

Department  
of Water  
Land and  
Biodiversity  
Conservation



The Department of  
Water, Land and  
Biodiversity  
Conservation



Government  
of South Australia

# Highlights 2003 – 04





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The information within this document is from the Department of Water, Land and Biodiversity Conservation's 2003-04 Annual Report. A full copy of this Report can be obtained by visiting [www.dwlbc.sa.gov.au](http://www.dwlbc.sa.gov.au) or phoning (08) 8463 7935.



# Chief Executive's Overview

The Department of Water, Land and Biodiversity Conservation (DWLBC) has made significant progress over this past year. From a corporate perspective we have set about restructuring our Corporate Plan to ensure that the business we undertake is focussed on

contributing to the achievement of the goals and targets identified within South Australia's Strategic Plan and other key Government strategies. While DWLBC has been identified as a key contributor to a number of specific targets, the Department has a much wider role to play across Government. Together with community and stakeholder organisations, the Department must contribute to the achievement of all targets with a reliance on natural resources.

The Department has strong community and stakeholder networks, however we will strive to further enhance our performance in this area to promote the development of collaborative partnerships, increase transparency, and deliver integrated outcomes.

The significant contribution that the dedicated and professional staff of DWLBC has made over the past year should be acknowledged.



While we will continue to focus on improving our performance and service levels, I believe that the Department is starting from a very high

base and that these improvements will be driven by the development of innovative strategies rather than through fundamental reform. In this regard I have been impressed by the commitment displayed by staff to continue to improve the integration of activities and service delivery across the Department.

Throughout the year DWLBC has contributed significantly to a number of key Government initiatives, including:

- > The national agreement to return 500GL of water to the River Murray;
- > The development of milestone legislation for improved management of the State's natural resources, including a significant consultation program;
- > Agreement to the National Water Initiative;
- > Ensuring that a significant environmental benefit is achieved whenever native vegetation clearance is authorised;

- > The implementation and administration of the joint State/ Australian Government programs of the National Action Plan for Salinity and Water Quality and the Natural Heritage Trust Extension;
- > The introduction of restrictions on water use from the River Murray and the associated drought response strategy;
- > The Branched Broomrape eradication program;
- > The continued implementation of the Upper South East Dryland Salinity and Flood Management Program; and
- > The commencement of a process to appropriately manage the precious water resources of the Eastern Mount Lofty Ranges and other parts of the State.

While much was achieved this past year, many exciting challenges still lie ahead. In 2004-2005 DWLBC will continue to provide leadership in the sustainable management of the State's water, land and biodiversity resources in order to achieve our catchcry – "Getting the Balance Right".

A handwritten signature in black ink, which appears to read "Rob Freeman". The signature is stylized and fluid.

Rob Freeman  
Chief Executive

## Relationship to Other Agencies

In 2003-04, the Department of Water, Land and Biodiversity Conservation (DWLBC) reported to the Minister for Environment and Conservation and the Minister for the River Murray, the Hon John Hill MP. The Department was one of four agencies reporting to the Minister, the others being the Department for Environment and Heritage (DEH), the Environment Protection Authority (EPA), and Zero Waste SA.

The Department, in performing its roles, works closely with other agencies including DEH, EPA, Primary Industries and Resources SA, Planning SA, Premier and Cabinet, Office of Regional Development, Department of Administrative and Information Services, Department of Further Education, Employment, Science and Technology, SA Water (a government business enterprise), Transport SA and Forestry SA.

DWLBC has extensive shared programs with the Australian Government through the Federal Departments of Agriculture, Fisheries and Forestry, and Environment and Heritage. It also has a number of significant programs with Local Government, particularly through the Animal and Plant Control Commission, the Urban Stormwater Initiative, and the Catchment Management Subsidy Scheme.



The Chief Executive of DWLBC is one of four State Government appointees on the Murray-Darling Basin Commission, which oversees the management of the major river systems in the Murray-Darling Basin. He is also a member of the Primary Industries Standing Committee and the Natural Resources Management Standing Committee, which advise State and Commonwealth Ministers.

