5475	1970	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.74
6205	1972	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.85
6935	1974	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.91
7665	1976	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.95
8395	1978	0.0	0.3	0.2	0.0	0.1	0.0	0.1	0.2	0.1	1.05
9125	1980	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1.11
9855	1982	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1.17
10585	1984	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.2	0.1	1.33
11315	1986	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.1	1.44
12045	1988	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.51
12775	1990	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.59
13505	1992	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.65
14235	1994	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	1.71
14965	1996	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	1.75
15695	1998	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.79
16425	2000	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.84
17155	2002	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.85
17885	2004	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.82
18615	2006	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.65
19345	2008	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.56
20075	2010	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.52
20805	2012	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.50
21535	2014	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.49
22265	2016	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.48
22995	2018	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47

Appendix B-5-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-5 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
23725	2020	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
24455	2022	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
25185	2024	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
25915	2026	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
26645	2028	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
27375	2030	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
28105	2032	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
28835	2034	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
29565	2036	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
30295	2038	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
31025	2040	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
31755	2042	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
32485	2044	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
33215	2046	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
33945	2048	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
34675	2050	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
35405	2052	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
36135	2054	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
36865	2056	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
37595	2058	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
38325	2060	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
39055	2062	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
39785	2064	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
40515	2066	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
41245	2068	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
41975	2070	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
42705	2072	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
43435	2074	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
44165	2076	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.46
44895	2078	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
45625	2080	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
46355	2082	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
47085	2084	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
47815	2086	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
48545	2088	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
49275	2090	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
50005	2092	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
50735	2094	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
51465	2096	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
52195	2098	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
52925	2100	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
53655	2102	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
54385	2104	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.47
TDS	*mg/L*	*20000*	*20000*	*28600*	*28600*	*28600*	*28600*	*28600*	*28600*	*28600*	

Appendix B-5-5b Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-5 (Bookpurnong Area)

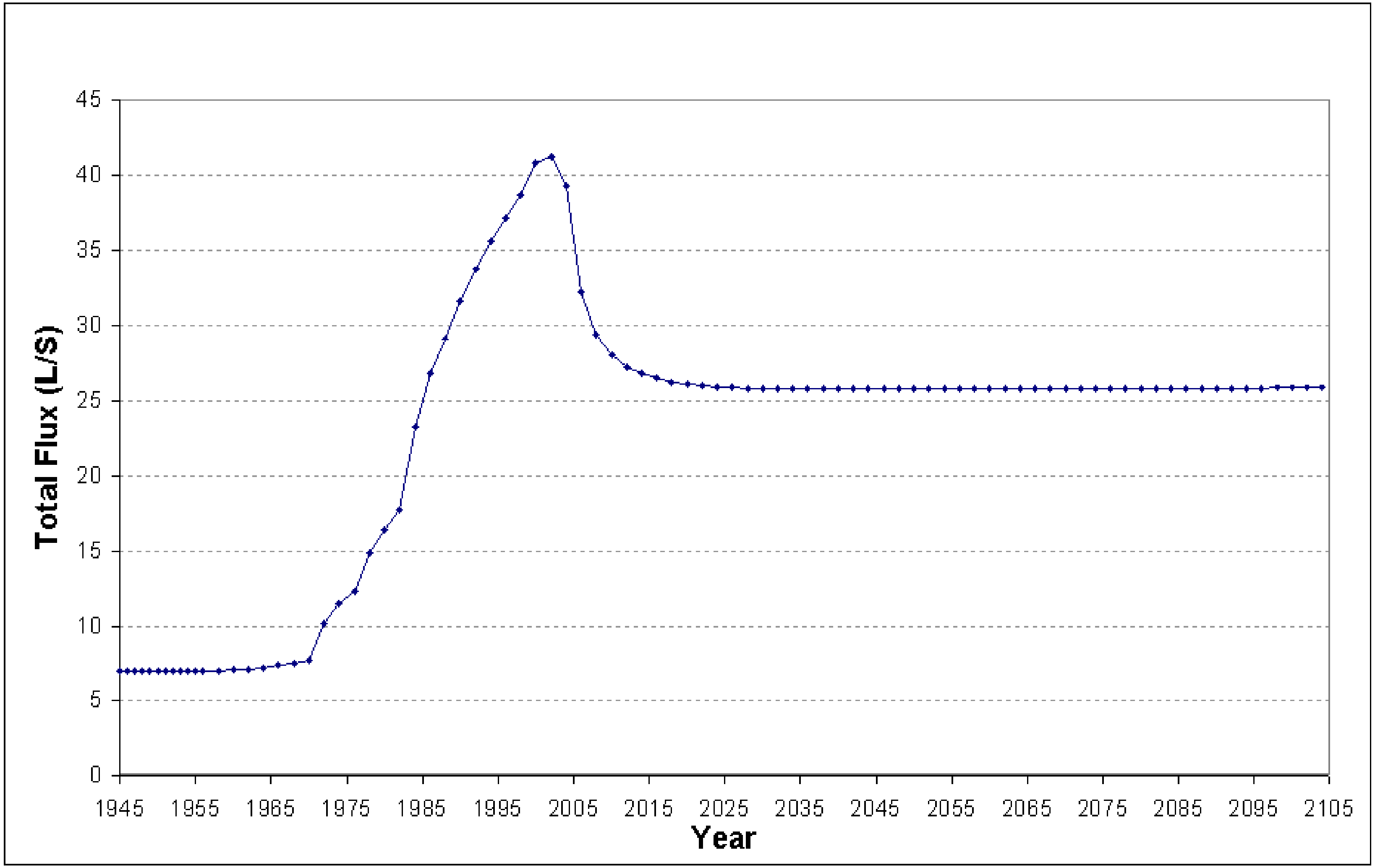


Appendix B-5-5c Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-5 (Bookpurnong Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	1945	581	24	605	7.00
0	1946	581	24	605	7.00
0	1947	581	24	605	7.00
0	1948	581	24	605	7.00
0	1949	581	24	605	7.00
0	1950	581	24	605	7.00
0	1951	581	24	605	7.00
0	1952	581	24	605	7.00
0	1953	581	24	605	7.00
0	1954	581	24	605	7.00
30	1955	581	24	605	7.00
365	1956	581	24	605	7.01
1095	1958	582	25	607	7.02
1825	1960	584	25	610	7.06
2555	1962	589	26	615	7.12
3285	1964	597	27	623	7.21
4015	1966	607	28	635	7.35
4745	1968	620	28	648	7.50
5475	1970	634	29	663	7.67
6205	1972	843	33	876	10.14
6935	1974	961	36	996	11.53
7665	1976	1029	37	1066	12.34
8395	1978	1242	41	1283	14.85
9125	1980	1370	43	1413	16.35
9855	1982	1485	45	1530	17.71
10585	1984	1954	51	2006	23.21
11315	1986	2262	55	2318	26.83
12045	1988	2459	58	2517	29.14
12775	1990	2668	61	2729	31.59
13505	1992	2851	64	2915	33.74
14235	1994	3015	66	3082	35.67
14965	1996	3140	68	3208	37.13
15695	1998	3277	69	3346	38.73
16425	2000	3455	71	3526	40.81
17155	2002	3495	72	3566	41.28
17885	2004	3326	70	3396	39.31
18615	2006	2721	64	2785	32.23
19345	2008	2480	60	2540	29.40
20075	2010	2365	59	2424	28.06
20805	2012	2300	58	2358	27.29
21535	2014	2259	57	2316	26.80
22265	2016	2231	57	2288	26.49
22995	2018	2213	57	2270	26.27

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
23725	2020	2200	56	2257	26.12
24455	2022	2191	56	2247	26.01
25185	2024	2185	56	2241	25.94
25915	2026	2180	56	2236	25.88
26645	2028	2177	56	2233	25.84
27375	2030	2174	56	2230	25.82
28105	2032	2173	56	2229	25.80
28835	2034	2171	56	2228	25.78
29565	2036	2171	56	2227	25.77
30295	2038	2170	56	2226	25.77
31025	2040	2170	56	2226	25.76
31755	2042	2170	56	2226	25.76
32485	2044	2169	56	2226	25.76
33215	2046	2170	56	2226	25.76
33945	2048	2170	56	2226	25.76
34675	2050	2170	56	2226	25.76
35405	2052	2170	56	2226	25.77
36135	2054	2170	56	2226	25.77
36865	2056	2171	56	2227	25.77
37595	2058	2171	56	2227	25.78
38325	2060	2171	56	2227	25.78
39055	2062	2171	56	2228	25.78
39785	2064	2172	56	2228	25.79
40515	2066	2172	56	2228	25.79
41245	2068	2172	56	2229	25.79
41975	2070	2173	56	2229	25.80
42705	2072	2173	56	2229	25.80
43435	2074	2173	56	2230	25.81
44165	2076	2174	56	2230	25.81
44895	2078	2174	56	2230	25.81
45625	2080	2174	56	2231	25.82
46355	2082	2175	57	2231	25.82
47085	2084	2175	57	2231	25.83
47815	2086	2175	57	2232	25.83
48545	2088	2175	57	2232	25.83
49275	2090	2176	57	2232	25.84
50005	2092	2176	57	2233	25.84
50735	2094	2176	57	2233	25.85
51465	2096	2177	57	2233	25.85
52195	2098	2177	57	2234	25.85
52925	2100	2177	57	2234	25.86
53655	2102	2178	57	2234	25.86
54385	2104	2178	57	2235	25.86

Appendix B-5-6a Predicted total groundwater flux in Scenario-5 (Bookpurnong Area)

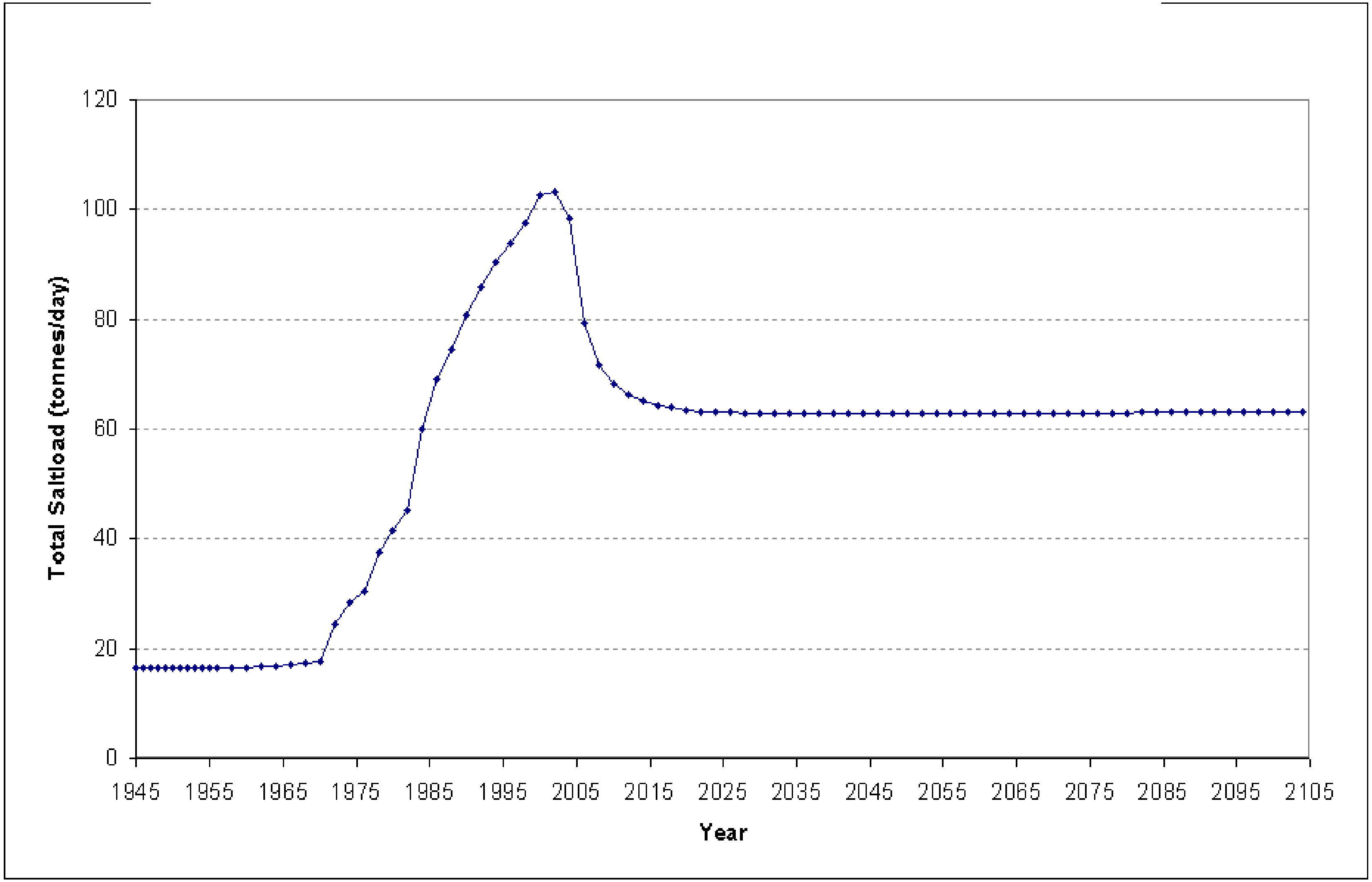


Appendix B-5-6b Graph of predicted total groundwater flux (L/second) entering the River Murray in Scenario-5 (Bookpurnong Area)

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	16	1	16.46
0	1946	16	1	16.46
0	1947	16	1	16.46
0	1948	16	1	16.46
0	1949	16	1	16.46
0	1950	16	1	16.46
0	1951	16	1	16.46
0	1952	16	1	16.46
0	1953	16	1	16.46
0	1954	16	1	16.46
30	1955	16	1	16.46
365	1956	16	1	16.46
1095	1958	16	1	16.49
1825	1960	16	1	16.56
2555	1962	16	1	16.67
3285	1964	16	1	16.82
4015	1966	16	1	17.01
4745	1968	17	1	17.24
5475	1970	17	1	17.50
6205	1972	24	1	24.44
6935	1974	27	1	28.29
7665	1976	29	1	30.40
8395	1978	36	1	37.53
9125	1980	41	1	41.63
9855	1982	44	1	45.20
10585	1984	59	1	59.96
11315	1986	68	1	68.97
12045	1988	73	2	74.64
12775	1990	79	2	80.76
13505	1992	84	2	85.81
14235	1994	89	2	90.44
14965	1996	92	2	93.97
15695	1998	96	2	97.68
16425	2000	101	2	102.58
17155	2002	101	2	103.31
17885	2004	97	2	98.49
18615	2006	78	2	79.34
19345	2008	70	2	71.75
20075	2010	67	2	68.28
20805	2012	65	2	66.35
21535	2014	64	1	65.16
22265	2016	63	1	64.39
22995	2018	62	1	63.87

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
23725	2020	62	1	63.52
24455	2022	62	1	63.28
25185	2024	62	1	63.11
25915	2026	62	1	62.99
26645	2028	61	1	62.91
27375	2030	61	1	62.86
28105	2032	61	1	62.82
28835	2034	61	1	62.80
29565	2036	61	1	62.78
30295	2038	61	1	62.78
31025	2040	61	1	62.78
31755	2042	61	1	62.78
32485	2044	61	1	62.78
33215	2046	61	1	62.79
33945	2048	61	1	62.80
34675	2050	61	1	62.81
35405	2052	61	1	62.82
36135	2054	61	1	62.83
36865	2056	61	1	62.85
37595	2058	61	1	62.86
38325	2060	61	1	62.87
39055	2062	61	1	62.88
39785	2064	61	1	62.89
40515	2066	61	1	62.90
41245	2068	61	1	62.91
41975	2070	61	1	62.92
42705	2072	61	1	62.93
43435	2074	61	1	62.95
44165	2076	61	1	62.96
44895	2078	61	1	62.97
45625	2080	62	1	62.97
46355	2082	62	1	62.98
47085	2084	62	1	62.99
47815	2086	62	1	63.00
48545	2088	62	1	63.01
49275	2090	62	1	63.02
50005	2092	62	1	63.03
50735	2094	62	1	63.04
51465	2096	62	1	63.05
52195	2098	62	1	63.06
52925	2100	62	1	63.06
53655	2102	62	1	63.07
54385	2104	62	1	63.08

Appendix B-5-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-5 (Bookpurnong Area)



Appendix B-5-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-5 (Bookpurnong Area)

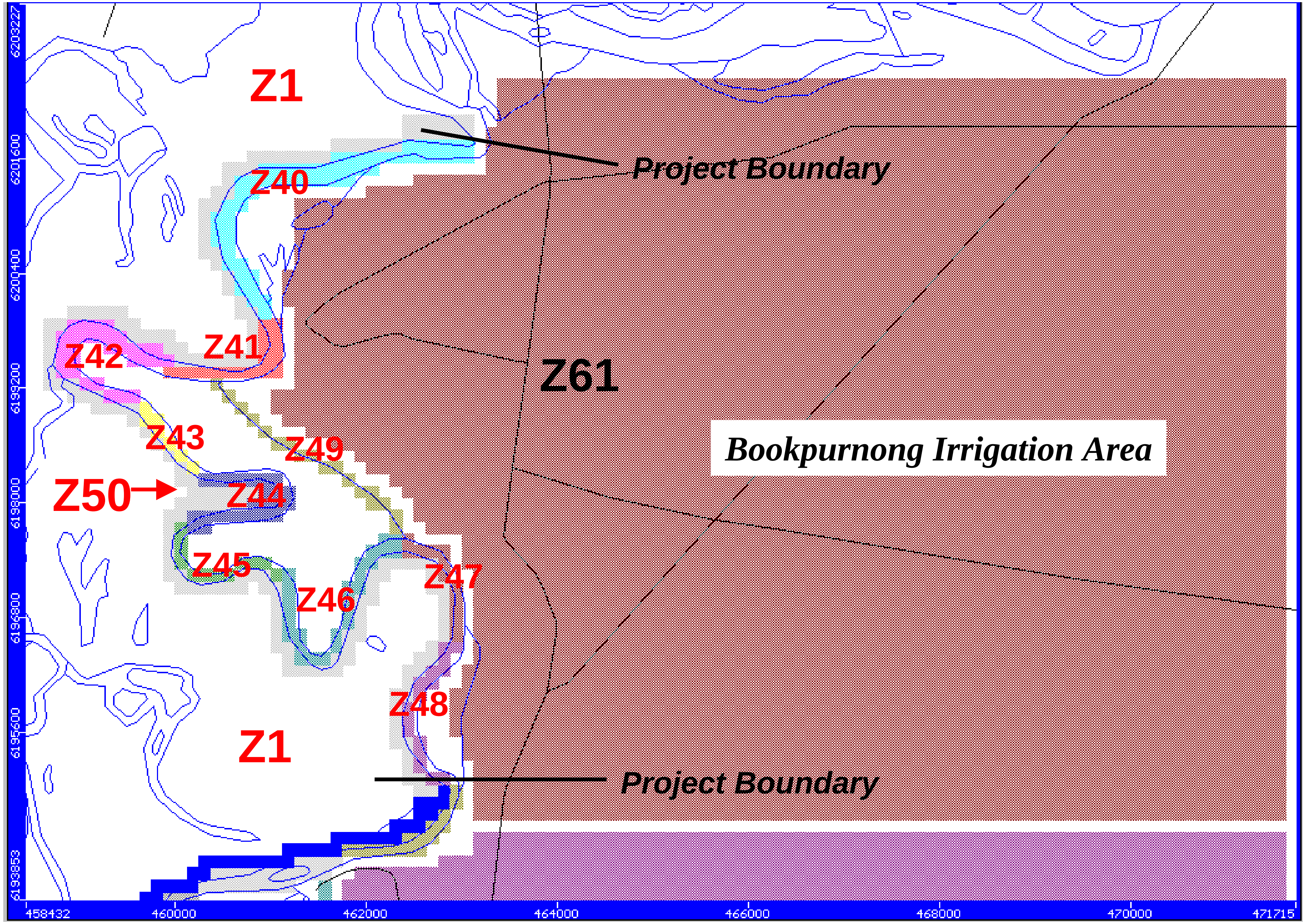
B6. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-6 (BOOKPURNONG AREA)

- Flow budget zones (Bookpurnong Area)
- Predicted lateral groundwater flux (m3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)

Appendix B-6

Groundwater flux and salt load entering the River Murray
Scenario-6
(Bookpurnong Area)

-Flow budget zones (Bookpurnong Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)



Appendix B-6-1 Flow budget zones in model Layer-1 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	**1945**	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	**581**
0	**1946**	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	**581**
0	**1947**	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	**581**
0	**1948**	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	**581**
0	**1949**	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	**581**
0	**1950**	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	**581**
0	**1951**	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	**581**
0	**1952**	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	**581**
0	**1953**	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	**581**
0	**1954**	*0.0*	*405.8*	*0.0*	*0.0*	*14.9*	*0.0*	*7.1*	*103.0*	*50.1*	*0.0*	**581**
30	**1955**	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	**581**
365	**1956**	0.0	405.8	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	**581**
1095	**1958**	0.0	405.9	0.0	0.0	15.0	0.0	7.1	103.3	50.6	0.0	**582**
1825	**1960**	0.0	406.0	0.0	0.0	15.1	0.0	7.2	104.0	52.1	0.0	**584**
2555	**1962**	0.0	406.2	0.0	0.0	15.4	0.0	7.3	105.2	55.0	0.0	**589**
3285	**1964**	0.0	406.4	0.0	0.0	15.6	0.0	7.5	106.8	60.3	0.0	**597**
4015	**1966**	0.0	406.7	0.0	0.0	15.8	0.0	7.6	108.9	68.1	0.0	**607**
4745	**1968**	0.0	407.0	0.0	0.0	16.1	0.0	7.8	111.6	77.3	0.0	**620**
5475	**1970**	0.0	407.2	0.0	0.0	16.3	0.0	7.9	114.9	87.4	0.0	**634**
6205	**1972**	0.0	464.0	0.0	0.0	67.3	0.0	29.6	183.6	98.5	0.0	**843**
6935	**1974**	0.0	488.1	0.0	0.0	99.9	0.0	43.4	219.6	110.0	0.0	**961**
7665	**1976**	0.0	500.7	0.0	0.0	115.3	0.0	50.9	240.8	121.7	0.0	**1029**
8395	**1978**	0.0	547.3	0.0	0.0	168.2	0.0	77.1	315.5	133.9	0.0	**1242**
9125	**1980**	1.9	569.3	0.0	0.0	200.3	1.1	93.0	355.4	146.3	2.6	**1370**
9855	**1982**	12.7	582.4	0.0	0.0	219.0	1.8	105.3	398.0	157.8	7.9	**1485**
10585	**1984**	39.8	684.2	0.0	0.5	323.9	4.0	153.0	530.8	169.6	48.5	**1954**
11315	**1986**	112.2	735.2	0.0	1.4	374.3	5.6	178.8	601.0	185.0	68.9	**2262**
12045	**1988**	154.9	768.4	0.0	1.9	399.3	6.4	193.3	653.0	201.7	80.1	**2459**
12775	**1990**	191.7	804.1	0.0	3.5	432.0	7.3	210.1	707.4	217.0	94.7	**2668**
13505	**1992**	253.7	830.5	0.0	4.5	450.4	7.9	220.0	747.6	233.8	102.5	**2851**
14235	**1994**	290.7	854.2	0.0	5.5	473.4	8.6	233.4	785.4	250.1	114.2	**3015**
14965	**1996**	318.1	868.9	0.0	6.4	491.7	9.2	243.8	815.7	263.7	122.7	**3140**
15695	**1998**	379.6	863.4	0.0	7.0	504.5	9.6	251.4	852.4	279.8	129.1	**3277**
16425	**2000**	461.5	862.0	0.0	7.5	516.6	10.0	261.7	903.6	294.9	136.9	**3455**
17155	**2002**	526.2	840.1	0.0	6.7	500.4	9.8	256.6	919.5	306.0	129.4	**3495**
17885	**2004**	478.4	788.1	0.0	4.8	466.4	9.0	242.2	910.2	312.3	114.6	**3326**
18615	**2006**	533.8	723.5	0.0	1.2	362.1	6.4	182.9	764.1	314.6	63.0	**2952**
19345	**2008**	534.1	682.7	0.0	0.4	316.3	4.9	158.1	716.8	315.0	45.1	**2783**
20075	**2010**	525.5	677.0	0.0	0.1	298.2	4.3	148.8	698.0	314.8	38.5	**2705**
20805	**2012**	516.8	668.3	0.0	0.0	289.7	4.0	144.4	688.9	314.4	35.3	**2662**
21535	**2014**	575.6	755.0	0.0	0.1	297.9	4.1	146.9	709.9	344.5	38.5	**2873**
22265	**2016**	680.7	805.0	0.0	0.6	324.3	4.7	159.0	760.9	381.9	49.0	**3166**
22995	**2018**	775.6	838.4	0.0	0.9	347.0	5.4	171.1	812.9	408.4	58.6	**3418**

Appendix B-6-2a Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-6 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
23725	**2020**	852.6	861.7	0.0	1.2	363.7	5.9	180.8	860.8	429.8	66.2	**3623**
24455	**2022**	916.1	878.7	0.0	1.4	376.0	6.3	188.3	904.4	447.8	72.1	**3791**
25185	**2024**	968.0	891.7	0.0	1.5	385.5	6.7	194.3	942.6	462.5	76.6	**3929**
25915	**2026**	1011.5	902.0	0.0	1.7	393.1	6.9	199.2	975.5	474.9	80.3	**4045**
26645	**2028**	1048.3	910.4	0.0	1.8	399.3	7.1	203.4	1004.8	486.1	83.3	**4145**
27375	**2030**	1079.7	917.4	0.0	1.9	404.5	7.3	206.9	1030.8	496.4	85.9	**4231**
28105	**2032**	1106.9	923.3	0.0	2.1	409.0	7.5	209.9	1054.0	505.9	88.1	**4307**
28835	**2034**	1130.5	928.5	0.0	2.3	412.8	7.6	212.6	1074.6	514.5	90.0	**4373**
29565	**2036**	1151.2	932.9	0.0	2.4	416.1	7.7	214.9	1093.0	522.4	91.7	**4432**
30295	**2038**	1169.3	936.8	0.0	2.6	419.0	7.8	217.0	1109.3	529.7	93.1	**4485**
31025	**2040**	1185.3	940.2	0.0	2.7	421.6	7.9	218.8	1123.8	536.3	94.4	**4531**
31755	**2042**	1199.4	943.2	0.0	2.8	423.9	8.0	220.3	1136.6	542.0	95.5	**4572**
32485	**2044**	1211.9	945.8	0.0	2.9	425.9	8.1	221.8	1148.0	547.1	96.5	**4608**
33215	**2046**	1223.0	948.1	0.0	3.0	427.7	8.2	223.0	1158.1	551.7	97.4	**4640**
33945	**2048**	1232.8	950.2	0.0	3.1	429.3	8.2	224.1	1167.2	556.0	98.2	**4669**
34675	**2050**	1241.6	952.1	0.0	3.2	430.7	8.3	225.1	1175.4	559.9	98.9	**4695**
35405	**2052**	1249.4	953.7	0.0	3.3	431.9	8.3	226.0	1182.7	563.5	99.5	**4718**
36135	**2054**	1256.4	955.2	0.0	3.4	433.1	8.4	226.8	1189.3	566.8	100.1	**4739**
36865	**2056**	1262.7	956.5	0.0	3.4	434.1	8.4	227.5	1195.2	569.9	100.6	**4758**
37595	**2058**	1268.3	957.7	0.0	3.5	435.0	8.4	228.1	1200.5	572.7	101.0	**4775**
38325	**2060**	1273.4	958.8	0.0	3.5	435.8	8.5	228.7	1205.4	575.3	101.4	**4791**
39055	**2062**	1278.0	959.8	0.0	3.6	436.5	8.5	229.3	1209.7	577.6	101.8	**4805**
39785	**2064**	1282.1	960.6	0.0	3.6	437.2	8.5	229.7	1213.5	579.7	102.1	**4817**
40515	**2066**	1285.9	961.4	0.0	3.6	437.8	8.6	230.2	1217.0	581.6	102.4	**4828**
41245	**2068**	1289.3	962.1	0.0	3.7	438.4	8.6	230.6	1220.2	583.4	102.7	**4839**
41975	**2070**	1292.4	962.8	0.0	3.7	438.9	8.6	230.9	1223.0	585.0	102.9	**4848**
42705	**2072**	1295.2	963.4	0.0	3.7	439.3	8.6	231.2	1225.7	586.4	103.1	**4857**
43435	**2074**	1297.7	963.9	0.0	3.8	439.8	8.6	231.5	1228.0	587.8	103.3	**4864**
44165	**2076**	1300.1	964.4	0.0	3.8	440.1	8.6	231.8	1230.2	589.0	103.5	**4872**
44895	**2078**	1302.2	964.9	0.0	3.8	440.5	8.7	232.0	1232.2	590.2	103.7	**4878**
45625	**2080**	1304.1	965.3	0.0	3.8	440.8	8.7	232.3	1234.0	591.3	103.8	**4884**
46355	**2082**	1305.9	965.7	0.0	3.8	441.1	8.7	232.5	1235.6	592.3	104.0	**4890**
47085	**2084**	1307.6	966.0	0.0	3.9	441.4	8.7	232.7	1237.2	593.2	104.1	**4895**
47815	**2086**	1309.1	966.4	0.0	3.9	441.7	8.7	232.9	1238.6	594.1	104.2	**4899**
48545	**2088**	1310.5	966.7	0.0	3.9	441.9	8.7	233.0	1239.9	594.9	104.3	**4904**
49275	**2090**	1311.8	966.9	0.0	3.9	442.1	8.7	233.2	1241.1	595.6	104.4	**4908**
50005	**2092**	1313.0	967.2	0.0	3.9	442.3	8.7	233.3	1242.2	596.4	104.5	**4912**
50735	**2094**	1314.1	967.4	0.0	3.9	442.5	8.8	233.5	1243.2	597.0	104.6	**4915**
51465	**2096**	1315.1	967.7	0.0	4.0	442.7	8.8	233.6	1244.2	597.6	104.7	**4918**
52195	**2098**	1316.1	967.9	0.0	4.0	442.8	8.8	233.7	1245.1	598.2	104.8	**4921**
52925	**2100**	1317.0	968.1	0.0	4.0	443.0	8.8	233.8	1245.9	598.8	104.9	**4924**
53655	**2102**	1317.8	968.2	0.0	4.0	443.2	8.8	233.9	1246.7	599.3	104.9	**4927**
54385	**2104**	1318.6	968.4	0.0	4.0	443.3	8.8	234.0	1247.4	599.8	105.0	**4929**
TDS	***mg/L***	***22900***	***26200***	***30000***	***38100***	***38100***	***30000***	***30000***	***38740***	***8870***	***13500***	

