Bryan Green, MP
Minister for Primary Industries and Water

Dear Minister

In accordance with the requirements of Section 36 of the *State Service Act 2000* and Section 17 of the *Audit Act 2008*, I am pleased to submit the 2009-10 Annual Report of the Inland Fisheries Service for presentation to Parliament.

Yours sincerely

John Diggle
Director of Inland Fisheries

31 October 2010

TABLE OF CONTENTS

THE INLAND FISHERIES SERVICE

About the Inland Fisheries Service

The Inland Fisheries Service replaced the Inland Fisheries Commission in March 2000 under the *Inland Fisheries Act 1995*. The previous Commission had operated as an autonomous statutory body since the late 1950's. It replaced the original Salmon Commission, which was set up in the early 1860's with the aim of establishing a salmonid fishery in Tasmania. The Commission built the 'Salmon Ponds' at Plenty to grow live salmon and trout eggs shipped from England for the stocking of Tasmanian inland waters. Nearly 150 years later, it has given rise to a flourishing inland recreational fishery particularly focused on wild brown trout. This legacy is now managed by the Service and the original work of harvesting wild trout eggs, and the growing and stocking of fish for the public recreational fishery is continued today with the same level of commitment.

Vision

A vibrant and sustainable inland fishery of a world class standard.

Mission

To manage Tasmania's inland fisheries for the benefit of anglers and the Tasmanian community.

Strategic outcomes

1. To maintain a financially viable business.
2. To excel in fisheries management.
3. To apply exceptional corporate governance.
4. To maintain a strong customer focus.
5. To adopt contemporary human resource management practices.
6. To manage the core business and assets on a commercial basis.

Responsibilities

The responsibilities of the Inland Fisheries Service today have been considerably broadened since its inception as the Salmon Commission nearly 150 years ago. They now include the regulation and promotion of commercial freshwater fisheries and the protection of native freshwater fauna. The Service has an obligation to manage Tasmania's freshwater resources in a sustainable manner, so that the best use is made of the recreational fishery whilst ensuring that Tasmania's freshwater fauna and its habitat are protected for the benefit of future generations.

Core functions

The Service has primary responsibility for implementing the *Inland Fisheries Act 1995 a*nd its subordinate legislation. The Act creates the position of the Director of Inland Fisheries and provides that the Director is a corporation, responsible for the following functions:

- to manage, control, protect, develop, improve, maintain and regulate salmon fisheries, fisheries in inland waters and freshwater fish;
- to stock inland waters with fish;
- to create, improve and maintain access to inland waters;
- to provide facilities in respect of access to inland waters;
- to carry out research and investigation into matters relating to salmon fisheries and fisheries in inland waters; and
- to collect, publish and disseminate information relating to freshwater fish and inland waters.

Jurisdiction
Under the *Inland Fisheries Act 1995,* the Service has jurisdiction over freshwater fish in all inland waters, which includes lakes, rivers, farm dams, registered private fisheries, ponds and aquaria. The Tasmanian boundary between marine and freshwater is called a seaward limit and the Service controls the inland side of this limit.

Management responsibilities
The Director is the Head of Agency for the purposes of the *Audit Act 2008.* The Service receives specific corporate support from the Department of Primary Industries, Parks, Water and Environment (DPIPWE). The Secretary of DPIPWE is the Head of Agency for the purposes of the *State Service Act 2000.*

While the Service has primary responsibility for its core business functions, DPIPWE continues to provide the Human Resource administration for the Service. At 30 June 2010, 27 people were employed by the Service, equating to 25.6 Full Time Equivalents. This represents a reduction of 2.6 FTE's from 2009.

Organisational structure
The Service is comprised of the Directorate being the Director of Inland Fisheries and three sections, managed by the Deputy Director (also the Manager, Business Services), the Principal Fisheries Manager, Fisheries Management and Planning and the Manager, Protection and Development (see below).

ANNUAL REPORT HIGHLIGHTS 2009-10

Following three very dry years, the State received well above average winter rainfall and recorded one of the wettest periods for many years. Water levels rose dramatically at inland waters throughout the State and the Service capitalised on the ideal conditions to reinvigorate fisheries with targeted stockings of fish.

The increased water was vital for the sustainable management of the fishery in a number of important ways. Firstly, it enabled the return of several regionally important fisheries in the State's South and East – Craigbourne Dam, Tooms Lake, Lake Leake and Lake Dulverton – which had suffered significantly due to the ongoing drought conditions in recent years. The Service was able to boost fish stocks at these waters by stocking throughout the season as the good conditions continued. Secondly, the rainfall alleviated the threat from continued low water levels at important waters in the Central Highlands, namely Arthurs, Woods and Great lakes.

The result of the increased rainfall and rising water levels was the provision of an improved range of attractive fishing locations throughout the State. This helped to spread angling effort and relieved some of the pressure experienced in recent years at a few premium highland waters. It also brought renewed interest in the fishery; raising the profile of trout fishing in the media, rewarding the dedicated community of anglers and attracting greater participation in Tasmanian trout fishing.

Licence sales and marketing

Improvement to the fishery as a result of increased water levels, particularly the increased availability of freshwater fishing options, is the main reason for an increase in angling licence sales. Total licence sales for the 2009-10 season rose to 29,010, which is the highest since 1998-99 when 29,690 licences were sold. It represents an increase of 3.1% on last year's sales of 28,131.

The increase was reflected across the board in terms of the number of anglers, residents and anglers from interstate and overseas as well as in most licence categories. Of significance was the increase in full season licence sales, particularly amongst Tasmanian residents. There was also an increase in sales of the newly introduced 48 Hour licence amongst Tasmanians and a swing away from the 28 Day and 7 Day licences. The 7 Day licence remained popular for interstate anglers followed by the full season licence, making up 35.7% and 31.3% respectively of total interstate sales. International anglers, meanwhile, favoured the 48 Hour and 7 Day licence types.

The increase in Tasmanian full season licence holders is a pleasing result given that this has been a key marketing aim of the Service over the past two years. The popularity of the 48 Hour licence, meanwhile, indicates that the two day licence is suited to the needs of the short term licence buyer for a two day fishing trip. Its introduction this season, replacing the 24 Hour licence, therefore, was a positive move by the Service.

Promotions

The Service continued to target full season licence holders this year through the annual licence renewal mail-out. This year, the renewal form included a 'Novice Licence' for the full season licence holder to give-away 'to a mate' for a free 48 Hour licence. For the second year in a row, full season licence holders were also offered free entry to the Salmon Ponds during the season.

The promotion resulted in 1,311 Novice Licence holders. Of these, 828 (63.2%) were 'one-off' Novice Licence holders who did not go on to purchase a licence during the 2009-10

season. A total of 175 (13.3%) Novice Licence holders did go on to purchase a licence but this group included those who had previously held a Tasmanian angling licence. The number of Novice Licence holders who had never held a Tasmanian angling licence but went on to buy a licence later in the season was 42 (3.2%). This provides an indication of the success of the promotion in terms of its objectives for increasing participation in trout fishing and also increasing licence sales.

Angler surveys

Results from the Angler Postal Survey show that the top ten still waters fished in 2009-10 (in descending order) were Arthurs Lake, Great Lake, Woods Lake, Little Pine Lagoon, Penstock Lagoon, Bronte Lagoon, Bradys Lake, Four Springs Lake, Craigbourne Dam and Lake Echo. The most significant difference compared with last season was the return of Craigbourne Dam into the top ten after its absence since 2005-06. Also Lake Echo, which appeared in the top 15 last year for the first time last year, rose to position 10 this year with over 2,146 anglers recorded and a catch rate of 2.77.

The most popular rivers meanwhile were the River Derwent, Mersey River, Brumbys Creek, and the South Esk, Macquarie, Huon, Tyenna, Meander, Leven and North Esk rivers. Although the Mersey River has appeared in the top five most popular rivers over the past five years, it received higher visitation this year with a jump from 2,060 anglers in 2008-09 to 3,040 anglers this year. This increase in fishing popularity as well as catch rate is possibly a result of the benefits of improved environmental flows provided by Hydro Tasmania in recent years.

Angler access and infrastructure

Further angler access brochures were produced this year bringing the total number to 21 brochures covering 30 individual waters. Specific angler access projects were completed for the River Leven and North Esk River, and one commenced for the Meander River. Further improvements to the Macquarie River access project were also completed including extensive willow removal at Woolmers Bridge in association with NRM North and Mersey NRM Services.

Other work included the installation of signage and pedestrian gates to define foot access for anglers to the sheltered western shore of Huntsman Lake. Tourism information panels incorporating general information for visitors and specific information on recreational fishing, were installed this year at Bronte Village and Bothwell. Stock exclusion fencing was installed at Bronte Lagoon, angler access signage and associated infrastructure was completed at Bradys Lake, and an interpretation and information project for the Western Lakes was progressed.

Carp management

At the start of the year, the Carp Management Program appeared to be in the best position to eradicate carp from Tasmania since the program began in 1995. Around 10,600 carp had been removed from both lakes over the period and the population at Lake Crescent appeared to have been eradicated. However, as the year progressed, rising water levels combined with warmer temperatures in spring and summer produced exceptional environmental conditions for carp spawning.