The Department fosters strong interactions with non-government organisations such as the Local Government Association of SA, Conservation Council of SA, SA Farmers Federation, and industry representative groups.



# Statement of Purpose

*To ensure South Australia's natural resources are managed in an ecologically sustainable manner that supports the wellbeing of present and future generations.*

## OUR VISION

*Natural resources used sustainably to enhance quality of life*

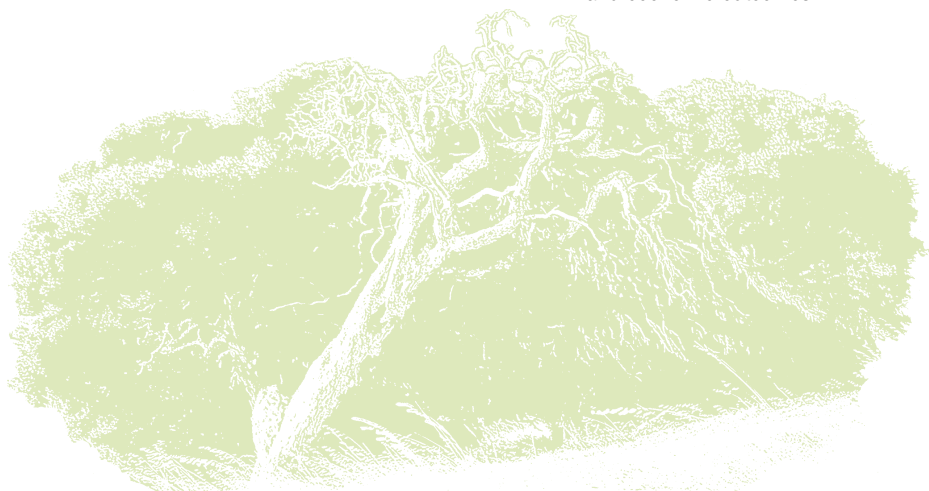
This vision incorporates an enhanced quality of life that depends on a well-managed balance of social, economic and environmental outcomes.

Achieving this balance involves strong stewardship responsibilities that need to be fulfilled through partnerships between the Department of Water, Land and Biodiversity Conservation (DWLBC), broader Government, the community, and stakeholders.

Success will ensure an informed and involved community that is committed to sustainable natural resources management as a way of life.

## OUR MISSION

- > Integrated management of all of South Australia's natural resources.
- > Improved health and productivity of our biodiversity, water, land and marine resources.
- > Community, industry, governments and other stakeholders working together to achieve high quality natural resources management outcomes.
- > There is greater capability and willingness to invest in natural resources management to provide a sustained funding base.
- > Wise resource allocation provides for the best environmental, social and economic outcomes.



## OUR ROLE

The Department of Water, Land and Biodiversity Conservation has three overarching roles, these being;

- > To contribute to the achievement of goals and targets identified within South Australia's Strategic Plan;
- > To provide advice and regulatory support to Government and the community regarding the management of South Australia's natural resources; and
- > To facilitate the sustainable allocation and use of the State's natural resources.

## OUR VALUES

The Code of Conduct for South Australian Public Sector Employees is based on the core values of:

- > Integrity, which is about honesty and the intent or meaning of our actions;
- > Respect for oneself and each other; and
- > Accountability, which refers to our responsibility as public sector employees to the elected Government, the community and the agency.

DWLBC is committed to these core values and ensuring that they are expressed through all actions that the Department undertakes.