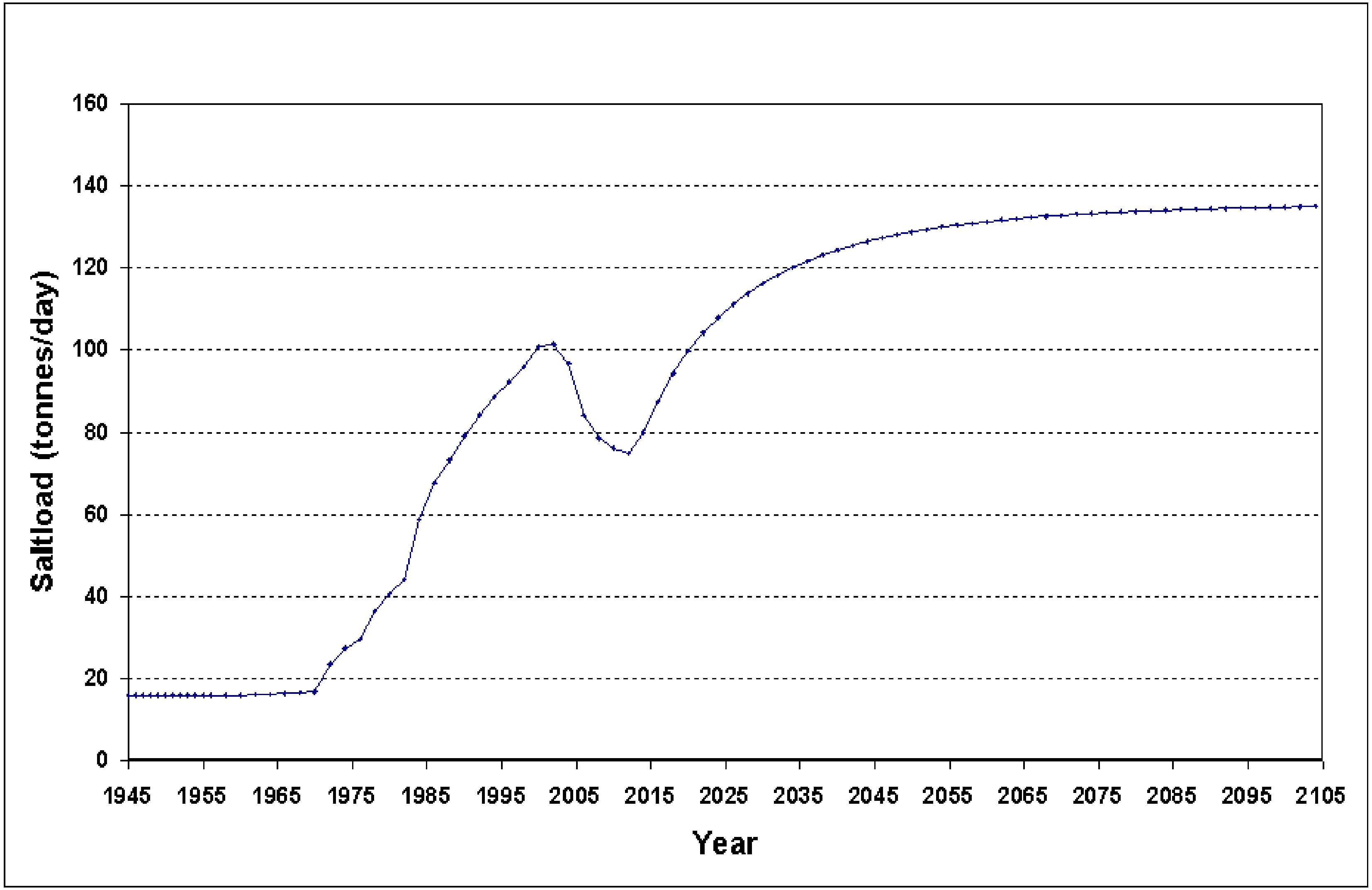
Appendix B-6-2b Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-6 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	1945	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1946	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1947	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1948	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1949	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1950	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1951	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1952	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1953	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
0	1954	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
30	1955	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
365	1956	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.85
1095	1958	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	15.87
1825	1960	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.0	0.5	0.0	15.92
2555	1962	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	16.01
3285	1964	0.0	10.6	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	16.14
4015	1966	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.2	0.6	0.0	16.31
4745	1968	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.3	0.7	0.0	16.52
5475	1970	0.0	10.7	0.0	0.0	0.6	0.0	0.2	4.5	0.8	0.0	16.75
6205	1972	0.0	12.2	0.0	0.0	2.6	0.0	0.9	7.1	0.9	0.0	23.59
6935	1974	0.0	12.8	0.0	0.0	3.8	0.0	1.3	8.5	1.0	0.0	27.38
7665	1976	0.0	13.1	0.0	0.0	4.4	0.0	1.5	9.3	1.1	0.0	29.45
8395	1978	0.0	14.3	0.0	0.0	6.4	0.0	2.3	12.2	1.2	0.0	36.47
9125	1980	0.0	14.9	0.0	0.0	7.6	0.0	2.8	13.8	1.3	0.0	40.52
9855	1982	0.3	15.3	0.0	0.0	8.3	0.1	3.2	15.4	1.4	0.1	44.03
10585	1984	0.9	17.9	0.0	0.0	12.3	0.1	4.6	20.6	1.5	0.7	58.63
11315	1986	2.6	19.3	0.0	0.1	14.3	0.2	5.4	23.3	1.6	0.9	67.53
12045	1988	3.5	20.1	0.0	0.1	15.2	0.2	5.8	25.3	1.8	1.1	73.13
12775	1990	4.4	21.1	0.0	0.1	16.5	0.2	6.3	27.4	1.9	1.3	79.18
13505	1992	5.8	21.8	0.0	0.2	17.2	0.2	6.6	29.0	2.1	1.4	84.16
14235	1994	6.7	22.4	0.0	0.2	18.0	0.3	7.0	30.4	2.2	1.5	88.73
14965	1996	7.3	22.8	0.0	0.2	18.7	0.3	7.3	31.6	2.3	1.7	92.21
15695	1998	8.7	22.6	0.0	0.3	19.2	0.3	7.5	33.0	2.5	1.7	95.88
16425	2000	10.6	22.6	0.0	0.3	19.7	0.3	7.9	35.0	2.6	1.8	100.74
17155	2002	12.0	22.0	0.0	0.3	19.1	0.3	7.7	35.6	2.7	1.7	101.45
17885	2004	11.0	20.6	0.0	0.2	17.8	0.3	7.3	35.3	2.8	1.5	96.67
18615	2006	12.2	19.0	0.0	0.0	13.8	0.2	5.5	29.6	2.8	0.9	83.95
19345	2008	12.2	18.1	0.0	0.0	12.1	0.1	4.7	27.8	2.8	0.6	78.51
20075	2010	12.0	17.7	0.0	0.0	11.4	0.1	4.5	27.0	2.8	0.5	76.08
20805	2012	11.8	17.5	0.0	0.0	11.0	0.1	4.3	26.7	2.8	0.5	74.79
21535	2014	13.2	19.8	0.0	0.0	11.4	0.1	4.4	27.5	3.1	0.5	79.93
22265	2016	15.6	21.1	0.0	0.0	12.4	0.1	4.8	29.5	3.4	0.7	87.50
22995	2018	17.8	22.0	0.0	0.0	13.2	0.2	5.1	31.5	3.6	0.8	94.18

Appendix B-6-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-6 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
23725	2020	19.5	22.6	0.0	0.0	13.9	0.2	5.4	33.3	3.8	0.9	99.66
24455	2022	21.0	23.0	0.0	0.1	14.3	0.2	5.6	35.0	4.0	1.0	104.20
25185	2024	22.2	23.4	0.0	0.1	14.7	0.2	5.8	36.5	4.1	1.0	107.96
25915	2026	23.2	23.6	0.0	0.1	15.0	0.2	6.0	37.8	4.2	1.1	111.11
26645	2028	24.0	23.9	0.0	0.1	15.2	0.2	6.1	38.9	4.3	1.1	113.82
27375	2030	24.7	24.0	0.0	0.1	15.4	0.2	6.2	39.9	4.4	1.2	116.17
28105	2032	25.3	24.2	0.0	0.1	15.6	0.2	6.3	40.8	4.5	1.2	118.23
28835	2034	25.9	24.3	0.0	0.1	15.7	0.2	6.4	41.6	4.6	1.2	120.04
29565	2036	26.4	24.4	0.0	0.1	15.9	0.2	6.4	42.3	4.6	1.2	121.64
30295	2038	26.8	24.5	0.0	0.1	16.0	0.2	6.5	43.0	4.7	1.3	123.06
31025	2040	27.1	24.6	0.0	0.1	16.1	0.2	6.6	43.5	4.8	1.3	124.31
31755	2042	27.5	24.7	0.0	0.1	16.1	0.2	6.6	44.0	4.8	1.3	125.41
32485	2044	27.8	24.8	0.0	0.1	16.2	0.2	6.7	44.5	4.9	1.3	126.40
33215	2046	28.0	24.8	0.0	0.1	16.3	0.2	6.7	44.9	4.9	1.3	127.27
33945	2048	28.2	24.9	0.0	0.1	16.4	0.2	6.7	45.2	4.9	1.3	128.05
34675	2050	28.4	24.9	0.0	0.1	16.4	0.2	6.8	45.5	5.0	1.3	128.75
35405	2052	28.6	25.0	0.0	0.1	16.5	0.2	6.8	45.8	5.0	1.3	129.37
36135	2054	28.8	25.0	0.0	0.1	16.5	0.3	6.8	46.1	5.0	1.4	129.93
36865	2056	28.9	25.1	0.0	0.1	16.5	0.3	6.8	46.3	5.1	1.4	130.44
37595	2058	29.0	25.1	0.0	0.1	16.6	0.3	6.8	46.5	5.1	1.4	130.89
38325	2060	29.2	25.1	0.0	0.1	16.6	0.3	6.9	46.7	5.1	1.4	131.30
39055	2062	29.3	25.1	0.0	0.1	16.6	0.3	6.9	46.9	5.1	1.4	131.67
39785	2064	29.4	25.2	0.0	0.1	16.7	0.3	6.9	47.0	5.1	1.4	132.00
40515	2066	29.4	25.2	0.0	0.1	16.7	0.3	6.9	47.1	5.2	1.4	132.30
41245	2068	29.5	25.2	0.0	0.1	16.7	0.3	6.9	47.3	5.2	1.4	132.58
41975	2070	29.6	25.2	0.0	0.1	16.7	0.3	6.9	47.4	5.2	1.4	132.82
42705	2072	29.7	25.2	0.0	0.1	16.7	0.3	6.9	47.5	5.2	1.4	133.05
43435	2074	29.7	25.3	0.0	0.1	16.8	0.3	6.9	47.6	5.2	1.4	133.26
44165	2076	29.8	25.3	0.0	0.1	16.8	0.3	7.0	47.7	5.2	1.4	133.45
44895	2078	29.8	25.3	0.0	0.1	16.8	0.3	7.0	47.7	5.2	1.4	133.62
45625	2080	29.9	25.3	0.0	0.1	16.8	0.3	7.0	47.8	5.2	1.4	133.78
46355	2082	29.9	25.3	0.0	0.1	16.8	0.3	7.0	47.9	5.3	1.4	133.92
47085	2084	29.9	25.3	0.0	0.1	16.8	0.3	7.0	47.9	5.3	1.4	134.06
47815	2086	30.0	25.3	0.0	0.1	16.8	0.3	7.0	48.0	5.3	1.4	134.18
48545	2088	30.0	25.3	0.0	0.1	16.8	0.3	7.0	48.0	5.3	1.4	134.29
49275	2090	30.0	25.3	0.0	0.1	16.8	0.3	7.0	48.1	5.3	1.4	134.40
50005	2092	30.1	25.3	0.0	0.1	16.9	0.3	7.0	48.1	5.3	1.4	134.50
50735	2094	30.1	25.3	0.0	0.2	16.9	0.3	7.0	48.2	5.3	1.4	134.58
51465	2096	30.1	25.4	0.0	0.2	16.9	0.3	7.0	48.2	5.3	1.4	134.67
52195	2098	30.1	25.4	0.0	0.2	16.9	0.3	7.0	48.2	5.3	1.4	134.75
52925	2100	30.2	25.4	0.0	0.2	16.9	0.3	7.0	48.3	5.3	1.4	134.82
53655	2102	30.2	25.4	0.0	0.2	16.9	0.3	7.0	48.3	5.3	1.4	134.89
54385	2104	30.2	25.4	0.0	0.2	16.9	0.3	7.0	48.3	5.3	1.4	134.96
TDS	mg/L	22900	26200	30000	38100	38100	30000	30000	38740	8870	13500	

Appendix B-6-3b Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-6 (Bookpurnong Area)



Appendix B-6-3c Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-6 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
0	1945	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1946	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1947	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1948	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1949	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1950	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1951	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1952	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1953	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1954	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
30	1955	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
365	1956	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
1095	1958	0.0	9.7	6.0	0.5	2.6	0.5	1.5	2.4	1.5	25
1825	1960	0.0	9.8	6.0	0.5	2.7	0.5	1.6	2.4	1.7	25
2555	1962	0.0	9.9	6.1	0.5	2.8	0.6	1.7	2.5	1.9	26
3285	1964	0.0	9.9	6.2	0.5	2.9	0.6	1.8	2.6	2.1	27
4015	1966	0.0	10.0	6.2	0.6	3.0	0.7	2.0	2.7	2.4	28
4745	1968	0.0	10.1	6.3	0.6	3.1	0.7	2.1	2.8	2.7	28
5475	1970	0.0	10.1	6.4	0.6	3.2	0.7	2.2	2.9	2.9	29
6205	1972	0.0	11.3	6.5	0.7	3.9	0.8	2.8	3.9	3.2	33
6935	1974	0.0	11.9	6.6	0.7	4.3	0.9	3.2	4.4	3.5	36
7665	1976	0.0	12.3	6.7	0.7	4.6	0.9	3.4	4.7	3.8	37
8395	1978	0.0	13.2	6.8	0.8	5.2	1.0	4.0	5.7	4.0	41
9125	1980	0.0	13.8	6.8	0.8	5.6	1.1	4.4	6.2	4.3	43
9855	1982	0.0	14.1	6.9	0.9	5.9	1.1	4.8	6.8	4.6	45
10585	1984	0.1	16.0	7.0	1.0	7.0	1.2	5.8	8.4	4.8	51
11315	1986	0.5	17.1	7.2	1.0	7.5	1.3	6.4	9.3	5.2	55
12045	1988	0.8	17.7	7.3	1.1	7.9	1.4	6.7	10.0	5.5	58
12775	1990	1.2	18.4	7.3	1.1	8.3	1.5	7.1	10.7	5.8	61
13505	1992	1.6	18.9	7.4	1.1	8.5	1.5	7.4	11.3	6.0	64
14235	1994	1.9	19.4	7.5	1.2	8.8	1.6	7.7	11.8	6.3	66
14965	1996	2.2	19.7	7.5	1.2	9.0	1.6	7.9	12.1	6.5	68
15695	1998	2.5	19.8	7.6	1.2	9.2	1.7	8.1	12.6	6.7	69
16425	2000	3.0	19.9	7.6	1.2	9.4	1.7	8.4	13.2	6.9	71
17155	2002	3.3	19.6	7.7	1.2	9.3	1.7	8.3	13.4	7.0	72
17885	2004	3.3	18.9	7.7	1.2	9.0	1.7	8.2	13.3	7.1	70
18615	2006	3.4	17.6	7.6	1.1	8.0	1.6	7.1	11.8	7.1	65
19345	2008	3.4	17.0	7.6	1.1	7.5	1.5	6.7	11.2	7.0	63
20075	2010	3.3	16.7	7.5	1.1	7.4	1.5	6.5	11.0	7.0	62
20805	2012	3.3	16.5	7.5	1.1	7.3	1.5	6.4	10.9	7.0	61
21535	2014	4.0	18.3	7.6	1.1	7.5	1.6	6.6	11.3	7.4	65
22265	2016	5.0	19.4	7.7	1.2	7.9	1.6	7.1	12.0	8.0	70
22995	2018	5.9	20.2	7.9	1.2	8.3	1.7	7.5	12.8	8.5	74

Appendix B-6-4a Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-6 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
23725	2020	6.7	20.7	8.0	1.3	8.6	1.8	7.8	13.5	8.9	77
24455	2022	7.4	21.1	8.1	1.3	8.9	1.9	8.2	14.1	9.2	80
25185	2024	8.0	21.5	8.2	1.3	9.1	1.9	8.4	14.6	9.5	83
25915	2026	8.5	21.8	8.3	1.4	9.2	2.0	8.7	15.1	9.8	85
26645	2028	8.9	22.0	8.4	1.4	9.4	2.0	8.9	15.5	10.0	87
27375	2030	9.4	22.2	8.5	1.4	9.5	2.1	9.0	15.9	10.2	88
28105	2032	9.7	22.4	8.5	1.4	9.7	2.1	9.2	16.2	10.4	90
28835	2034	10.1	22.5	8.6	1.5	9.8	2.2	9.4	16.5	10.6	91
29565	2036	10.4	22.7	8.6	1.5	9.9	2.2	9.5	16.8	10.8	92
30295	2038	10.6	22.8	8.7	1.5	10.0	2.2	9.6	17.0	10.9	93
31025	2040	10.9	22.9	8.7	1.5	10.0	2.3	9.7	17.2	11.0	94
31755	2042	11.1	23.0	8.8	1.5	10.1	2.3	9.8	17.4	11.2	95
32485	2044	11.3	23.1	8.8	1.5	10.2	2.3	9.9	17.6	11.3	96
33215	2046	11.5	23.1	8.9	1.5	10.2	2.3	10.0	17.7	11.4	97
33945	2048	11.6	23.2	8.9	1.6	10.3	2.4	10.1	17.8	11.5	97
34675	2050	11.8	23.3	8.9	1.6	10.3	2.4	10.2	18.0	11.6	98
35405	2052	11.9	23.3	9.0	1.6	10.4	2.4	10.2	18.1	11.7	99
36135	2054	12.0	23.4	9.0	1.6	10.4	2.4	10.3	18.2	11.7	99
36865	2056	12.2	23.4	9.0	1.6	10.5	2.4	10.3	18.3	11.8	100
37595	2058	12.3	23.5	9.0	1.6	10.5	2.5	10.4	18.3	11.9	100
38325	2060	12.4	23.5	9.1	1.6	10.6	2.5	10.4	18.4	11.9	100
39055	2062	12.5	23.6	9.1	1.6	10.6	2.5	10.5	18.5	12.0	101
39785	2064	12.5	23.6	9.1	1.6	10.6	2.5	10.5	18.5	12.1	101
40515	2066	12.6	23.6	9.1	1.6	10.6	2.5	10.6	18.6	12.1	101
41245	2068	12.7	23.7	9.2	1.6	10.7	2.5	10.6	18.7	12.2	102
41975	2070	12.8	23.7	9.2	1.6	10.7	2.5	10.6	18.7	12.2	102
42705	2072	12.8	23.7	9.2	1.6	10.7	2.5	10.7	18.7	12.2	102
43435	2074	12.9	23.7	9.2	1.6	10.7	2.6	10.7	18.8	12.3	103
44165	2076	12.9	23.8	9.2	1.6	10.8	2.6	10.7	18.8	12.3	103
44895	2078	13.0	23.8	9.2	1.7	10.8	2.6	10.8	18.9	12.4	103
45625	2080	13.0	23.8	9.3	1.7	10.8	2.6	10.8	18.9	12.4	103
46355	2082	13.1	23.8	9.3	1.7	10.8	2.6	10.8	18.9	12.4	103
47085	2084	13.1	23.8	9.3	1.7	10.8	2.6	10.8	18.9	12.4	104
47815	2086	13.2	23.9	9.3	1.7	10.9	2.6	10.9	19.0	12.5	104
48545	2088	13.2	23.9	9.3	1.7	10.9	2.6	10.9	19.0	12.5	104
49275	2090	13.3	23.9	9.3	1.7	10.9	2.6	10.9	19.0	12.5	104
50005	2092	13.3	23.9	9.3	1.7	10.9	2.6	10.9	19.0	12.5	104
50735	2094	13.3	23.9	9.4	1.7	10.9	2.6	11.0	19.1	12.6	104
51465	2096	13.4	23.9	9.4	1.7	10.9	2.7	11.0	19.1	12.6	105
52195	2098	13.4	23.9	9.4	1.7	11.0	2.7	11.0	19.1	12.6	105
52925	2100	13.4	24.0	9.4	1.7	11.0	2.7	11.0	19.1	12.6	105
53655	2102	13.5	24.0	9.4	1.7	11.0	2.7	11.0	19.1	12.6	105
54385	2104	13.5	24.0	9.4	1.7	11.0	2.7	11.0	19.1	12.7	105
TDS	*mg/L*	20000	20000	28600	28600	28600	28600	28600	28600	28600	

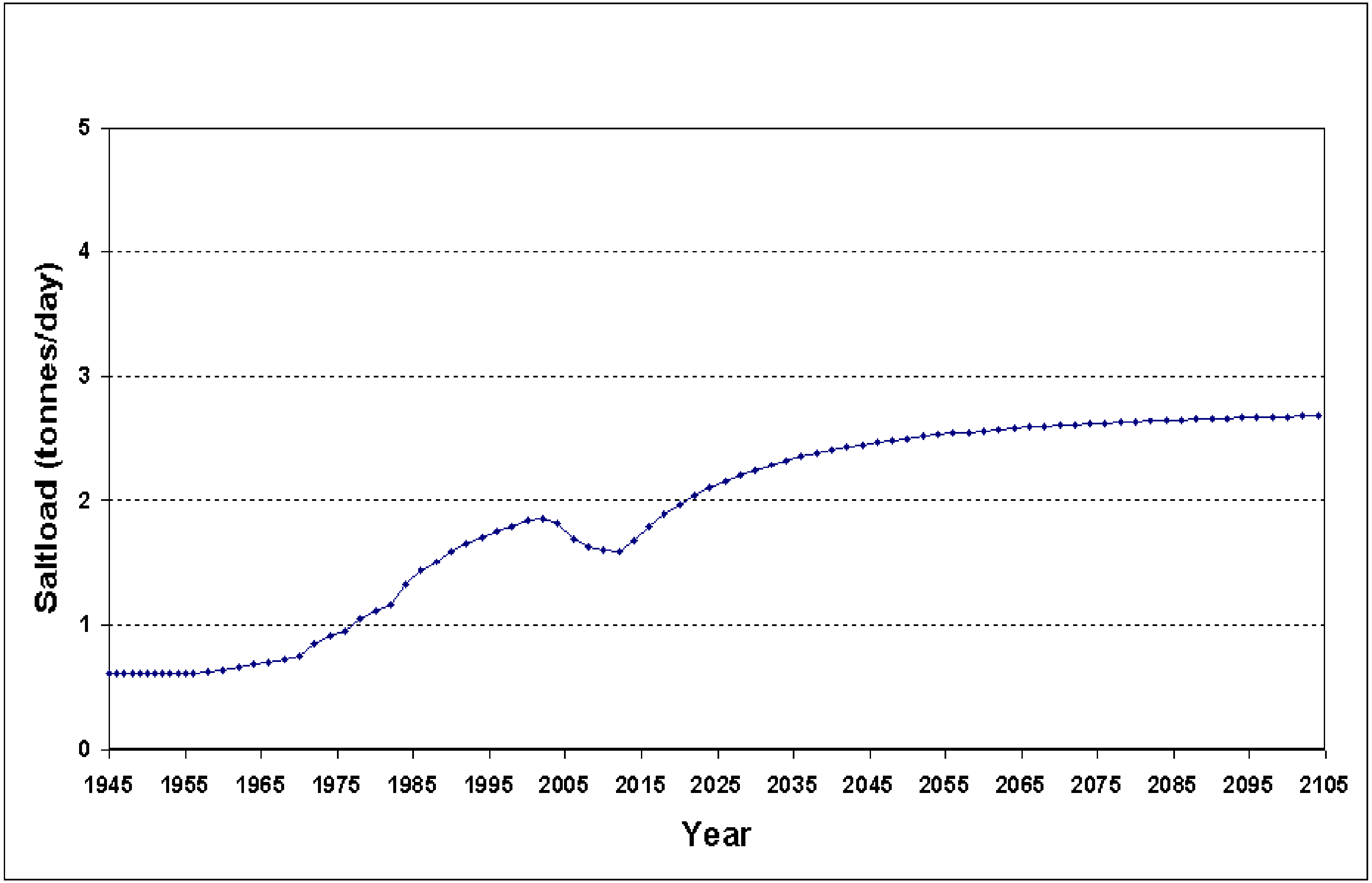
Appendix B-6-4b Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-6 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
0	*1945*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.61*
0	*1946*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.61*
0	*1947*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.61*
0	*1948*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.61*
0	*1949*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.61*
0	*1950*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.61*
0	*1951*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.61*
0	*1952*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.61*
0	*1953*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.61*
0	*1954*	*0.0*	*0.2*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.61*
30	1955	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	*0.61*
365	1956	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
1095	1958	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.62
1825	1960	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.64
2555	1962	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.1	0.66
3285	1964	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.68
4015	1966	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.70
4745	1968	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.72
5475	1970	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.74
6205	1972	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.85
6935	1974	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.91
7665	1976	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.95
8395	1978	0.0	0.3	0.2	0.0	0.1	0.0	0.1	0.2	0.1	1.05
9125	1980	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1.11
9855	1982	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1.17
10585	1984	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.2	0.1	1.33
11315	1986	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.1	1.44
12045	1988	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.51
12775	1990	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.59
13505	1992	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.65
14235	1994	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	1.71
14965	1996	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	1.75
15695	1998	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.79
16425	2000	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.84
17155	2002	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.85
17885	2004	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.82
18615	2006	0.1	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.69
19345	2008	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.63
20075	2010	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.60
20805	2012	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.59
21535	2014	0.1	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.68
22265	2016	0.1	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.79
22995	2018	0.1	0.4	0.2	0.0	0.2	0.0	0.2	0.4	0.2	1.89

Appendix B-6-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-6 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
23725	2020	0.1	0.4	0.2	0.0	0.2	0.1	0.2	0.4	0.3	1.97
24455	2022	0.1	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.3	2.05
25185	2024	0.2	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.3	2.11
25915	2026	0.2	0.4	0.2	0.0	0.3	0.1	0.2	0.4	0.3	2.16
26645	2028	0.2	0.4	0.2	0.0	0.3	0.1	0.3	0.4	0.3	2.21
27375	2030	0.2	0.4	0.2	0.0	0.3	0.1	0.3	0.5	0.3	2.25
28105	2032	0.2	0.4	0.2	0.0	0.3	0.1	0.3	0.5	0.3	2.29
28835	2034	0.2	0.5	0.2	0.0	0.3	0.1	0.3	0.5	0.3	2.32
29565	2036	0.2	0.5	0.2	0.0	0.3	0.1	0.3	0.5	0.3	2.35
30295	2038	0.2	0.5	0.2	0.0	0.3	0.1	0.3	0.5	0.3	2.38
31025	2040	0.2	0.5	0.2	0.0	0.3	0.1	0.3	0.5	0.3	2.41
31755	2042	0.2	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.43
32485	2044	0.2	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.45
33215	2046	0.2	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.47
33945	2048	0.2	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.49
34675	2050	0.2	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.50
35405	2052	0.2	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.52
36135	2054	0.2	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.53
36865	2056	0.2	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.54
37595	2058	0.2	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.55
38325	2060	0.2	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.56
39055	2062	0.2	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.57
39785	2064	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.58
40515	2066	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.59
41245	2068	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.60
41975	2070	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.3	2.61
42705	2072	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.61
43435	2074	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.62
44165	2076	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.62
44895	2078	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.63
45625	2080	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.64
46355	2082	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.64
47085	2084	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.65
47815	2086	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.65
48545	2088	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.65
49275	2090	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.66
50005	2092	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.66
50735	2094	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.67
51465	2096	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.67
52195	2098	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.67
52925	2100	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.68
53655	2102	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.68
54385	2104	0.3	0.5	0.3	0.0	0.3	0.1	0.3	0.5	0.4	2.68
TDS	mg/L	20000	20000	28600	28600	28600	28600	28600	28600	28600	

Appendix B-6-5b Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-6 (Bookpurnong Area)

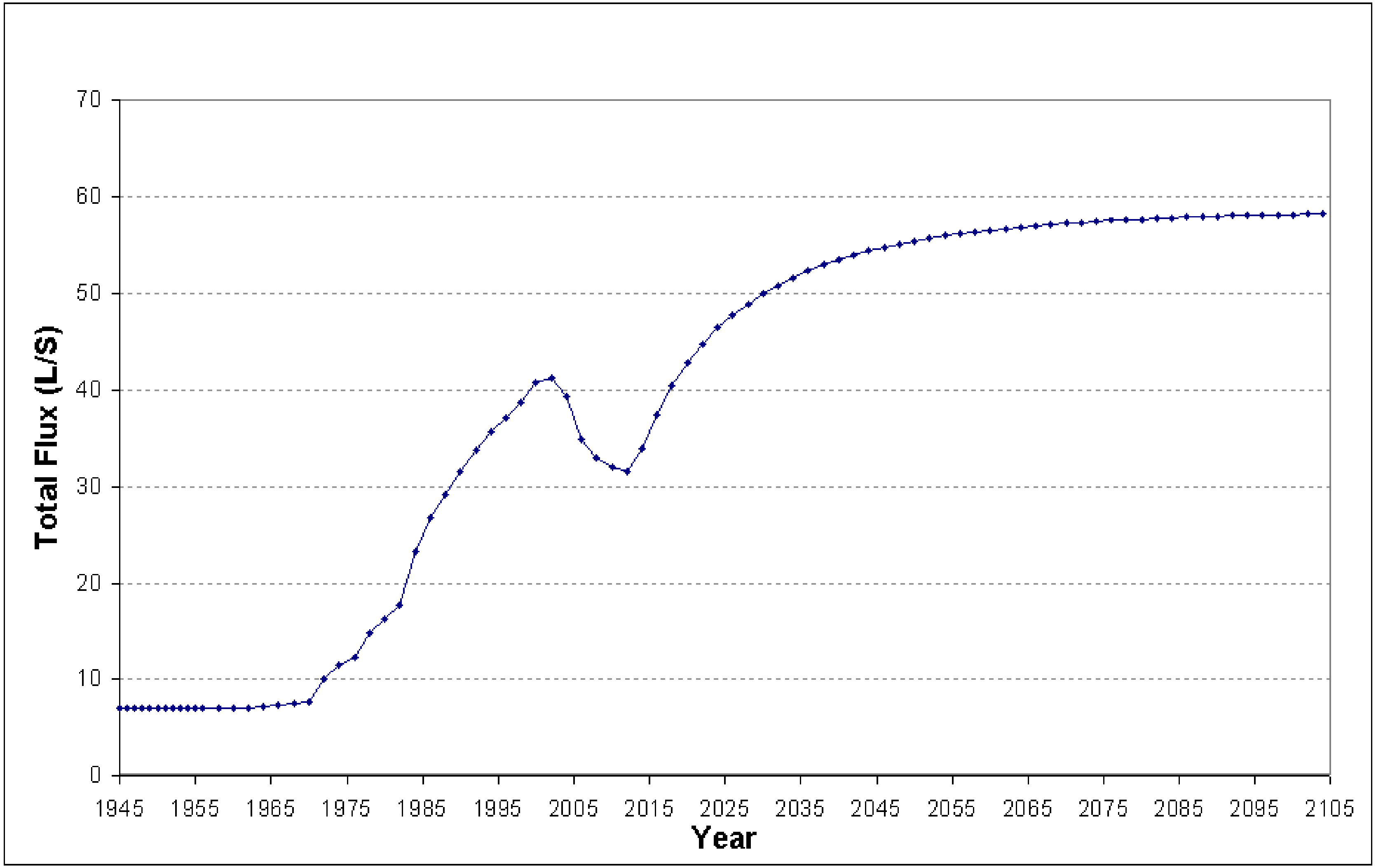


Appendix B-6-5c Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-6 (Bookpurnong Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	1945	581	24	605	7.00
0	1946	581	24	605	7.00
0	1947	581	24	605	7.00
0	1948	581	24	605	7.00
0	1949	581	24	605	7.00
0	1950	581	24	605	7.00
0	1951	581	24	605	7.00
0	1952	581	24	605	7.00
0	1953	581	24	605	7.00
0	1954	581	24	605	7.00
30	1955	581	24	605	7.00
365	1956	581	24	605	7.01
1095	1958	582	25	607	7.02
1825	1960	584	25	610	7.06
2555	1962	589	26	615	7.12
3285	1964	597	27	623	7.21
4015	1966	607	28	635	7.35
4745	1968	620	28	648	7.50
5475	1970	634	29	663	7.67
6205	1972	843	33	876	10.14
6935	1974	961	36	996	11.53
7665	1976	1029	37	1066	12.34
8395	1978	1242	41	1283	14.85
9125	1980	1370	43	1413	16.35
9855	1982	1485	45	1530	17.71
10585	1984	1954	51	2006	23.21
11315	1986	2262	55	2318	26.83
12045	1988	2459	58	2517	29.14
12775	1990	2668	61	2729	31.59
13505	1992	2851	64	2915	33.74
14235	1994	3015	66	3082	35.67
14965	1996	3140	68	3208	37.13
15695	1998	3277	69	3346	38.73
16425	2000	3455	71	3526	40.81
17155	2002	3495	72	3566	41.28
17885	2004	3326	70	3396	39.31
18615	2006	2952	65	3017	34.92
19345	2008	2783	63	2847	32.95
20075	2010	2705	62	2767	32.03
20805	2012	2662	61	2723	31.52
21535	2014	2873	65	2938	34.00
22265	2016	3166	70	3236	37.45
22995	2018	3418	74	3492	40.42

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
23725	2020	3623	77	3700	42.82
24455	2022	3791	80	3871	44.80
25185	2024	3929	83	4012	46.43
25915	2026	4045	85	4130	47.80
26645	2028	4145	87	4231	48.97
27375	2030	4231	88	4319	49.99
28105	2032	4307	90	4396	50.88
28835	2034	4373	91	4464	51.67
29565	2036	4432	92	4525	52.37
30295	2038	4485	93	4578	52.98
31025	2040	4531	94	4625	53.53
31755	2042	4572	95	4667	54.01
32485	2044	4608	96	4704	54.44
33215	2046	4640	97	4737	54.83
33945	2048	4669	97	4767	55.17
34675	2050	4695	98	4793	55.48
35405	2052	4718	99	4817	55.75
36135	2054	4739	99	4838	56.00
36865	2056	4758	100	4858	56.22
37595	2058	4775	100	4875	56.43
38325	2060	4791	100	4891	56.61
39055	2062	4805	101	4905	56.78
39785	2064	4817	101	4918	56.92
40515	2066	4828	101	4930	57.06
41245	2068	4839	102	4941	57.18
41975	2070	4848	102	4950	57.29
42705	2072	4857	102	4959	57.40
43435	2074	4864	103	4967	57.49
44165	2076	4872	103	4974	57.57
44895	2078	4878	103	4981	57.65
45625	2080	4884	103	4987	57.72
46355	2082	4890	103	4993	57.79
47085	2084	4895	104	4998	57.85
47815	2086	4899	104	5003	57.91
48545	2088	4904	104	5008	57.96
49275	2090	4908	104	5012	58.01
50005	2092	4912	104	5016	58.05
50735	2094	4915	104	5019	58.10
51465	2096	4918	105	5023	58.13
52195	2098	4921	105	5026	58.17
52925	2100	4924	105	5029	58.21
53655	2102	4927	105	5032	58.24
54385	2104	4929	105	5034	58.27

Appendix B-6-6a Predicted total groundwater flux in Scenario-6 (Bookpurnong Area)