Despite specific strategies to prevent its occurrence, including the installation of extensive barrier fencing across ideal spawning habitat and continuous removal of carp, some spawning occurred in Lake Sorell. This led to an outbreak of juvenile carp in Lake Sorell, which was a major set-back for the carp program. As a result, the State Government responded by committing $400,000 of additional funding towards the carp program for 2010-11.

Hatchery and stocking
This was the third year of operation of the Service's purpose built hatchery at the New Norfolk headquarters. This investment has enabled the Service to increase its production of higher quality fish stocks for supplementing the fishery. Several improvements were made this year to reduce running costs and improve production rates, including changes to artificial lighting and water quality used in egg incubation.

A total of 98, 457 brown and 241,555 rainbow trout were produced in the hatchery this year from eggs harvested from Great Lake spawners along with 8,000 brook trout, which were grown from Salmon Ponds eggs. An increased proportion of these fish were able to be grown to a larger age class before being stocked, which should lead to greater stocking effectiveness.

The annual stocking program (based on the *Tasmanian Inland Recreational Fishery Management Plan 2008-18*) is aimed at providing a diverse range of fishery types and fishing experiences to meet the demands of the angling market. Intensive stocking was undertaken this year with the aim of reinvigorating the fisheries at Craigbourne Dam, Tooms Lake, Lake Leake and Lake Dulverton. The Service also continued its stocking program at popular waters in other regions of the State to stimulate interest and satisfy anglers' seeking larger catchable fish. These waters included Four Springs Lake, Brushy Lagoon and Curries River Reservoir in the North, Lake Barrington in the North West, Bradys Lake in the southern central region, and Meadowbank Lake in the South.

Compliance
Reports from Inland Fisheries Inspectors were generally positive throughout the season, reflecting the atmosphere of celebration amongst anglers regarding the rain-induced improvements to the fishery. There was a slight increase in the number of infringements, mostly for anglers fishing without a licence or possessing an assembled rod when unlicensed.

Several reports of illegal fishing from members of the public resulted in arrests and successful prosecutions. These included three prosecutions for illegal whitebait fishing, the arrest for the possession of a threatened species (two giant freshwater crayfish), and the prosecution for the possession of a controlled species at an inland water (mainland yabbies and mussels at Great Lake).

Inspectors continued to receive important and timely information from the public and to work in league with Tasmania Police, and Parks and Wildlife Service in responding to incidents and patrolling remote areas. Progress was made to combine compliance forces at an operational level with other divisions in the Department of Primary Industries, Parks, Water and Environment through the formation of an agency enforcement committee.

Stakeholder liaison and partnerships
The Service again hosted its major public event, the *Trout Weekend* at Liawenee in May 2010. This has become a real tradition for Tasmanian anglers and a celebration of the State's unique angling heritage, its renowned trout fishery and the origin of Tasmania's famous wild brown trout. Each year, the Service receives invaluable support from angling clubs, Fishcare Volunteers, fishing businesses, other government agencies and local community groups to run the event and this year was no exception.

The Service received ongoing support from the State's aquaculture industry through the donation of surplus brood and production stock for supplementing the public fishery. Springfield Hatcheries, Petuna Aquaculture (formerly Sevrup), Saltas and Tassal donated fish to the Service for transfer to suitable receiving waters during the year.

The Service continued to strengthen its partnership with Hydro Tasmania and Marine and Safety Tasmania particularly in regard to fishery infrastructure planning and promotions. It continued its financial support of Anglers Alliance Tasmania and also worked with AAT on various marketing proposals and concepts. The Inland Fisheries Advisory Council (IFAC) continued to play an important role in supporting the work of the Service and providing ministerial advice in regard to the fishery and its sustainable management.

INLAND FISHERIES ADVISORY COUNCIL REPORT 2009-10

The Inland Fisheries Advisory Council (IFAC) held three meetings during the reporting year on 12 August 2009, 20 November 2009 and 26 March 2010. It addressed a range of matters concerning inland fisheries, providing an independent view on proposals and issues put forward by the Service, and advised the Minister accordingly.

A major issue for IFAC last year related to the availability of water and the relationship between this and proposed irrigation developments. IFAC's concerns were raised with the Minister and resulted in the establishment of the Special Working Group of the Tasmanian Irrigation Development Board, which was designed to enable consultation with recreational anglers regarding proposed developments.

IFAC's focus on sustainable water use continued this year. The Irrigation Development Special Working Group met and the matters raised at these meetings were discussed at IFAC. Topics included the capping of irrigation rights and minimum environmental water levels and river flows, and the importance of obtaining water level agreements in order to maintain viable ecosystems.

The Minister attended IFAC and advised the Council regarding the Government's focus on irrigation development. Specific advice was given about the development of water management plans that underpin the decision making process.

In response, IFAC proposed that the Irrigation Development Special Working Group be consulted in the process of completing water management plans. IFAC put forward the case that the water management plans should include mechanisms to encourage irrigators to draw less water directly from rivers in summer, to develop off-river on-farm water storage and to implement other efficiencies in the use of water. Also, in cases such as the South Esk River, 'no take' levels should be incrementally increased over time until the minimum environmental flow is reached as a mechanism to improve efficiency and reduce the impact on water users.

In reaching its position, IFAC noted that the use of off-river storage in plans put forward by the Irrigation Development Board was commendable. It also acknowledged that the use of irrigation plans (including plans for existing water use) as a condition of the IDB water entitlements, was a positive approach to encourage efficient irrigation while maintaining acceptable environmental flows and recreational standards.

Another key issue raised at IFAC during the year was the recreational use of Central Highlands' lakes; in particular, the ownership and maintenance of recreational facilities such as campgrounds and toilets, and the role of the Recreational Lakes Committee. IFAC acknowledged that the ownership group should also include the Rivers and Water Supply Commission and that management of facilities needed to recognise where responsibilities lie. It also acknowledged that some local councils have few resources to invest in and maintain recreational fishing infrastructure, and that a user pays approach might be more appropriate. Notwithstanding the important collaborative role played by the Recreational Lakes Committee, IFAC concluded that leadership was fundamental and that one organisation needed to take responsibility for these matters in order to make significant gains in future.

Other items listed on the IFAC agenda during the year included the endorsement of the IFS Brook Trout Policy, allowing commercial production of the species; Hydro Tasmania's proposal to restore the wetlands at Lagoon of Islands; and the future management of the recreational bream fishery.

During the year, IFAC was saddened by the loss of a valuable member, Les Monson, who was representing the interests of anglers in the North West of the State. Prior to IFAC, Les had served as an Associate Commissioner before the Inland Fisheries Commission became the Service in 2000. In these roles, Les provided balanced input and sound views as a result of his longstanding experience and understanding of the fishery.

No new appointments to IFAC were made during the year and the current membership under the Chairmanship of John Cleary as at 30 June 2010 is shown in Table 1 below.

Member	Representation and role
John Cleary	Chairperson
John Smith	Ministerial appointment
David Ikedife	Representing conservation interests
Robyn Lewis	Ministerial appointment
Michael Bidwell	Ministerial appointment
Richard Dax	Representing freshwater angling associations
Peter Maloney	Representing tourism interests
Phillip Cooper	Representing freshwater commercial interests
TBA	Licensed angler representing the North West
Andrew Braithwaite	Licensed angler representing the North
Louis Molnar	Licensed angler representing the South
John Diggle	Director of Inland Fisheries

Table 1. Membership of the Inland Fisheries Advisory Council as at 30 June 2010

LEGISLATION INTRODUCED IN 2009-10

Legislation introduced in 2009-10 included the *Inland Fisheries (Recreational Fishing) Regulations 2009* and the *Inland Fisheries (Commercial Nets and Fees) Regulations 2009*.

This new legislation which governs the recreational and commercial fisheries activities under the *Inland Fisheries Act 1995* simply replaced the previous *Inland Fisheries (Recreational Fishing) Regulations 1999* and *Inland Fisheries (Commercial Nets and Fees) Regulations 1999, which were* repealed and reviewed. The replacement legislation was gazette in December 2009 after a compulsory regulatory review initiated under the *Subordinate Legislation Act 1992*.

Changes made to these regulations were minor in nature and generally involved the removal of redundant matters that were no longer supported by the *Inland Fisheries Act 1995*. They also included the updating of definitions in line with more recent legislative references and some minor alterations to numbering in specific sections.

BUSINESS AND MARKETING SERVICES REPORT

Finance and administration
The Service continued its review of business processes and adoption of contemporary financial management practices as part of an ongoing practice. The aim has been to ensure that the business of the Service is undertaken in accordance with commercial principles so that services are cost-effective and efficient.

The year concluded with an operating deficit of some $75,278. This result however was pleasing as the Service met severance payments for three full time staff during the year. After the revaluation of investment property the Service recorded a positive comprehensive result of $126,460. The Service has an objective to operate in surplus at all times.

During the year the redevelopment of the Corporate Plan commenced. It is expected that this will be completed in the following financial year and provide a sound framework for the future operations of the Service.