## THE WAY THAT WE WORK

In many respects the way that the Department works toward achieving its vision and mission is as important as the actual outcome. In this regard DWLBC staff are committed to:

### Achieving Results

- > Making a difference as an individual and as an organisation
- > Following through and delivering on commitments
- > Being innovative and creative
- > Maintaining fiscal responsibility
- > Ensuring timeliness of response

### Collaborative Partnerships

- > Engaging with key stakeholders and the community

### Effective Communication

- > Engaging in open and honest communication
- > Involving others in decision-making

### Healthy and Safe Workplaces

- > Ensuring a healthy and safe workplace
- > Taking responsibility for our own health, safety and wellbeing

### People

- > Training and development
- > Increasing opportunity
- > Fostering talent

### Working Together

- > Teamwork
- > Valuing individual differences and diversity



## STRATEGIC PRIORITIES

South Australia's Strategic Plan was launched by the Premier on 31 March 2004. As a consequence, the Department has developed five strategic priorities to focus the Department's planning and business on the achievement of the appropriate goals and targets in South Australia's Strategic Plan and to contribute most importantly to the realisation of the agency's vision and mission.

### > Deliver effective reporting on the state and condition of the State's natural resources

An integrated, whole-of-government approach will be required if Government is to receive the type and quality of information necessary for it to confidently make policy and investment decisions to secure the integrity of our natural resources.



### > Restore the health of the River Murray

It is well recognised that reduced flow and increasing salinity in the River Murray are seriously affecting the ecological health of the river system. If this decline is allowed to continue, it will seriously impact on the viability of the industries and communities that depend upon it.

### > Halt the decline in both the quality and extent of native vegetation

South Australia has over-cleared its native vegetation and much of the remaining vegetation is not being managed appropriately. This is contributing significantly to biodiversity decline, land degradation, and loss of ecosystem services.

### > Protect and enhance the natural resources of the Mount Lofty Ranges

The Mount Lofty Ranges is the State's most important natural, social and economic region. The region supplies over 60 per cent of Adelaide's water, contributes 31 per cent of the State's total primary production farm gate revenue, and supports a \$50 million tourist industry. Continuing development, pollution and increasing competition for water are placing the region's natural resources under stress.



# Programs, Objectives and Achievements in 2003-04

The South Australian Government's Portfolio Statements presented by the Treasurer of South Australia to Parliament outline the programs for the Department of Water, Land and Biodiversity Conservation for 2003-04.

The Department had three programs during the 2003 – 2004 year:

1. Policy, Planning and Coordination;
2. Natural Resources Management; and
3. Natural Resources Science and Information.

The Policy, Planning and Coordination program incorporates three sub-programs:

- > Policy Advice;
- > Natural Resources Planning; and
- > State-Commonwealth Joint Programs.

The Natural Resources Management Program incorporates four sub-programs:

- > Murray-Darling;
- > Building Community Capacity;
- > Resource Management Operations, Licensing and Compliance; and
- > Management of Infrastructure Assets.



The Natural Resources Science and Information Program incorporates two sub-programs:

- > Resource Management and Assessment; and
- > Resource Management Technology and Innovation.

The detail of the Department's objectives and achievements during 2003-04 under each of the above programs and sub-programs can be found in the full version of the Department's Annual Report 2003-04, which can be viewed online at [www.dwlbc.sa.gov.au](http://www.dwlbc.sa.gov.au)

The following pages include selected Highlights and Achievements in 2003-04 from these objectives and achievements.



# Highlights and Achievements

## *Policy, Planning and Coordination*

### **NATURAL RESOURCES MANAGEMENT ARRANGEMENTS**

South Australia was on the verge of finalising Australia's most comprehensive natural resources management (NRM) arrangements at 30 June 2004. These arrangements will be implemented through new legislation that would establish a new structure for the ecologically sustainable development of the State.

Throughout 2003-04 the Department carried out extensive public consultation on new integrated natural resources management arrangements, with more than 600 people attending 15 workshops during July and August 2003.

The proposed arrangements were changed and enhanced based on submissions received from this public consultation. A total of 158 submissions were received and during the consultation there were more than 1300 comments proposing changes on specific aspects of the suggested natural resources management arrangements. All submissions were referred to the interim Natural Resources Management Council for advice.

At the end of 2003-04, all eight of South Australia's NRM regions had integrated NRM plans that had been jointly accredited by the Australian and State Governments.