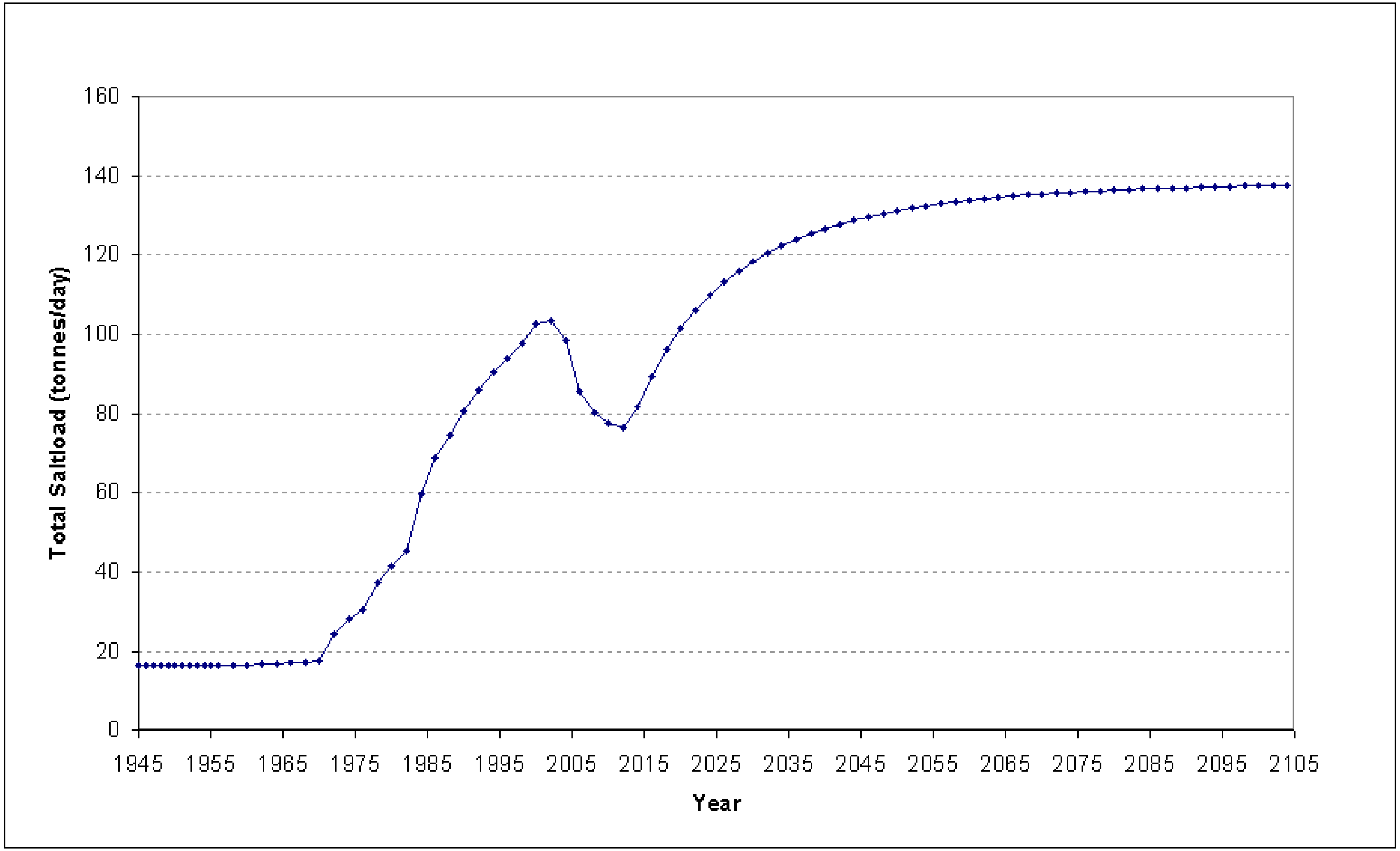


Appendix B-6-6b Graph of predicted total groundwater flux (L/second) entering the River Murray in Scenario-6 (Bookpurnong Area)

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	16	1	16.46
0	1946	16	1	16.46
0	1947	16	1	16.46
0	1948	16	1	16.46
0	1949	16	1	16.46
0	1950	16	1	16.46
0	1951	16	1	16.46
0	1952	16	1	16.46
0	1953	16	1	16.46
0	1954	16	1	16.46
30	1955	16	1	16.46
365	1956	16	1	16.46
1095	1958	16	1	16.49
1825	1960	16	1	16.56
2555	1962	16	1	16.67
3285	1964	16	1	16.82
4015	1966	16	1	17.01
4745	1968	17	1	17.24
5475	1970	17	1	17.50
6205	1972	24	1	24.44
6935	1974	27	1	28.29
7665	1976	29	1	30.40
8395	1978	36	1	37.53
9125	1980	41	1	41.63
9855	1982	44	1	45.20
10585	1984	59	1	59.96
11315	1986	68	1	68.97
12045	1988	73	2	74.64
12775	1990	79	2	80.76
13505	1992	84	2	85.81
14235	1994	89	2	90.44
14965	1996	92	2	93.97
15695	1998	96	2	97.68
16425	2000	101	2	102.58
17155	2002	101	2	103.31
17885	2004	97	2	98.49
18615	2006	84	2	85.64
19345	2008	79	2	80.14
20075	2010	76	2	77.69
20805	2012	75	2	76.38
21535	2014	80	2	81.60
22265	2016	87	2	89.29
22995	2018	94	2	96.07

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
23725	2020	100	2	101.63
24455	2022	104	2	106.24
25185	2024	108	2	110.06
25915	2026	111	2	113.27
26645	2028	114	2	116.02
27375	2030	116	2	118.42
28105	2032	118	2	120.52
28835	2034	120	2	122.36
29565	2036	122	2	124.00
30295	2038	123	2	125.44
31025	2040	124	2	126.72
31755	2042	125	2	127.84
32485	2044	126	2	128.85
33215	2046	127	2	129.73
33945	2048	128	2	130.53
34675	2050	129	3	131.25
35405	2052	129	3	131.89
36135	2054	130	3	132.46
36865	2056	130	3	132.98
37595	2058	131	3	133.44
38325	2060	131	3	133.87
39055	2062	132	3	134.24
39785	2064	132	3	134.58
40515	2066	132	3	134.89
41245	2068	133	3	135.18
41975	2070	133	3	135.43
42705	2072	133	3	135.67
43435	2074	133	3	135.87
44165	2076	133	3	136.07
44895	2078	134	3	136.25
45625	2080	134	3	136.41
46355	2082	134	3	136.56
47085	2084	134	3	136.70
47815	2086	134	3	136.83
48545	2088	134	3	136.95
49275	2090	134	3	137.06
50005	2092	134	3	137.16
50735	2094	135	3	137.25
51465	2096	135	3	137.34
52195	2098	135	3	137.42
52925	2100	135	3	137.50
53655	2102	135	3	137.57
54385	2104	135	3	137.64

Appendix B-6-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-6 (Bookpurnong Area)



Appendix B-6-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-6 (Bookpurnong Area)

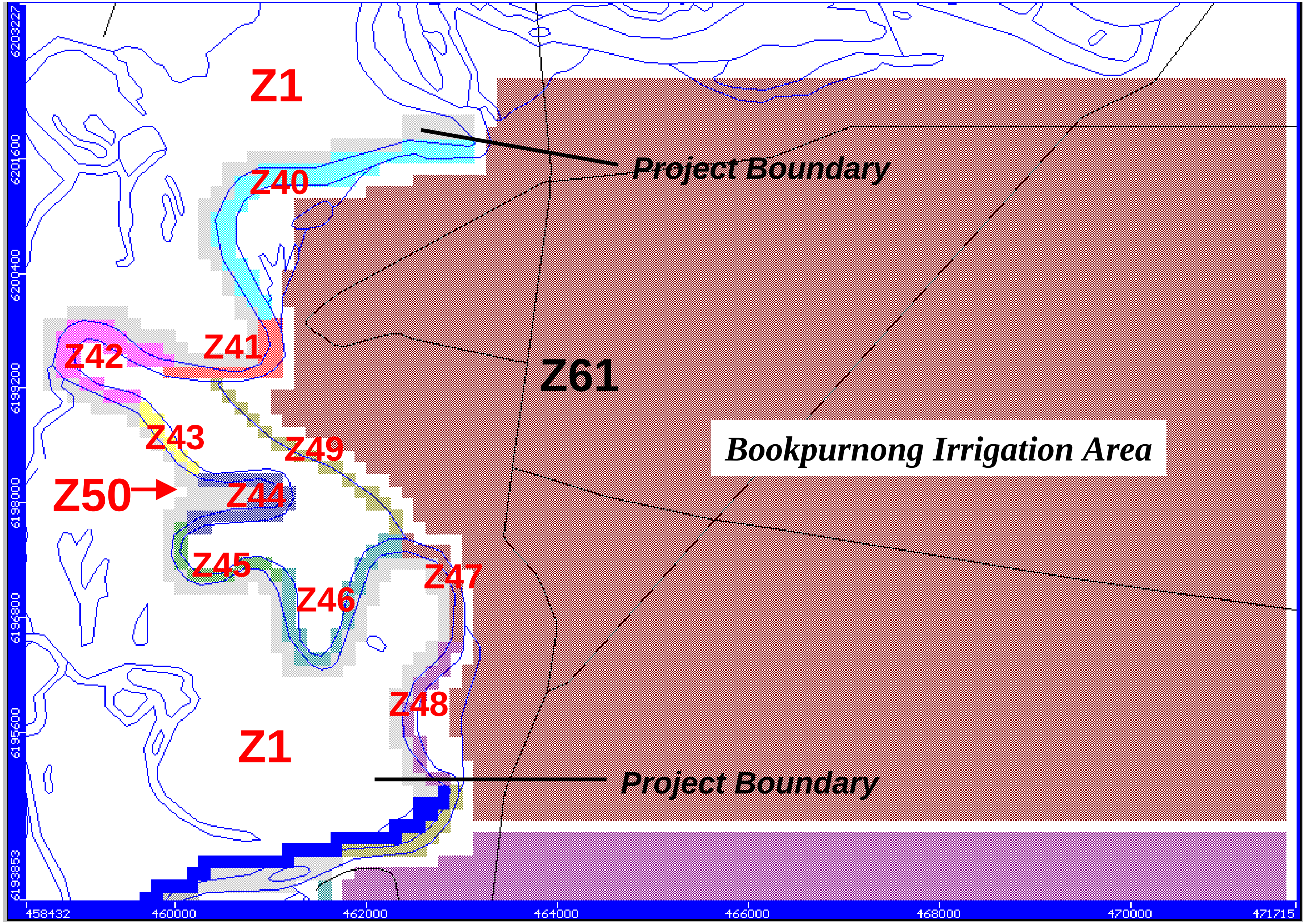
B7. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-7 (BOOKPURNONG AREA)

- Flow budget zones (Bookpurnong Area)
- Predicted lateral groundwater flux (m^3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m^3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)

Appendix B-7

Groundwater flux and salt load entering the River Murray
Scenario-7
(Bookpurnong Area)

-Flow budget zones (Bookpurnong Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)



Appendix B-7-1 Flow budget zones in model Layer-1 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	1945	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1946	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1947	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1948	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1949	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1950	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1951	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1952	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1953	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1954	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
30	1955	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
365	1956	0.0	321.4	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	497
1095	1958	0.0	323.3	0.0	0.0	15.0	0.0	7.1	103.3	50.6	0.0	499
1825	1960	0.0	323.8	0.0	0.0	15.2	0.0	7.2	104.0	52.1	0.0	502
2555	1962	0.0	324.2	0.0	0.0	15.5	0.0	7.4	105.2	55.0	0.0	507
3285	1964	0.0	324.6	0.0	0.0	15.8	0.0	7.5	106.8	60.3	0.0	515
4015	1966	0.0	324.9	0.0	0.0	16.1	0.0	7.7	109.0	68.1	0.0	526
4745	1968	0.0	325.2	0.0	0.0	16.4	0.0	7.8	111.8	77.4	0.0	539
5475	1970	0.0	325.5	0.0	0.0	16.6	0.0	8.0	115.1	87.5	0.0	553
6205	1972	0.0	376.1	0.0	0.0	67.8	0.0	29.7	183.8	98.6	0.0	756
6935	1974	0.0	399.9	0.0	0.0	100.4	0.0	43.6	219.9	110.2	0.0	874
7665	1976	0.0	412.1	0.0	0.0	116.0	0.0	51.1	241.2	122.0	0.0	942
8395	1978	0.0	454.6	0.0	0.0	168.9	0.1	77.4	316.1	134.5	0.0	1151
9125	1980	6.2	476.1	0.0	0.0	201.2	1.1	93.3	356.0	147.0	2.7	1284
9855	1982	19.4	488.8	0.0	0.0	219.9	1.8	105.5	398.8	158.7	8.0	1401
10585	1984	51.1	581.2	0.0	0.5	325.0	4.1	153.3	531.7	170.7	48.8	1867
11315	1986	126.4	629.4	0.0	1.5	375.6	5.7	179.2	602.1	186.5	69.3	2176
12045	1988	172.4	660.0	0.0	2.0	400.8	6.5	193.8	654.3	203.4	80.6	2374
12775	1990	215.8	693.2	0.0	3.6	433.7	7.3	210.6	708.9	219.0	95.2	2587
13505	1992	285.2	717.2	0.0	4.7	452.2	7.9	220.6	749.3	236.1	103.1	2776
14235	1994	329.4	738.5	0.0	5.7	475.4	8.6	234.0	787.4	252.7	114.9	2947
14965	1996	361.1	752.8	0.0	6.6	493.8	9.2	244.5	817.9	266.5	123.4	3076
15695	1998	420.0	750.3	0.0	7.3	506.8	9.6	252.1	854.8	282.8	129.9	3214
16425	2000	503.0	750.0	0.0	7.7	518.9	10.1	262.4	906.2	298.1	137.7	3394
17155	2002	567.9	731.1	0.0	6.9	502.6	9.9	257.3	922.3	309.3	130.2	3438
17885	2004	511.2	686.4	0.0	5.0	468.6	9.1	242.9	913.0	315.8	115.3	3267
18615	2006	185.5	298.6	0.0	0.0	59.0	0.0	42.5	226.1	104.0	0.0	916
19345	2008	159.9	263.6	0.0	0.0	2.9	0.0	3.4	163.6	77.8	0.0	671
20075	2010	147.0	247.5	0.0	0.0	0.0	0.0	0.0	148.4	68.4	0.0	611
20805	2012	136.8	238.5	0.0	0.0	0.0	0.0	0.0	139.6	62.9	0.0	578
21535	2014	129.4	233.6	0.0	0.0	0.0	0.0	0.0	133.9	59.6	0.0	557
22265	2016	124.1	231.2	0.0	0.0	0.0	0.0	0.0	129.9	57.1	0.0	542
22995	2018	120.2	229.6	0.0	0.0	0.0	0.0	0.0	127.0	55.4	0.0	532

Appendix B-7-2a Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-7 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
23725	2020	117.3	228.6	0.0	0.0	0.0	0.0	0.0	124.7	54.2	0.0	525
24455	2022	115.1	227.8	0.0	0.0	0.0	0.0	0.0	123.0	53.2	0.0	519
25185	2024	113.6	227.3	0.0	0.0	0.0	0.0	0.0	121.7	52.3	0.0	515
25915	2026	112.4	226.9	0.0	0.0	0.0	0.0	0.0	120.6	51.6	0.0	511
26645	2028	111.5	226.7	0.0	0.0	0.0	0.0	0.0	119.7	50.9	0.0	509
27375	2030	110.9	226.5	0.0	0.0	0.0	0.0	0.0	118.9	50.3	0.0	507
28105	2032	110.5	226.3	0.0	0.0	0.0	0.0	0.0	118.3	49.8	0.0	505
28835	2034	103.0	204.6	0.0	0.0	0.0	0.0	0.0	29.7	31.9	0.0	369
29565	2036	97.6	209.6	0.0	0.0	0.0	0.0	0.0	26.7	29.8	0.0	364
30295	2038	95.2	210.1	0.0	0.0	0.0	0.0	0.0	25.5	28.9	0.0	360
31025	2040	93.8	209.6	0.0	0.0	0.0	0.0	0.0	24.8	28.3	0.0	357
31755	2042	92.9	209.3	0.0	0.0	0.0	0.0	0.0	24.2	27.8	0.0	354
32485	2044	92.3	209.0	0.0	0.0	0.0	0.0	0.0	23.8	27.5	0.0	353
33215	2046	91.8	208.8	0.0	0.0	0.0	0.0	0.0	23.5	27.2	0.0	351
33945	2048	93.6	208.5	0.0	0.0	0.0	0.0	0.0	14.8	21.6	0.0	338
34675	2050	92.3	208.5	0.0	0.0	0.0	0.0	0.0	14.3	20.6	0.0	336
35405	2052	91.7	208.4	0.0	0.0	0.0	0.0	0.0	14.1	20.1	0.0	334
36135	2054	91.4	208.3	0.0	0.0	0.0	0.0	0.0	14.0	19.7	0.0	333
36865	2056	91.2	208.2	0.0	0.0	0.0	0.0	0.0	13.9	19.5	0.0	333
37595	2058	91.0	208.1	0.0	0.0	0.0	0.0	0.0	13.8	19.3	0.0	332
38325	2060	90.9	208.1	0.0	0.0	0.0	0.0	0.0	13.7	19.1	0.0	332
39055	2062	90.8	208.1	0.0	0.0	0.0	0.0	0.0	13.7	19.0	0.0	331
39785	2064	90.7	208.0	0.0	0.0	0.0	0.0	0.0	13.6	18.9	0.0	331
40515	2066	90.7	208.0	0.0	0.0	0.0	0.0	0.0	13.6	18.8	0.0	331
41245	2068	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.5	18.7	0.0	331
41975	2070	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.5	18.6	0.0	331
42705	2072	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.5	18.5	0.0	331
43435	2074	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.4	18.5	0.0	330
44165	2076	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.4	18.4	0.0	330
44895	2078	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.4	18.4	0.0	330
45625	2080	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.4	18.3	0.0	330
46355	2082	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.4	18.3	0.0	330
47085	2084	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.3	18.2	0.0	330
47815	2086	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.3	18.2	0.0	330
48545	2088	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.3	18.2	0.0	330
49275	2090	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.3	18.1	0.0	330
50005	2092	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.3	18.1	0.0	330
50735	2094	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.3	18.1	0.0	330
51465	2096	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.3	18.1	0.0	330
52195	2098	90.6	208.0	0.0	0.0	0.0	0.0	0.0	13.3	18.1	0.0	330
52925	2100	90.7	208.0	0.0	0.0	0.0	0.0	0.0	13.3	18.1	0.0	330
53655	2102	90.7	208.0	0.0	0.0	0.0	0.0	0.0	13.3	18.1	0.0	330
54385	2104	90.7	208.0	0.0	0.0	0.0	0.0	0.0	13.3	18.0	0.0	330
TDS	*mg/L*	22900	26200	30000	38100	38100	30000	30000	38740	8870	13500	

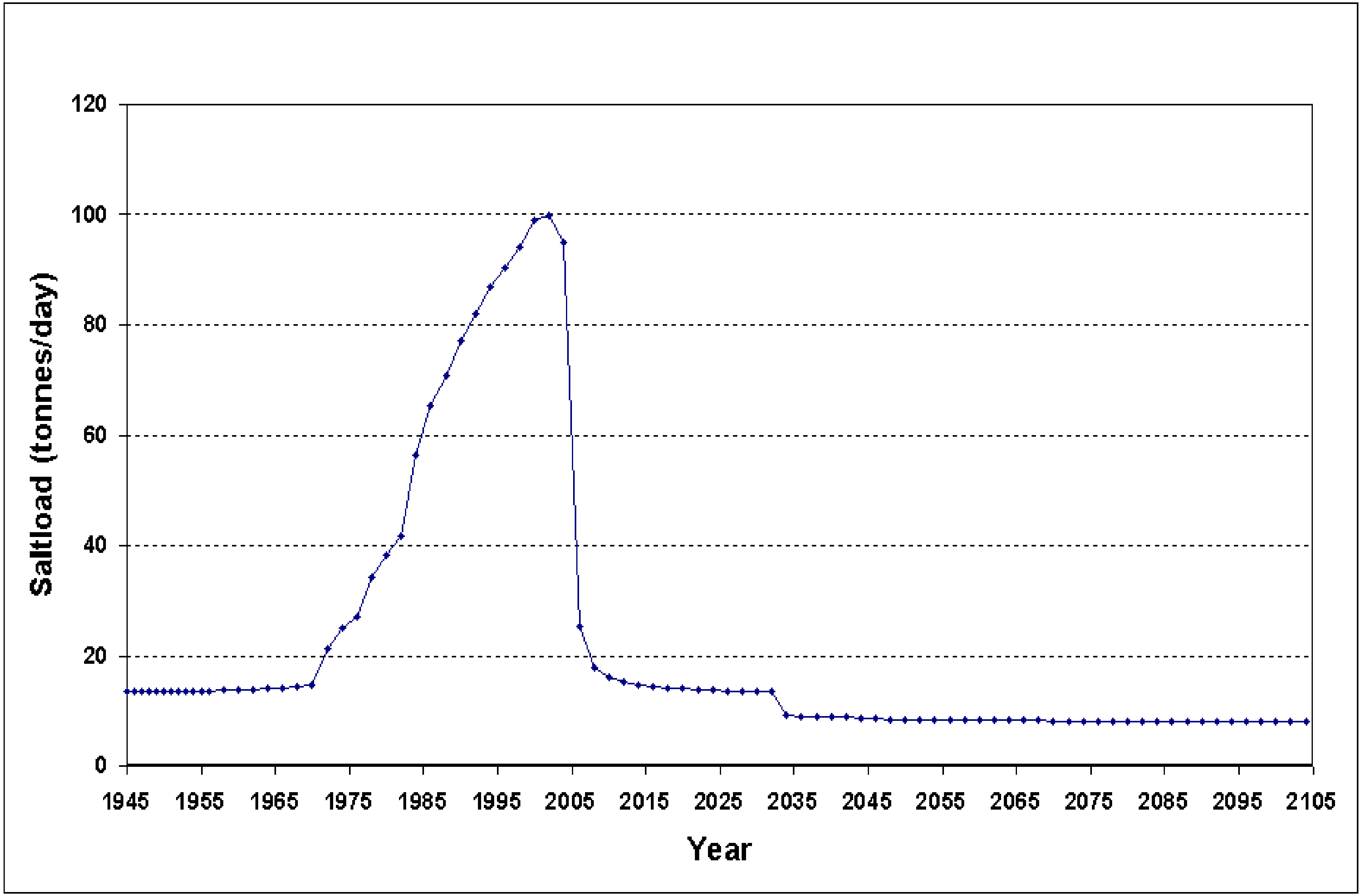
Appendix B-7-2b Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-7 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	*1945*	*0.0*	*8.2*	*0.0*	*0.0*	*0.6*	*0.0*	*0.2*	*4.0*	*0.4*	*0.0*	*13.44*
0	*1946*	*0.0*	*8.2*	*0.0*	*0.0*	*0.6*	*0.0*	*0.2*	*4.0*	*0.4*	*0.0*	*13.44*
0	*1947*	*0.0*	*8.2*	*0.0*	*0.0*	*0.6*	*0.0*	*0.2*	*4.0*	*0.4*	*0.0*	*13.44*
0	*1948*	*0.0*	*8.2*	*0.0*	*0.0*	*0.6*	*0.0*	*0.2*	*4.0*	*0.4*	*0.0*	*13.44*
0	*1949*	*0.0*	*8.2*	*0.0*	*0.0*	*0.6*	*0.0*	*0.2*	*4.0*	*0.4*	*0.0*	*13.44*
0	*1950*	*0.0*	*8.2*	*0.0*	*0.0*	*0.6*	*0.0*	*0.2*	*4.0*	*0.4*	*0.0*	*13.44*
0	*1951*	*0.0*	*8.2*	*0.0*	*0.0*	*0.6*	*0.0*	*0.2*	*4.0*	*0.4*	*0.0*	*13.44*
0	*1952*	*0.0*	*8.2*	*0.0*	*0.0*	*0.6*	*0.0*	*0.2*	*4.0*	*0.4*	*0.0*	*13.44*
0	*1953*	*0.0*	*8.2*	*0.0*	*0.0*	*0.6*	*0.0*	*0.2*	*4.0*	*0.4*	*0.0*	*13.44*
0	*1954*	*0.0*	*8.2*	*0.0*	*0.0*	*0.6*	*0.0*	*0.2*	*4.0*	*0.4*	*0.0*	*13.44*
30	1955	0.0	8.2	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.44
365	1956	0.0	8.4	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.64
1095	1958	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.71
1825	1960	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.0	0.5	0.0	13.77
2555	1962	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	13.87
3285	1964	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	14.00
4015	1966	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.2	0.6	0.0	14.18
4745	1968	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.3	0.7	0.0	14.39
5475	1970	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.5	0.8	0.0	14.64
6205	1972	0.0	9.9	0.0	0.0	2.6	0.0	0.9	7.1	0.9	0.0	21.32
6935	1974	0.0	10.5	0.0	0.0	3.8	0.0	1.3	8.5	1.0	0.0	25.11
7665	1976	0.0	10.8	0.0	0.0	4.4	0.0	1.5	9.3	1.1	0.0	27.18
8395	1978	0.0	11.9	0.0	0.0	6.4	0.0	2.3	12.2	1.2	0.0	34.11
9125	1980	0.1	12.5	0.0	0.0	7.7	0.0	2.8	13.8	1.3	0.0	38.25
9855	1982	0.4	12.8	0.0	0.0	8.4	0.1	3.2	15.4	1.4	0.1	41.82
10585	1984	1.2	15.2	0.0	0.0	12.4	0.1	4.6	20.6	1.5	0.7	56.30
11315	1986	2.9	16.5	0.0	0.1	14.3	0.2	5.4	23.3	1.7	0.9	65.21
12045	1988	3.9	17.3	0.0	0.1	15.3	0.2	5.8	25.3	1.8	1.1	70.83
12775	1990	4.9	18.2	0.0	0.1	16.5	0.2	6.3	27.5	1.9	1.3	76.99
13505	1992	6.5	18.8	0.0	0.2	17.2	0.2	6.6	29.0	2.1	1.4	82.10
14235	1994	7.5	19.3	0.0	0.2	18.1	0.3	7.0	30.5	2.2	1.6	86.79
14965	1996	8.3	19.7	0.0	0.3	18.8	0.3	7.3	31.7	2.4	1.7	90.38
15695	1998	9.6	19.7	0.0	0.3	19.3	0.3	7.6	33.1	2.5	1.8	94.09
16425	2000	11.5	19.6	0.0	0.3	19.8	0.3	7.9	35.1	2.6	1.9	99.02
17155	2002	13.0	19.2	0.0	0.3	19.2	0.3	7.7	35.7	2.7	1.8	99.82
17885	2004	11.7	18.0	0.0	0.2	17.9	0.3	7.3	35.4	2.8	1.6	95.02
18615	2006	4.2	7.8	0.0	0.0	2.2	0.0	1.3	8.8	0.9	0.0	25.28
19345	2008	3.7	6.9	0.0	0.0	0.1	0.0	0.1	6.3	0.7	0.0	17.81
20075	2010	3.4	6.5	0.0	0.0	0.0	0.0	0.0	5.7	0.6	0.0	16.21
20805	2012	3.1	6.2	0.0	0.0	0.0	0.0	0.0	5.4	0.6	0.0	15.35
21535	2014	3.0	6.1	0.0	0.0	0.0	0.0	0.0	5.2	0.5	0.0	14.80
22265	2016	2.8	6.1	0.0	0.0	0.0	0.0	0.0	5.0	0.5	0.0	14.44
22995	2018	2.8	6.0	0.0	0.0	0.0	0.0	0.0	4.9	0.5	0.0	14.18

Appendix B-7-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-7 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
23725	2020	2.7	6.0	0.0	0.0	0.0	0.0	0.0	4.8	0.5	0.0	13.99
24455	2022	2.6	6.0	0.0	0.0	0.0	0.0	0.0	4.8	0.5	0.0	13.84
25185	2024	2.6	6.0	0.0	0.0	0.0	0.0	0.0	4.7	0.5	0.0	13.73
25915	2026	2.6	5.9	0.0	0.0	0.0	0.0	0.0	4.7	0.5	0.0	13.65
26645	2028	2.6	5.9	0.0	0.0	0.0	0.0	0.0	4.6	0.5	0.0	13.58
27375	2030	2.5	5.9	0.0	0.0	0.0	0.0	0.0	4.6	0.4	0.0	13.53
28105	2032	2.5	5.9	0.0	0.0	0.0	0.0	0.0	4.6	0.4	0.0	13.48
28835	2034	2.4	5.4	0.0	0.0	0.0	0.0	0.0	1.1	0.3	0.0	9.15
29565	2036	2.2	5.5	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	9.03
30295	2038	2.2	5.5	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	8.93
31025	2040	2.1	5.5	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	8.85
31755	2042	2.1	5.5	0.0	0.0	0.0	0.0	0.0	0.9	0.2	0.0	8.80
32485	2044	2.1	5.5	0.0	0.0	0.0	0.0	0.0	0.9	0.2	0.0	8.76
33215	2046	2.1	5.5	0.0	0.0	0.0	0.0	0.0	0.9	0.2	0.0	8.73
33945	2048	2.1	5.5	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.0	8.37
34675	2050	2.1	5.5	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.0	8.31
35405	2052	2.1	5.5	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.28
36135	2054	2.1	5.5	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.27
36865	2056	2.1	5.5	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.25
37595	2058	2.1	5.5	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.24
38325	2060	2.1	5.5	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.23
39055	2062	2.1	5.5	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.23
39785	2064	2.1	5.5	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.22
40515	2066	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.22
41245	2068	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.21
41975	2070	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.21
42705	2072	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.21
43435	2074	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.21
44165	2076	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.21
44895	2078	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
45625	2080	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
46355	2082	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
47085	2084	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
47815	2086	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
48545	2088	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
49275	2090	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
50005	2092	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
50735	2094	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
51465	2096	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
52195	2098	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
52925	2100	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
53655	2102	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
54385	2104	2.1	5.4	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	8.20
TDS	mg/L	22900	26200	30000	38100	38100	30000	30000	38740	8870	13500	

Appendix B-7-3b Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-7 (Bookpurnong Area)



Appendix B-7-3c Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-7 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
0	1945	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1946	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1947	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1948	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1949	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1950	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1951	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1952	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1953	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1954	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
30	1955	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
365	1956	0.0	9.8	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
1095	1958	0.0	9.8	6.0	0.5	2.6	0.5	1.5	2.4	1.5	25
1825	1960	0.0	9.9	6.0	0.5	2.7	0.5	1.6	2.4	1.7	25
2555	1962	0.0	10.0	6.1	0.5	2.8	0.6	1.7	2.5	1.9	26
3285	1964	0.0	10.1	6.2	0.5	2.9	0.6	1.9	2.6	2.1	27
4015	1966	0.0	10.1	6.3	0.6	3.0	0.7	2.0	2.7	2.4	28
4745	1968	0.0	10.2	6.3	0.6	3.1	0.7	2.1	2.8	2.7	29
5475	1970	0.0	10.2	6.4	0.6	3.2	0.7	2.2	2.9	3.0	29
6205	1972	0.0	11.5	6.5	0.7	3.9	0.8	2.8	3.9	3.3	33
6935	1974	0.0	12.2	6.6	0.7	4.4	0.9	3.2	4.4	3.5	36
7665	1976	0.0	12.6	6.7	0.8	4.6	0.9	3.4	4.7	3.8	38
8395	1978	0.0	13.6	6.8	0.8	5.2	1.0	4.1	5.7	4.1	41
9125	1980	0.0	14.2	6.9	0.9	5.6	1.1	4.5	6.3	4.4	44
9855	1982	0.0	14.6	7.0	0.9	5.9	1.2	4.8	6.8	4.6	46
10585	1984	0.2	16.6	7.1	1.0	7.0	1.3	5.8	8.5	4.9	52
11315	1986	0.6	17.8	7.2	1.0	7.6	1.4	6.4	9.4	5.2	57
12045	1988	0.9	18.5	7.3	1.1	7.9	1.4	6.8	10.1	5.5	60
12775	1990	1.2	19.3	7.4	1.1	8.3	1.5	7.2	10.8	5.8	63
13505	1992	1.6	19.9	7.5	1.2	8.6	1.6	7.5	11.3	6.1	65
14235	1994	2.0	20.4	7.5	1.2	8.9	1.6	7.8	11.8	6.4	68
14965	1996	2.2	20.8	7.6	1.2	9.1	1.7	8.0	12.2	6.6	69
15695	1998	2.6	20.8	7.7	1.2	9.3	1.7	8.2	12.7	6.8	71
16425	2000	3.0	20.9	7.7	1.2	9.5	1.7	8.5	13.3	7.0	73
17155	2002	3.4	20.6	7.7	1.2	9.3	1.7	8.4	13.5	7.2	73
17885	2004	3.3	19.7	7.7	1.2	9.1	1.7	8.2	13.4	7.2	72
18615	2006	2.4	9.6	7.5	0.7	5.2	1.5	5.0	6.2	4.4	42
19345	2008	2.0	8.2	7.4	0.6	4.1	1.3	4.0	5.0	3.8	36
20075	2010	1.8	7.5	7.3	0.6	3.7	1.3	3.6	4.4	3.5	34
20805	2012	1.6	7.1	7.3	0.6	3.4	1.2	3.3	4.1	3.3	32
21535	2014	1.5	6.9	7.2	0.5	3.3	1.2	3.2	4.0	3.2	31
22265	2016	1.4	6.8	7.2	0.5	3.2	1.2	3.1	3.8	3.1	30
22995	2018	1.3	6.7	7.2	0.5	3.1	1.2	3.0	3.8	3.0	30

Appendix B-7-4a Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-7 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
23725	2020	1.2	6.6	7.2	0.5	3.1	1.2	3.0	3.7	3.0	29
24455	2022	1.2	6.6	7.2	0.5	3.1	1.2	2.9	3.7	2.9	29
25185	2024	1.2	6.5	7.2	0.5	3.0	1.2	2.9	3.6	2.9	29
25915	2026	1.2	6.5	7.2	0.5	3.0	1.2	2.9	3.6	2.9	29
26645	2028	1.2	6.5	7.2	0.5	3.0	1.2	2.9	3.6	2.8	29
27375	2030	1.2	6.5	7.1	0.5	3.0	1.1	2.8	3.6	2.8	29
28105	2032	1.1	6.5	7.1	0.5	3.0	1.1	2.8	3.5	2.8	29
28835	2034	1.0	5.6	7.1	0.4	2.5	1.1	2.1	1.7	2.2	24
29565	2036	0.9	5.6	7.1	0.4	2.4	1.1	2.0	1.6	2.1	23
30295	2038	0.9	5.6	7.1	0.4	2.4	1.1	2.0	1.5	2.1	23
31025	2040	0.9	5.6	7.1	0.4	2.4	1.1	2.0	1.5	2.0	23
31755	2042	0.9	5.5	7.1	0.4	2.4	1.1	2.0	1.5	2.0	23
32485	2044	0.9	5.5	7.1	0.4	2.4	1.1	2.0	1.5	2.0	23
33215	2046	0.9	5.5	7.1	0.4	2.4	1.1	2.0	1.5	2.0	23
33945	2048	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.7	22
34675	2050	0.9	5.6	7.0	0.3	2.3	1.0	1.9	1.0	1.7	22
35405	2052	0.9	5.6	7.0	0.3	2.3	1.0	1.9	1.0	1.6	22
36135	2054	0.9	5.6	7.0	0.3	2.3	1.0	1.9	1.0	1.6	22
36865	2056	0.9	5.6	7.0	0.3	2.3	1.0	1.9	1.0	1.6	22
37595	2058	0.9	5.6	7.0	0.3	2.3	1.0	1.9	1.0	1.6	22
38325	2060	0.9	5.6	7.0	0.3	2.3	1.0	1.9	1.0	1.6	22
39055	2062	0.9	5.6	7.0	0.3	2.3	1.0	1.9	1.0	1.6	22
39785	2064	0.9	5.6	7.0	0.3	2.3	1.0	1.9	1.0	1.6	22
40515	2066	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
41245	2068	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
41975	2070	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
42705	2072	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
43435	2074	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
44165	2076	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
44895	2078	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
45625	2080	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
46355	2082	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
47085	2084	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
47815	2086	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
48545	2088	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
49275	2090	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
50005	2092	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
50735	2094	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
51465	2096	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
52195	2098	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
52925	2100	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
53655	2102	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
54385	2104	0.9	5.6	7.1	0.3	2.3	1.0	1.9	1.0	1.6	22
TDS	*mg/L*	20000	20000	28600	28600	28600	28600	28600	28600	28600	