Asset management
Further improvements to the New Norfolk hatchery water cooling system were completed during the year to optimise growing conditions. The property at Lampton Avenue continued to be fully leased, providing a separate income stream to the Service. This has been important to alleviate the sole reliance of the Service on the Government's administrative payment and angling licence sales. An additional investment property at Western Junction near Launceston Airport was acquired during the year. This property is subject to a long term lease.

The Service continued to manage its obligations regarding the maintenance of the grounds and display fish in the ponds at the Salmon Ponds, together with the management and maintenance of the museum and its artefacts. A photographic display was established in the hatchery building projecting an array of photographs from the vast collection held by the Service. The Salmon Ponds hatchery is no longer fully utilised by the Service but the grounds are leased to Nekon Pty Ltd to operate as a tourist facility. The lease agreement continued to be fulfilled by the lessee and joint promotions were undertaken in support of the Service.

Grants, contributions and contractors
The grant from the Government to the Service in the form of an administered payment paid via the Department of Primary Industries, Parks, Water and Environment was $1,201,000. This amount is also set in the forward estimates but not indexed to take account of Consumer Price Index or salary and wages movements. The challenge for the Service continued to be the attraction of additional revenue to fund price and wages movements.

The Service continued to contribute financially to various organisations and projects during the year. A financial contribution to the value of $36,000 was provided to Anglers Alliance Tasmania (AAT) again this year to assist with administrative costs of AAT.

As in previous years, the Service engaged a number of local contractors to provide a range of services including cleaning, building maintenance, electrical and plumbing services. In addition, other contractors were engaged for services including security, fire and air conditioning maintenance.

Reducing our carbon footprint
During the year, the Service continued to plan and implement strategies for decreased emissions and energy consumption. In the hatchery, where electricity constitutes the largest operating cost, low energy lighting was installed; fluorescent lights replacing the 250 W

globes. Meanwhile, in the main office area, a heat pump water cylinder was installed in the staff facilities, reducing the electricity used for water heating by 80 per cent.

The Service's vehicle fleet is now fully compliant with the Department of Premier and Cabinet's carbon emission requirements and four stroke motors are used on all Service boats, reducing fuel consumption as well as emissions. Towards year end, an assessment of renewable energy options such as solar power was undertaken for the New Norfolk site with the view to adopting the most cost effective options in the coming year.

Licensing marketing, sales and promotions

The Service continued to manage the recreational fishing licensing process involving the direct mail of renewals to full season licence holders and the management of licence sales through private agents, *Service* Tasmania and online. The Service mailed out 22,142 renewal forms to 2008-09 full season licence holders and during the year, 12,972 were renewed. A further 16,038 new licences were processed giving a total of 29,010 angling licences sold for the year. In addition, 841 Whitebait licences were sold.

Marketing activities range from strategic advice regarding the products and services of the Service to the development and implementation of specific promotional campaigns. A major focus is the promotion of angling licences which has recently targeted existing full season anglers with the understanding that this group represents significant value to the Service.

This year, the Service spearheaded its 'Take a Mate Fishing' promotion through the renewal mailout as well as offering full season licence holders free entry to the Salmon Ponds. The rationale was to reward full season licence holders and increase the number of licence holders so as to generate more revenue for the management of the recreational fishery. The campaign was developed with the understanding that a shared fishing experience with a dedicated angler was an effective way of introducing a new angler to trout fishing.

Planning for the promotion was undertaken the previous year and involved the conversion of the 24 Hour Licence to a 48 Hour Licence to accommodate the free licence for a weekend fishing trip. A 'Novice Licence', which could be converted to a Complimentary 48 Hour Licence, was included in the renewal form for renewing full season licence holders to pass on to a friend or family member. An arrangement was made through Anglers Alliance Tasmania to contract the services of Red Jelly in providing advice about the campaign, and designing the Novice Licence and renewal form.

During the year, a total of 1,311 anglers were recorded as having activated a Novice Licence. Of these, 155 were recorded as having gone on to buy an angling licence in the same season and 42 of these, had not held a Tasmanian angling licence previously.

Public events

The Service hosted its annual *Trout Weekend* at Liawenee in May this year with the invaluable support of angling clubs, Fishcare Volunteers, local fishing businesses and the Highlands community. It attracted over 4,000 people to the field station again this year, achieving a good balance in terms of the number of people attending and what is being offered in terms of food, facilities and entertainment; and with free entry.

The event centres on the harvesting of eggs from wild brown trout on their annual spawning migration in the Central Highland lakes and rivers, an activity that has continued since trout were first introduced in 1864. It has become a tradition amongst anglers and the angling community, and a celebration of Tasmania's unique angling heritage, the State's renowned inland recreational fishery and the famous wild brown trout. The involvement of anglers along with a keen public interest, are part of this unique angling tradition in Tasmania.

Angling clubs provided fishing displays, demonstrations, food stalls and assisted the Service with logistics. The Devonport Fly Fishers Club organised a fly tying display and demonstration with volunteers from the Fly Fishers Club of Tasmania, North West Fly Tyers Club, Corralinn Fly Fishing and Casting Association, and the Tasmanian Fly Tyers Club. The Clarence Licensed Anglers Club ran a food stall as did the Longford Angling Club who also assisted with visitor parking control.

Exhibitors this year included Marine and Safety Tasmania, Hydro Tasmania, Quarantine Tasmania, the Cancer Council, tackle stores, outdoor equipment stores, Cressy Trout Expo and Anglers Alliance Tasmania. As in the previous year, the children's fish out ponds, the trout stripping demonstration, the bus tour of the Liawenee Canal and fish trap, and the safety displays, were all extremely popular.

The Service constructed a second children's fish-out pond prior to the weekend this year to extend the area available for this attraction which is ably run by Fishcare Volunteers each year. As a result, at least 500 children had a turn to catch and keep a trout, and over 450 trout were caught during the weekend. The Service also had two buses operating continuously in a round trip tour of the Canal and around 1000 people took the 15 minute bus tour to view the fish trap and see the natural spawning behaviour of the trout.

Other major events attended by the Service this year were the Derwent Valley Autumn Festival, Cressy Trout Expo and the Deloraine Craft Fair. During the year, Service staff also visited several schools in the local area and attended angling club meetings, dinners, competitions and events held throughout the State.

Publications

The Service produced and distributed its annual publication, the *Tasmanian Inland Fisheries Angling Code 2009-10*, containing the new season's angling regulations. The publication is distributed free of charge with all licences sold and it is mailed with renewal notices.

This year, the booklet format of the Code which previously contained advertising and general information about the fishery was changed to provide a purely regulatory focus. It was redesigned as 'the essential pocket guide' and contained a Special Waters Regulations Chart, which listed only those waters that did not fall under the general rule for season, methods and catch limits.

The Service discontinued its production of *Angler News* while work began on alternative options under a Communications Strategy put forward by Anglers Alliance Tasmania. During this period, the website remained a key mechanism for broadcasting information about the fishery, including latest stocking and management news. An informal email alert was generated to supply timely information to fishing news media stakeholders.

The *Carp Management Program Annual Report 2008-09* was produced and distributed to key stakeholders. The Service also contributed editorial regularly throughout the year to fishing magazines, provided periodic news items in the regional press in relation to particular issues and contributed advertising and editorial for the trout fishing features run at the start of the season in all regional papers.

The Service published three more Anglers Access brochures bringing the total to 21 brochures providing information on 30 individual waters. The brochures were distributed through licence agents throughout Tasmania and at selected tackle stores in Victoria and New South Wales, and were made available for download via the IFS and AAT websites.

OUTPUT GROUP 1 RECREATIONAL FISHERIES MANAGEMENT

FOCUS

The Fisheries Management and Planning Section and the Business Services Section deliver Output Group 1. It covers the management of the State's inland recreational fishery, encompassing the development of recreational fishing policy, fishery management plans and fishing regulations, and the monitoring, assessment and research of recreational fisheries.

OUTPUT 1.1 RECREATIONAL FISHERIES MANAGEMENT AND PLANNING

OBJECTIVES

- To provide a structured approach for the management of fisheries in the medium to long term.
- To engage stakeholders in the development of fisheries policy, planning and management.
- To provide a systematic approach for assessing and reporting on the performance of priority fisheries.
- To expand the baseline data of the State's recreational trout fishery.
- To develop a strategic approach to fisheries management and optimise the performance of recreational fisheries.

ACHIEVEMENTS IN 2009-10

Fishery management plans
Implementation of the Great Lake Fishery Management Plan continued with the stocking of wild rainbow trout during the year. Approximately 100,150 fingerlings were stocked out in May to June 2010, grown from ova collected in 2009.

Fishery monitoring
The spawning runs at Great Lake (rainbow and brown trout) and Arthurs Lake (brown trout) were monitored and two hundred fish from each run were weighed and measured. The brown trout spawning run at Lake Sorell was also monitored with only low numbers of fish present, while the run of rainbow trout was negligible. Great Lake and Arthurs Lake spawning runs were sources for adult brown trout transferred to other waters.

Fish tagging surveys
During February 2010, a gill and fyke netting survey was undertaken at three key broadwater sites and associated runs within the Break O'Day River. This survey formed part of a project to examine the prevalence of tagged and marked fish that were released into the river at these sites during June 2008.