These NRM plans are important as they provide the strategic direction for coordinated management to protect the State's valuable natural resources.



## HIGHLIGHTS AND ACHIEVEMENTS

### *Policy, Planning and Coordination*

#### **HISTORIC AGREEMENTS SIGNED AT COUNCIL OF AUSTRALIAN GOVERNMENTS (COAG) MEETING**

Two historic agreements were signed at the Council of Australian Governments meeting in June.

The signing of the Intergovernmental Agreement for the National Water Initiative followed extensive negotiation between the Department and the Australian, State and Territory Governments.

The Intergovernmental Agreement sets new directions in water access entitlements, water planning, over-allocation, Indigenous access, water markets and trading and water pricing. It also includes water resource accounting, management of environmental water and water efficiency in urban areas.

Also signed at the COAG meeting was the \$500 million Murray-Darling Basin Agreement. This agreement will deliver an extra 500 GL of environmental flow down the River Murray and was negotiated between the Australian Government, the Murray-Darling Basin States (excluding Queensland) and the Australian Capital Territory.

#### **RIVER MURRAY DROUGHT RESPONSE IMPLEMENTATION**

Ongoing drought conditions in the Murray-Darling Basin during 2003-04 led to restrictions being imposed on South Australian River Murray water users for the first time.

The drought had a major impact on water resource conditions throughout the basin, prompting the State Government to introduce restrictions on the use of licensed water allocations from the River Murray effective 1 July 2003.

The use of River Murray water was initially restricted to 65% of licensed water allocation, with use from SA Water's licensed allocations for water supplies to country towns and metropolitan Adelaide restricted to 30 GL and 122 GL respectively. DWLBC kept River Murray water users up to date with information on the condition and the outlook of the resource.

A gradual improvement in conditions in late 2003 allowed allocations to be progressively increased to 95% for irrigators. The allocation for country towns was lifted to 40 GL, while SA Water's metropolitan Adelaide allocation remained unchanged.

#### **RIVER MURRAY ACT 2003**

New legislation to further protect, restore and enhance the River Murray was passed by State Parliament and came into effect in 2003-04.

The River Murray Act 2003 aims to protect and enhance the River Murray and related areas and ecosystems. This is vital for the State's economic and social well being.

The Act enables all aspects of activities that affect the river to be considered, and introduces a duty of care not to harm the river through one's actions. The Act came into force in late November 2003.



## HIGHLIGHTS AND ACHIEVEMENTS

### *Policy, Planning and Coordination*

#### **UPPER SOUTH EAST DRYLAND SALINITY AND FLOOD MANAGEMENT PROGRAM**

The State Government approved an integrated program of environmental activities, agricultural production system improvements, and drainage construction works worth \$49.3 million to complete the Upper South East Dryland Salinity and Flood Management Program.

The program aims to address dryland salinity, waterlogging and ecosystem degradation in the Upper South East. It includes \$38.3 million from the National Action Plan for Salinity and Water Quality and \$11 million to be raised either through a community levy or through community in-kind biodiversity conservation contributions.

Following a Public Works Committee hearing in October 2003, support was provided for the program's \$20.9 million drainage construction component. The proposal involved the supervision and construction of the northern catchment drains, the design and construction of the central catchment drains, and the construction of miscellaneous drains lengths and structures throughout the program area.

#### **FORESTRY IN THE LOWER SOUTH EAST**

An accountable and transparent system to manage the impacts of commercial forestry on regional water resources in the Lower South East was brought into effect by the State Government in June 2004.