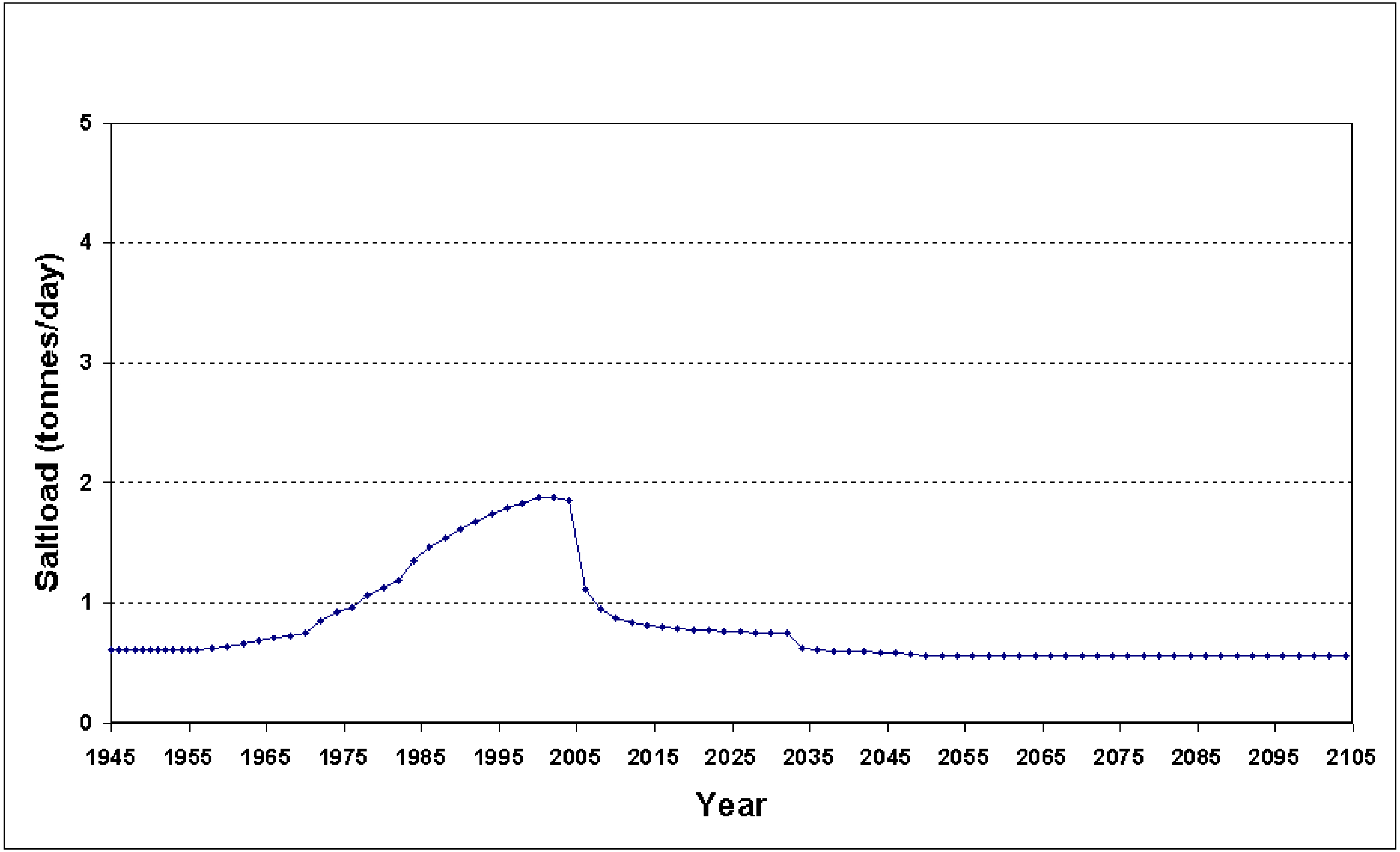
Appendix B-7-4b Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-7 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
0	1945	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1946	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1947	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1948	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1949	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1950	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1951	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1952	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1953	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1954	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
30	1955	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
365	1956	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
1095	1958	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.62
1825	1960	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.64
2555	1962	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.1	0.66
3285	1964	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.68
4015	1966	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.71
4745	1968	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.73
5475	1970	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.75
6205	1972	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.86
6935	1974	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.92
7665	1976	0.0	0.3	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.97
8395	1978	0.0	0.3	0.2	0.0	0.1	0.0	0.1	0.2	0.1	1.06
9125	1980	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1.13
9855	1982	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1.18
10585	1984	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.2	0.1	1.35
11315	1986	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.1	1.46
12045	1988	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.54
12775	1990	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.62
13505	1992	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.68
14235	1994	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	1.74
14965	1996	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	1.79
15695	1998	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.83
16425	2000	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.88
17155	2002	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.88
17885	2004	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.85
18615	2006	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.2	0.1	1.11
19345	2008	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.95
20075	2010	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.88
20805	2012	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.84
21535	2014	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.81
22265	2016	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.80
22995	2018	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.78

Appendix B-7-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-7 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
23725	2020	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.77
24455	2022	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.77
25185	2024	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.76
25915	2026	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.76
26645	2028	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.76
27375	2030	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.75
28105	2032	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.75
28835	2034	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.62
29565	2036	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.61
30295	2038	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.60
31025	2040	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.60
31755	2042	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.59
32485	2044	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.59
33215	2046	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.59
33945	2048	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.57
34675	2050	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.57
35405	2052	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.57
36135	2054	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
36865	2056	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
37595	2058	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
38325	2060	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
39055	2062	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
39785	2064	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
40515	2066	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
41245	2068	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
41975	2070	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
42705	2072	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
43435	2074	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
44165	2076	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
44895	2078	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
45625	2080	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
46355	2082	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
47085	2084	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
47815	2086	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
48545	2088	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
49275	2090	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
50005	2092	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
50735	2094	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
51465	2096	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
52195	2098	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
52925	2100	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
53655	2102	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
54385	2104	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.56
TDS	*mg/L*	*20000*	*20000*	*28600*	*28600*	*28600*	*28600*	*28600*	*28600*	*28600*	

Appendix B-7-5b Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-7 (Bookpurnong Area)

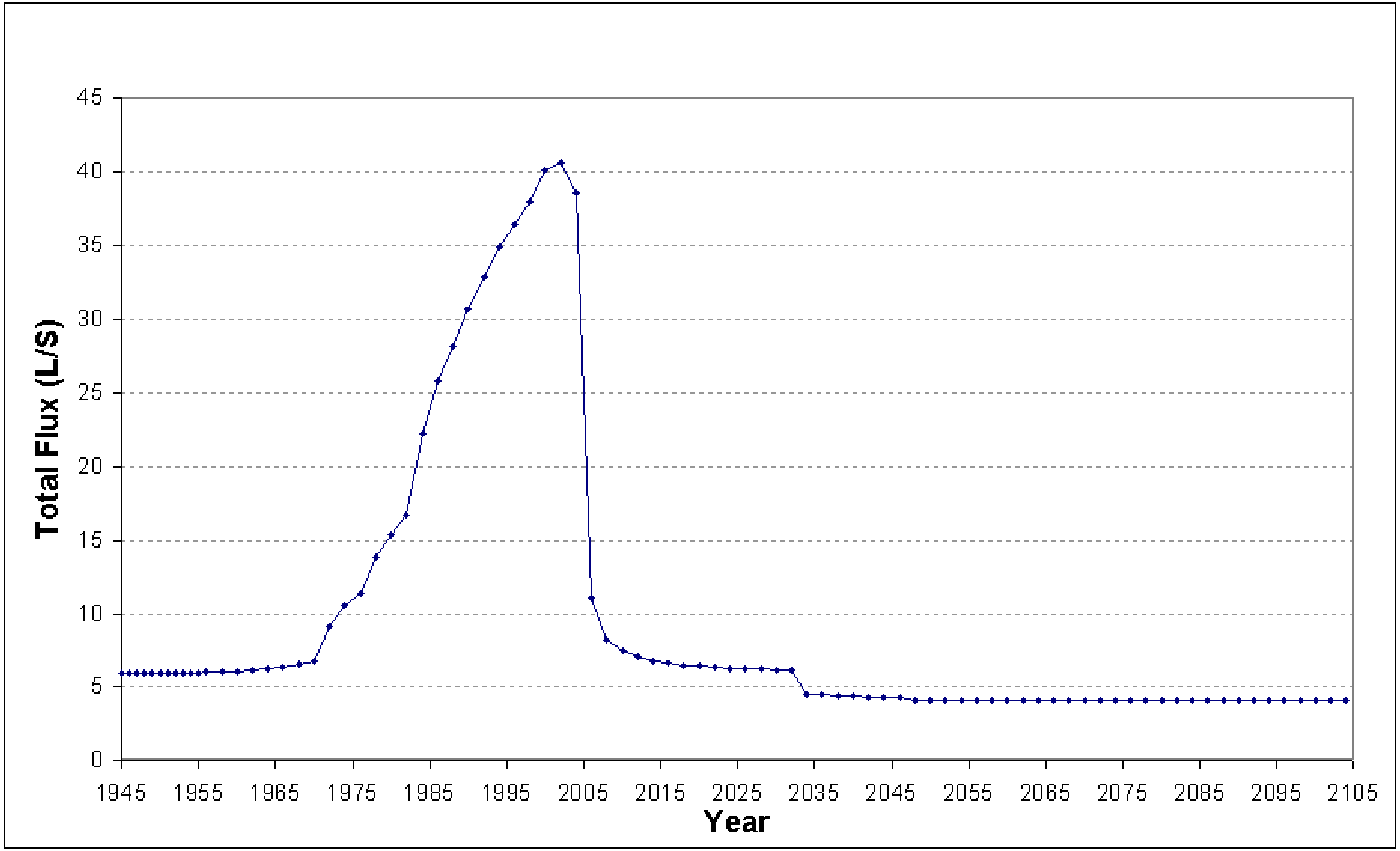


Appendix B-7-5c Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-7 (Bookpurnong Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	1945	489	24	513	5.94
0	1946	489	24	513	5.94
0	1947	489	24	513	5.94
0	1948	489	24	513	5.94
0	1949	489	24	513	5.94
0	1950	489	24	513	5.94
0	1951	489	24	513	5.94
0	1952	489	24	513	5.94
0	1953	489	24	513	5.94
0	1954	489	24	513	5.94
30	1955	489	24	513	5.94
365	1956	497	24	521	6.03
1095	1958	499	25	524	6.07
1825	1960	502	25	528	6.11
2555	1962	507	26	533	6.17
3285	1964	515	27	542	6.27
4015	1966	526	28	553	6.41
4745	1968	539	29	567	6.56
5475	1970	553	29	582	6.74
6205	1972	756	33	789	9.14
6935	1974	874	36	910	10.53
7665	1976	942	38	980	11.34
8395	1978	1151	41	1193	13.81
9125	1980	1284	44	1327	15.36
9855	1982	1401	46	1447	16.75
10585	1984	1867	52	1919	22.21
11315	1986	2176	57	2232	25.83
12045	1988	2374	60	2433	28.16
12775	1990	2587	63	2650	30.67
13505	1992	2776	65	2841	32.89
14235	1994	2947	68	3014	34.89
14965	1996	3076	69	3145	36.40
15695	1998	3214	71	3284	38.01
16425	2000	3394	73	3467	40.13
17155	2002	3438	73	3511	40.63
17885	2004	3267	72	3339	38.64
18615	2006	916	42	958	11.09
19345	2008	671	36	707	8.19
20075	2010	611	34	645	7.46
20805	2012	578	32	610	7.06
21535	2014	557	31	587	6.80
22265	2016	542	30	573	6.63
22995	2018	532	30	562	6.51

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
23725	2020	525	29	554	6.42
24455	2022	519	29	548	6.35
25185	2024	515	29	544	6.29
25915	2026	511	29	540	6.25
26645	2028	509	29	538	6.22
27375	2030	507	29	535	6.20
28105	2032	505	29	533	6.17
28835	2034	369	24	393	4.55
29565	2036	364	23	387	4.48
30295	2038	360	23	383	4.43
31025	2040	357	23	379	4.39
31755	2042	354	23	377	4.36
32485	2044	353	23	375	4.34
33215	2046	351	23	374	4.33
33945	2048	338	22	360	4.17
34675	2050	336	22	357	4.14
35405	2052	334	22	356	4.12
36135	2054	333	22	355	4.11
36865	2056	333	22	354	4.10
37595	2058	332	22	354	4.10
38325	2060	332	22	353	4.09
39055	2062	331	22	353	4.09
39785	2064	331	22	353	4.08
40515	2066	331	22	353	4.08
41245	2068	331	22	352	4.08
41975	2070	331	22	352	4.08
42705	2072	331	22	352	4.08
43435	2074	330	22	352	4.07
44165	2076	330	22	352	4.07
44895	2078	330	22	352	4.07
45625	2080	330	22	352	4.07
46355	2082	330	22	352	4.07
47085	2084	330	22	352	4.07
47815	2086	330	22	352	4.07
48545	2088	330	22	352	4.07
49275	2090	330	22	352	4.07
50005	2092	330	22	352	4.07
50735	2094	330	22	352	4.07
51465	2096	330	22	352	4.07
52195	2098	330	22	352	4.07
52925	2100	330	22	352	4.07
53655	2102	330	22	352	4.07
54385	2104	330	22	352	4.07

Appendix B-7-6a Predicted total groundwater flux in Scenario-7 (Bookpurnong Area)

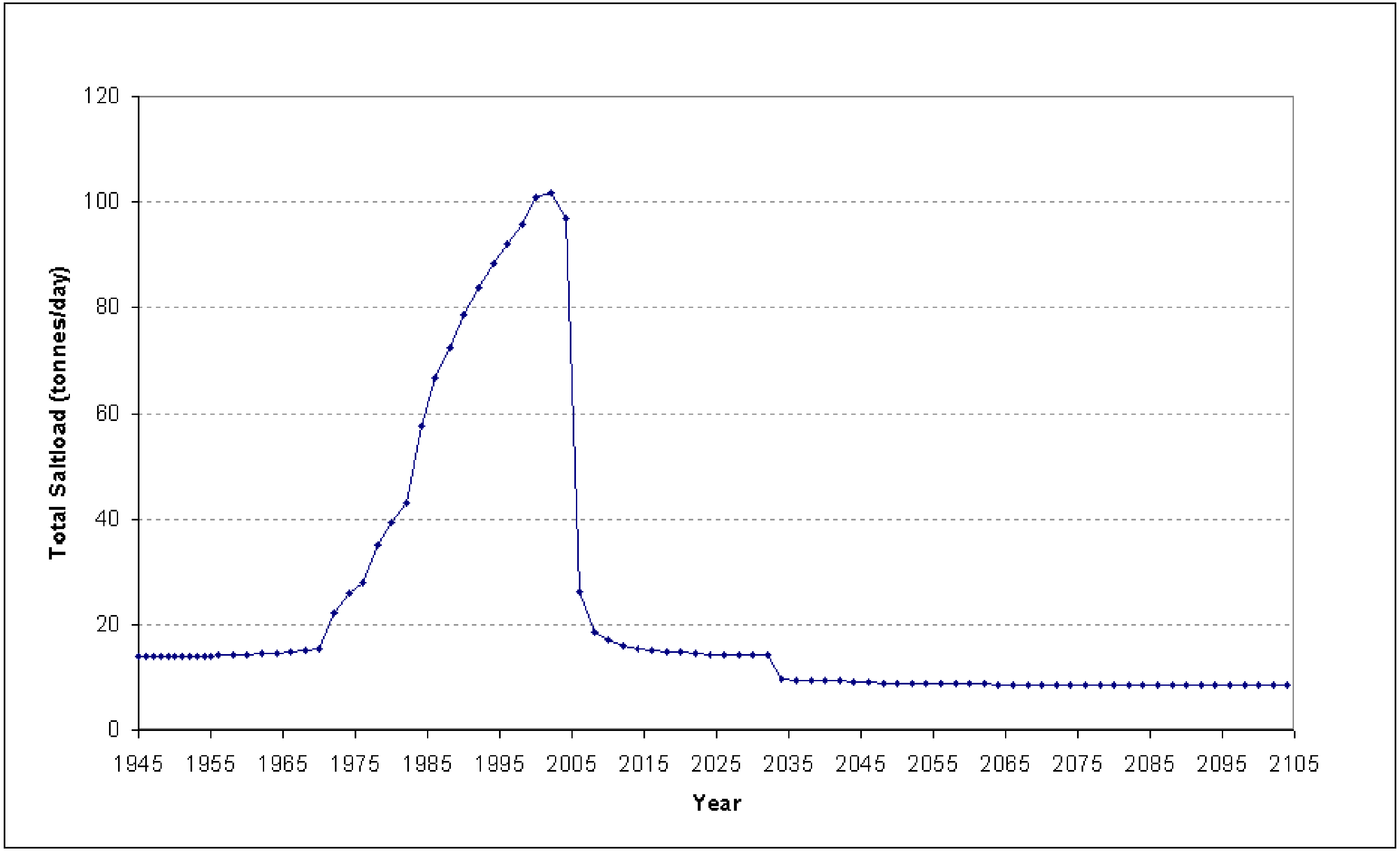


Appendix B-7-6b Graph of predicted total groundwater flux (L/sec) entering the River Murray in Scenario-7 (Bookpurnong Area)

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	13	1	14.05
0	1946	13	1	14.05
0	1947	13	1	14.05
0	1948	13	1	14.05
0	1949	13	1	14.05
0	1950	13	1	14.05
0	1951	13	1	14.05
0	1952	13	1	14.05
0	1953	13	1	14.05
0	1954	13	1	14.05
30	1955	13	1	14.05
365	1956	14	1	14.25
1095	1958	14	1	14.33
1825	1960	14	1	14.41
2555	1962	14	1	14.53
3285	1964	14	1	14.69
4015	1966	14	1	14.89
4745	1968	14	1	15.12
5475	1970	15	1	15.38
6205	1972	21	1	22.18
6935	1974	25	1	26.03
7665	1976	27	1	28.14
8395	1978	34	1	35.17
9125	1980	38	1	39.38
9855	1982	42	1	43.00
10585	1984	56	1	57.65
11315	1986	65	1	66.67
12045	1988	71	2	72.37
12775	1990	77	2	78.61
13505	1992	82	2	83.78
14235	1994	87	2	88.54
14965	1996	90	2	92.17
15695	1998	94	2	95.92
16425	2000	99	2	100.89
17155	2002	100	2	101.70
17885	2004	95	2	96.87
18615	2006	25	1	26.39
19345	2008	18	1	18.76
20075	2010	16	1	17.08
20805	2012	15	1	16.19
21535	2014	15	1	15.61
22265	2016	14	1	15.24
22995	2018	14	1	14.96

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
23725	2020	14	1	14.76
24455	2022	14	1	14.61
25185	2024	14	1	14.50
25915	2026	14	1	14.41
26645	2028	14	1	14.34
27375	2030	14	1	14.28
28105	2032	13	1	14.24
28835	2034	9	1	9.77
29565	2036	9	1	9.63
30295	2038	9	1	9.53
31025	2040	9	1	9.45
31755	2042	9	1	9.39
32485	2044	9	1	9.35
33215	2046	9	1	9.32
33945	2048	8	1	8.94
34675	2050	8	1	8.88
35405	2052	8	1	8.85
36135	2054	8	1	8.83
36865	2056	8	1	8.82
37595	2058	8	1	8.80
38325	2060	8	1	8.80
39055	2062	8	1	8.79
39785	2064	8	1	8.78
40515	2066	8	1	8.78
41245	2068	8	1	8.78
41975	2070	8	1	8.77
42705	2072	8	1	8.77
43435	2074	8	1	8.77
44165	2076	8	1	8.77
44895	2078	8	1	8.77
45625	2080	8	1	8.76
46355	2082	8	1	8.76
47085	2084	8	1	8.76
47815	2086	8	1	8.76
48545	2088	8	1	8.76
49275	2090	8	1	8.76
50005	2092	8	1	8.76
50735	2094	8	1	8.76
51465	2096	8	1	8.76
52195	2098	8	1	8.76
52925	2100	8	1	8.76
53655	2102	8	1	8.76
54385	2104	8	1	8.76

Appendix B-7-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-7 (Bookpurnong Area)



Appendix B-7-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-7 (Bookpurnong Area)

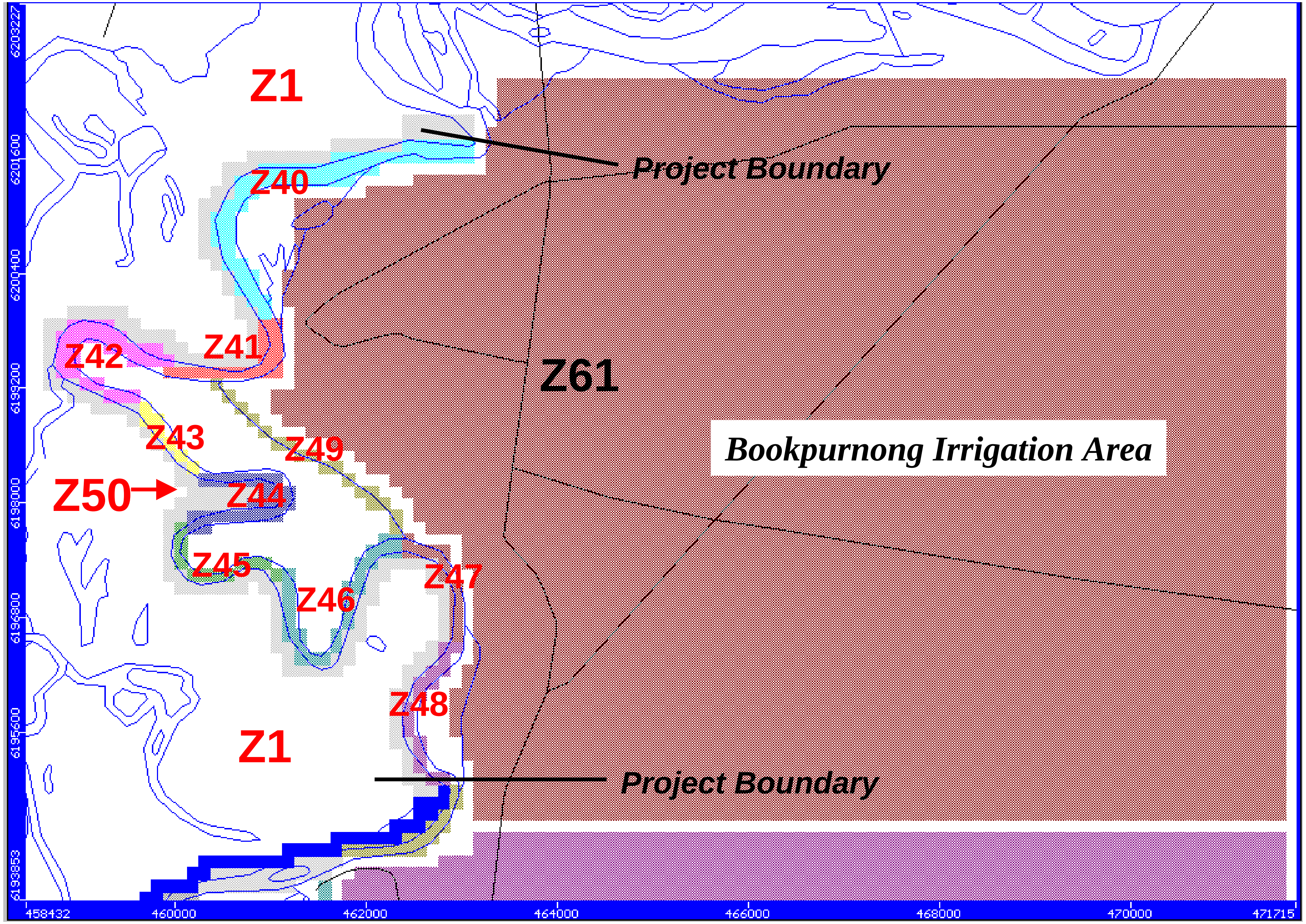
B8. GROUNDWATER FLUX AND SALT LOAD ENTERING THE RIVER MURRAY SCENARIO-8 (BOOKPURNONG AREA)

- Flow budget zones (Bookpurnong Area)
- Predicted lateral groundwater flux (m^3/day)
- Predicted lateral salt load (tonnes/day)
- Predicted upward groundwater flux (m^3/day)
- Predicted upward salt load (tonnes/day)
- Predicted total groundwater flux (ML/day)
- Predicted total salt load (tonnes/day)
- Borehole locations and pumping rates

Appendix B-8

Groundwater flux and salt load entering the River Murray
Scenario-8
(Bookpurnong Area)

-Flow budget zones (Bookpurnong Area)
-Predicted lateral groundwater flux (m^3/day)
-Predicted lateral salt load (tonnes/day)
-Predicted upward groundwater flux (m^3/day)
-Predicted upward salt load (tonnes/day)
-Predicted total groundwater flux (ML/day)
-Predicted total salt load (tonnes/day)
- Borehole locations and pumping rates



Appendix B-8-1 Flow budget zones in model Layer-1 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	1945	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1946	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1947	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1948	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1949	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1950	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1951	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1952	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1953	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
0	1954	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
30	1955	0.0	314.0	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	489
365	1956	0.0	321.4	0.0	0.0	14.9	0.0	7.1	103.0	50.1	0.0	497
1095	1958	0.0	323.3	0.0	0.0	15.0	0.0	7.1	103.3	50.6	0.0	499
1825	1960	0.0	323.8	0.0	0.0	15.2	0.0	7.2	104.0	52.1	0.0	502
2555	1962	0.0	324.2	0.0	0.0	15.5	0.0	7.4	105.2	55.0	0.0	507
3285	1964	0.0	324.6	0.0	0.0	15.8	0.0	7.5	106.9	60.3	0.0	515
4015	1966	0.0	324.9	0.0	0.0	16.1	0.0	7.7	109.0	68.2	0.0	526
4745	1968	0.0	325.2	0.0	0.0	16.4	0.0	7.8	111.8	77.5	0.0	539
5475	1970	0.0	325.5	0.0	0.0	16.7	0.0	8.0	115.1	87.6	0.0	553
6205	1972	0.0	376.1	0.0	0.0	67.8	0.0	29.7	183.9	98.7	0.0	756
6935	1974	0.0	399.9	0.0	0.0	100.4	0.0	43.6	220.0	110.3	0.0	874
7665	1976	0.0	412.2	0.0	0.0	116.0	0.0	51.1	241.3	122.1	0.0	943
8395	1978	0.0	454.6	0.0	0.0	168.9	0.1	77.4	316.1	134.5	0.0	1152
9125	1980	6.2	476.1	0.0	0.0	201.2	1.1	93.3	356.1	147.1	2.7	1284
9855	1982	19.5	488.8	0.0	0.0	220.0	1.8	105.5	398.8	158.8	8.0	1401
10585	1984	51.1	581.2	0.0	0.5	325.0	4.1	153.3	531.8	170.8	48.8	1867
11315	1986	126.5	629.4	0.0	1.4	375.5	5.7	179.2	602.1	186.5	69.3	2176
12045	1988	172.4	659.9	0.0	2.0	400.8	6.5	193.8	654.3	203.4	80.6	2374
12775	1990	215.8	693.2	0.0	3.6	433.7	7.3	210.6	708.9	219.0	95.2	2587
13505	1992	285.2	717.2	0.0	4.7	452.2	7.9	220.6	749.3	236.1	103.1	2776
14235	1994	329.4	738.5	0.0	5.7	475.4	8.6	234.0	787.3	252.7	114.9	2946
14965	1996	361.0	752.8	0.0	6.6	493.8	9.2	244.5	817.9	266.5	123.4	3076
15695	1998	420.0	750.3	0.0	7.2	506.8	9.6	252.1	854.8	282.7	129.9	3213
16425	2000	503.0	750.0	0.0	7.7	518.9	10.1	262.4	906.1	298.0	137.7	3394
17155	2002	567.9	731.1	0.0	6.9	502.6	9.8	257.3	922.2	309.3	130.2	3437
17885	2004	511.2	686.4	0.0	5.0	468.6	9.1	242.9	913.0	315.7	115.3	3267
18615	2006	133.8	245.6	0.0	2.4	390.7	9.0	205.8	149.2	162.1	19.4	1318
19345	2008	22.6	212.2	0.0	0.0	68.1	0.0	28.4	29.2	8.1	0.0	369
20075	2010	15.3	211.8	0.0	0.0	26.6	0.0	8.9	9.6	2.7	0.0	275
20805	2012	12.2	211.7	0.0	0.0	20.0	0.0	6.0	4.5	1.1	0.0	255
21535	2014	17.0	211.9	0.0	0.0	20.4	0.0	5.8	8.1	2.8	0.0	266
22265	2016	26.0	212.1	0.0	0.0	24.9	0.0	7.6	15.5	7.1	0.0	293
22995	2018	34.2	212.4	0.0	0.0	28.6	0.0	9.4	23.0	10.7	0.0	318

Appendix B-8-2a Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-8 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
23725	2020	40.6	212.5	0.0	0.0	31.3	0.0	10.9	29.3	13.3	0.0	338
24455	2022	46.0	212.6	0.0	0.0	33.4	0.0	12.1	35.2	15.5	0.0	355
25185	2024	50.9	212.7	0.0	0.0	35.2	0.0	13.0	40.6	17.2	0.0	369
25915	2026	54.9	212.8	0.0	0.0	36.7	0.0	13.8	45.3	18.6	0.0	382
26645	2028	58.3	212.8	0.0	0.0	37.9	0.0	14.5	49.4	19.8	0.0	393
27375	2030	61.2	212.9	0.0	0.0	38.9	0.0	15.1	53.2	21.0	0.0	402
28105	2032	63.8	212.9	0.0	0.0	39.8	0.0	15.6	56.5	22.0	0.0	411
28835	2034	66.0	213.0	0.0	0.0	40.6	0.0	16.0	59.5	23.0	0.0	418
29565	2036	68.0	213.0	0.0	0.0	41.3	0.0	16.4	62.1	23.8	0.0	425
30295	2038	69.7	213.0	0.0	0.0	41.9	0.0	16.8	64.2	24.5	0.0	430
31025	2040	71.3	213.1	0.0	0.0	42.4	0.0	17.1	66.0	25.0	0.0	435
31755	2042	72.7	213.1	0.0	0.0	42.9	0.0	17.3	67.6	25.4	0.0	439
32485	2044	73.9	213.1	0.0	0.0	43.3	0.0	17.6	69.0	25.8	0.0	443
33215	2046	75.0	213.1	0.0	0.0	43.7	0.0	17.8	70.2	26.2	0.0	446
33945	2048	76.0	213.1	0.0	0.0	44.0	0.0	18.0	71.4	26.5	0.0	449
34675	2050	76.9	213.2	0.0	0.0	44.3	0.0	18.2	72.4	26.8	0.0	452
35405	2052	77.7	213.2	0.0	0.0	44.6	0.0	18.3	73.3	27.1	0.0	454
36135	2054	78.4	213.2	0.0	0.0	44.8	0.0	18.4	74.1	27.3	0.0	456
36865	2056	79.0	213.2	0.0	0.0	45.1	0.0	18.6	74.8	27.6	0.0	458
37595	2058	79.5	213.2	0.0	0.0	45.3	0.0	18.7	75.5	27.8	0.0	460
38325	2060	80.0	213.2	0.0	0.0	45.4	0.0	18.8	76.1	27.9	0.0	461
39055	2062	80.5	213.2	0.0	0.0	45.6	0.0	18.9	76.6	28.1	0.0	463
39785	2064	80.9	213.2	0.0	0.0	45.7	0.0	18.9	77.1	28.3	0.0	464
40515	2066	81.3	213.2	0.0	0.0	45.9	0.0	19.0	77.5	28.4	0.0	465
41245	2068	81.6	213.2	0.0	0.0	46.0	0.0	19.1	78.0	28.5	0.0	466
41975	2070	81.9	213.3	0.0	0.0	46.1	0.0	19.1	78.3	28.7	0.0	467
42705	2072	82.2	213.3	0.0	0.0	46.2	0.0	19.2	78.7	28.8	0.0	468
43435	2074	82.5	213.3	0.0	0.0	46.3	0.0	19.3	79.0	28.9	0.0	469
44165	2076	82.7	213.3	0.0	0.0	46.4	0.0	19.3	79.2	28.9	0.0	470
44895	2078	82.9	213.3	0.0	0.0	46.4	0.0	19.3	79.5	29.0	0.0	470
45625	2080	83.1	213.3	0.0	0.0	46.5	0.0	19.4	79.7	29.1	0.0	471
46355	2082	83.3	213.3	0.0	0.0	46.6	0.0	19.4	79.9	29.2	0.0	472
47085	2084	83.5	213.3	0.0	0.0	46.6	0.0	19.5	80.1	29.2	0.0	472
47815	2086	83.6	213.3	0.0	0.0	46.7	0.0	19.5	80.3	29.3	0.0	473
48545	2088	83.8	213.3	0.0	0.0	46.8	0.0	19.5	80.5	29.3	0.0	473
49275	2090	83.9	213.3	0.0	0.0	46.8	0.0	19.5	80.6	29.4	0.0	474
50005	2092	84.0	213.3	0.0	0.0	46.8	0.0	19.6	80.8	29.4	0.0	474
50735	2094	84.1	213.3	0.0	0.0	46.9	0.0	19.6	80.9	29.5	0.0	474
51465	2096	84.2	213.3	0.0	0.0	46.9	0.0	19.6	81.0	29.5	0.0	475
52195	2098	84.3	213.3	0.0	0.0	47.0	0.0	19.6	81.1	29.6	0.0	475
52925	2100	84.4	213.3	0.0	0.0	47.0	0.0	19.7	81.2	29.6	0.0	475
53655	2102	84.5	213.3	0.0	0.0	47.0	0.0	19.7	81.3	29.6	0.0	475
54385	2104	84.6	213.3	0.0	0.0	47.1	0.0	19.7	81.4	29.7	0.0	476
TDS	*mg/L*	*22900*	*26200*	*30000*	*38100*	*38100*	*30000*	*30000*	*38740*	*8870*	*13500*	