Survey results suggested that the total number of trout in the Break O'Day River was very low. The proportion of tagged and marked fish from the 2008 release compared to resident fish numbers, was also very low. When this data is combined with the data collected during a 2008 survey, it provides evidence of extremely low natural recruitment occurring within the Break O'Day system.

As a result of the survey information, further releases of brown trout are planned for the future. This will be supported by a program to monitor released fish and improve the overall performance of the fishery once critical numbers of fish are achieved. Other fish species in this system including both native and other introduced species, all appear to be at healthy population levels.

During July 2008, 500 brown trout weighing 30 g were fin clipped and released into Lake Botsford. The aim was to assess the success for stocking fingerling sized trout into this lake, in preference to adult brown trout. A survey conducted in October 2009 failed to find any of these fin clipped fish so a further survey is planned for 2010.

Fish salvages
During 2009-10 the Service salvaged a small number of brown trout from the area immediately downstream from the dam at Laughing Jack Lagoon. This was undertaken to prevent fish strandings due to dam operations.

Recreational management
The Service is represented on the interagency Recreational Lakes Committee. The Committee continued to meet during the year, focusing on the development of a camping strategy for the Central Highlands, as well as waste management issues, visitor information booths, a joint land use planning strategy and angler access at Bradys Lake. The Service was also involved in the development of a Boating Infrastructure Plan with Marine and Safety Tasmania and Hydro Tasmania. The plan will assist in the development and maintenance of boating infrastructure across the State.

Angler access and infrastructure
Under the Service's Angler Access program, tourism information panels were installed at Bronte Highland Village and Bothwell. The panels contained general information for visitors and specific information on recreational fishing. Three angler access brochures were also produced this year, bringing the total to 21 covering 30 individual waters.

Angler access projects incorporate a range of activities including the negotiation of access agreements and the installation of signage, fence stiles, fencing, footbridges and access steps. Projects may also deal with car parking, off stream stock watering, willow removal and associated environmental works. This year, the River Leven and North Esk River projects were completed and the Meander River project commenced. Further improvements to the Macquarie River access project were also completed, including extensive willow removal at Woolmers Bridge in association with NRM North and Mersey NRM Services.

Stock exclusion fencing was installed at Bronte Lagoon and angler access signage and associated infrastructure was completed at Bradys Lake in partnership with Hydro Tasmania, Southern Highlands Progress Association and Central Highlands Council. Work on an interpretation and information project for the Western Lakes continued.

Works were also undertaken to improve the condition of vehicle access at several waters during the year. Prior to the start of the 2009-10 season, the Four Springs Lake road, Fisheries Lane at Brumbys Creek, and the Lake Echo access road to Large Bay were improved, and after the season's close, the Woods Lake road was upgraded. The Service also commissioned work during the summer to protect the dam wall at Four Springs Lake against erosion, particularly during periods of high water levels.

Angler surveys
Two separate surveys of anglers are conducted by the Service to obtain quantitative data on the recreational fishery each year; the annual Angler Postal Survey (APS) and the angler creel survey. The APS involves a written questionnaire, which is mailed out at the end of the season to a representative sample of licence holders while the creel survey collects angler catch data and is conducted by Inland Fisheries Inspectors as part of their normal routine licence checking.

A total of 4,790 questionnaire forms were sent out for the APS and the response rate was 18%, which is 3% lower than 2008-09. The results were collated and calculations made to produce estimates of the catch rate and total harvest for each species and angler effort, as well as the number of full season anglers fishing particular waters and the total number of anglers.

The results of the APS in terms of ranking of the most popular fisheries in 2009-10 are displayed in Table 2. It shows the estimated number of anglers who fished at each location along with the estimated total catch rate for all species combined (brown trout, rainbow trout, brook trout and Atlantic salmon).

Ranking	Water	Catch Rate (fish per day)	Angler Numbers
1	Arthurs Lake	2.02	9,586
2	Great Lake	1.68	8,871
3	Woods Lake	2.90	5,902
4	Little Pine Lagoon	1.28	3,970
5	Penstock Lagoon	0.90	3,219
6	Bronte Lagoon	1.80	2,968
7	Bradys Lake	1.38	2,503
8	Four Springs Lake	0.95	2,360
9	Craigbourne Dam	0.68	2,146
10	Lake Echo	2.77	2,146
11	Lake Barrington	0.99	1,752
12	Brushy Lagoon	0.86	1,752
13	Huntsman Lake	1.83	1,752
14	Lake Augusta	3.25	1,609
15	Lake Burbury	3.69	1,359
Ranking	**River**	**Catch Rate (fish per day)**	**Angler Numbers**
1	River Derwent	0.50	3,433
2	Mersey River	1.39	3,040
3	Brumbys Creek	0.68	3,004
4	South Esk River	2.02	2,146
5	Macquarie River	1.21	1,967
6	Huon River	0.79	1,824
7	Tyenna River	2.94	1,716
8	Meander River	2.59	1,573
9	River Leven	1.38	1,359
10	North Esk River	3.53	1,287

Table 2. Ranking of fisheries based on results of the 2009-10 Angler Postal Survey

The top ten most popular still water fisheries in 2009-10 (in descending order) were Arthurs Lake, Great Lake, Woods Lake, Little Pine Lagoon, Penstock Lagoon, Bronte Lagoon, Bradys Lake, Four Springs Lake, Craigbourne Dam and Lake Echo. The most popular rivers meanwhile were the River Derwent, Mersey River, Brumbys Creek, and the South Esk, Macquarie, Huon, Tyenna, Meander, River Leven and North Esk rivers.

The APS results for 2009-10 compared to the four previous seasons are shown in Appendix 3. The top five still waters, which are Tasmania's premium trout fisheries (ie Arthurs, Great and Woods lakes and Penstock and Little Pine lagoons) have remained relatively unchanged in terms of popularity over the past few years. Of these, Woods Lake has provided anglers with the most consistent and high catch rates.

Since 2008-09, there has been a re-emergence of Craigbourne Dam as a top 15 water and the appearance of Lake Echo in top 10 position. The higher lake levels in the 2009-10 season saw Craigbourne Dam regain its popularity after being absent from the top 15 since 2006-07. Lake Echo increased its popularity due to raised water levels, intensive stocking efforts by the Service and improved angler access. Good spring rainfalls meant that Arthurs Lake regained its number one ranking over Great Lake, which was the most popular fishery in 2008-09.

River fisheries also benefitted greatly from the spring rains in 2009. The major change in the ranking of rivers was the increase in popularity of the Mersey River. It was ranked fourth in 2008-09 with 2,060 anglers but was positioned second this year with 3,040 anglers. St. Patricks River in the North slipped out of the top 10 rivers and was replaced by the River Leven, which has benefited from increased angler access and signage as a result of the Angler Access Project.

The Mersey River has had a marked increase in angling participation following an extended period of decline in popularity. Over the past six years, the Mersey River has been managed by Hydro Tasmania to include environmental flows. A joint study conducted by the Service, the Water Resources Division of the DPIPWE and Hydro Tasmania concluded that there were benefits to trout recruitment in the river from this environmental flow regime. The recent increase in popularity as a fishery could be a reflection of improved recruitment with a time lag of four years due to building trout stocks.

The highest catch rates (fish per angler per day) for the year across all the waters were reported at Lake Burbury (3.69), North Esk River (3.53), Lake Augusta (3.25), Tyenna River (2.94), Woods Lake (2.90), Meander River (2.59), Lake Echo (2.77), Arthurs Lake (2.02), South Esk River (2.02) and Huntsman Lake (1.83). Catch rates were generally higher for the 2009-10 season. Woods Lake maintained its high catch rate this year despite a general perception that this would be impacted due to increasing popularity. Arthurs Lake showed a slight decrease from the previous year as did Great Lake.

Creel survey results show that inspectors checked over 3,000 anglers for a total of 3,577 angler days at 90 different waters throughout the State. The greatest numbers of anglers were checked at Arthurs Lake (590), Great Lake (415), Bradys Lake (368), Brushy Lagoon (178), Four Springs Lake (178), Little Pine Lagoon (172), Lake Binney (157), Bronte Lagoon (156), Lake Burbury (136) and Lake Pedder (123).

Of those interviewed, 31% of anglers were bait fishing, 26% spinning, 23% trolling and 20% fly fishing, noting that some anglers use more than one method of fishing. A total of 2,081 fish were caught by anglers participating in the survey; 1,606 (77%) of which were brown trout, 273 (13%) rainbow trout, 188 (9%) Atlantic salmon and 14 (1%) brook trout.

PLANS FOR 2010-11

- Evaluation of the actions and outcomes for current fishery management plans and where appropriate undertake further management actions as prescribed.
- Continuation of the annual spawner monitoring program at Great and Arthurs lakes.
- Monitoring and assessment of 2009 trout stocking in the Break O'Day River.
- Monitoring River Leven fish populations to assess impacts of fishing pressure at new river access locations.
- Continuation of the delivery of communication activities, including contributions to public presentations, publications and website management.
- Continuation of the angler access program for the Meander, Derwent and Tyenna rivers and several other waters around the State.
- Monitor and assess the stocking at Lake Botsford.