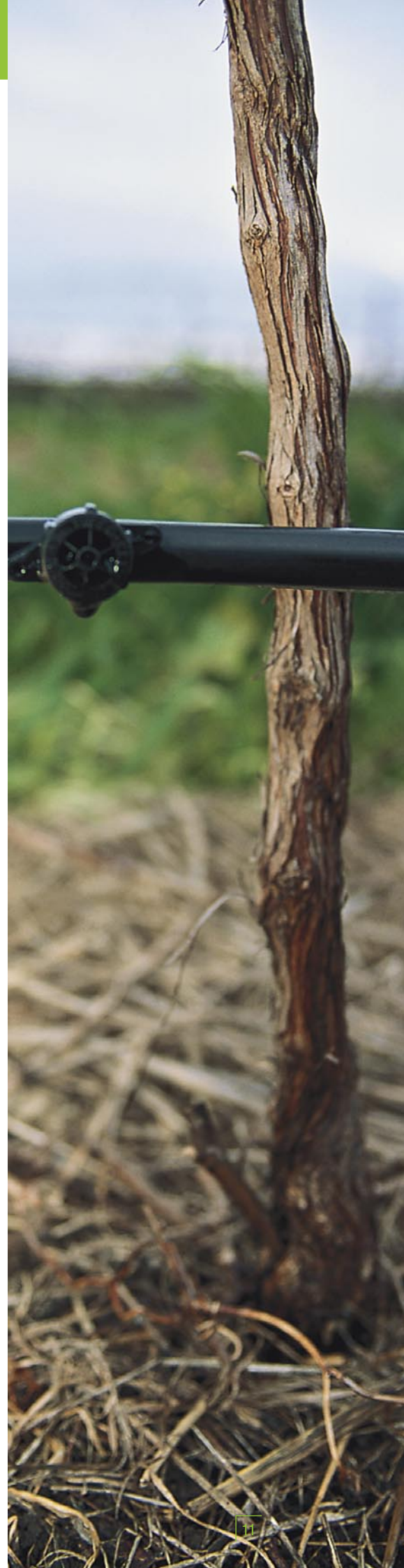
The management system is a significant policy development in water resources management in Australia because it tackles the input side of the water budget rather than the extraction side, as has been the case since water law was first established in this country.

Under the adopted management system, commercial forestry in the Lower South East is prescribed as a 'water affecting activity' requiring a permit. The permit system will be managed concurrently with local government development approvals for land use change to commercial forestry.



It requires all such development applications to be referred to the Minister responsible for the administration of the Water Resources Act 1997 for direction.

Provision has been made for approximately 59 000 hectares of plantation expansion, without the need to secure water allocations to allow commercial forest to expand. Further expansion of plantation forest beyond the 59 000 hectares may be accommodated provided the forest proponent offsets the impact on the water budget by securing and quarantining an appropriate water allocation.



## HIGHLIGHTS AND ACHIEVEMENTS

***Natural Resource Management*****EASTERN MOUNT LOFTY RANGES PRESCRIPTION PROPOSAL**

An increase in the use of water resources in the Eastern Mount Lofty Ranges (EMLR) led to the Minister for Environment and Conservation announcing his intention to prescribe the region in October 2003. The Minister also announced a Notice of Prohibition that placed a temporary moratorium on new water use while a detailed assessment of current water use and ability to support future development was conducted.

These announcements initiated an extensive consultation process, with the Department hosting public meetings and workshops across the region to inform people about the new controls and to seek their feedback on the proposal to prescribe. More than 1000 people attended these public meetings and/or workshops.



The Minister received 124 written submissions about the proposal for prescription. This community feedback will be considered by the Minister in making a decision about whether to seek the prescription of the region's water resources.

The Department conducted a detailed assessment of water use across the region. At the commencement of the project 1444 irrigation developments were identified for survey. At 30 June 2004, 320 irrigation developments had been surveyed.



## **MURRAY MOUTH**

Projects to boost the health of the Lower Lakes and Coorong continued in 2003-04. Dredging operations kept the Mouth open and water was released from the barrages for the first time in almost two years.

Two dredges operated 24 hours a day to remove sand from the Murray Mouth. Since the dredging project began in October 2002 more than two million cubic metres of sand has been removed from the Mouth and pumped onto nearby peninsulas.