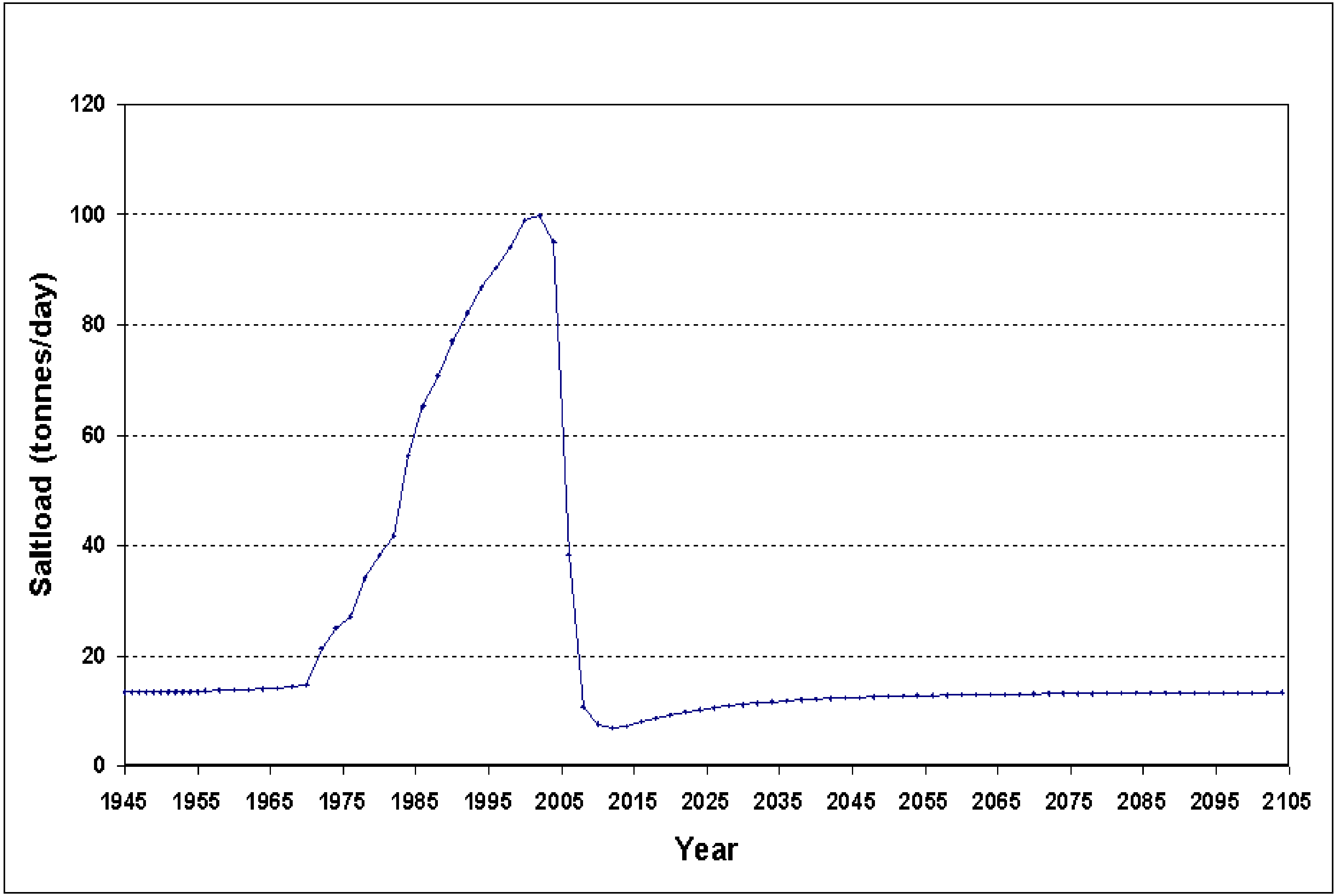
Appendix B-8-2b Predicted lateral groundwater flux (m^3/day) from flow budget zones in Scenario-8 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
0	1945	0.0	8.2	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.44
0	1946	0.0	8.2	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.44
0	1947	0.0	8.2	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.44
0	1948	0.0	8.2	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.44
0	1949	0.0	8.2	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.44
0	1950	0.0	8.2	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.44
0	1951	0.0	8.2	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.44
0	1952	0.0	8.2	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.44
0	1953	0.0	8.2	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.44
0	1954	0.0	8.2	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.44
30	1955	0.0	8.2	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.44
365	1956	0.0	8.4	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.64
1095	1958	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.0	0.4	0.0	13.71
1825	1960	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.0	0.5	0.0	13.77
2555	1962	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	13.87
3285	1964	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.1	0.5	0.0	14.01
4015	1966	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.2	0.6	0.0	14.19
4745	1968	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.3	0.7	0.0	14.40
5475	1970	0.0	8.5	0.0	0.0	0.6	0.0	0.2	4.5	0.8	0.0	14.64
6205	1972	0.0	9.9	0.0	0.0	2.6	0.0	0.9	7.1	0.9	0.0	21.33
6935	1974	0.0	10.5	0.0	0.0	3.8	0.0	1.3	8.5	1.0	0.0	25.11
7665	1976	0.0	10.8	0.0	0.0	4.4	0.0	1.5	9.3	1.1	0.0	27.18
8395	1978	0.0	11.9	0.0	0.0	6.4	0.0	2.3	12.2	1.2	0.0	34.11
9125	1980	0.1	12.5	0.0	0.0	7.7	0.0	2.8	13.8	1.3	0.0	38.25
9855	1982	0.4	12.8	0.0	0.0	8.4	0.1	3.2	15.4	1.4	0.1	41.82
10585	1984	1.2	15.2	0.0	0.0	12.4	0.1	4.6	20.6	1.5	0.7	56.30
11315	1986	2.9	16.5	0.0	0.1	14.3	0.2	5.4	23.3	1.7	0.9	65.21
12045	1988	3.9	17.3	0.0	0.1	15.3	0.2	5.8	25.3	1.8	1.1	70.83
12775	1990	4.9	18.2	0.0	0.1	16.5	0.2	6.3	27.5	1.9	1.3	76.99
13505	1992	6.5	18.8	0.0	0.2	17.2	0.2	6.6	29.0	2.1	1.4	82.10
14235	1994	7.5	19.3	0.0	0.2	18.1	0.3	7.0	30.5	2.2	1.6	86.79
14965	1996	8.3	19.7	0.0	0.3	18.8	0.3	7.3	31.7	2.4	1.7	90.38
15695	1998	9.6	19.7	0.0	0.3	19.3	0.3	7.6	33.1	2.5	1.8	94.09
16425	2000	11.5	19.6	0.0	0.3	19.8	0.3	7.9	35.1	2.6	1.9	99.01
17155	2002	13.0	19.2	0.0	0.3	19.1	0.3	7.7	35.7	2.7	1.8	99.82
17885	2004	11.7	18.0	0.0	0.2	17.9	0.3	7.3	35.4	2.8	1.6	95.02
18615	2006	3.1	6.4	0.0	0.1	14.9	0.3	6.2	5.8	1.4	0.3	38.40
19345	2008	0.5	5.6	0.0	0.0	2.6	0.0	0.9	1.1	0.1	0.0	10.73
20075	2010	0.4	5.5	0.0	0.0	1.0	0.0	0.3	0.4	0.0	0.0	7.58
20805	2012	0.3	5.5	0.0	0.0	0.8	0.0	0.2	0.2	0.0	0.0	6.95
21535	2014	0.4	5.6	0.0	0.0	0.8	0.0	0.2	0.3	0.0	0.0	7.23
22265	2016	0.6	5.6	0.0	0.0	1.0	0.0	0.2	0.6	0.1	0.0	8.00
22995	2018	0.8	5.6	0.0	0.0	1.1	0.0	0.3	0.9	0.1	0.0	8.71

Appendix B-8-3a Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-8 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Drain Out Z49	Total
23725	2020	0.9	5.6	0.0	0.0	1.2	0.0	0.3	1.1	0.1	0.0	9.27
24455	2022	1.1	5.6	0.0	0.0	1.3	0.0	0.4	1.4	0.1	0.0	9.76
25185	2024	1.2	5.6	0.0	0.0	1.3	0.0	0.4	1.6	0.2	0.0	10.19
25915	2026	1.3	5.6	0.0	0.0	1.4	0.0	0.4	1.8	0.2	0.0	10.56
26645	2028	1.3	5.6	0.0	0.0	1.4	0.0	0.4	1.9	0.2	0.0	10.88
27375	2030	1.4	5.6	0.0	0.0	1.5	0.0	0.5	2.1	0.2	0.0	11.16
28105	2032	1.5	5.6	0.0	0.0	1.5	0.0	0.5	2.2	0.2	0.0	11.41
28835	2034	1.5	5.6	0.0	0.0	1.5	0.0	0.5	2.3	0.2	0.0	11.63
29565	2036	1.6	5.6	0.0	0.0	1.6	0.0	0.5	2.4	0.2	0.0	11.82
30295	2038	1.6	5.6	0.0	0.0	1.6	0.0	0.5	2.5	0.2	0.0	11.98
31025	2040	1.6	5.6	0.0	0.0	1.6	0.0	0.5	2.6	0.2	0.0	12.12
31755	2042	1.7	5.6	0.0	0.0	1.6	0.0	0.5	2.6	0.2	0.0	12.25
32485	2044	1.7	5.6	0.0	0.0	1.7	0.0	0.5	2.7	0.2	0.0	12.36
33215	2046	1.7	5.6	0.0	0.0	1.7	0.0	0.5	2.7	0.2	0.0	12.45
33945	2048	1.7	5.6	0.0	0.0	1.7	0.0	0.5	2.8	0.2	0.0	12.54
34675	2050	1.8	5.6	0.0	0.0	1.7	0.0	0.5	2.8	0.2	0.0	12.62
35405	2052	1.8	5.6	0.0	0.0	1.7	0.0	0.5	2.8	0.2	0.0	12.69
36135	2054	1.8	5.6	0.0	0.0	1.7	0.0	0.6	2.9	0.2	0.0	12.75
36865	2056	1.8	5.6	0.0	0.0	1.7	0.0	0.6	2.9	0.2	0.0	12.81
37595	2058	1.8	5.6	0.0	0.0	1.7	0.0	0.6	2.9	0.2	0.0	12.86
38325	2060	1.8	5.6	0.0	0.0	1.7	0.0	0.6	2.9	0.2	0.0	12.91
39055	2062	1.8	5.6	0.0	0.0	1.7	0.0	0.6	3.0	0.2	0.0	12.95
39785	2064	1.9	5.6	0.0	0.0	1.7	0.0	0.6	3.0	0.3	0.0	12.99
40515	2066	1.9	5.6	0.0	0.0	1.7	0.0	0.6	3.0	0.3	0.0	13.02
41245	2068	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.0	0.3	0.0	13.05
41975	2070	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.0	0.3	0.0	13.08
42705	2072	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.0	0.3	0.0	13.11
43435	2074	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.13
44165	2076	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.15
44895	2078	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.17
45625	2080	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.19
46355	2082	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.21
47085	2084	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.22
47815	2086	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.24
48545	2088	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.25
49275	2090	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.26
50005	2092	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.27
50735	2094	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.28
51465	2096	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.29
52195	2098	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.30
52925	2100	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.1	0.3	0.0	13.31
53655	2102	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.2	0.3	0.0	13.32
54385	2104	1.9	5.6	0.0	0.0	1.8	0.0	0.6	3.2	0.3	0.0	13.33
TDS	*mg/L*	*22900*	*26200*	*30000*	*38100*	*38100*	*30000*	*30000*	*38740*	*8870*	*13500*	

Appendix B-8-3b Predicted lateral salt load (tonnes/day) from flow budget zones in Scenario-8 (Bookpurnong Area)



Appendix B-8-3c Graph of predicted total lateral salt load (tonnes/day) entering the River Murray in Scenario-8 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
0	1945	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1946	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1947	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1948	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1949	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1950	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1951	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1952	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1953	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
0	1954	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
30	1955	0.0	9.7	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
365	1956	0.0	9.8	5.9	0.5	2.6	0.4	1.4	2.3	1.4	24
1095	1958	0.0	9.8	6.0	0.5	2.6	0.5	1.5	2.4	1.5	25
1825	1960	0.0	9.9	6.0	0.5	2.7	0.5	1.6	2.4	1.7	25
2555	1962	0.0	10.0	6.1	0.5	2.8	0.6	1.7	2.5	1.9	26
3285	1964	0.0	10.1	6.2	0.5	3.0	0.6	1.9	2.6	2.2	27
4015	1966	0.0	10.1	6.3	0.6	3.1	0.7	2.0	2.7	2.4	28
4745	1968	0.0	10.2	6.3	0.6	3.1	0.7	2.1	2.8	2.7	29
5475	1970	0.0	10.3	6.4	0.6	3.2	0.7	2.2	2.9	3.0	29
6205	1972	0.0	11.5	6.5	0.7	3.9	0.8	2.8	3.9	3.3	33
6935	1974	0.0	12.2	6.6	0.7	4.4	0.9	3.2	4.4	3.6	36
7665	1976	0.0	12.6	6.7	0.8	4.6	0.9	3.4	4.7	3.8	38
8395	1978	0.0	13.6	6.8	0.8	5.2	1.0	4.1	5.7	4.1	41
9125	1980	0.0	14.2	6.9	0.9	5.6	1.1	4.5	6.3	4.4	44
9855	1982	0.0	14.6	7.0	0.9	5.9	1.2	4.8	6.8	4.6	46
10585	1984	0.2	16.6	7.1	1.0	7.0	1.3	5.8	8.5	4.9	52
11315	1986	0.6	17.8	7.2	1.0	7.6	1.4	6.4	9.4	5.2	57
12045	1988	0.9	18.5	7.3	1.1	7.9	1.4	6.8	10.1	5.5	60
12775	1990	1.2	19.3	7.4	1.1	8.3	1.5	7.2	10.8	5.8	63
13505	1992	1.6	19.9	7.5	1.2	8.6	1.6	7.5	11.3	6.1	65
14235	1994	2.0	20.4	7.5	1.2	8.9	1.6	7.8	11.8	6.4	68
14965	1996	2.2	20.8	7.6	1.2	9.1	1.7	8.0	12.2	6.6	69
15695	1998	2.6	20.8	7.6	1.2	9.3	1.7	8.2	12.7	6.8	71
16425	2000	3.0	20.9	7.7	1.2	9.5	1.7	8.4	13.3	7.0	73
17155	2002	3.4	20.6	7.7	1.2	9.3	1.7	8.4	13.5	7.2	73
17885	2004	3.3	19.7	7.7	1.2	9.1	1.7	8.2	13.4	7.2	72
18615	2006	2.6	12.2	7.7	1.2	8.6	1.7	7.6	5.7	5.7	53
19345	2008	1.8	10.0	7.6	0.9	5.7	1.5	4.9	3.2	2.8	38
20075	2010	1.6	9.4	7.5	0.9	5.0	1.4	4.2	2.5	2.3	35
20805	2012	1.4	9.1	7.4	0.8	4.8	1.3	3.9	2.2	2.0	33
21535	2014	1.8	9.6	7.4	0.9	4.9	1.4	4.0	2.5	2.2	35
22265	2016	2.5	10.0	7.5	0.9	5.2	1.4	4.3	2.9	2.5	37
22995	2018	3.0	10.3	7.7	0.9	5.4	1.5	4.6	3.3	2.7	39

Appendix B-8-4a Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-8 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
23725	2020	3.5	10.5	7.8	1.0	5.6	1.5	4.8	3.7	2.9	41
24455	2022	4.0	10.7	7.9	1.0	5.8	1.6	5.0	3.9	3.1	43
25185	2024	4.4	10.9	7.9	1.0	5.9	1.7	5.2	4.2	3.3	44
25915	2026	4.7	11.0	8.0	1.0	6.0	1.7	5.4	4.4	3.5	46
26645	2028	5.0	11.1	8.1	1.1	6.1	1.8	5.5	4.6	3.6	47
27375	2030	5.3	11.2	8.2	1.1	6.2	1.8	5.7	4.8	3.7	48
28105	2032	5.6	11.3	8.2	1.1	6.3	1.8	5.8	5.0	3.8	49
28835	2034	5.8	11.4	8.3	1.1	6.4	1.9	5.9	5.1	4.0	50
29565	2036	6.0	11.5	8.3	1.1	6.5	1.9	6.0	5.2	4.1	51
30295	2038	6.2	11.6	8.4	1.1	6.5	1.9	6.1	5.3	4.1	51
31025	2040	6.4	11.6	8.4	1.2	6.6	2.0	6.2	5.4	4.2	52
31755	2042	6.5	11.7	8.5	1.2	6.7	2.0	6.3	5.5	4.3	53
32485	2044	6.6	11.7	8.5	1.2	6.7	2.0	6.3	5.6	4.4	53
33215	2046	6.8	11.8	8.6	1.2	6.8	2.0	6.4	5.7	4.4	54
33945	2048	6.9	11.8	8.6	1.2	6.8	2.0	6.5	5.7	4.5	54
34675	2050	7.0	11.9	8.6	1.2	6.9	2.1	6.5	5.8	4.5	54
35405	2052	7.1	11.9	8.6	1.2	6.9	2.1	6.6	5.8	4.6	55
36135	2054	7.2	11.9	8.7	1.2	6.9	2.1	6.6	5.9	4.6	55
36865	2056	7.3	12.0	8.7	1.2	7.0	2.1	6.7	5.9	4.7	56
37595	2058	7.4	12.0	8.7	1.2	7.0	2.1	6.7	6.0	4.7	56
38325	2060	7.4	12.0	8.7	1.2	7.0	2.1	6.7	6.0	4.7	56
39055	2062	7.5	12.1	8.8	1.2	7.0	2.2	6.8	6.0	4.8	56
39785	2064	7.6	12.1	8.8	1.3	7.1	2.2	6.8	6.1	4.8	57
40515	2066	7.6	12.1	8.8	1.3	7.1	2.2	6.8	6.1	4.8	57
41245	2068	7.7	12.1	8.8	1.3	7.1	2.2	6.9	6.1	4.9	57
41975	2070	7.7	12.1	8.8	1.3	7.1	2.2	6.9	6.1	4.9	57
42705	2072	7.8	12.2	8.9	1.3	7.2	2.2	6.9	6.2	4.9	57
43435	2074	7.8	12.2	8.9	1.3	7.2	2.2	7.0	6.2	4.9	58
44165	2076	7.9	12.2	8.9	1.3	7.2	2.2	7.0	6.2	5.0	58
44895	2078	7.9	12.2	8.9	1.3	7.2	2.2	7.0	6.2	5.0	58
45625	2080	8.0	12.2	8.9	1.3	7.2	2.2	7.0	6.2	5.0	58
46355	2082	8.0	12.2	8.9	1.3	7.3	2.3	7.1	6.3	5.0	58
47085	2084	8.0	12.2	8.9	1.3	7.3	2.3	7.1	6.3	5.0	58
47815	2086	8.1	12.3	9.0	1.3	7.3	2.3	7.1	6.3	5.1	59
48545	2088	8.1	12.3	9.0	1.3	7.3	2.3	7.1	6.3	5.1	59
49275	2090	8.1	12.3	9.0	1.3	7.3	2.3	7.1	6.3	5.1	59
50005	2092	8.1	12.3	9.0	1.3	7.3	2.3	7.1	6.3	5.1	59
50735	2094	8.2	12.3	9.0	1.3	7.3	2.3	7.2	6.3	5.1	59
51465	2096	8.2	12.3	9.0	1.3	7.3	2.3	7.2	6.4	5.1	59
52195	2098	8.2	12.3	9.0	1.3	7.4	2.3	7.2	6.4	5.2	59
52925	2100	8.2	12.3	9.0	1.3	7.4	2.3	7.2	6.4	5.2	59
53655	2102	8.3	12.3	9.0	1.3	7.4	2.3	7.2	6.4	5.2	59
54385	2104	8.3	12.3	9.1	1.3	7.4	2.3	7.2	6.4	5.2	60
TDS	*mg/L*	20000	20000	28600	28600	28600	28600	28600	28600	28600	

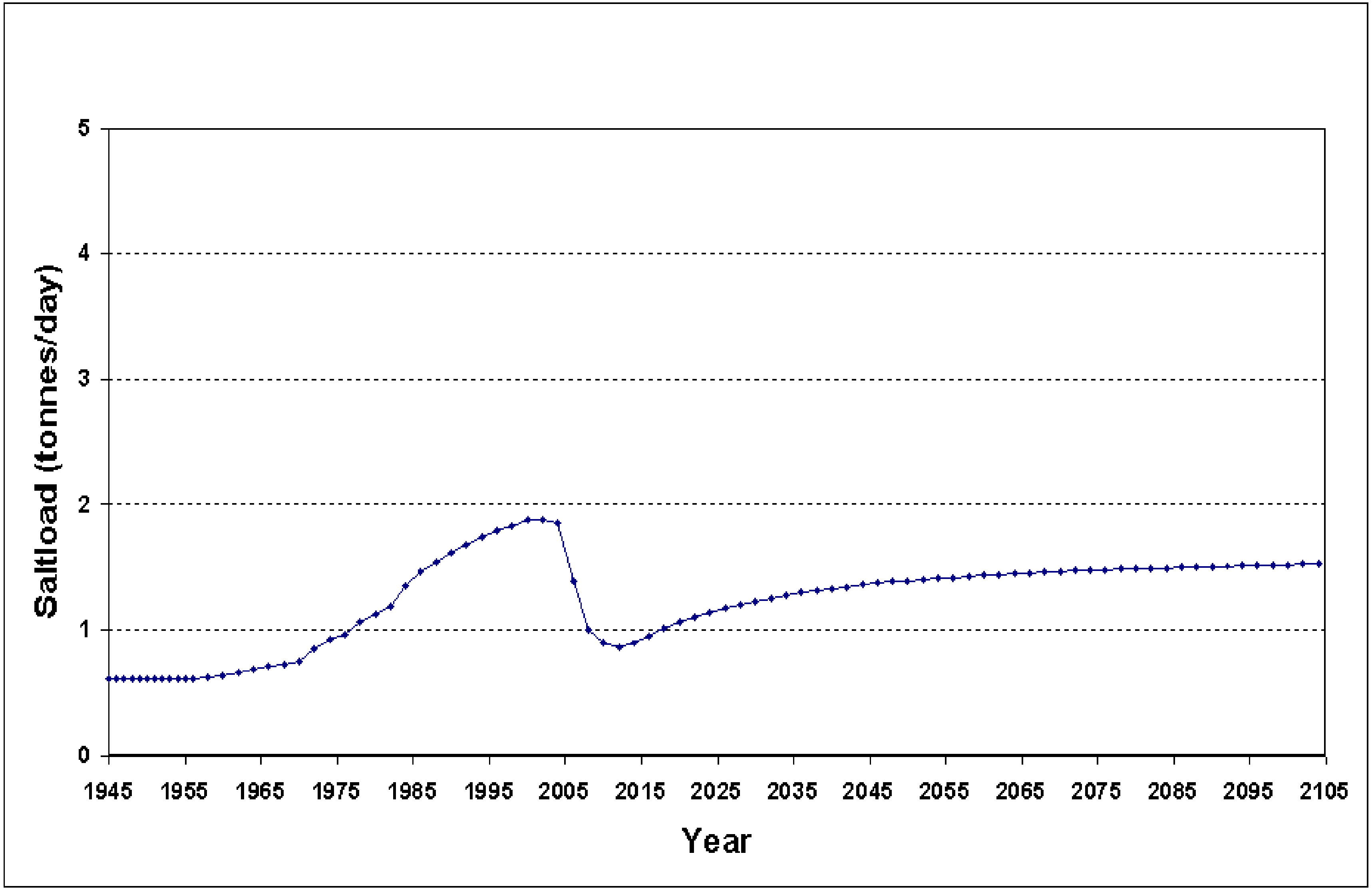
Appendix B-8-4b Predicted upward groundwater flux (m^3/day) from flow budget zones in Scenario-8 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
0	1945	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1946	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1947	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1948	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1949	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1950	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1951	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1952	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1953	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
0	1954	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
30	1955	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
365	1956	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.61
1095	1958	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.62
1825	1960	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.64
2555	1962	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.1	0.66
3285	1964	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.69
4015	1966	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.71
4745	1968	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.73
5475	1970	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.75
6205	1972	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.86
6935	1974	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.92
7665	1976	0.0	0.3	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.97
8395	1978	0.0	0.3	0.2	0.0	0.1	0.0	0.1	0.2	0.1	1.07
9125	1980	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1.13
9855	1982	0.0	0.3	0.2	0.0	0.2	0.0	0.1	0.2	0.1	1.18
10585	1984	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.2	0.1	1.35
11315	1986	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.1	1.46
12045	1988	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.54
12775	1990	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.62
13505	1992	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.3	0.2	1.68
14235	1994	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	1.74
14965	1996	0.0	0.4	0.2	0.0	0.3	0.0	0.2	0.3	0.2	1.79
15695	1998	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.83
16425	2000	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.87
17155	2002	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.88
17885	2004	0.1	0.4	0.2	0.0	0.3	0.0	0.2	0.4	0.2	1.85
18615	2006	0.1	0.2	0.2	0.0	0.2	0.0	0.2	0.2	0.2	1.39
19345	2008	0.0	0.2	0.2	0.0	0.2	0.0	0.1	0.1	0.1	1.00
20075	2010	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.90
20805	2012	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.86
21535	2014	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.89
22265	2016	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.96
22995	2018	0.1	0.2	0.2	0.0	0.2	0.0	0.1	0.1	0.1	1.01

Appendix B-8-5a Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-8 (Bookpurnong Area)

day	year	Z1 to Z40	Z1 to Z41	Z1 to Z42	Z1 to Z43	Z1 to Z44	Z1 to Z45	Z1 to Z46	Z1 to Z47	Z1 to Z48	Total
23725	2020	0.1	0.2	0.2	0.0	0.2	0.0	0.1	0.1	0.1	1.06
24455	2022	0.1	0.2	0.2	0.0	0.2	0.0	0.1	0.1	0.1	1.10
25185	2024	0.1	0.2	0.2	0.0	0.2	0.0	0.1	0.1	0.1	1.14
25915	2026	0.1	0.2	0.2	0.0	0.2	0.0	0.2	0.1	0.1	1.17
26645	2028	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.1	0.1	1.20
27375	2030	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.1	0.1	1.23
28105	2032	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.1	0.1	1.26
28835	2034	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.1	0.1	1.28
29565	2036	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.1	0.1	1.30
30295	2038	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.2	0.1	1.32
31025	2040	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.2	0.1	1.33
31755	2042	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.2	0.1	1.35
32485	2044	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.2	0.1	1.36
33215	2046	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.2	0.1	1.37
33945	2048	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.2	0.1	1.38
34675	2050	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.2	0.1	1.39
35405	2052	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.2	0.1	1.40
36135	2054	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.2	0.1	1.41
36865	2056	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.2	0.1	1.42
37595	2058	0.1	0.2	0.2	0.0	0.2	0.1	0.2	0.2	0.1	1.43
38325	2060	0.1	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.44
39055	2062	0.1	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.44
39785	2064	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.45
40515	2066	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.46
41245	2068	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.46
41975	2070	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.47
42705	2072	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.47
43435	2074	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.48
44165	2076	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.48
44895	2078	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.49
45625	2080	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.49
46355	2082	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.49
47085	2084	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.50
47815	2086	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.50
48545	2088	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.50
49275	2090	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.51
50005	2092	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.51
50735	2094	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.51
51465	2096	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.52
52195	2098	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.52
52925	2100	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.52
53655	2102	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.52
54385	2104	0.2	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.1	1.53
TDS	*mg/L*	*20000*	*20000*	*28600*	*28600*	*28600*	*28600*	*28600*	*28600*	*28600*	

Appendix B-8-5b Predicted upward salt load (tonnes/day) from flow budget zones in Scenario-8 (Bookpurnong Area)

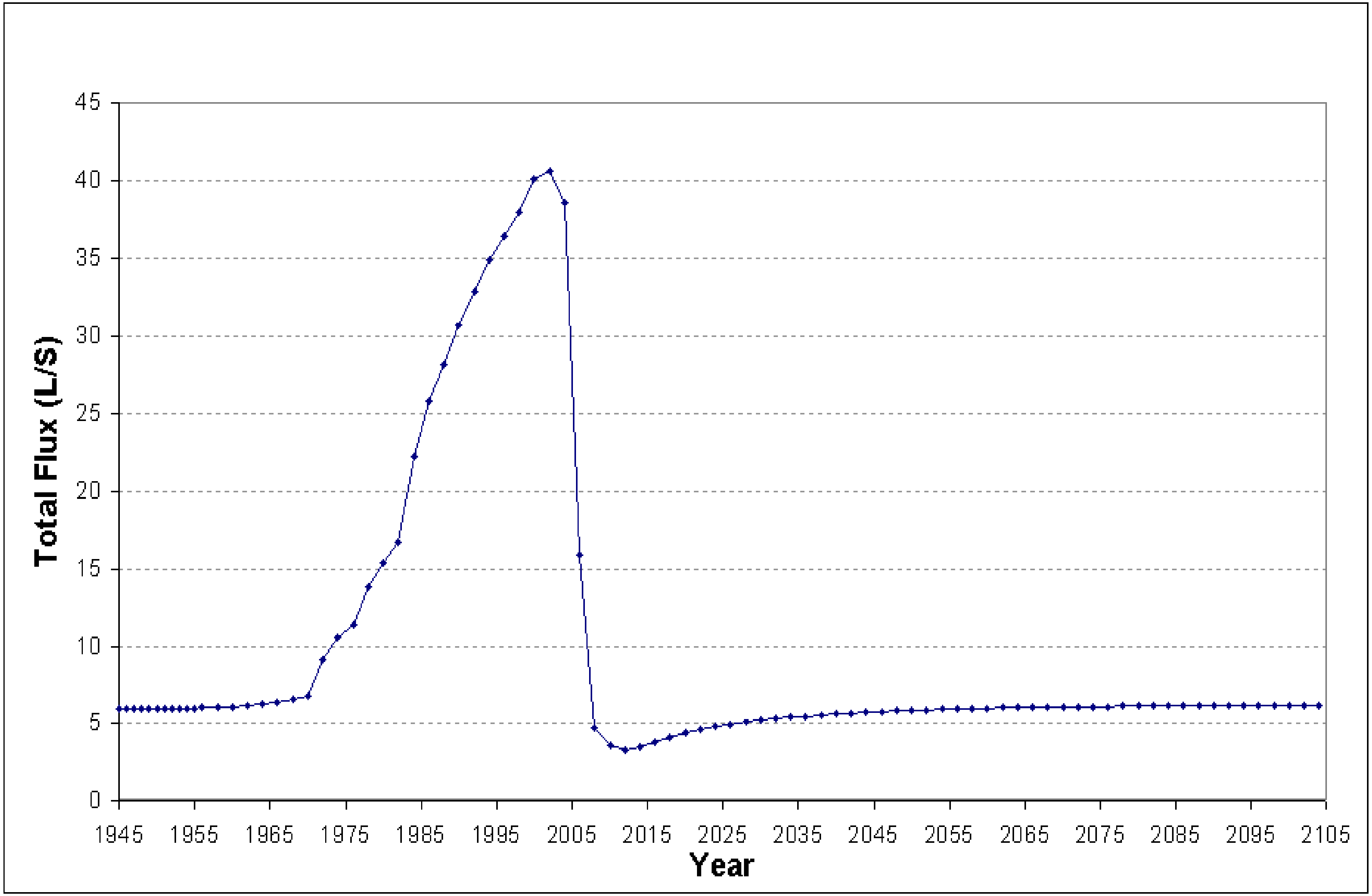


Appendix B-8-5c Graph of predicted total upward salt load (tonnes/day) entering the River Murray in Scenario-8 (Bookpurnong Area)