OUTPUT 1.2 RECREATIONAL WHITEBAIT FISHERY

OBJECTIVES

- To ensure the long-term sustainable management of the recreational whitebait fishery.
- To ensure that the fishery remains accessible to future generations of fishers.
- To ensure the conservation of the native whitebait species by avoiding over-exploitation and protecting habitat.

ACHIEVEMENTS IN 2009-10

The 2009 whitebait season opened on the 1 October 2009 and closed on the 11 November 2009. A total of 841 whitebait licences were sold for the six week season. This represents a decrease of 6.5% in participation compared to the previous year.

A limited number of rivers were open for the season being the Little Forester, Brid, Tamar, Derwent, Huon, Rubicon, Don, Forth, Leven, Inglis, Duck, Black, Pieman and Big Henty rivers. Opening of rivers for the 2010 whitebait season will be in accordance with the amendments to the Whitebait Fishery Management Plan.

PLANS FOR 2010-11

- The postal survey of whitebait fishers to collect catch effort data may be repeated.
- Continued licensing of the recreational whitebait fishery.

OUTPUT GROUP 2 HATCHERY PRODUCTION AND STOCKING

FOCUS

The Protection and Development Section and Fisheries Management and Planning Section deliver Output Group 2. It covers the key responsibility of maintaining the recreational fishing stocks in the State's inland recreational fishery, which involves the stocking of domestic fish as well as the hatchery rearing of wild stock at the New Norfolk and Salmon Ponds hatchery facilities. It also covers farm dam stocking and private fishery applications, as well as the private sale and transport of fish and egg stocks.

OUTPUT 2.1 HATCHERY PRODUCTION

OBJECTIVES

- To collect wild ova, and rear and raise trout for stocking into inland waters.
- To provide appropriate stock for Tasmanian recreational fisheries.
- To supply and maintain display fish for the Salmon Ponds tourist operation.

ACHIEVEMENTS IN 2009-2010

Ova collection
The Service collected 800,000 brown trout ova and 480,000 rainbow trout ova from wild fish trapped in Liawenee Canal, Great Lake. A further 15,000 brook trout and 10,000 tiger trout (brown and brook trout cross) were collected from Salmon Ponds stock.

Grow out
The Service grows trout to various size classes for stocking into the State's inland waters to support the recreational fishery. The specific fish stocking size, is predetermined depending upon the water in which the stock are to be released. Total production numbers of wild fish from the Services hatcheries at New Norfolk and the Salmon Ponds are shown in Table 3.

Age class	Brown trout	Rainbow trout	Brook trout
Fry (1-5 g)	23,000	26,000	8000
Fingerling (6-50 g)	75,150	215,495	-
Yearling (51-200 g)	-	-	-
Adult (+ 200 g)	307	60	
Total	**98,457**	**241,555**	**8,000**

Table 3. Fish number, species and age class production by the IFS in 2009-10

Production of wild trout from the Service's hatcheries continued to improve in 2009-10 compared with 2008-09 due to the success of the new New Norfolk recirculating hatchery. The hatchery allowed the production of a greater number of fish grown to a larger size class. This level of production and stocking of juvenile wild fish is a strategy that has been introduced to improve stocking effectiveness and the proportion of fish reaching catchable size in the public fishery.

Ova and fish sales
During the year, the Service sold 108,000 brown trout ova to the South Australian Fly Fishers and 40,000 brown trout ova to the Victorian Acclimatisation Society. Also, 50 adult brown trout from Great Lake, 2,000 juvenile brown trout, 500 juvenile rainbow trout and

2,000 tiger trout from New Norfolk hatchery were sold to private fisheries within the State and 1,995 triploid rainbow trout were sold for private farm dam stocking.

PLANS FOR 2009-10

- The Service will collect approximately 800,000 wild brown trout ova and 600,000 wild rainbow trout ova for hatchery rearing and the subsequent stocking of public waters and sales.

OUTPUT 2.2 STOCKING OF INLAND WATERS

OBJECTIVES

- To manage the stocking of inland waters.
- To maximise recreational fisheries performance.

ACHIEVEMENTS IN 2009-10

Stocking of inland waters for public fishing

Each year, the Service plans the stocking of public inland waters based on historical stocking levels, fishery performance assessments and management goals. This also involves the identification of stocking requirements in regard to individual species, and the number and size of fish to be stocked into particular waters. However, the ability of the Service to fulfill its stocking requirements is dependent upon the number of fish successfully raised at its hatcheries as well as on domestic fish stocks donated by various commercial hatcheries such as Springfield Hatcheries, Petuna Aquaculture (formerly Sevrup), Tassal and Saltas.

During 2009-10, the Service distributed approximately 295,354 rainbow trout, 99,180 brown trout, 14,279 brook trout and 6,798 Atlantic salmon into public waters. These fish were variously sourced from the Service's hatcheries at New Norfolk and the Salmon Ponds, the University of Tasmania and commercial hatchery operations within the State. For instance, a total of 59,660 rainbow trout, 6,318 brook trout and 6,798 Atlantic salmon were sourced directly from commercial fish farms. A summary of fish species and age details is displayed in Table 4 below.

Age class	Brown trout	Rainbow trout	Brook trout	Atlantic salmon
Fry (1-5 g)	9,000	8,000	14,000	-
Fingerling (6-50 g)	75,685	233,495	-	-
Yearling (51-200 g)	5,000	52,200	-	-
Adult (+ 200 g)	9,495	1,659	279	6,798
Total	**99,180**	**295,354**	**14,279**	**6,798**

Table 4. Fish number, species and age class stocked into public fisheries in 2009-10

Fish were also harvested from natural sources at Lake Crescent, Hydro Creek (Arthurs Lake), Mountain Creek (Lake Sorell), streams in the North East of the State, Laughing Jack Lagoon and Liawenee Canal (Great Lake). A detailed listing of public waters stocked by the Service during the year is contained in Appendix 1.

Stocking of private farm dams for public fishing
The Service provides rainbow trout stocks for dams on private property and brown trout where there is an agreement signed by the landholder enabling public access by anglers. In most cases, access to the dam is negotiated through local angling clubs.

During the year, the Service along with Springfield Hatcheries and Petuna Aquaculture supplied adult rainbow trout to waters for promotional events. The North Motton Rearing Unit supplied fish stocks for dams on private land in the State's North, with the original fish stocks of brown trout fry and rainbow trout fingerlings from the Service's hatchery. North Motton also distributed 20,000 rainbow trout fingerlings into the North West of the State using the Penguin and Ulverstone branches of the North West Fisheries Association. Meanwhile, the Penguin and Ulverstone branches of the NWFA and the Devonport Angling Club distributed 20,000 brown trout fry into farm dams in the North West of the State. Details of these stockings are provided in Appendix 2.

Stocking of farm dams for private fishing
The Service manages the stocking of farm dams for private fishing (with triploid rainbow trout only) through the issuing of a permit, often with rainbow trout stocks supplied by private hatcheries. During the year, the Service approved the stocking of a total of 17,255 rainbow trout and 10 albino Atlantic salmon into 68 private farm dams located throughout the State.

PLANS FOR 2010-11

- Continued stocking of private and public waters for public fishing.
- Continued assessment of stocking of dams for private fishing.
- Continued assessment of stocking of public waters for public fishing as guided by the *Tasmanian Recreational Inland Fishery Management Plan 2008-18*.
- Continued assessment of stocking of private dams for public fishing.

OUTPUT GROUP 3 RECREATIONAL FISHERY LICENSING

FOCUS

Output Group 3 involves the production, distribution, sale and administration of angling and whitebait licences through private agents, *Service* Tasmania and via the internet, including the annual renewal mailout. It also involves the regular management of the licence holder database, including daily uploads and monitoring, finance administration and liaison with licence agents, as well as dealing with a significant number of customer inquiries regarding recreational fishing and licence sales.

OUTPUT 3.1 LICENSING OF RECREATONAL FISHING

OBJECTIVES

- To provide an efficient and cost-effective method of licensing recreational fishers.
- To satisfy customers in the design of the licence product, categories and fees.
- To partner agents in the distribution and sale of licences.
- To provide accurate and up to date records and reports on licence sales.
- To collect information and investigate the angling market.

ACHIEVEMENTS IN 2009-10

Licence distribution and payment
The Service continued its annual licence renewal mail-out involving the direct mail of an integrated renewal form with an individually printed laminated peel-off licence card. A total of 22,142 renewals were mailed to anglers who held a full season licence in 2008-09 which was due to expire on 31 July 2009. Of these, 12,972 anglers renewed their annual licence through one of the payment methods available, representing a take-up rate of 58.6%, which is equivalent to the rate in 2008-09.

A breakdown of angler preference for the various payment methods for renewals over the past five years is displayed in Table 5. This shows that the trend towards electronic payment of renewals is continuing.