The project - which cost \$6.24 million in 2003-04 - continued to meet its objective of keeping the Murray Mouth open to protect the health of the Coorong. The dredging allowed tidal variations and water levels over spring/summer that resulted in suitable habitat for migratory birds. There was also sufficient exchange of cool, well-oxygenated seawater within the Coorong to ensure that there were no adverse impacts on the Coorong ecology.

In September 2003 water was released from the barrages for the first time in 23 months, more than double the previous longest period without flow over the barrages.

Premier Mike Rann, right, and Minister for Environment and Conservation, John Hill, inspect a new fishway at Tauwitschere Barrage.



Prior to the release, research suggested that lack of flows was impacting adversely on the ecology of the Coorong and salinity levels in the Lower Lakes.

The event was unique because it marked one of the few occasions that the barrages were operated to manipulate flow specifically to achieve ecological outcomes for the site.

Also at the Murray Mouth in 2003-04, the first of four trial fishways at the Barrages - a rock ramp at Tauwitschere Barrage - was completed. Work is continuing on three other fishways, one more at Tauwitschere and two at Goolwa Barrage, with commissioning of these expected during the 2004-05 financial year.

One of two sand dredges operating to keep the Murray Mouth open



## HIGHLIGHTS AND ACHIEVEMENTS

*Natural Resource Management***EXPERIMENTAL WATERING  
OF RIVER RED GUMS  
– MONOMAN ISLAND TRIAL**

In early 2004, the Murray-Darling Basin Commission's Living Murray Implementation Program agreed to fund an investigative project on the Chowilla floodplain. The objectives of the project were to investigate the response of River Red Gums to an artificially created flood regime, and to identify the logistical and administrative processes required to implement watering schemes on floodplains to achieve environmental outcomes.

This pilot project was the first step in undertaking an adaptive environmental management approach to floodplain rehabilitation at this significant ecological asset in the Murray Darling Basin. The aim of the project was to assess the effectiveness and efficiency of manipulated flooding using mobile pumping infrastructure to enhance the health of the River Murray floodplain.



The results of the watering were dramatic and immediate. Within a week of flooding the creek, groundwater levels showed significant signs of being recharged and freshened. In some cases salinity in the root zone of the trees dropped from 23 700 EC to less than 400 EC. Within a month River Red Gum and Black Box trees adjacent to the creek were showing signs of recovery, and after two and a half months more than half of the trees displayed new and invigorated growth.

A River Red Gum at Chowilla before the trial (left), and the same tree, much healthier, 10 weeks after the trial began (above).





## *Natural Resources Science and Information*

### **ENVIRONMENTAL FLOW REQUIREMENTS FOR AUSTRALIAN ARID ZONE RIVERS PROJECT (ARIDFLO)**

A scientific report was completed following the conclusion of the scientific components of the ARIDFLO project during 2003-04. The study was undertaken using Cooper Creek, Diamantina River and the Neales River in the Far North of the State.

During the period data analysis and a rigorous peer review process was also completed. The ARIDFLO project began in January 2000, and aims to improve knowledge of Australia's arid rivers by combining scientific research and local knowledge to produce information and models that could be used by communities and governments in guiding the management of these rivers.

### **IDENTIFYING WATER DEPENDENT ECOSYSTEMS FROM THE AIR**

Aerial videography used to monitor bushfires has been developed to map significant streams in South Australia.

The technology was used to map baseline information on water dependent ecosystems in the Mount Lofty Ranges, Flinders Ranges and on Kangaroo Island. This information included the health of these ecosystems, and identified potential risks to their health.

DWLBC officers conduct fish sampling as part of the ARIDFLOW project.



The project methodology was developed with private sector collaboration from technologies applied to monitoring bushfires. In combination with other data in GIS format, the resultant datasets will enable areas of greatest ecological value and highest degradation risk to be identified so future natural resources management efforts can be targeted most effectively.

Trial datasets have been compiled and show significant promise, both for technical analysis and for clear communication to stakeholders.