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
0	1945	489	24	513	5.94
0	1946	489	24	513	5.94
0	1947	489	24	513	5.94
0	1948	489	24	513	5.94
0	1949	489	24	513	5.94
0	1950	489	24	513	5.94
0	1951	489	24	513	5.94
0	1952	489	24	513	5.94
0	1953	489	24	513	5.94
0	1954	489	24	513	5.94
30	1955	489	24	513	5.94
365	1956	497	24	521	6.03
1095	1958	499	25	524	6.07
1825	1960	502	25	528	6.11
2555	1962	507	26	534	6.18
3285	1964	515	27	542	6.27
4015	1966	526	28	554	6.41
4745	1968	539	29	567	6.57
5475	1970	553	29	582	6.74
6205	1972	756	33	790	9.14
6935	1974	874	36	910	10.53
7665	1976	943	38	980	11.34
8395	1978	1152	41	1193	13.81
9125	1980	1284	44	1328	15.36
9855	1982	1401	46	1447	16.75
10585	1984	1867	52	1919	22.21
11315	1986	2176	57	2232	25.83
12045	1988	2374	60	2433	28.16
12775	1990	2587	63	2650	30.67
13505	1992	2776	65	2841	32.89
14235	1994	2946	68	3014	34.88
14965	1996	3076	69	3145	36.40
15695	1998	3213	71	3284	38.01
16425	2000	3394	73	3467	40.12
17155	2002	3437	73	3510	40.63
17885	2004	3267	72	3339	38.64
18615	2006	1318	53	1371	15.87
19345	2008	369	38	407	4.71
20075	2010	275	35	310	3.58
20805	2012	255	33	289	3.34
21535	2014	266	35	301	3.48
22265	2016	293	37	330	3.82
22995	2018	318	39	358	4.14

day	year	Lateral flux (m3/day)	Upward leakage (m3/day)	Total flux (m3/day)	Total flux (L/s)
23725	2020	338	41	379	4.39
24455	2022	355	43	398	4.61
25185	2024	369	44	414	4.79
25915	2026	382	46	428	4.95
26645	2028	393	47	440	5.09
27375	2030	402	48	450	5.21
28105	2032	411	49	460	5.32
28835	2034	418	50	468	5.42
29565	2036	425	51	475	5.50
30295	2038	430	51	481	5.57
31025	2040	435	52	487	5.63
31755	2042	439	53	492	5.69
32485	2044	443	53	496	5.74
33215	2046	446	54	500	5.78
33945	2048	449	54	503	5.82
34675	2050	452	54	506	5.86
35405	2052	454	55	509	5.89
36135	2054	456	55	511	5.92
36865	2056	458	56	514	5.95
37595	2058	460	56	516	5.97
38325	2060	461	56	518	5.99
39055	2062	463	56	519	6.01
39785	2064	464	57	521	6.03
40515	2066	465	57	522	6.04
41245	2068	466	57	523	6.06
41975	2070	467	57	525	6.07
42705	2072	468	57	526	6.08
43435	2074	469	58	527	6.10
44165	2076	470	58	528	6.11
44895	2078	470	58	528	6.12
45625	2080	471	58	529	6.13
46355	2082	472	58	530	6.13
47085	2084	472	58	531	6.14
47815	2086	473	59	531	6.15
48545	2088	473	59	532	6.16
49275	2090	474	59	532	6.16
50005	2092	474	59	533	6.17
50735	2094	474	59	533	6.17
51465	2096	475	59	534	6.18
52195	2098	475	59	534	6.18
52925	2100	475	59	535	6.19
53655	2102	475	59	535	6.19
54385	2104	476	60	535	6.19

Appendix B-8-6a Predicted total groundwater flux in Scenario-8 (Bookpurnong Area)

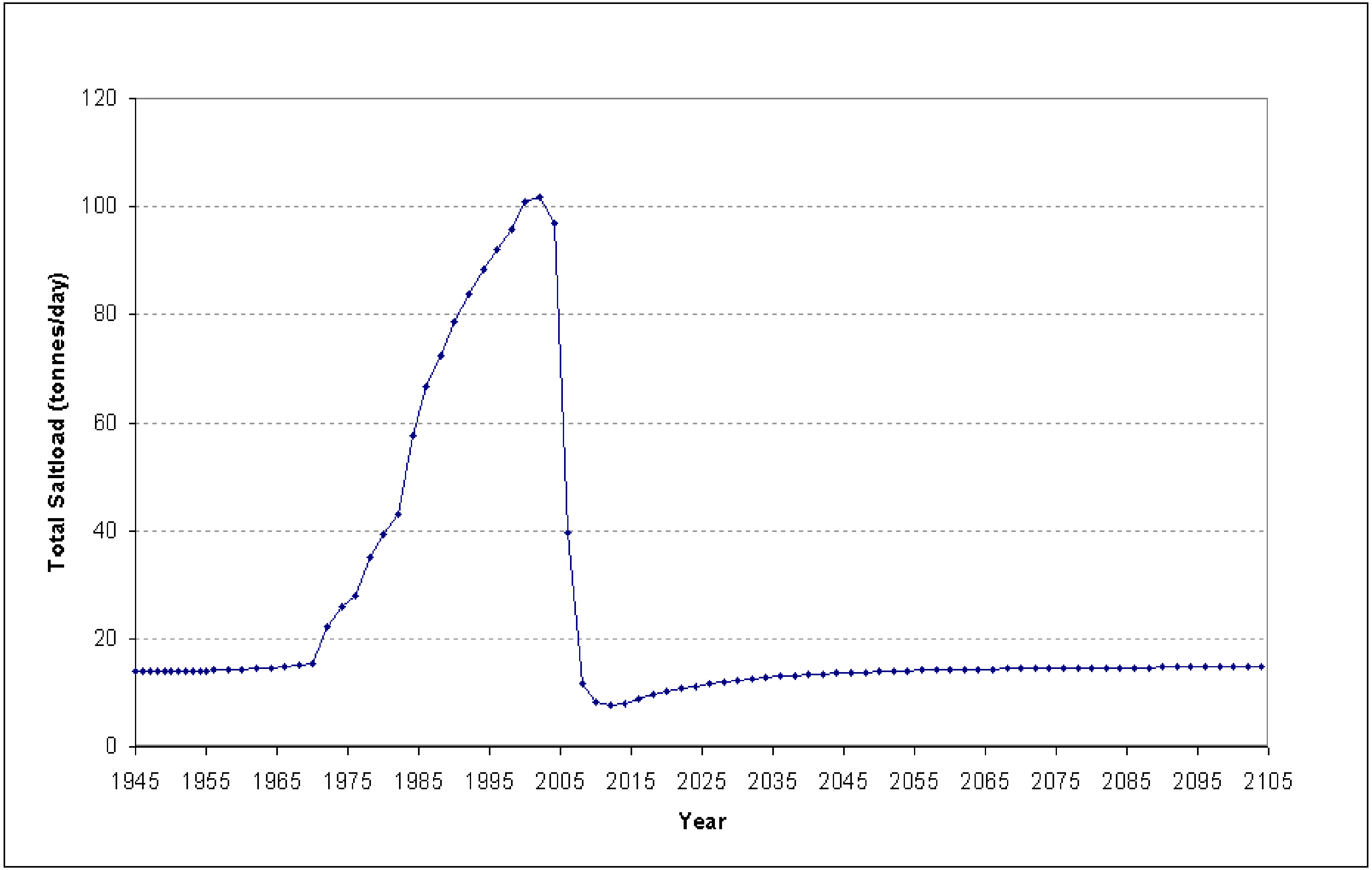


Appendix B-8-6b Graph of predicted total groundwater flux (L/second) entering the River Murray in Scenario-8 (Bookpurnong Area)

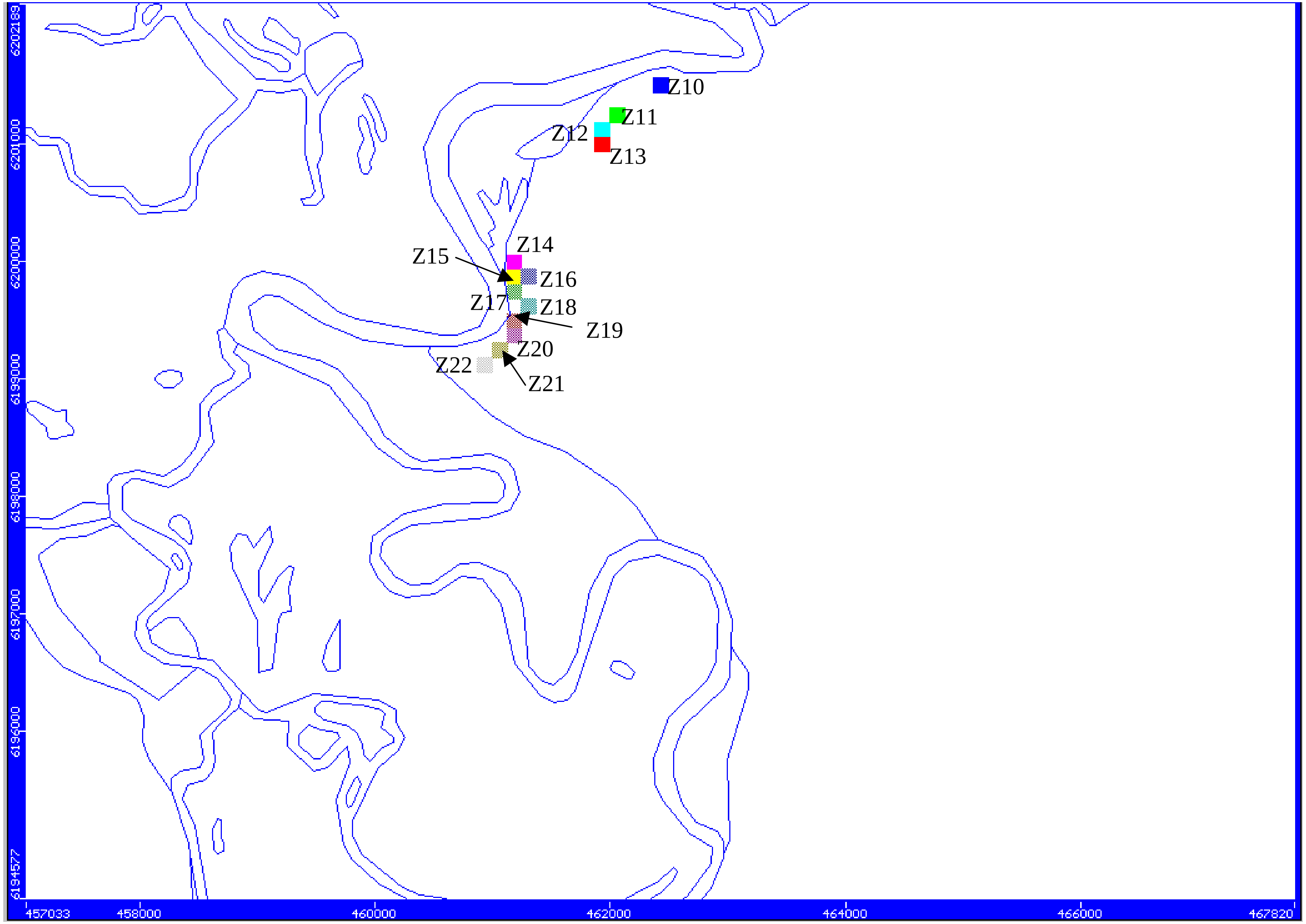
day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
0	1945	13	1	14.05
0	1946	13	1	14.05
0	1947	13	1	14.05
0	1948	13	1	14.05
0	1949	13	1	14.05
0	1950	13	1	14.05
0	1951	13	1	14.05
0	1952	13	1	14.05
0	1953	13	1	14.05
0	1954	13	1	14.05
30	1955	13	1	14.05
365	1956	14	1	14.25
1095	1958	14	1	14.33
1825	1960	14	1	14.42
2555	1962	14	1	14.53
3285	1964	14	1	14.69
4015	1966	14	1	14.89
4745	1968	14	1	15.13
5475	1970	15	1	15.39
6205	1972	21	1	22.18
6935	1974	25	1	26.03
7665	1976	27	1	28.15
8395	1978	34	1	35.18
9125	1980	38	1	39.38
9855	1982	42	1	43.00
10585	1984	56	1	57.65
11315	1986	65	1	66.67
12045	1988	71	2	72.37
12775	1990	77	2	78.61
13505	1992	82	2	83.78
14235	1994	87	2	88.53
14965	1996	90	2	92.17
15695	1998	94	2	95.91
16425	2000	99	2	100.89
17155	2002	100	2	101.70
17885	2004	95	2	96.87
18615	2006	38	1	39.79
19345	2008	11	1	11.73
20075	2010	8	1	8.47
20805	2012	7	1	7.81
21535	2014	7	1	8.12
22265	2016	8	1	8.95
22995	2018	9	1	9.72

day	year	Lateral Saltload (tonnes/day)	Upward Saltload (tonnes/day)	Total Saltload (tonnes/day)
23725	2020	9	1	10.33
24455	2022	10	1	10.87
25185	2024	10	1	11.33
25915	2026	11	1	11.74
26645	2028	11	1	12.09
27375	2030	11	1	12.39
28105	2032	11	1	12.67
28835	2034	12	1	12.91
29565	2036	12	1	13.12
30295	2038	12	1	13.30
31025	2040	12	1	13.45
31755	2042	12	1	13.59
32485	2044	12	1	13.72
33215	2046	12	1	13.83
33945	2048	13	1	13.93
34675	2050	13	1	14.02
35405	2052	13	1	14.10
36135	2054	13	1	14.17
36865	2056	13	1	14.23
37595	2058	13	1	14.29
38325	2060	13	1	14.34
39055	2062	13	1	14.39
39785	2064	13	1	14.44
40515	2066	13	1	14.48
41245	2068	13	1	14.52
41975	2070	13	1	14.55
42705	2072	13	1	14.58
43435	2074	13	1	14.61
44165	2076	13	1	14.63
44895	2078	13	1	14.66
45625	2080	13	1	14.68
46355	2082	13	1	14.70
47085	2084	13	1	14.72
47815	2086	13	2	14.74
48545	2088	13	2	14.75
49275	2090	13	2	14.77
50005	2092	13	2	14.78
50735	2094	13	2	14.80
51465	2096	13	2	14.81
52195	2098	13	2	14.82
52925	2100	13	2	14.83
53655	2102	13	2	14.84
54385	2104	13	2	14.85

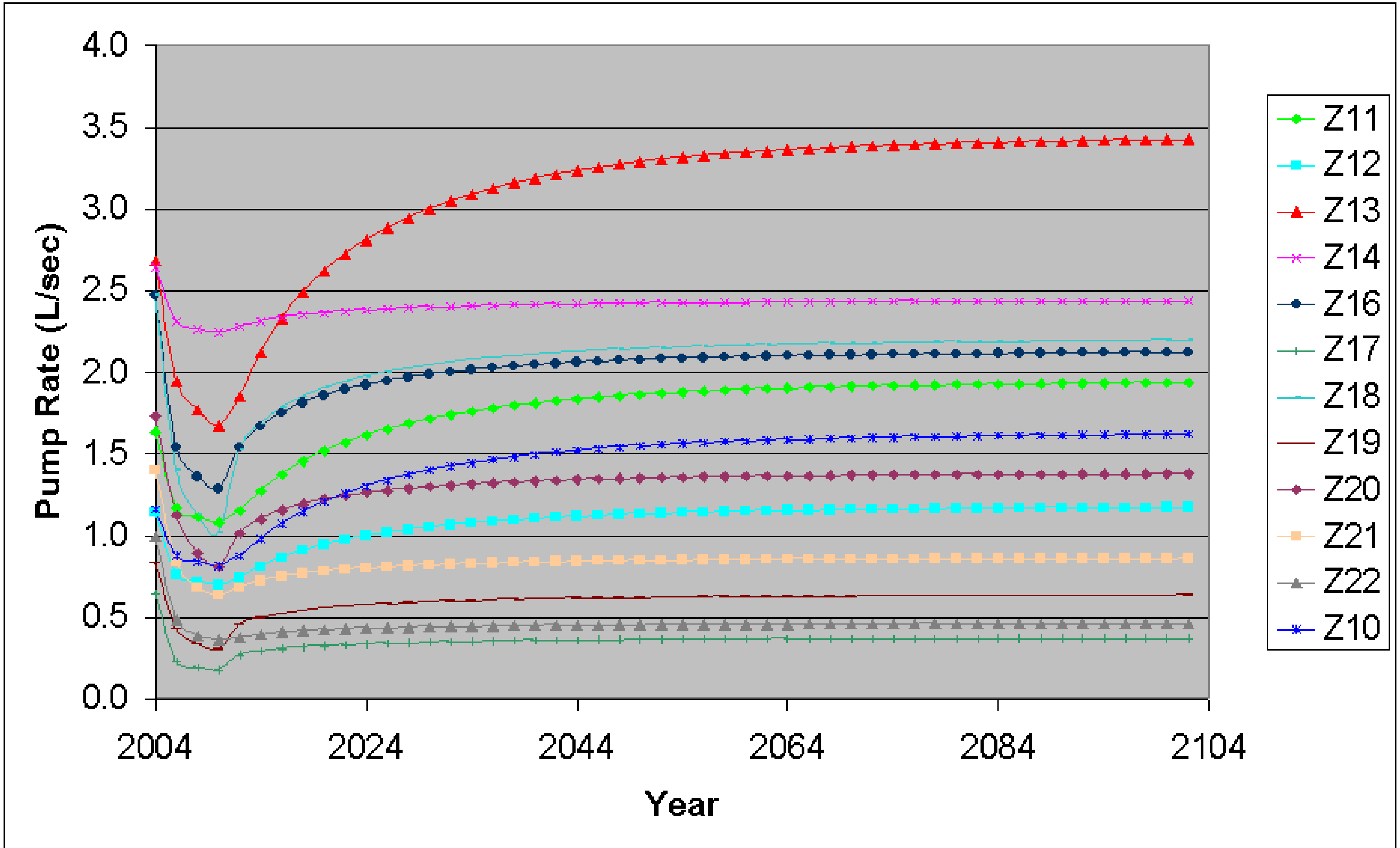
Appendix B-8-7a Predicted total salt load (tonnes/day) entering the River Murray in Scenario-8 (Bookpurnong Area)



Appendix B-8-7b Graph of predicted total salt load (tonnes/day) entering the River Murray in Scenario-8 (Bookpurnong Area)



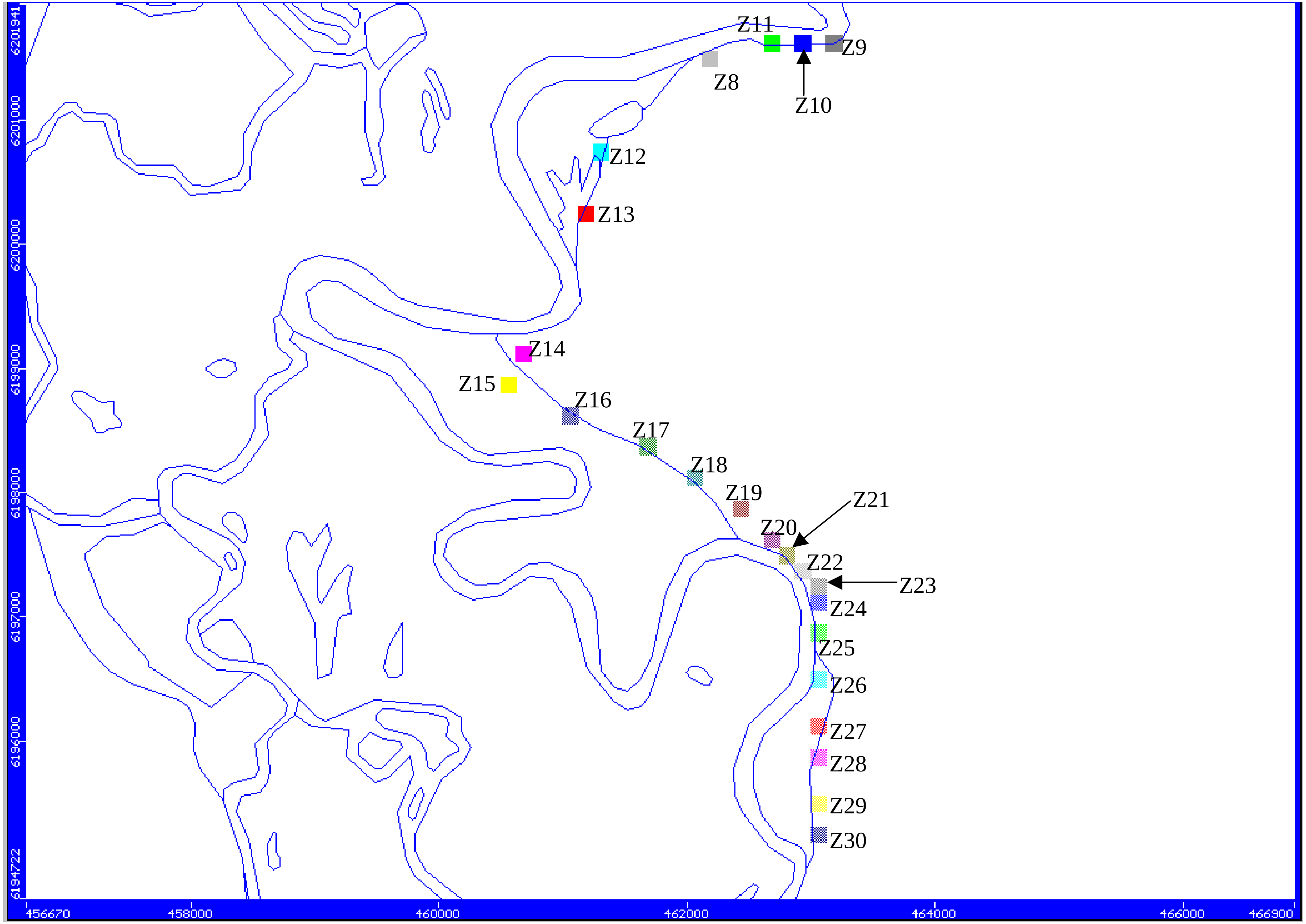
Appendix B-8-8a Potential locations of highland SIS production wells Scenario-8 (Bookpurnong Area)



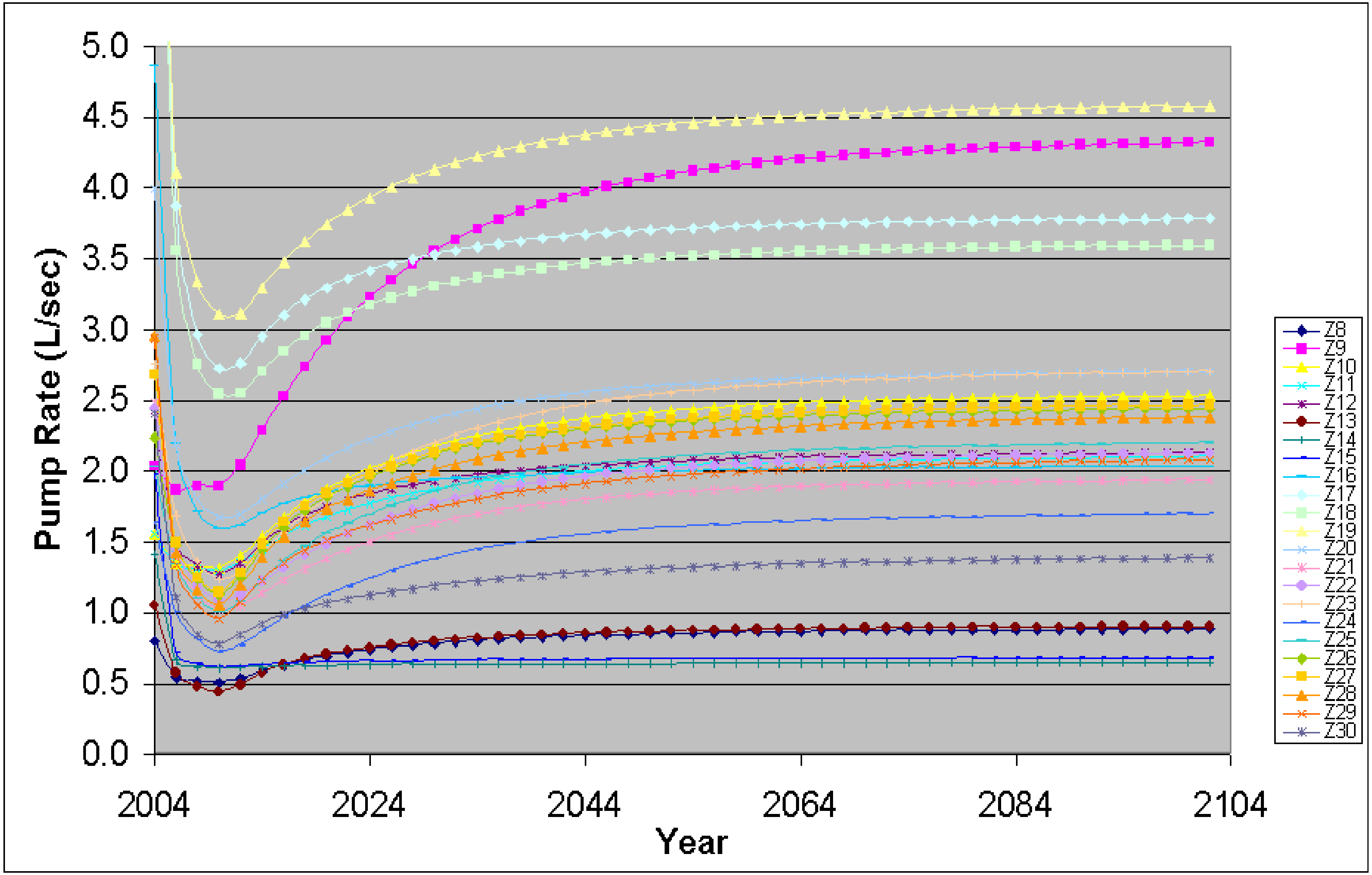
Appendix B-8-8b Graph of predicted range of pumping rates from highland SIS production wells Scenario-8 (Bookpurnong Area)

Year	Z10	Z11	Z12	Z13	Z14	Z15	Z16	Z17	Z18	Z19	Z20	Z21	Z22	Total
2004	1.2	1.6	1.1	2.7	2.6	0.0	2.5	0.6	2.5	0.8	1.7	1.4	1.0	18.7
2006	0.9	1.2	0.8	1.9	2.3	0.0	1.5	0.2	1.4	0.4	1.1	0.8	0.5	12.2
2008	0.8	1.1	0.7	1.8	2.3	0.0	1.4	0.2	1.1	0.3	0.9	0.7	0.4	10.8
2010	0.8	1.1	0.7	1.7	2.2	0.0	1.3	0.2	1.0	0.3	0.8	0.6	0.4	10.3
2012	0.9	1.2	0.7	1.9	2.3	0.0	1.5	0.3	1.5	0.5	1.0	0.7	0.4	11.9
2014	1.0	1.3	0.8	2.1	2.3	0.0	1.7	0.3	1.7	0.5	1.1	0.7	0.4	12.9
2016	1.1	1.4	0.9	2.3	2.3	0.0	1.8	0.3	1.8	0.5	1.2	0.8	0.4	13.6
2018	1.1	1.5	0.9	2.5	2.4	0.0	1.8	0.3	1.9	0.5	1.2	0.8	0.4	14.1
2020	1.2	1.5	0.9	2.6	2.4	0.0	1.9	0.3	1.9	0.6	1.2	0.8	0.4	14.5
2022	1.3	1.6	1.0	2.7	2.4	0.0	1.9	0.3	1.9	0.6	1.2	0.8	0.4	14.8
2024	1.3	1.6	1.0	2.8	2.4	0.0	1.9	0.3	2.0	0.6	1.3	0.8	0.4	15.1
2026	1.3	1.7	1.0	2.9	2.4	0.0	1.9	0.3	2.0	0.6	1.3	0.8	0.4	15.3
2028	1.4	1.7	1.0	2.9	2.4	0.0	2.0	0.3	2.0	0.6	1.3	0.8	0.4	15.5
2030	1.4	1.7	1.1	3.0	2.4	0.0	2.0	0.3	2.0	0.6	1.3	0.8	0.4	15.7
2032	1.4	1.7	1.1	3.0	2.4	0.0	2.0	0.4	2.1	0.6	1.3	0.8	0.4	15.8
2034	1.4	1.8	1.1	3.1	2.4	0.0	2.0	0.4	2.1	0.6	1.3	0.8	0.4	16.0
2036	1.5	1.8	1.1	3.1	2.4	0.0	2.0	0.4	2.1	0.6	1.3	0.8	0.4	16.1
2038	1.5	1.8	1.1	3.2	2.4	0.0	2.0	0.4	2.1	0.6	1.3	0.8	0.4	16.2
2040	1.5	1.8	1.1	3.2	2.4	0.0	2.0	0.4	2.1	0.6	1.3	0.8	0.5	16.3
2042	1.5	1.8	1.1	3.2	2.4	0.0	2.1	0.4	2.1	0.6	1.3	0.8	0.5	16.3
2044	1.5	1.8	1.1	3.2	2.4	0.0	2.1	0.4	2.1	0.6	1.3	0.8	0.5	16.4
2046	1.5	1.8	1.1	3.3	2.4	0.0	2.1	0.4	2.1	0.6	1.3	0.8	0.5	16.5
2048	1.5	1.9	1.1	3.3	2.4	0.0	2.1	0.4	2.1	0.6	1.3	0.8	0.5	16.5
2050	1.5	1.9	1.1	3.3	2.4	0.0	2.1	0.4	2.1	0.6	1.4	0.8	0.5	16.6
2052	1.6	1.9	1.1	3.3	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.6
2054	1.6	1.9	1.1	3.3	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.7
2056	1.6	1.9	1.1	3.3	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.7
2058	1.6	1.9	1.1	3.3	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.7
2060	1.6	1.9	1.2	3.3	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.8
2062	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.8
2064	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.8
2066	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.8
2068	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.8
2070	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.9
2072	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.9
2074	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.9
2076	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.9
2078	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.9
2080	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.9
2082	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.9
2084	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	16.9
2086	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	17.0
2088	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	17.0
2090	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	17.0
2092	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	17.0
2094	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	17.0
2096	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	17.0
2098	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	17.0
2100	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	17.0
2102	1.6	1.9	1.2	3.4	2.4	0.0	2.1	0.4	2.2	0.6	1.4	0.9	0.5	17.0

Appendix A-8-8c Predicted range of pumping rates from highland SIS production wells Scenario-8 (Bookpurnong Area)



Appendix A-8-9a Potential locations of floodplain SIS production wells Scenario-8 (Bookpurnong Area)



Appendix A-8-9b Graph of predicted range of pumping rates from floodplain SIS production wells Scenario-8 (Bookpurnong Area)