Payment Method	2005-06	2006-07	2007-08	2008-09	2009-10
Service Tasmania	5,664	6,062	5,903	5,659	5,363
Electronic (total)	3,804	4,566	4,754	4,708	5,630
Private Agents	1,598	2,020	1,998	2,250	1,940
IFS	263	182	56	154	39
Total	**11,329**	**12,830**	**12,776**	**12,771**	**12,972**

Table 5. Comparison of angler preference for renewal payment over the past five years

The total number of new licences, including short-term licences sold this year was 16,038. A breakdown in the preference for various methods of purchasing new licences over the past five years is displayed in Table 6. This shows that the majority of new licences were distributed through private agents as with previous years, followed by *Service* Tasmania shops. There was a further rise in the number of licences sold on-line this year, which is the third full year that this payment service has been offered.

Payment Method	2005-06	2006-07	2007-08	2008-09	2009-10
Service Tasmania	3,049	3,165	2,803	2,835	3,141
Private Agents	13,683	12,827	11,199	11,020	11,144
Internet	-	-	1,071	1,484	1,730
IFS	60	45	56	20	23
Total	16,792	16,037	15,129	15,360	16,038

Table 6. Comparison of angler preference for new licence payment methods over the past five years

Licence structure and fees

The 1Day/24 Hour Licence was extended this year to a 48 Hour Licence at no relative increase in price of the licence. There was no increase in any fees except in accordance with the Government Fee Unit (to reflect CPI) which was rounded down to the nearest fifty cents. The cost of a juvenile licence was kept the same for the fourth year in a row. A comparison of the price for the various licence types over the past five years is shown in Table 7 below.

Licence type	2005-06	2006-07	2007-08	2008-09	2009-10
Adult Licence	$57.00	$59.00	$61.00	$62.50	$65.00
Juvenile Licence	$11.50	$12.00	$12.00	$12.00	$12.00
Pensioner Licence	$31.50	$32.50	$33.50	$34.50	$35.50
Senior Licence	$45.50	$47.00	$48.50	$49.50	$51.50
28 Day Licence	$45.50	$47.00	$48.50	$49.50	$51.50
7 Day Licence	$29.00	$30.00	$31.00	$32.00	$33.00
24 Hour/48Hour* Licence	$17.50	$18.00	$18.00	$19.00	$19.50*
1 extra rod – adult	$11.50	$12.00	$12.50	$12.50	$13.00
1 extra rod – other	$5.80	$6.00	$6.00	$6.00	$6.50

Table 7. Tasmanian angling licence fees and structure for the past five years

Trend in angling licence sales

The total number of licences sold this year was 29,010 which is an increase of 3.12% compared with 28,131 licences sold last year. The total revenue from angling licence sales was $1,517,333, which is up by 5.4% on the 2008-09 total of $1,440,276. A breakdown of licences sold per category this year compared with previous years is shown in Table 8.

Categories	2005-06	2006-07	2007-08	2008-09	2009-10
Adult Licence	14,277	14,662	13,834	13,888	14,182
Juvenile Licence	1,368	1,336	1,205	1,292	1,312
Pensioner Licence	5,632	5,849	5,791	5,955	6,218
Seniors Licence	823	933	1,016	1,113	1,141
28 Day Licence	979	1057	1,072	1,095	917
7 Day Licence	3,374	3421	3,303	3,170	2,504
24 Hour/*48 Hour Licence	1,668	1609	1,684	1,618	2,736*
Total	**28,121**	**28,867**	**27,905**	**28,131**	**29,010**

Table 8. Number of angling licences sold per licence category over the past five years

Table 8 shows that the sale of annual licences increased across all categories. Further analysis indicates that Adult licences increased by 294 (2.1%), Juvenile licences by 20 (1.6%), Pensioner licences by 263 (4.4%) and Senior licences by 28 (2.5%). Amongst the short term licences, there was a trend away from the 28 Day licence and the 7 Day licence in favour of the newly introduced 48 Hour licence which replaced the 24 Hour licence. Sales of the 28 Day and 7 Day licences decreased by 178 (16.3%) and 666 (21.0%) respectively, while the sale of the 48 Hour licence increased by 1,118 (69.1%) compared with the previous year's sales of the 24 Hour licence.

Angler origin

The five year trend in licence sales to anglers of various origins is displayed in Table 9, below. It shows that resident Tasmanians bought the majority of angling licences, 22,798 representing 78.5% of total licences sold and this has been relatively steady since 2005-06.

Angler Origin	2005-06	2006-07	2007-08	2008-09	2009-10
TAS	22,099	22,825	21,707	22,055	22,798
Interstate	5,615	5,636	5,861	5,779	5,888
VIC	*2,766*	*2,812*	*2,925*	*2,941*	*2,899*
NSW	*1,377*	*1,293*	*1,294*	*1,203*	*1,314*
QLD	*677*	*698*	*748*	*774*	*759*
SA	*303*	*324*	*364*	*324*	*335*
WA	*293*	*295*	*324*	*307*	*331*
ACT	*149*	*158*	*158*	*176*	*178*
NT	*50*	*56*	*48*	*54*	*72*
International	407	406	338	297	324
Total	**28,121**	**28,867**	**27,905**	**28,131**	**29,010**

Table 9. Number of angling licences sold in Tasmania, interstate and overseas in the past five years

There was a slight increase in sales to interstate anglers this year although the proportion of total sales (20.3%) remained relatively constant. There was a slight decrease in the number of licences bought by Victorians hence the increase was made up of anglers from other states, primarily NSW. However, Victoria still remained the primary source of visiting anglers with a total of 2,899 representing 10.0% of total licence holders this year. This was followed by 1,314 licence holders from New South Wales and 759 from Queensland representing 4.5% and 2.6% of the total licences sold.

The number of licences sold to international anglers rose slightly this year to a total of 324 but the overall proportion of total sales continued to remain low at 1.1%. A breakdown of the origin of international anglers this year compared with the previous four years is shown in Table 10 below. It shows that the top six countries for the most visiting anglers include the United States of America, the United Kingdom, New Zealand, Germany, Japan and Canada. This list has generally remained the same over recent years.

Country	2005-06	2006-07	2007-08	2008-09	2009-10
Canada	24	24	15	2	22
France	7	13	5	18	15
Germany	12	13	20	15	23
Hong Kong	6	3	12	1	4
Ireland	7	7	8	3	2
Japan	23	23	19	25	17
Netherlands	5	8	2	5	3
New Zealand	27	41	24	17	16
Singapore	4	3	7	7	9
South Africa	2	9	5	8	5
Switzerland	9	5	6	5	15
United Kingdom	51	91	86	63	39
USA	114	130	93	71	86
Other	116	36	36	57	68
Total	**407**	**406**	**338**	**297**	**324**

Table 10. Number of angling licences sold per country in 2009-10 compared with previous years

Licence type and angler origin

Table 11 below shows a further breakdown of this year's licence sales in terms of licence type and angler origin (Tasmanian, Interstate and International). This shows that the most popular licence type amongst Tasmanian anglers was the annual licence which is the same as in previous years. A majority of 20,988 (92.1%) annual licences were bought by Tasmanians, an increase of 498 this year which continues the trend begun last year. The next most popular licence amongst Tasmanian anglers was the 48 Hour licence with 1,456 sold, an increase of 671 (85.5%) compared with last year's sale of the 24 Hour licence. In comparison, there was a drop in sales of the other short term licences sold to Tasmanian anglers, with the 7 Day licence dropping by 57.8% to 291 and the 28 Day licence dropping by a smaller amount of 30.0% to 63.

Licence Type	Tas	IS	State							IN	Total
			ACT	*NSW*	*NT*	*QLD*	*SA*	*Vic*	*WA*		
Adult	13,237	929	25	156	13	96	54	532	53	16	14,182
Juvenile	1,189	121	4	21		19	8	59	10	2	1,312
Pension	5,672	542	8	137	6	142	31	194	24	4	6,218
Senior	890	251	5	64	2	36	11	124	9	0	1,141
Annual subtotal	20,988	1,843	42	378	21	293	104	909	96	22	22,853
28 Day	63	792	31	206	9	82	44	347	73	62	917
7 Day	291	2,094	71	444	25	219	116	1,131	88	119	2,504
48 Hour	1,456	1,159	34	286	17	165	71	512	74	121	2,736
Short subtotal	1,810	4,045	138	980	56	497	240	2,072	261	309	7,318
Total	**22,798**	**5,888**	**178**	**1,314**	**72**	**759**	**335**	**2,899**	**331**	**324**	**29,010**

Table 11. Number of licences sold per category to anglers from various origins in 2009-10

Amongst the sales to interstate anglers, the 7 Day licence was the most popular with 2,094 sold, representing 35.7% of all interstate sales. This was followed by 1,843 annual licences and then 1,159 48 Hour licences, representing 31.3% and 19.7% of total interstate sales, respectively. Amongst international sales, the 48 Hour and 7 Day licences were the most popular, with the combined majority of 240 representing 74.1% of all licences sold to international anglers.

Whitebait licences

The Recreational Whitebait fishery has an open season of 6 weeks from 1 October to 11 November with certain waters open on a rotational basis. The cost of a whitebait licence was $26.60 this year, a small increase on last year's price reflecting the normal annual increase in line with CPI.

Table 12 below lists the number of whitebait licences sold in the past seven years. It shows that 841 whitebait licences were sold this year, slightly down on the previous year. The corresponding revenue from sales was $22,690, which represented a decrease in revenue of 6.5% compared with 2008.

Year	2002	2003	2004	2005	2006	2007	2008	2009
Licences sold	497	563	761	777	1106	641	899	841

Table 12. Number of whitebait licences sold from 2002 to 2009

Whitebait licence sales tend to reflect the prevailing conditions. In 2008, favourable river heights and strong runs of bait encouraged increased sales which rose by 40.2% compared with 2007. The 6.5% decrease in whitebait licence sales this year was probably due to less favourable conditions for whitebait fishing in some rivers, with high flows remaining throughout spring. Also, since some rivers are only open for whitebaiting in alternate years hence the popularity of some rivers may also contribute to fluctuating annual licence sales.

Novice licence promotion

The Service ran a promotion targeting full season licence holders offering a 'Novice Licence' to give-away to a friend or family member as part of the annual renewal mail-out. The Novice licence could be activated on line or at licence agents by exchanging it for a Complimentary 48 Hour Licence.

A total of 1,311 people were recorded as having taken out a free 48 Hour Novice Licence during the season. Of these, 828 (63.2%) were one-off Novice Licence users; that is, they had not held a Tasmanian angling licence previously and they did not go on to purchase a licence during the 2009-10 season. Amongst those that had previously held a Tasmanian angling licence, 328 (25.0%) did not go on to buy a licence during the season. There were 175 (13.3%) Novice Licence holders, including those that had held an angling licence in the past, who went on to purchase a licence in 2009-10. Out of these, 149 bought an annual licence (118 adult, 21 pensioner, 2 senior and 8 juvenile), 22 bought another 48 Hour licence and 5 bought a 7 Day licence.

A specific indicator of the success of the promotion was the number of Novice Licence holders who had not held a Tasmanian angling licence previously but went on to buy a licence afterwards. There were 42 (3.2%) of these Novice Licence holders and they went on to buy 30 full season licences, eleven 48 Hour Licences and one 7 Day licence during the season. This was worth an estimated $1,935 in licence revenue to the Service.

Planning was undertaken to repeat the promotion for the following season. Improvements were made in relation to IFS administration and the terminology of the Novice Licence. The

latter was changed to a 'Voucher' for a free 48 Hour Licence to reinforce the need for participants to exchange the voucher for a Complimentary 48 Hour Licence either in person at a licence agent or *Service* Tasmania shop or via the internet.

PLANS FOR 2009-10

- Continued assessment and enhancement of the delivery and payment of licences.
- Maintenance of IFS website for electronic licence sales.
- Continued development of partnership with the tackle industry.
- Continued investigation of the angling market and consultation with customers.

OUTPUT GROUP 4 NATIVE FISH CONSERVATION

FOCUS

Output Group 4 is delivered by the Fisheries Management and Planning Section. Native Fish Conservation covers the management of all 25 species native freshwater fish that occur within Tasmania. These include 12 native fish species listed under the State's threatened species legislation and 11 listed under Commonwealth legislation. All of these threatened freshwater fish species, with the exception of the Australian grayling, are from the galaxiidae family, which are managed according to the *Tasmanian Galaxiid Recovery Plan 2006-2010*.

OUTPUT 4.1 TASMANIAN GALAXIAS RECOVERY PROGRAM

OBJECTIVES

- To improve the conservation status of Tasmania's 12 threatened freshwater fish species.
- To implement the *Tasmanian Galaxiid Recovery Plan 2006-2010*.
- To undertake, participate and encourage research into native fish conservation.

ACHIEVEMENTS IN 2009-10

The Threatened Species Unit, DPIPWE, provided funding of $40,000 for work on priority species of galaxias listed under the *Environment Protection and Biodiversity Conservation Act 1999,* as detailed in the galaxiid recovery plan. This included the monitoring of five species, the Pedder galaxias, Swan galaxias, Clarence galaxias, saddled galaxias and Arthurs paragalaxias, which was undertaken for population health and risk management purposes. A number of on-ground works for protection of these species was also undertaken during the year.

A survey of the Pedder galaxias population at Strathgordon Water Supply in May 2010 provided strong evidence of recruitment occurring, with a large number of juvenile fish present. This indicates the population is now self sustaining and will contribute significantly to the long term survival of the species.

Above average rainfall resulted in most populations of the Swan galaxias recovering from the drought conditions experienced over the previous three years. Federal government funding enabled habitat refugia to be established to protect a Swan galaxias population at Tater Garden Creek. Pool deepening and revegetation was undertaken to provide pool refuge areas for fish to retreat into during summer and periods of low or no flow. The conservation status of this species still remains tenuous with a number of populations consisting of very few individuals. Long term management for the effects of climate change and continuous monitoring and on ground works are required to ensure the Swan galaxias survival.

The health status of the golden galaxias populations at lakes Sorell and Crescent improved dramatically due to spring rains, enabling fish access to critical spawning habitat. The release of water from Lake Sorell to Lake Crescent was initiated to promote recruitment of fish in Lake Crescent. This was successful with high levels of recruitment resulting. Surveys of previous translocation sites, however revealed that only one viable population of the golden galaxias had managed to establish.

Surveys conducted on the saddled galaxias at Arthurs and Woods lakes indicated that these populations were healthy, with good numbers of both adults and juveniles. The population of

Arthurs paragalaxias at Arthurs Lake also appeared healthy, with good numbers of both adults and juveniles surveyed. The Woods Lake population however, remained in low numbers, with none captured during monitoring surveys for 2009-10. Forty three Arthurs paragalaxias were transferred from Arthurs Lake to Woods Lake during the year.

The Clarence galaxias populations surveyed were generally stable and secure across all sites with the exception of Tibbs Plains Marsh where no specimens have been found since 2005. The site at Dyes Marsh was almost completely dry with the outflow reduced to a single large pool. All brown trout were removed from the outflow where only one galaxid was found.

Advice on forestry operations near threatened fish populations was regularly provided to the Forest Practices Authority. Service staff attended the Forest Practices Tribunal on two occasions regarding disputed forest practices plans.

The Service continued to manage lamprey stocks at the base of dam at Meadowbank Lake through annual funding made available from Hydro Tasmania. This work involves the trapping and restocking of spawning adult lampreys as part of a sustainability program (see Environmental Management and Advice Section).

PLANS FOR 2010-11

- Continue attempts to re-establish the Arthurs paragalaxias population in Woods Lake.
- Continue monitoring and trout removal for the protection of a Clarence galaxias population.
- Monitor recruitment of the Pedder galaxias at Strathgordon.
- Initiate planning for the establishment of a third translocated population of the Pedder galaxias.
- Monitor Swan galaxias populations in all areas.
- Identify and undertake strategic plan for on-ground works to conserve and protect priority populations of the Swan galaxias.
- Monitor and assess environmental works at Green Tier and Tater Garden creeks.
- Disseminate information to raise awareness of native fish conservation.

OUTPUT GROUP 5 COMMERCIAL FISHERIES

FOCUS

The Fisheries Management and Planning Section and the Business Services Section deliver Output Group 5. Commercial Fisheries covers the licensing, management, research, assessment, monitoring and compliance specific to commercial fishery activities. These include the licensing of fish dealers, importers, fish farmers and harvesters of freshwater fish species (eg eels).

OUTPUT 5.1 LICENSING OF FISH DEALERS, FISH FARMS AND PRIVATE FISHERIES

OBJECTIVES

- To ensure compliance with the *Inland Fisheries Act 1995*.
- To licence and regulate fish hatcheries, fish farming, private fisheries and fish dealers in inland waters.

ACHIEVEMENTS IN 2009-10

Fish farms
The Service licences and regulates all freshwater fish farms in inland waters. Applications are assessed in collaboration with other State authorities to ensure compliance with environmental, planning and water management requirements. During the year, the Service licensed one new salmonid fish farm and one new ornamental aquarium fish operation. Additionally, the licences of 17 fish farms and four ornamental aquarium operations were renewed. A total of 23 fish farms were licensed with the Service.

Private fisheries
Private fisheries provide recreational fishing opportunities without being subject to angling licence provisions and angling regulations. During the year, one new private fishery was licensed and the licences of 20 others were renewed. A total of 21 private fisheries were registered with the Service.

Fish dealers
The Service regulates all commercial importers and sellers of freshwater fish. The Service applies a list to be used by registered fish dealers as a guide to species that are permitted for importation and trade. Species may be imported if they are approved under the national listing by Department of Agriculture, Fisheries and Forestry' Management of Ornamental Fish Strategy and if they do not pose a risk of establishment in Tasmanian waters nor a risk in terms of disease. This list, "Permissible imports list", was adjusted during this year to suit the needs of fish dealers whilst ensuring that there is no risk to the environment and industry. There were 35 fish dealers registered during the year with two businesses registering for the first time.

The Service is represented on the national Ornamental Fish Management Implementation Working Group which met in April 2010 and June 2010. No new fish species were added to Inland Fisheries controlled fish orders in 2009-10 but consideration was given to the addition of the second tranche of 67 species.