Year	Z8	Z9	Z10	Z11	Z12	Z13	Z14	Z15	Z16	Z17	Z18	Z19	Z20	Z21	Z22	Z23	Z24	Z25	Z26	Z27	Z28	Z29	Z30	Total
2004	0.8	2.0	1.6	1.6	2.4	1.1	1.4	2.0	4.9	8.5	8.5	8.3	4.0	2.5	2.4	2.8	1.6	2.0	2.2	2.7	3.0	2.9	2.4	67.2
2006	0.5	1.9	1.3	1.3	1.5	0.6	0.7	0.7	2.2	3.9	3.6	4.1	2.2	1.4	1.5	1.7	1.0	1.3	1.5	1.5	1.4	1.3	1.1	34.5
2008	0.5	1.9	1.3	1.3	1.3	0.5	0.6	0.6	1.7	3.0	2.8	3.3	1.8	1.1	1.2	1.4	0.8	1.1	1.2	1.3	1.2	1.1	0.8	28.1
2010	0.5	1.9	1.3	1.3	1.3	0.4	0.6	0.6	1.6	2.7	2.5	3.1	1.7	1.0	1.1	1.2	0.7	1.0	1.1	1.1	1.1	1.0	0.8	26.0
2012	0.5	2.0	1.4	1.4	1.3	0.5	0.6	0.6	1.6	2.8	2.5	3.1	1.7	1.0	1.1	1.3	0.8	1.1	1.2	1.3	1.2	1.1	0.8	27.1
2014	0.6	2.3	1.5	1.5	1.5	0.6	0.6	0.6	1.7	3.0	2.7	3.3	1.8	1.1	1.2	1.4	0.9	1.2	1.4	1.5	1.4	1.2	0.9	29.6
2016	0.6	2.5	1.7	1.5	1.6	0.6	0.6	0.6	1.8	3.1	2.8	3.5	1.9	1.2	1.3	1.6	1.0	1.4	1.6	1.6	1.5	1.4	1.0	31.7
2018	0.7	2.7	1.8	1.6	1.7	0.7	0.6	0.6	1.8	3.2	3.0	3.6	2.0	1.3	1.4	1.7	1.0	1.5	1.7	1.8	1.6	1.4	1.0	33.4
2020	0.7	2.9	1.9	1.7	1.7	0.7	0.6	0.7	1.8	3.3	3.0	3.7	2.1	1.4	1.5	1.8	1.1	1.6	1.8	1.8	1.7	1.5	1.1	34.8
2022	0.7	3.1	1.9	1.7	1.8	0.7	0.6	0.7	1.9	3.4	3.1	3.8	2.2	1.4	1.6	1.9	1.2	1.6	1.9	1.9	1.8	1.6	1.1	35.9
2024	0.7	3.2	2.0	1.8	1.8	0.8	0.6	0.7	1.9	3.4	3.2	3.9	2.2	1.5	1.6	2.0	1.2	1.7	2.0	2.0	1.9	1.6	1.1	36.9
2026	0.8	3.3	2.1	1.8	1.9	0.8	0.6	0.7	1.9	3.5	3.2	4.0	2.3	1.5	1.7	2.1	1.3	1.8	2.0	2.0	1.9	1.7	1.1	37.7
2028	0.8	3.5	2.1	1.8	1.9	0.8	0.6	0.7	1.9	3.5	3.3	4.1	2.3	1.6	1.7	2.1	1.3	1.8	2.1	2.1	2.0	1.7	1.2	38.5
2030	0.8	3.6	2.2	1.9	1.9	0.8	0.6	0.7	1.9	3.5	3.3	4.1	2.4	1.6	1.8	2.2	1.4	1.9	2.1	2.1	2.0	1.7	1.2	39.2
2032	0.8	3.6	2.2	1.9	2.0	0.8	0.6	0.7	1.9	3.6	3.3	4.2	2.4	1.7	1.8	2.3	1.4	1.9	2.2	2.2	2.0	1.8	1.2	39.8
2034	0.8	3.7	2.2	1.9	2.0	0.8	0.6	0.7	2.0	3.6	3.4	4.2	2.4	1.7	1.8	2.3	1.4	1.9	2.2	2.2	2.1	1.8	1.2	40.3
2036	0.8	3.8	2.3	1.9	2.0	0.8	0.6	0.7	2.0	3.6	3.4	4.3	2.5	1.7	1.9	2.3	1.5	2.0	2.2	2.2	2.1	1.8	1.2	40.8
2038	0.8	3.8	2.3	2.0	2.0	0.8	0.6	0.7	2.0	3.6	3.4	4.3	2.5	1.7	1.9	2.4	1.5	2.0	2.2	2.3	2.1	1.9	1.3	41.2
2040	0.8	3.9	2.3	2.0	2.0	0.8	0.6	0.7	2.0	3.6	3.4	4.3	2.5	1.8	1.9	2.4	1.5	2.0	2.3	2.3	2.2	1.9	1.3	41.5
2042	0.8	3.9	2.4	2.0	2.0	0.9	0.6	0.7	2.0	3.7	3.4	4.4	2.5	1.8	1.9	2.4	1.5	2.0	2.3	2.3	2.2	1.9	1.3	41.8
2044	0.8	4.0	2.4	2.0	2.0	0.9	0.6	0.7	2.0	3.7	3.5	4.4	2.6	1.8	2.0	2.5	1.6	2.0	2.3	2.3	2.2	1.9	1.3	42.1
2046	0.8	4.0	2.4	2.0	2.0	0.9	0.6	0.7	2.0	3.7	3.5	4.4	2.6	1.8	2.0	2.5	1.6	2.1	2.3	2.3	2.2	1.9	1.3	42.4
2048	0.9	4.0	2.4	2.0	2.1	0.9	0.6	0.7	2.0	3.7	3.5	4.4	2.6	1.8	2.0	2.5	1.6	2.1	2.3	2.3	2.2	1.9	1.3	42.6
2050	0.9	4.1	2.4	2.0	2.1	0.9	0.6	0.7	2.0	3.7	3.5	4.4	2.6	1.8	2.0	2.5	1.6	2.1	2.3	2.4	2.2	2.0	1.3	42.8
2052	0.9	4.1	2.4	2.0	2.1	0.9	0.6	0.7	2.0	3.7	3.5	4.4	2.6	1.8	2.0	2.6	1.6	2.1	2.3	2.4	2.3	2.0	1.3	43.0
2054	0.9	4.1	2.4	2.0	2.1	0.9	0.6	0.7	2.0	3.7	3.5	4.5	2.6	1.9	2.0	2.6	1.6	2.1	2.4	2.4	2.3	2.0	1.3	43.1
2056	0.9	4.1	2.4	2.0	2.1	0.9	0.6	0.7	2.0	3.7	3.5	4.5	2.6	1.9	2.0	2.6	1.6	2.1	2.4	2.4	2.3	2.0	1.3	43.3
2058	0.9	4.2	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.7	3.5	4.5	2.6	1.9	2.0	2.6	1.6	2.1	2.4	2.4	2.3	2.0	1.3	43.4
2060	0.9	4.2	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.7	3.5	4.5	2.6	1.9	2.1	2.6	1.6	2.1	2.4	2.4	2.3	2.0	1.3	43.5
2062	0.9	4.2	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.7	3.5	4.5	2.6	1.9	2.1	2.6	1.6	2.1	2.4	2.4	2.3	2.0	1.3	43.6
2064	0.9	4.2	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.7	3.6	4.5	2.7	1.9	2.1	2.6	1.6	2.1	2.4	2.4	2.3	2.0	1.3	43.7
2066	0.9	4.2	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.7	3.6	4.5	2.7	1.9	2.1	2.6	1.7	2.2	2.4	2.4	2.3	2.0	1.4	43.8
2068	0.9	4.2	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.5	2.7	1.9	2.1	2.6	1.7	2.2	2.4	2.4	2.3	2.0	1.4	43.9
2070	0.9	4.2	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.5	2.7	1.9	2.1	2.6	1.7	2.2	2.4	2.4	2.3	2.0	1.4	44.0
2072	0.9	4.2	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.5	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.4	2.3	2.0	1.4	44.0
2074	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.5	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.4	2.3	2.0	1.4	44.1
2076	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.5	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.4	2.3	2.0	1.4	44.2
2078	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.5	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.4	2.4	2.1	1.4	44.2
2080	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.6	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.4	2.4	2.1	1.4	44.3
2082	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.6	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.5	2.4	2.1	1.4	44.3
2084	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.6	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.5	2.4	2.1	1.4	44.3
2086	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.6	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.5	2.4	2.1	1.4	44.4
2088	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.6	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.5	2.4	2.1	1.4	44.4
2090	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.6	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.5	2.4	2.1	1.4	44.4
2092	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.6	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.5	2.4	2.1	1.4	44.5
2094	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.6	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.5	2.4	2.1	1.4	44.5
2096	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.6	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.5	2.4	2.1	1.4	44.5
2098	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.6	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.5	2.4	2.1	1.4	44.6
2100	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.6	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.5	2.4	2.1	1.4	44.6
2102	0.9	4.3	2.5	2.1	2.1	0.9	0.6	0.7	2.0	3.8	3.6	4.6	2.7	1.9	2.1	2.7	1.7	2.2	2.4	2.5	2.4	2.1	1.4	44.6

Appendix A-8-9c Predicted range of pumping rates from floodplain SIS production wells Scenario-8 (Loxton Area)

C. PREDICTED SALT LOAD ENTERING THE RIVER MURRAY AND IN RIVER EC BENEFIT AT MORGAN FOR ALL SCENARIOS, LOXTON AND BOOKPURNONG AREAS

- Predicted total salt load (tonnes/day)
- Predicted annual salt load (tonnes/day)
- Predicted 30 years average salt load
- Predicted EC benefits

Appendix C

Predicted salt load entering the River Murray and in river EC benefit at Morgan for all Scenarios Loxton and Bookpurnong Areas

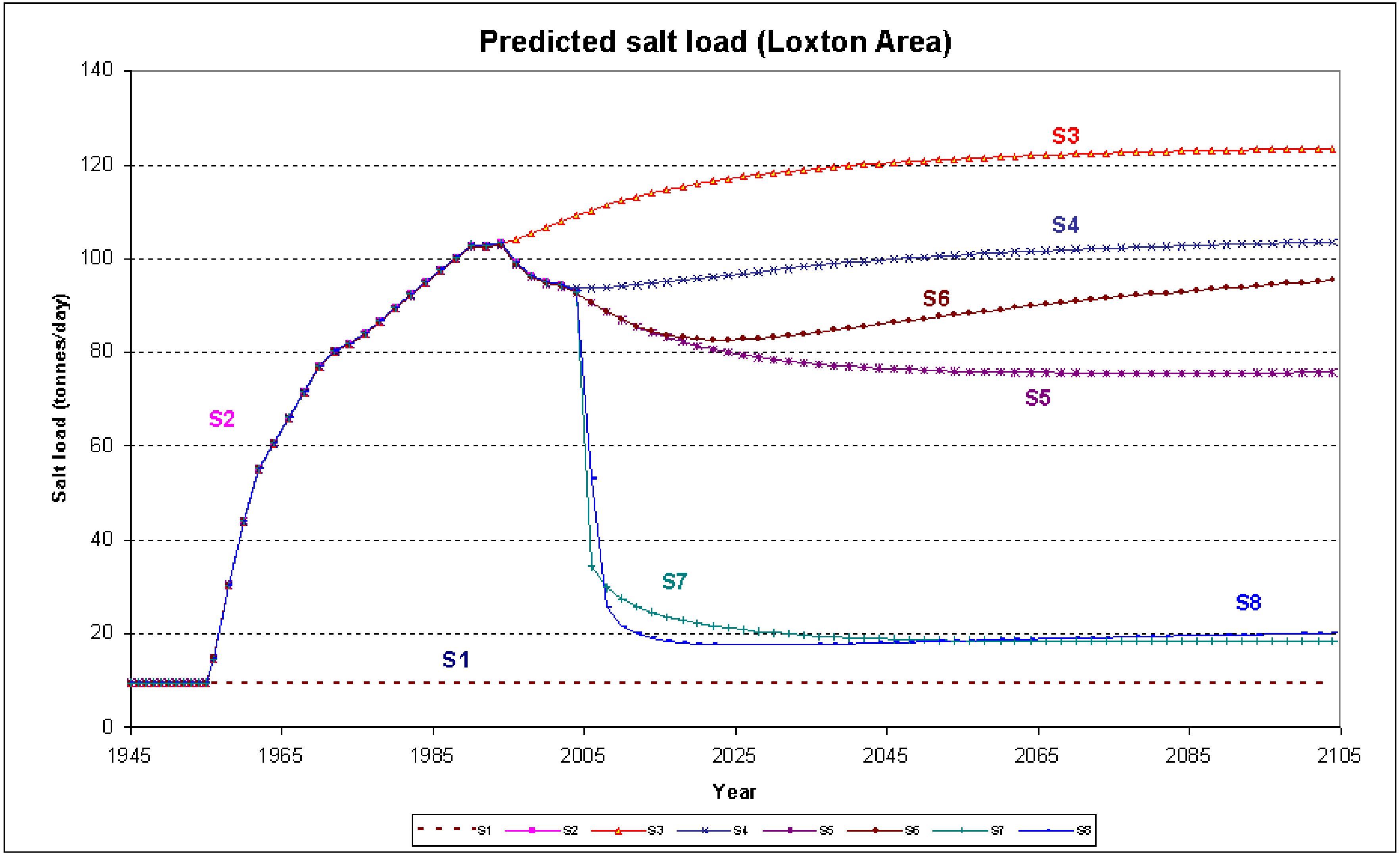
-Predicted total salt load (tonnes/day)
-Predicted annual salt load (tonnes/day)
-Predicted 30 years average salt load
-Predicted EC benefits

day	year	S1	S2	S3	S4	S5	S6	S7	S8
0	1945	9.54	9.59	9.54	9.54	9.54	9.54	9.59	9.59
0	1946	9.54	9.59	9.54	9.54	9.54	9.54	9.59	9.59
0	1947	9.54	9.59	9.54	9.54	9.54	9.54	9.59	9.59
0	1948	9.54	9.59	9.54	9.54	9.54	9.54	9.59	9.59
0	1949	9.54	9.59	9.54	9.54	9.54	9.54	9.59	9.59
0	1950	9.54	9.59	9.54	9.54	9.54	9.54	9.59	9.59
0	1951	9.54	9.59	9.54	9.54	9.54	9.54	9.59	9.59
0	1952	9.54	9.59	9.54	9.54	9.54	9.54	9.59	9.59
0	1953	9.54	9.59	9.54	9.54	9.54	9.54	9.59	9.59
0	1954	9.54	9.59	9.54	9.54	9.54	9.54	9.59	9.59
30	1955	9.54	9.59	9.54	9.54	9.54	9.54	9.59	9.59
365	1956	9.54	14.66	14.59	14.59	14.72	14.72	14.66	14.66
1095	1958	9.54	30.33	30.22	30.22	30.41	30.41	30.33	30.33
1825	1960	9.54	44.04	43.89	43.89	44.11	44.11	44.04	44.04
2555	1962	9.54	55.18	55.00	55.00	55.24	55.24	55.18	55.18
3285	1964	9.54	60.73	60.54	60.54	60.73	60.73	60.73	60.73
4015	1966	9.54	66.12	65.91	65.91	66.10	66.10	66.12	66.12
4745	1968	9.54	71.58	71.36	71.36	71.55	71.55	71.58	71.58
5475	1970	9.54	77.03	76.80	76.80	76.92	76.92	77.03	77.03
6205	1972	9.54	80.39	80.16	80.16	80.27	80.27	80.39	80.39
6935	1974	9.54	81.86	81.64	81.64	81.74	81.74	81.86	81.86
7665	1976	9.54	84.15	83.92	83.92	83.95	83.95	84.15	84.15
8395	1978	9.54	86.81	86.58	86.58	86.60	86.60	86.81	86.81
9125	1980	9.54	89.59	89.36	89.36	89.38	89.38	89.59	89.59
9855	1982	9.54	92.42	92.18	92.18	92.12	92.12	92.42	92.42
10585	1984	9.54	95.11	94.87	94.87	94.79	94.79	95.11	95.11
11315	1986	9.54	97.75	97.50	97.50	97.42	97.42	97.75	97.75
12045	1988	9.54	100.33	100.08	100.08	100.00	100.00	100.33	100.33
12775	1990	9.54	103.01	102.76	102.76	102.60	102.60	103.01	103.01
13505	1992	9.54	102.88	102.63	102.63	102.46	102.46	102.88	102.88
14235	1994	9.54	103.44	103.19	103.19	103.01	103.01	103.44	103.44
14965	1996	9.54	99.18	104.24	98.94	98.75	98.75	99.18	99.18
15695	1998	9.54	96.37	105.40	96.14	96.04	96.04	96.37	96.37
16425	2000	9.54	95.00	106.68	94.78	94.68	94.68	95.00	95.00
17155	2002	9.54	94.36	107.95	94.13	94.03	94.03	94.36	94.36
17885	2004	9.54	92.97	109.17	93.88	92.66	92.66	92.97	92.97
18615	2006	9.54		110.26	93.78	90.65	90.65	34.33	53.08
19345	2008	9.54		111.34	93.89	88.70	88.70	29.90	25.71
20075	2010	9.54		112.34	94.10	86.99	87.00	27.52	21.50
20805	2012	9.54		113.25	94.36	85.53	85.54	25.88	19.99
21535	2014	9.54		114.06	94.67	84.27	84.46	24.63	19.11
22265	2016	9.54		114.79	95.01	83.17	83.69	23.65	18.55
22995	2018	9.54		115.46	95.36	82.22	83.16	22.86	18.19

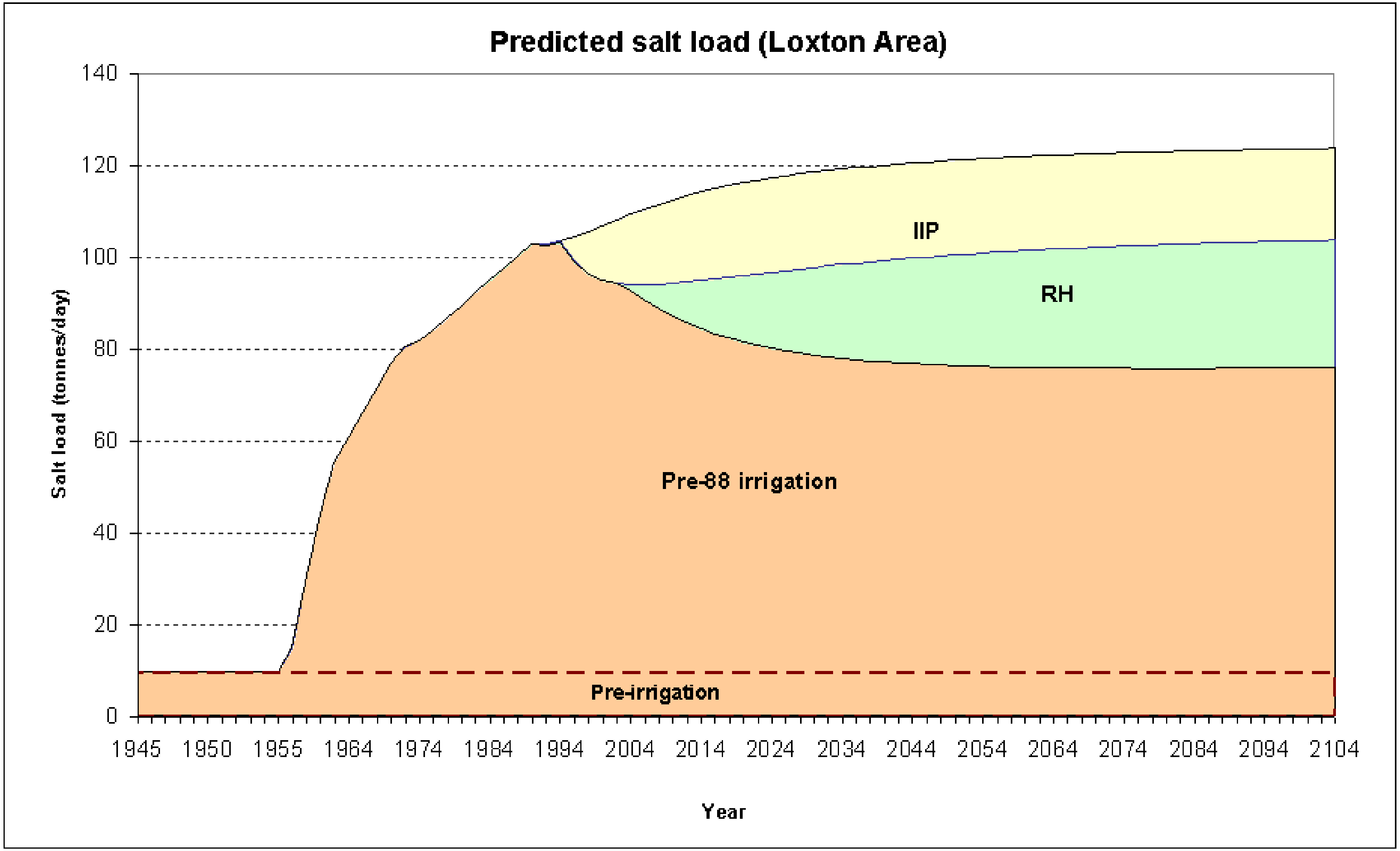
Appendix C-1-1a Predicted total salt load (tonnes/day) entering the River Murray in all Scenarios (Loxton Area)

day	year	S1	S2	S3	S4	S5	S6	S7	S8
23725	2020	9.54		116.05	95.73	81.39	82.86	22.22	17.95
24455	2022	9.54		116.60	96.10	80.66	82.73	21.68	17.80
25185	2024	9.54		117.09	96.47	80.03	82.74	21.22	17.71
25915	2026	9.54		117.54	96.84	79.47	82.86	20.83	17.66
26645	2028	9.54		117.95	97.21	78.98	83.06	20.49	17.65
27375	2030	9.54		118.33	97.57	78.54	83.33	20.21	17.67
28105	2032	9.54		118.67	97.93	78.16	83.64	19.96	17.70
28835	2034	9.54		119.00	98.26	77.82	83.99	19.66	17.74
29565	2036	9.54		119.29	98.58	77.53	84.36	19.46	17.80
30295	2038	9.54		119.57	98.88	77.27	84.76	19.30	17.86
31025	2040	9.54		119.83	99.16	77.03	85.16	19.16	17.93
31755	2042	9.54		120.08	99.42	76.83	85.57	19.04	18.01
32485	2044	9.54		120.31	99.67	76.65	85.99	18.94	18.09
33215	2046	9.54		120.53	99.90	76.50	86.40	18.85	18.16
33945	2048	9.54		120.73	100.12	76.36	86.81	18.74	18.25
34675	2050	9.54		120.92	100.33	76.24	87.23	18.66	18.33
35405	2052	9.54		121.11	100.54	76.13	87.63	18.60	18.41
36135	2054	9.54		121.28	100.73	76.04	88.03	18.55	18.49
36865	2056	9.54		121.44	100.91	75.96	88.42	18.50	18.57
37595	2058	9.54		121.59	101.09	75.89	88.81	18.50	18.65
38325	2060	9.54		121.73	101.26	75.83	89.18	18.52	18.73
39055	2062	9.54		121.87	101.42	75.78	89.55	18.52	18.80
39785	2064	9.54		121.99	101.57	75.74	89.91	18.51	18.88
40515	2066	9.54		122.11	101.72	75.71	90.27	18.49	18.95
41245	2068	9.54		122.22	101.86	75.68	90.61	18.48	19.03
41975	2070	9.54		122.33	101.99	75.65	90.94	18.47	19.10
42705	2072	9.54		122.43	102.12	75.64	91.26	18.46	19.17
43435	2074	9.54		122.52	102.24	75.62	91.58	18.45	19.24
44165	2076	9.54		122.61	102.35	75.61	91.88	18.45	19.30
44895	2078	9.54		122.70	102.46	75.61	92.18	18.44	19.37
45625	2080	9.54		122.78	102.57	75.61	92.47	18.44	19.43
46355	2082	9.54		122.86	102.67	75.61	92.75	18.44	19.49
47085	2084	9.54		122.94	102.76	75.61	93.02	18.44	19.55
47815	2086	9.54		123.01	102.85	75.62	93.28	18.44	19.61
48545	2088	9.54		123.08	102.94	75.63	93.54	18.44	19.67
49275	2090	9.54		123.14	103.03	75.64	93.78	18.45	19.73
50005	2092	9.54		123.21	103.11	75.65	94.02	18.45	19.78
50735	2094	9.54		123.27	103.19	75.67	94.26	18.46	19.83
51465	2096	9.54		123.33	103.27	75.68	94.48	18.47	19.89
52195	2098	9.54		123.39	103.34	75.70	94.70	18.47	19.94
52925	2100	9.54		123.44	103.41	75.72	94.92	18.48	19.99
53655	2102	9.54		123.49	103.48	75.74	95.12	18.49	20.04
54385	2104	9.54		123.54	103.54	75.76	95.33	18.50	20.08

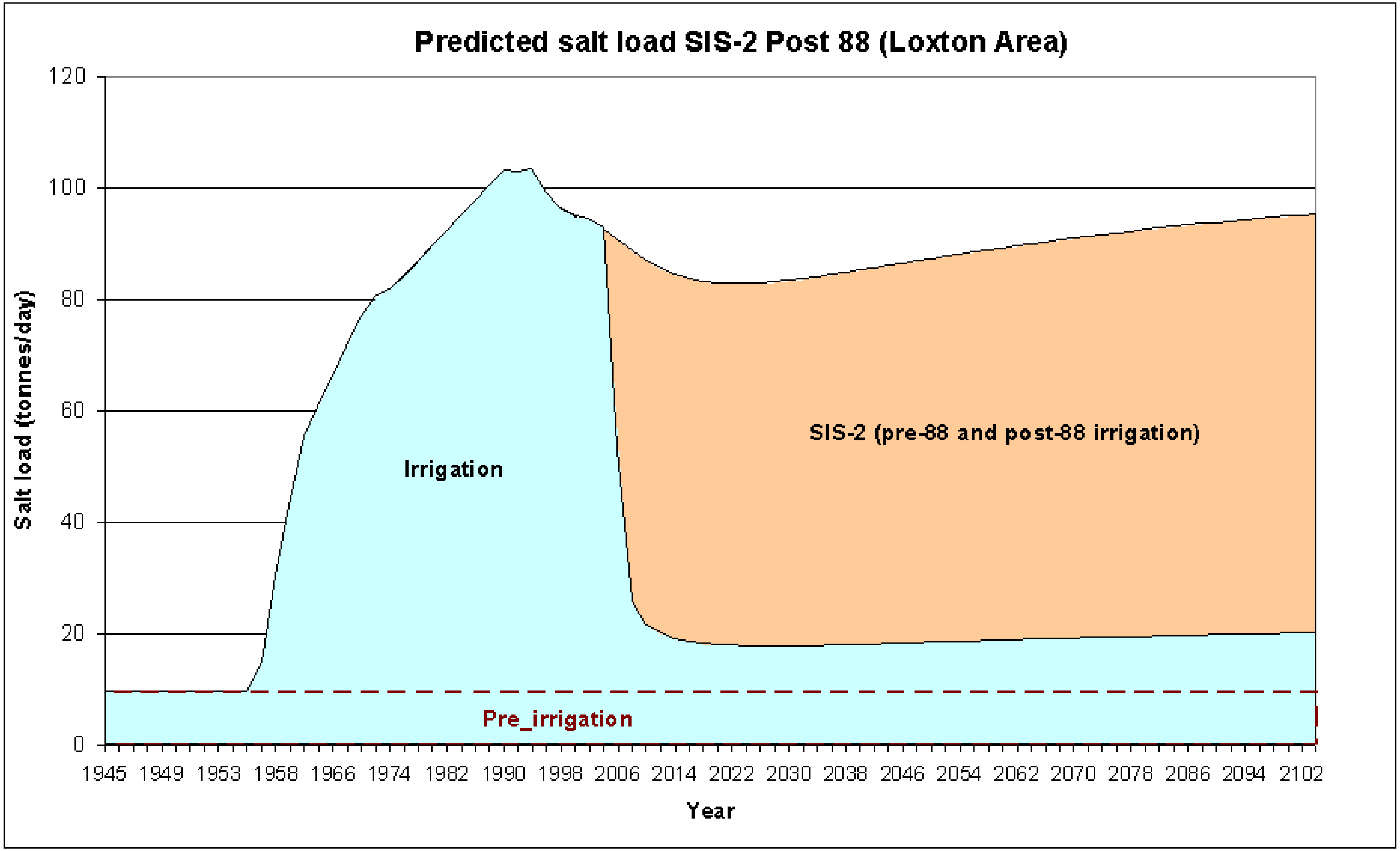
Appendix C-1-1b Predicted total salt load (tonnes/day) entering the River Murray in all Scenarios (Loxton Area)



Appendix C-1-2 Graph of predicted total salt load (tonnes/day) entering the River Murray in all Scenarios (Loxton Area)



Appendix C-1-3 Predicted salt loads entering the River Murray (Loxton Area pre-88 irrigation)



Appendix C-1-4 Modelled SIS-2 benefits (Loxton Area)

Time (Year)	Model results S3	Model results S4	Model results S5	Model results S6	Model results S7	Model results S8	30 year Average (S3)	30 year Average (S4)	30 year Average (S5)	30 year Average (S6)	30 year Average (S7)	30 year Average (S8)
2004	109.2	93.9	92.7	92.7	93.0	93.0						
2005	109.7	93.8	91.7	91.7	63.7	73.0						
2006	110.3	93.8	90.6	90.6	34.3	53.1						
2007	110.8	93.8	89.7	89.7	32.1	39.4						
2008	111.3	93.9	88.7	88.7	29.9	25.7						
2009	111.8	94.0	87.8	87.8	28.7	23.6						
2010	112.3	94.1	87.0	87.0	27.5	21.5						
2011	112.8	94.2	86.3	86.3	26.7	20.7						
2012	113.2	94.4	85.5	85.5	25.9	20.0						
2013	113.7	94.5	84.9	85.0	25.3	19.6						
2014	114.1	94.7	84.3	84.5	24.6	19.1						
2015	114.4	94.8	83.7	84.1	24.1	18.8						
2016	114.8	95.0	83.2	83.7	23.7	18.6						
2017	115.1	95.2	82.7	83.4	23.3	18.4						
2018	115.5	95.4	82.2	83.2	22.9	18.2						
2019	115.8	95.5	81.8	83.0	22.5	18.1						
2020	116.1	95.7	81.4	82.9	22.2	17.9						
2021	116.3	95.9	81.0	82.8	21.9	17.9						
2022	116.6	96.1	80.7	82.7	21.7	17.8						
2023	116.8	96.3	80.3	82.7	21.4	17.8						
2024	117.1	96.5	80.0	82.7	21.2	17.7						
2025	117.3	96.7	79.7	82.8	21.0	17.7						
2026	117.5	96.8	79.5	82.9	20.8	17.7						
2027	117.7	97.0	79.2	83.0	20.7	17.7						
2028	117.9	97.2	79.0	83.1	20.5	17.7						
2029	118.1	97.4	78.8	83.2	20.3	17.7						
2030	118.3	97.6	78.5	83.3	20.2	17.7						
2031	118.5	97.7	78.4	83.5	20.1	17.7						
2032	118.7	97.9	78.2	83.6	20.0	17.7						
2033	118.8	98.1	78.0	83.8	19.8	17.7						
2034	119.0	98.3	77.8	84.0	19.7	17.7	**115.2**	**95.7**	**83.0**	**85.0**	**27.1**	**24.7**
2035	119.1	98.4	77.7	84.2	19.6	17.8						
2036	119.3	98.6	77.5	84.4	19.5	17.8						
2037	119.4	98.7	77.4	84.6	19.4	17.8						
2038	119.6	98.9	77.3	84.8	19.3	17.9						
2039	119.7	99.0	77.2	85.0	19.2	17.9	**116.6**	**96.5**	**80.9**	**84.0**	**22.1**	**18.4**
2040	119.8	99.2	77.0	85.2	19.2	17.9						
2041	120.0	99.3	76.9	85.4	19.1	18.0						
2042	120.1	99.4	76.8	85.6	19.0	18.0						
2043	120.2	99.5	76.7	85.8	19.0	18.0						
2044	120.3	99.7	76.7	86.0	18.9	18.1	**117.8**	**97.3**	**79.3**	**83.9**	**20.8**	**17.9**
2045	120.4	99.8	76.6	86.2	18.9	18.1						

Appendix C-1-5a Predicted annual and average salt load (tonnes/day) entering the River Murray in some Scenarios (Loxton Area)

Time (Year)	Model results S3	Model results S4	Model results S5	Model results S6	Model results S7	Model results S8	30 year Average (S3)	30 year Average (S4)	30 year Average (S5)	30 year Average (S6)	30 year Average (S7)	30 year Average (S8)
2046	120.5	99.9	76.5	86.4	18.8	18.2						
2047	120.6	100.0	76.4	86.6	18.8	18.2						
2048	120.7	100.1	76.4	86.8	18.7	18.2						
2049	120.8	100.2	76.3	87.0	18.7	18.3	**118.8**	**98.1**	**78.2**	**84.3**	**20.0**	**17.9**
2050	120.9	100.3	76.2	87.2	18.7	18.3						
2051	121.0	100.4	76.2	87.4	18.6	18.4						
2052	121.1	100.5	76.1	87.6	18.6	18.4						
2053	121.2	100.6	76.1	87.8	18.6	18.4						
2054	121.3	100.7	76.0	88.0	18.5	18.5	**119.5**	**98.9**	**77.5**	**85.1**	**19.5**	**18.0**
2055	121.4	100.8	76.0	88.2	18.5	18.5						
2056	121.4	100.9	76.0	88.4	18.5	18.6						
2057	121.5	101.0	75.9	88.6	18.5	18.6						
2058	121.6	101.1	75.9	88.8	18.5	18.6						
2059	121.7	101.2	75.9	89.0	18.5	18.7	**120.2**	**99.5**	**76.9**	**86.0**	**19.1**	**18.1**
2060	121.7	101.3	75.8	89.2	18.5	18.7						
2061	121.8	101.3	75.8	89.4	18.5	18.8						
2062	121.9	101.4	75.8	89.6	18.5	18.8						
2063	121.9	101.5	75.8	89.7	18.5	18.8						
2064	122.0	101.6	75.7	89.9	18.5	18.9	**120.7**	**100.1**	**76.5**	**87.0**	**18.8**	**18.3**
2065	122.0	101.6	75.7	90.1	18.5	18.9						
2066	122.1	101.7	75.7	90.3	18.5	19.0						
2067	122.2	101.8	75.7	90.4	18.5	19.0						
2068	122.2	101.9	75.7	90.6	18.5	19.0						
2069	122.3	101.9	75.7	90.8	18.5	19.1	**121.2**	**100.6**	**76.2**	**88.0**	**18.7**	**18.5**
2070	122.3	102.0	75.7	90.9	18.5	19.1						
2071	122.4	102.1	75.6	91.1	18.5	19.1						
2072	122.4	102.1	75.6	91.3	18.5	19.2						
2073	122.5	102.2	75.6	91.4	18.5	19.2						
2074	122.5	102.2	75.6	91.6	18.5	19.2	**121.6**	**101.1**	**76.0**	**88.9**	**18.6**	**18.7**
2075	122.6	102.3	75.6	91.7	18.4	19.3						
2076	122.6	102.4	75.6	91.9	18.4	19.3						
2077	122.7	102.4	75.6	92.0	18.4	19.3						
2078	122.7	102.5	75.6	92.2	18.4	19.4						
2079	122.7	102.5	75.6	92.3	18.4	19.4	**121.9**	**101.5**	**75.8**	**89.8**	**18.5**	**18.9**
2080	122.8	102.6	75.6	92.5	18.4	19.4						
2081	122.8	102.6	75.6	92.6	18.4	19.5						
2082	122.9	102.7	75.6	92.7	18.4	19.5						
2083	122.9	102.7	75.6	92.9	18.4	19.5						
2084	122.9	102.8	75.6	93.0	18.4	19.6	**122.2**	**101.9**	**75.7**	**90.7**	**18.5**	**19.0**
2085	123.0	102.8	75.6	93.2	18.4	19.6						
2086	123.0	102.9	75.6	93.3	18.4	19.6						
2087	123.0	102.9	75.6	93.4	18.4	19.6						

Appendix C-1-5b Predicted annual and average salt load (tonnes/day) entering the River Murray in some Scenarios (Loxton Area)

Time (Year)	Model results S3	Model results S4	Model results S5	Model results S6	Model results S7	Model results S8	30 year Average (S3)	30 year Average (S4)	30 year Average (S5)	30 year Average (S6)	30 year Average (S7)	30 year Average (S8)
2088	123.1	102.9	75.6	93.5	18.4	19.7						
2089	123.1	103.0	75.6	93.7	18.4	19.7	**122.5**	**102.2**	**75.7**	**91.5**	**18.5**	**19.2**
2090	123.1	103.0	75.6	93.8	18.4	19.7						
2091	123.2	103.1	75.6	93.9	18.5	19.8						
2092	123.2	103.1	75.7	94.0	18.5	19.8						
2093	123.2	103.1	75.7	94.1	18.5	19.8						
2094	123.3	103.2	75.7	94.3	18.5	19.8	**122.7**	**102.5**	**75.6**	**92.2**	**18.5**	**19.4**
2095	123.3	103.2	75.7	94.4	18.5	19.9						
2096	123.3	103.3	75.7	94.5	18.5	19.9						
2097	123.4	103.3	75.7	94.6	18.5	19.9						
2098	123.4	103.3	75.7	94.7	18.5	19.9						
2099	123.4	103.4	75.7	94.8	18.5	20.0	**122.9**	**102.7**	**75.6**	**92.9**	**18.5**	**19.5**
2100	123.4	103.4	75.7	94.9	18.5	20.0						
2101	123.5	103.4	75.7	95.0	18.5	20.0						
2102	123.5	103.5	75.7	95.1	18.5	20.0						
2103	123.5	103.5	75.7	95.2	18.5	20.1						
2104	123.5	103.5	75.8	95.3	18.5	20.1	**123.1**	**103.0**	**75.7**	**93.6**	**18.5**	**19.7**

Appendix C-1-5c Predicted annual and average salt load (tonnes/day) entering the River Murray in some Scenarios (Loxton Area)

30 year averages (tonnes/day)-Loxton Area							
Year (start)	Year (end)	Mallee (SST)	Pre88-IIP-RH (S5-S1)	RH on Pre88 (S4-S5)	IIP on Pre88 (S3 - S4)	Post88 (S6-S5)	SIS-2 (S6-S8)
2004	2034	9.5	73.5	12.7	19.5	2.0	60.2
2009	2039	9.5	71.3	15.6	20.2	3.1	65.5
2014	2044	9.5	69.8	18.0	20.5	4.5	65.9
2019	2049	9.5	68.7	19.9	20.6	6.1	66.4
2024	2054	9.5	67.9	21.4	20.7	7.6	67.1
2029	2059	9.5	67.3	22.6	20.6	9.1	67.9
2034	2064	9.5	66.9	23.7	20.6	10.5	68.7
2039	2069	9.5	66.6	24.5	20.5	11.8	69.5
2044	2074	9.5	66.4	25.1	20.5	13.0	70.2
2049	2079	9.5	66.3	25.7	20.4	14.0	71.0
2054	2084	9.5	66.2	26.1	20.4	15.0	71.6
2059	2089	9.5	66.1	26.5	20.3	15.8	72.3
2064	2094	9.5	66.1	26.8	20.2	16.6	72.9
2069	2099	9.5	66.1	27.1	20.2	17.3	73.4
2074	2104	9.5	66.1	27.3	20.1	17.9	73.9

Morgan in-river EC (Loxton Area)							
Year (start)	Year (end)	Mallee (SST)	Pre88-IIP-RH (S5-S1)	RH on Pre88 (S4-S5)	IIP on Pre88 (S3 - S4)	Post88 (S6-S5)	SIS-2 (S6-S8)
2004	2034	2.1	16.2	2.8	4.3	0.4	13.3
2009	2039	2.1	15.7	3.4	4.4	0.7	14.4
2014	2044	2.1	15.4	4.0	4.5	1.0	14.5
2019	2049	2.1	15.1	4.4	4.5	1.3	14.6
2024	2054	2.1	14.9	4.7	4.5	1.7	14.8
2029	2059	2.1	14.8	5.0	4.5	2.0	14.9
2034	2064	2.1	14.7	5.2	4.5	2.3	15.1
2039	2069	2.1	14.7	5.4	4.5	2.6	15.3
2044	2074	2.1	14.6	5.5	4.5	2.9	15.5
2049	2079	2.1	14.6	5.7	4.5	3.1	15.6
2054	2084	2.1	14.6	5.8	4.5	3.3	15.8
2059	2089	2.1	14.5	5.8	4.5	3.5	15.9
2064	2094	2.1	14.5	5.9	4.5	3.7	16.0
2069	2099	2.1	14.5	6.0	4.4	3.8	16.1
2074	2104	2.1	14.5	6.0	4.4	3.9	16.3

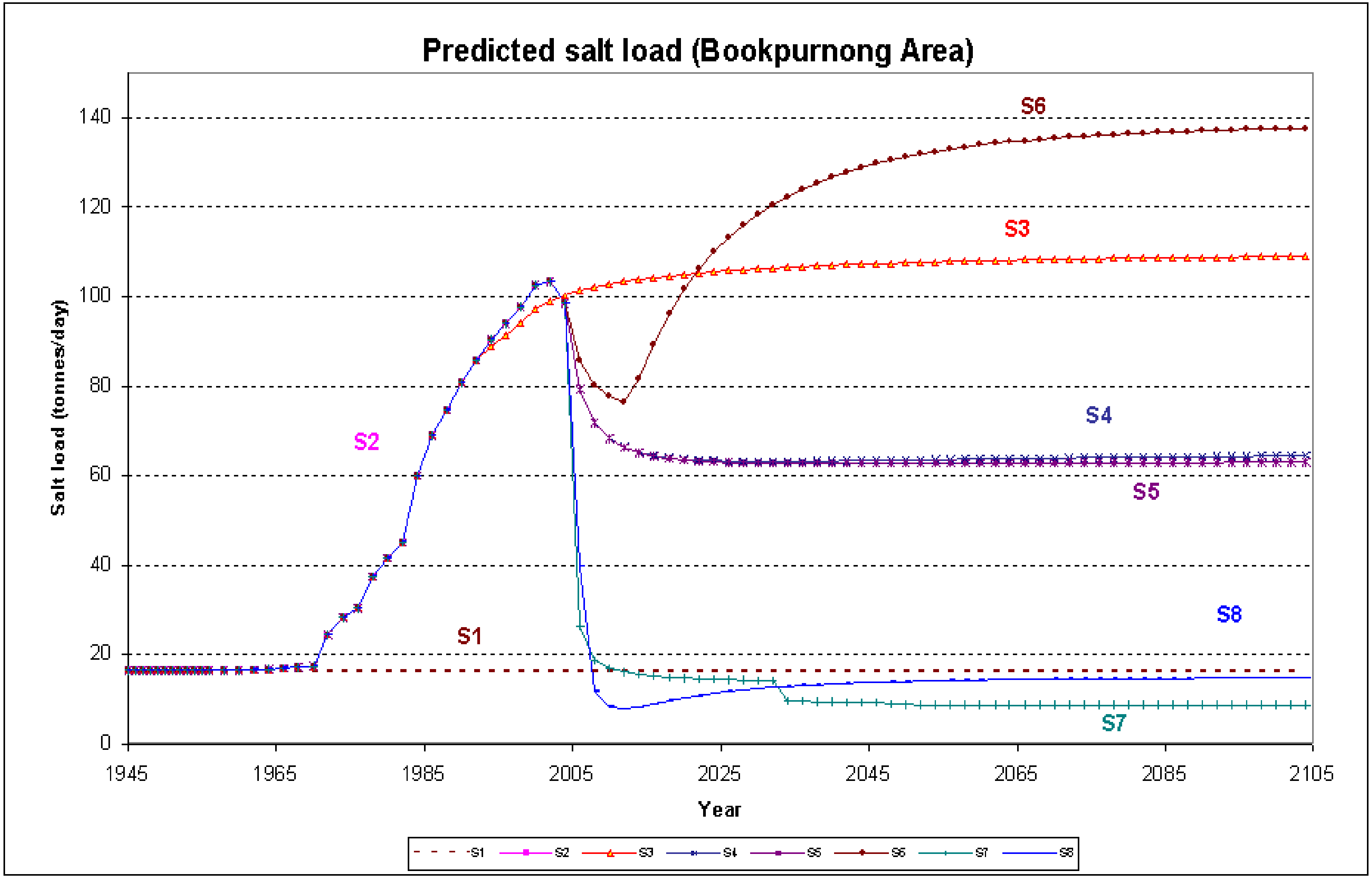
Appendix C-1-6 Predicted salt load (tonnes/day) entering the River Murray and in River EC benefit at Morgan (Loxton Area)

day	year	S1	S2	S3	S4	S5	S6	S7	S8
0	1945	16.46	16.46	16.46	16.46	16.46	16.46	16.46	16.46
0	1946	16.46	16.46	16.46	16.46	16.46	16.46	16.46	16.46
0	1947	16.46	16.46	16.46	16.46	16.46	16.46	16.46	16.46
0	1948	16.46	16.46	16.46	16.46	16.46	16.46	16.46	16.46
0	1949	16.46	16.46	16.46	16.46	16.46	16.46	16.46	16.46
0	1950	16.46	16.46	16.46	16.46	16.46	16.46	16.46	16.46
0	1951	16.46	16.46	16.46	16.46	16.46	16.46	16.46	16.46
0	1952	16.46	16.46	16.46	16.46	16.46	16.46	16.46	16.46
0	1953	16.46	16.46	16.46	16.46	16.46	16.46	16.46	16.46
0	1954	16.46	16.46	16.46	16.46	16.46	16.46	16.46	16.46
30	1955	16.46	16.46	16.46	16.46	16.46	16.46	16.46	16.46
365	1956	16.46	16.46	16.46	16.46	16.46	16.46	16.46	16.46
1095	1958	16.46	16.49	16.49	16.49	16.49	16.49	16.49	16.49
1825	1960	16.46	16.56	16.56	16.56	16.56	16.56	16.56	16.56
2555	1962	16.46	16.66	16.66	16.66	16.67	16.67	16.66	16.66
3285	1964	16.46	16.81	16.81	16.81	16.82	16.82	16.81	16.81
4015	1966	16.46	17.01	17.01	17.01	17.01	17.01	17.01	17.01
4745	1968	16.46	17.24	17.24	17.24	17.24	17.24	17.24	17.24
5475	1970	16.46	17.49	17.49	17.49	17.50	17.50	17.49	17.49
6205	1972	16.46	24.44	24.44	24.44	24.44	24.44	24.44	24.44
6935	1974	16.46	28.29	28.29	28.29	28.29	28.29	28.29	28.29
7665	1976	16.46	30.40	30.40	30.40	30.40	30.40	30.40	30.40
8395	1978	16.46	37.52	37.52	37.52	37.53	37.53	37.52	37.52
9125	1980	16.46	41.63	41.63	41.63	41.63	41.63	41.63	41.63
9855	1982	16.46	45.19	45.19	45.19	45.20	45.20	45.19	45.19
10585	1984	16.46	59.96	59.96	59.96	59.96	59.96	59.96	59.96
11315	1986	16.46	68.97	68.97	68.97	68.97	68.97	68.97	68.97
12045	1988	16.46	74.64	74.64	74.64	74.64	74.64	74.64	74.64
12775	1990	16.46	80.76	80.76	80.76	80.76	80.76	80.76	80.76
13505	1992	16.46	85.81	85.65	85.81	85.81	85.81	85.81	85.81
14235	1994	16.46	90.44	89.00	90.44	90.44	90.44	90.44	90.44
14965	1996	16.46	93.97	91.27	93.97	93.97	93.97	93.97	93.97
15695	1998	16.46	97.68	93.97	97.68	97.68	97.68	97.68	97.68
16425	2000	16.46	102.59	97.11	102.59	102.58	102.58	102.59	102.59
17155	2002	16.46	103.31	98.87	103.31	103.31	103.31	103.31	103.31
17885	2004	16.46	98.49	100.19	98.49	98.49	98.49	98.49	98.49
18615	2006	16.46		101.22	79.35	79.34	85.64	26.39	39.79
19345	2008	16.46		102.06	71.78	71.75	80.14	18.76	11.73
20075	2010	16.46		102.76	68.33	68.28	77.69	17.08	8.47
20805	2012	16.46		103.34	66.41	66.35	76.38	16.19	7.81
21535	2014	16.46		103.84	65.25	65.16	81.60	15.61	8.12
22265	2016	16.46		104.27	64.52	64.39	89.29	15.24	8.95
22995	2018	16.46		104.65	64.03	63.87	96.07	14.96	9.72

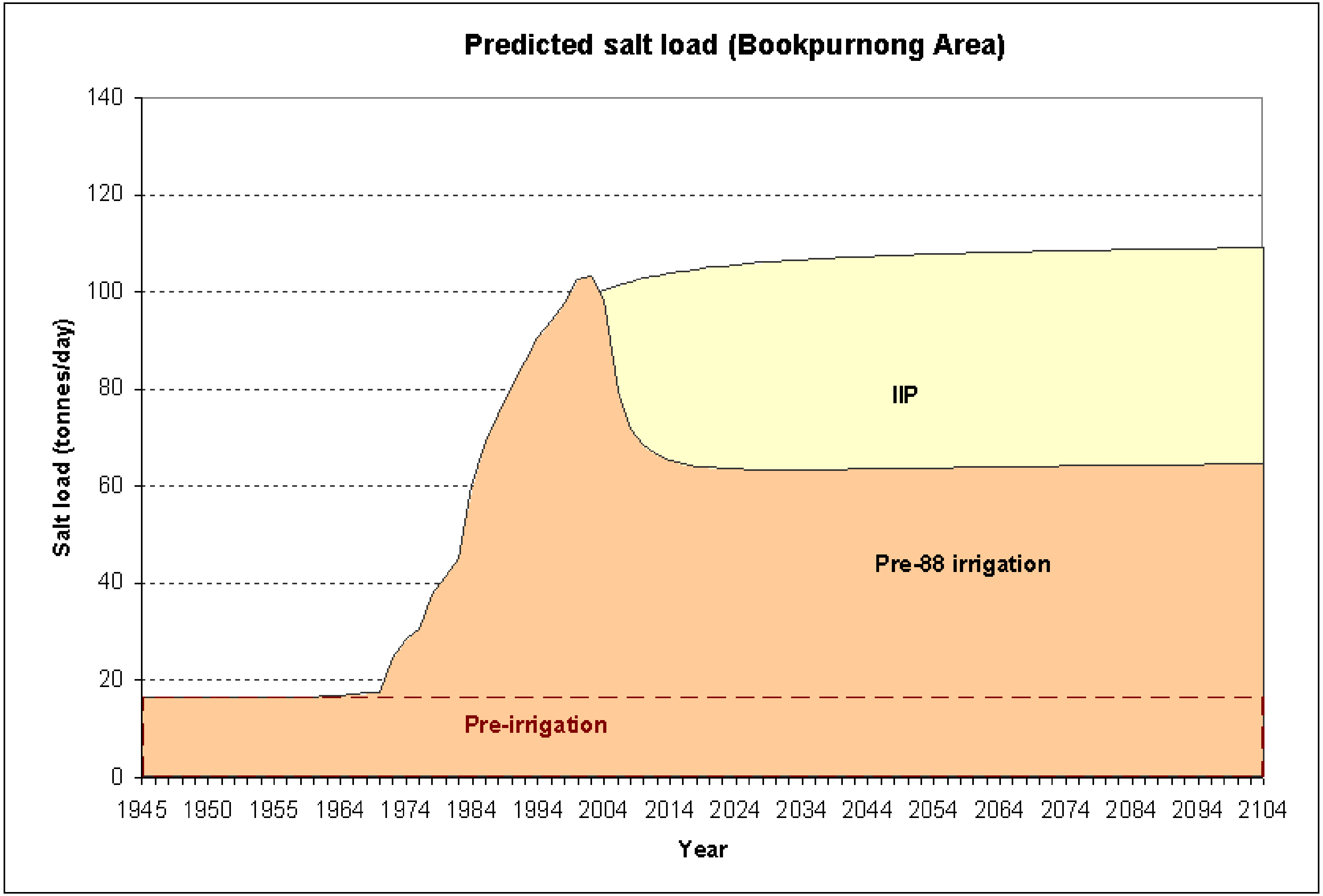
Appendix C-2-1a Predicted total salt load (tonnes/day) entering the River Murray in all Scenarios (Bookpurnong Area)

day	year	S1	S2	S3	S4	S5	S6	S7	S8
23725	2020	16.46		104.98	63.71	63.52	101.63	14.76	10.33
24455	2022	16.46		105.28	63.51	63.28	106.24	14.61	10.87
25185	2024	16.46		105.54	63.37	63.11	110.06	14.50	11.33
25915	2026	16.46		105.79	63.29	62.99	113.27	14.41	11.74
26645	2028	16.46		106.01	63.25	62.91	116.02	14.34	12.09
27375	2030	16.46		106.21	63.23	62.86	118.42	14.28	12.39
28105	2032	16.46		106.40	63.23	62.82	120.52	14.24	12.67
28835	2034	16.46		106.57	63.25	62.80	122.36	9.77	12.91
29565	2036	16.46		106.73	63.27	62.78	124.00	9.63	13.12
30295	2038	16.46		106.88	63.31	62.78	125.44	9.53	13.30
31025	2040	16.46		107.02	63.34	62.78	126.72	9.45	13.45
31755	2042	16.46		107.14	63.38	62.78	127.84	9.39	13.59
32485	2044	16.46		107.26	63.42	62.78	128.85	9.35	13.72
33215	2046	16.46		107.37	63.47	62.79	129.73	9.32	13.83
33945	2048	16.46		107.47	63.51	62.80	130.53	8.94	13.93
34675	2050	16.46		107.57	63.56	62.81	131.25	8.88	14.02
35405	2052	16.46		107.66	63.60	62.82	131.89	8.85	14.10
36135	2054	16.46		107.75	63.65	62.83	132.46	8.83	14.17
36865	2056	16.46		107.83	63.69	62.85	132.98	8.82	14.23
37595	2058	16.46		107.91	63.74	62.86	133.44	8.80	14.29
38325	2060	16.46		107.98	63.78	62.87	133.87	8.80	14.34
39055	2062	16.46		108.05	63.82	62.88	134.24	8.79	14.39
39785	2064	16.46		108.12	63.86	62.89	134.58	8.78	14.44
40515	2066	16.46		108.19	63.90	62.90	134.89	8.78	14.48
41245	2068	16.46		108.25	63.94	62.91	135.18	8.78	14.52
41975	2070	16.46		108.31	63.98	62.92	135.43	8.77	14.55
42705	2072	16.46		108.36	64.02	62.93	135.67	8.77	14.58
43435	2074	16.46		108.42	64.06	62.95	135.87	8.77	14.61
44165	2076	16.46		108.47	64.09	62.96	136.07	8.77	14.63
44895	2078	16.46		108.52	64.12	62.97	136.25	8.77	14.66
45625	2080	16.46		108.56	64.16	62.97	136.41	8.76	14.68
46355	2082	16.46		108.61	64.19	62.98	136.56	8.76	14.70
47085	2084	16.46		108.65	64.22	62.99	136.70	8.76	14.72
47815	2086	16.46		108.69	64.25	63.00	136.83	8.76	14.74
48545	2088	16.46		108.73	64.28	63.01	136.95	8.76	14.75
49275	2090	16.46		108.77	64.31	63.02	137.06	8.76	14.77
50005	2092	16.46		108.81	64.34	63.03	137.16	8.76	14.78
50735	2094	16.46		108.84	64.37	63.04	137.25	8.76	14.80
51465	2096	16.46		108.88	64.40	63.05	137.34	8.76	14.81
52195	2098	16.46		108.91	64.42	63.06	137.42	8.76	14.82
52925	2100	16.46		108.94	64.45	63.06	137.50	8.76	14.83
53655	2102	16.46		108.97	64.47	63.07	137.57	8.76	14.84
54385	2104	16.46		109.00	64.50	63.08	137.64	8.76	14.85

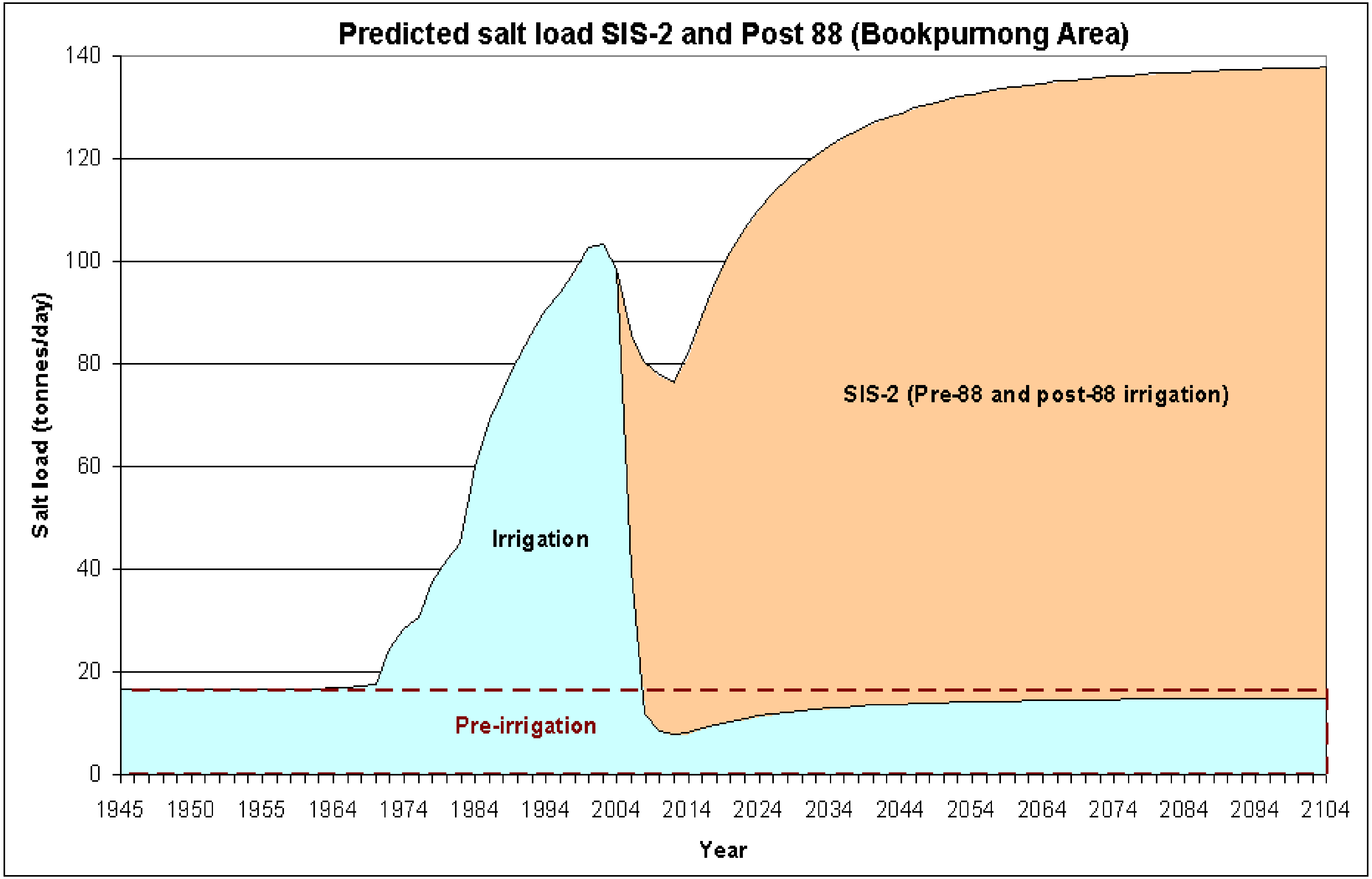
Appendix C-2-1b Predicted total salt load (tonnes/day) entering the River Murray in all Scenarios (Bookpurnong Area)



Appendix C-2-2 Graph of predicted total salt load (tonnes/day) entering the River Murray in all Scenarios (Bookpurnong Area)



Appendix C-2-3 Predicted salt loads entering the River Murray (Bookpurnong Area pre-88 irrigation)



Appendix C-2-4 Modelled SIS-2 benefits (Bookpurnong Area)

Time	Model results S3	Model results S4	Model results S5	Model results S6	Model results S7	Model results S8	30 year Average (S3)	30 year Average (S4)	30 year Average (S5)	30 year Average (S6)	30 year Average (S7)	30 year Average (S8)
2004	98.9	98.5	98.5	98.5	98.5	98.5						
2005	99.5	88.9	88.9	92.1	62.4	69.1						
2006	100.2	79.4	79.3	85.6	26.4	39.8						
2007	100.7	75.6	75.5	82.9	22.6	25.8						
2008	101.2	71.8	71.8	80.1	18.8	11.7						
2009	101.6	70.1	70.0	78.9	17.9	10.1						
2010	102.1	68.3	68.3	77.7	17.1	8.5						
2011	102.4	67.4	67.3	77.0	16.6	8.1						
2012	102.8	66.4	66.3	76.4	16.2	7.8						
2013	103.1	65.8	65.8	79.0	15.9	8.0						
2014	103.3	65.3	65.2	81.6	15.6	8.1						
2015	103.6	64.9	64.8	85.4	15.4	8.5						
2016	103.8	64.5	64.4	89.3	15.2	9.0						
2017	104.1	64.3	64.1	92.7	15.1	9.3						
2018	104.3	64.0	63.9	96.1	15.0	9.7						
2019	104.5	63.9	63.7	98.9	14.9	10.0						
2020	104.6	63.7	63.5	101.6	14.8	10.3						
2021	104.8	63.6	63.4	103.9	14.7	10.6						
2022	105.0	63.5	63.3	106.2	14.6	10.9						
2023	105.1	63.4	63.2	108.2	14.6	11.1						
2024	105.3	63.4	63.1	110.1	14.5	11.3						
2025	105.4	63.3	63.1	111.7	14.5	11.5						
2026	105.5	63.3	63.0	113.3	14.4	11.7						
2027	105.7	63.3	63.0	114.6	14.4	11.9						
2028	105.8	63.3	62.9	116.0	14.3	12.1						
2029	105.9	63.2	62.9	117.2	14.3	12.2						
2030	106.0	63.2	62.9	118.4	14.3	12.4						
2031	106.1	63.2	62.8	119.5	14.3	12.5						
2032	106.2	63.2	62.8	120.5	14.2	12.7						
2033	106.3	63.2	62.8	121.4	12.0	12.8						
2034	106.4	63.2	62.8	122.4	9.8	12.9	**103.9**	**67.4**	**67.2**	**99.3**	**19.8**	**16.7**
2035	106.5	63.3	62.8	123.2	9.7	13.0						
2036	106.6	63.3	62.8	124.0	9.6	13.1						
2037	106.6	63.3	62.8	124.7	9.6	13.2						
2038	106.7	63.3	62.8	125.4	9.5	13.3						
2039	106.8	63.3	62.8	126.1	9.5	13.4	**104.9**	**64.2**	**64.0**	**105.2**	**13.9**	**11.0**
2040	106.9	63.3	62.8	126.7	9.4	13.5						
2041	106.9	63.4	62.8	127.3	9.4	13.5						
2042	107.0	63.4	62.8	127.8	9.4	13.6						

Appendix C-2-5a Predicted annual and average salt load (tonnes/day) entering the River Murray in some Scenarios (Bookpurnong Area)

Time	Model results S3	Model results S4	Model results S5	Model results S6	Model results S7	Model results S8	30 year Average (S3)	30 year Average (S4)	30 year Average (S5)	30 year Average (S6)	30 year Average (S7)	30 year Average (S8)
2043	107.1	63.4	62.8	128.3	9.4	13.7						
2044	107.1	63.4	62.8	128.8	9.3	13.7	**105.7**	**63.6**	**63.2**	**113.3**	**12.8**	**11.8**
2045	107.2	63.4	62.8	129.3	9.3	13.8						
2046	107.3	63.5	62.8	129.7	9.3	13.8						
2047	107.3	63.5	62.8	130.1	9.1	13.9						
2048	107.4	63.5	62.8	130.5	8.9	13.9						
2049	107.4	63.5	62.8	130.9	8.9	14.0	**106.2**	**63.4**	**62.9**	**119.9**	**11.8**	**12.6**
2050	107.5	63.6	62.8	131.2	8.9	14.0						
2051	107.5	63.6	62.8	131.6	8.9	14.1						
2052	107.6	63.6	62.8	131.9	8.8	14.1						
2053	107.6	63.6	62.8	132.2	8.8	14.1						
2054	107.7	63.6	62.8	132.5	8.8	14.2	**106.7**	**63.4**	**62.8**	**124.4**	**10.8**	**13.2**
2055	107.7	63.7	62.8	132.7	8.8	14.2						
2056	107.7	63.7	62.8	133.0	8.8	14.2						
2057	107.8	63.7	62.9	133.2	8.8	14.3						
2058	107.8	63.7	62.9	133.4	8.8	14.3						
2059	107.9	63.8	62.9	133.7	8.8	14.3	**107.1**	**63.4**	**62.8**	**127.7**	**9.9**	**13.6**
2060	107.9	63.8	62.9	133.9	8.8	14.3						
2061	107.9	63.8	62.9	134.1	8.8	14.4						
2062	108.0	63.8	62.9	134.2	8.8	14.4						
2063	108.0	63.8	62.9	134.4	8.8	14.4						
2064	108.1	63.9	62.9	134.6	8.8	14.4	**107.4**	**63.5**	**62.8**	**130.1**	**9.1**	**13.9**
2065	108.1	63.9	62.9	134.7	8.8	14.5						
2066	108.1	63.9	62.9	134.9	8.8	14.5						
2067	108.2	63.9	62.9	135.0	8.8	14.5						
2068	108.2	63.9	62.9	135.2	8.8	14.5						
2069	108.2	64.0	62.9	135.3	8.8	14.5	**107.6**	**63.6**	**62.8**	**131.8**	**9.0**	**14.1**
2070	108.2	64.0	62.9	135.4	8.8	14.5						
2071	108.3	64.0	62.9	135.5	8.8	14.6						
2072	108.3	64.0	62.9	135.7	8.8	14.6						
2073	108.3	64.0	62.9	135.8	8.8	14.6						
2074	108.4	64.1	62.9	135.9	8.8	14.6	**107.8**	**63.8**	**62.9**	**133.2**	**8.9**	**14.3**
2075	108.4	64.1	63.0	136.0	8.8	14.6						
2076	108.4	64.1	63.0	136.1	8.8	14.6						
2077	108.4	64.1	63.0	136.2	8.8	14.6						
2078	108.5	64.1	63.0	136.2	8.8	14.7						
2079	108.5	64.1	63.0	136.3	8.8	14.7	**108.0**	**63.9**	**62.9**	**134.2**	**8.8**	**14.4**
2080	108.5	64.2	63.0	136.4	8.8	14.7						
2081	108.5	64.2	63.0	136.5	8.8	14.7						

Appendix C-2-5b Predicted annual and average salt load (tonnes/day) entering the River Murray in some Scenarios (Bookpurnong Area)

Time	Model results S3	Model results S4	Model results S5	Model results S6	Model results S7	Model results S8	30 year Average (S3)	30 year Average (S4)	30 year Average (S5)	30 year Average (S6)	30 year Average (S7)	30 year Average (S8)
2082	108.6	64.2	63.0	136.6	8.8	14.7						
2083	108.6	64.2	63.0	136.6	8.8	14.7						
2084	108.6	64.2	63.0	136.7	8.8	14.7	**108.2**	**64.0**	**62.9**	**135.1**	**8.8**	**14.5**
2085	108.6	64.2	63.0	136.8	8.8	14.7						
2086	108.7	64.3	63.0	136.8	8.8	14.7						
2087	108.7	64.3	63.0	136.9	8.8	14.7						
2088	108.7	64.3	63.0	136.9	8.8	14.8						
2089	108.7	64.3	63.0	137.0	8.8	14.8	**108.3**	**64.0**	**62.9**	**135.7**	**8.8**	**14.6**
2090	108.7	64.3	63.0	137.1	8.8	14.8						
2091	108.8	64.3	63.0	137.1	8.8	14.8						
2092	108.8	64.3	63.0	137.2	8.8	14.8						
2093	108.8	64.4	63.0	137.2	8.8	14.8						
2094	108.8	64.4	63.0	137.3	8.8	14.8	**108.5**	**64.1**	**63.0**	**136.2**	**8.8**	**14.7**
2095	108.8	64.4	63.0	137.3	8.8	14.8						
2096	108.8	64.4	63.0	137.3	8.8	14.8						
2097	108.9	64.4	63.1	137.4	8.8	14.8						
2098	108.9	64.4	63.1	137.4	8.8	14.8						
2099	108.9	64.4	63.1	137.5	8.8	14.8	**108.6**	**64.2**	**63.0**	**136.6**	**8.8**	**14.7**
2100	108.9	64.4	63.1	137.5	8.8	14.8						
2101	108.9	64.5	63.1	137.5	8.8	14.8						
2102	108.9	64.5	63.1	137.6	8.8	14.8						
2103	109.0	64.5	63.1	137.6	8.8	14.8						
2104	109.0	64.5	63.1	137.6	8.8	14.9	**108.7**	**64.3**	**63.0**	**136.9**	**8.8**	**14.8**

Appendix C-2-5c Predicted annual and average salt load (tonnes/day) entering the River Murray in some Scenarios (Bookpurnong Area)

30 year averages (tonnes/day)-Bookpurnong Area						
Year (start)	Year (end)	Mallee (SST)	Pre88-IIE (S4-S1)	IIE on Pre88 (S3 - S4)	Post 88 (S6-S4)	SIS-2 (S6-S8)
2004	2034	16.5	50.9	36.5	31.9	82.5
2009	2039	16.5	47.8	40.7	41.0	94.2
2014	2044	16.5	47.1	42.1	49.7	101.5
2019	2049	16.5	46.9	42.9	56.5	107.3
2024	2054	16.5	46.9	43.3	61.1	111.3
2029	2059	16.5	47.0	43.6	64.2	114.1
2034	2064	16.5	47.1	43.8	66.5	116.2
2039	2069	16.5	47.2	44.0	68.2	117.8
2044	2074	16.5	47.3	44.1	69.5	118.9
2049	2079	16.5	47.4	44.2	70.4	119.8
2054	2084	16.5	47.5	44.2	71.1	120.6
2059	2089	16.5	47.6	44.3	71.6	121.1
2064	2094	16.5	47.7	44.3	72.1	121.5
2069	2099	16.5	47.8	44.4	72.4	121.9
2074	2104	16.5	47.8	44.4	72.6	122.2

Morgan in-river EC (Bookpurnong Area)						
Year (start)	Year (end)	Mallee (SST)	Pre88-IIE (S4-S1)	IIE on Pre88 (S3 - S4)	Post 88 (S6-S4)	SIS-2 (S6-S8)
2004	2034	3.6	11.2	8.0	7.0	18.2
2009	2039	3.6	10.5	9.0	9.0	20.7
2014	2044	3.6	10.4	9.3	10.9	22.3
2019	2049	3.6	10.3	9.4	12.4	23.6
2024	2054	3.6	10.3	9.5	13.4	24.5
2029	2059	3.6	10.3	9.6	14.1	25.1
2034	2064	3.6	10.4	9.6	14.6	25.6
2039	2069	3.6	10.4	9.7	15.0	25.9
2044	2074	3.6	10.4	9.7	15.3	26.2
2049	2079	3.6	10.4	9.7	15.5	26.4
2054	2084	3.6	10.4	9.7	15.6	26.5
2059	2089	3.6	10.5	9.7	15.8	26.6
2064	2094	3.6	10.5	9.8	15.9	26.7
2069	2099	3.6	10.5	9.8	15.9	26.8
2074	2104	3.6	10.5	9.8	16.0	26.9

Appendix C-2-6 Predicted salt load (tonnes/day) entering the River Murray and in River EC benefit at Morgan (Bookpurnong Area)