PLANS FOR 2010-11

- Continue assessment of applications in collaboration with relevant State regulatory authorities.
- Review commercial fishery business forms (eg application and renewal forms).
- Participate in the Ornamental Fish Management Implementation Working Group.
- Complete the listing of the second tranche of high risk fish species as controlled fish.

OUTPUT 5.2 COMMERCIAL EEL FISHERY LICENSING AND MANAGEMENT

OBJECTIVES

- To ensure the commercial eel fishery is managed sustainably and complies with the *Inland Fisheries Act 1995* and other legislation or requirements.

ACHIEVEMENTS IN 2009-10

Commercial eel fishing licences

Tasmania's commercial eel fishery is a limited entry fishery with licences being specific to one or more major catchments. All licence holders are required to maintain accurate records of daily fishing activities and submit monthly returns to the Service. This information is used to assess catch-effort, by-catch and to evaluate stocking requirements.

During the year, the existing 12 commercial eel licences were renewed. The industry sold a total weight of 34, 378 kg of wild eels. Short-finned eels comprised 28, 976 kg and long-finned eels 5,402 kg of this total.

Eel stocking

Eel fishers were offered a limited quantity of eels for restocking waters in their licensed catchments. Six eel fishers responded to this offer and received elvers for replenishment of eel fisheries in some lakes and farm dams. A total of 295 kg of elvers was harvested at Meadowbank Lake and provided to interested fishers.

PLANS FOR 20010-11

- Continued harvesting of elvers for restocking for the commercial eel fishery.
- Monitoring and licensing of the commercial eel fishery in Tasmania.
- Satisfy eel export permit conditions issued by the Department of Environment, Water, Heritage and the Arts (DEWHA) as required under Part 13A of the *Environment Protection and Biodiversity Conservation Act 1999*.

OUTPUT GROUP 6 PEST FISH AND OTHER SPECIES

FOCUS

The Protection and Development Section and the Fisheries Management and Planning Section deliver Output Group 6. It covers the management, monitoring and control of identified pest fish species, particularly those species listed as 'Controlled Fish' under the *Inland Fisheries Act 1995*. These include European carp (*Cyprinus carpio*), all species of mainland yabbies (*Cherax* spp.) and Eastern gambusia (*Gambusia holbrooki*) as well as a host of ornamental fish species.

OUTPUT 6.1 CARP MANAGEMENT PROGRAM

OBJECTIVES

- To minimise the impact of carp on Tasmanian fisheries.
- To contain carp to lakes Sorell and Crescent.
- To eradicate carp from Tasmanian waters in the long term.

ACHIEVEMENTS IN 2009-10

Above average rainfalls during winter and spring caused rising lake levels and the inundation of extensive wetland areas. This provided ideal conditions for carp spawning and as the weather warmed in October, carp activity intensified with carp attempting to access spawning sites in the marshes. Effort was concentrated during this period to prevent the carp from spawning and daily monitoring of the lakes was undertaken.

Tansmitter implanted male carp continued to be actively targeted as they moved and aggregated throughout the two lakes. This radio-tracking work over the years has enabled the Service to build intelligence on carp movements and to predict the preferred locations of remaining carp at varying water levels and temperatures.

Lake Crescent carp population
Since the start of the program, a total of 7,797 carp have been removed from Lake Crescent. Despite the ideal spawning conditions, no new carp were captured during the year. Extensive monitoring in Lake Crescent failed to find any sign of successful recruitment from the spawning period and it now appears that carp have been eradicated from this lake.

Lake Sorell carp population
As with Lake Crescent, daily monitoring was undertaken at Lake Sorell during the spawning period. Male carp containing transmitters were observed moving large distances most likely in search of females. These fish were captured regularly in traps and targeted on a regular basis, either when they aggregated or when they were located individually at prime sites.

Over the past year, a total of 37 adult carp, including 34 females, were removed. These mature females had the potential to lay tens of millions of eggs. Despite actively targeting and trapping these mature fish, successful spawning did occur and spawning sites were treated to kill carp eggs. However, juvenile carp were found at a number of locations around the lake late in December. An intensive and immediate effort was made to target and reduce the numbers of this new cohort while they remained concentrated in the marshes. Over 14,000 juvenile carp were removed from the lake and it is estimated that less than 4,000 remain.

In May a review of the Carp Management Program was undertaken with a series of recommendations to eradicate carp from Lake Sorell. As a result, the State Government made a further allocation of $400,000 to the Program for the following year. Funding from the Invasive Animal Cooperative Research Centre (IACRC) is available for a further year to undertake field trials of pheromones. This project aims to develop and identify opportunities to exploit the seasonal movements of carp with the results being applicable at a national level.

PLANS FOR 2010-11

- Implement recommendations for managing the Lake Sorell population with the additional funding provided by the State Government.
- Continuation of the carp containment strategy including isolating Lake Sorell from Lake Crescent.
- Deploy further barrier netting and increase the amount of fishing effort in Lake Sorell.
- Monitoring and respond to spawning activity during spring/summer.
- Targeting carp aggregations and hot spots with the aim of total eradication.
- Continue to develop and implement the IACRC Carp Pheremone Project.
- Monitor Lake Crescent for eradication success.
- Respond to carp sightings around the State.

OUTPUT 6.2 OTHER PEST SPECIES

OBJECTIVES

- To prevent further introductions and the translocation of pest fish species within Tasmania.
- To assist in the location, management and where achievable, eradication of populations of Eastern gambusia (*Gambusia holbrooki)* within Tasmania.
- Continue to raise awareness and educate anglers regarding the potential for the introduction from New Zealand of Didymo or rock snot *(Didymosphenia geminata)*.
- Continue to assess the distribution of redfin perch, gambusia and other relevant pest fish species within the State, and where feasible undertake actions to eradicate or control populations.

ACHIEVEMENTS IN 2009-10

Surveys

The two dams located near the Lyell Highway that were poisoned in February 2008 were checked for the presence of redfin perch. This work confirmed previous survey results, indicating perch have been successfully eradicated.

Didymo

The Service continued its role as chair of the Didymo Working Group, part of DPIPWE's Biosecurity Technical Group. The focus of the working group has been to continue the awareness campaign and to identify areas at greatest risk should the invasive algae establish in Tasmania or mainland Australia. Development of incursion modelling continued and was presented at the working group meeting in March 2010.

Eastern gambusia program

No new populations of Eastern gambusia where reported or identified within the State. The existing distribution is stable and confined to the Tamar estuary area. The Service provided technical advice to the Natural Resource Management, Gambusia Project Officer, who is responsible for the day to day management of gambusia in the Tamar River precinct. Management actions included monitoring, surveying and community awareness and education.

PLANS FOR 2010-11

- Respond to new pest fish sightings.
- Participate in the Gambusia Management Committee and assist the Gambusia Project Officer.
- Contribute to on-ground works and provide technical guidance with management strategies.
- Monitor sites where previous eradication actions for gambusia have been undertaken.
- Examine and where feasible, undertake eradication of priority populations of gambusia within the Tamar River area.
- Continue delivering community awareness and education regarding pest fish species.
- Assist and provide technical advice to Hydro Tasmania regarding pest fish management.
- Continue to chair the Didymo Working Group and hold two meetings during the 2010-11 financial year.

GROUP 7 ENVIRONMENTAL MANAGEMENT AND ADVICE

FOCUS

The Fisheries Management and Planning Section deliver Output Group 7. It covers a diverse range of environmental issues including artificial in-stream barriers (dams, weirs and culverts), habitat destruction and restoration, ecological studies, water quality degradation and assessment. A main focus is to provide specific and technical advice to the Service, IFAC and other government agencies, the private sector and community groups regarding fisheries management requirements.

OUTPUT 7.1 ENVIRONMENTAL MANAGEMENT AND ADVICE

OBJECTIVES

- To preserve fish passage in river systems for the protection of all freshwater fauna.
- To provide advice on the ecosystem requirements for the development of natural resource and water management plans, with a particular focus on fisheries related issues.
- To provide input to the State's water and catchment management planning process as plans are developed.
- To provide technical support to community groups and industry undertaking environmental projects.
- To assist in the conservation of native species, maintenance of freshwater ecosystems and enhancement of biodiversity.

ACHIEVEMENTS IN 2009-10

Fish passage assessment
The Service continued to provide direct input to the State's farm dam construction process through its representation on the Technical Advisory Group, which provides technical input into farm dam applications for the Assessment Committee for Dam Construction (ACDC). This has enabled the Service to review development applications for farm dams and ensure that fish passage issues are considered in dam assessment reporting. It has also enabled the Service to advise about the requirement for further studies based on the potential impact of dam construction on native freshwater fauna and potential impacts on trout recruitment. During 2009-10, the Service assessed 30 Dam Assessment Reports with no recommendations for further studies including fish and giant freshwater lobster surveys to be undertaken.

Technical advice
The Service provided input and advice on forest harvest plans that may impact on threatened species and the review of the threatened fauna advisor to the Forest Practices Authority. In addition, input was provided in relation to the water management of the South Esk and Macquarie rivers, water development projects from Tasmanian Irrigation Development Board and to Hydro Tasmania about aquatic environmental issues. Comment was also made on the Cullinswood coal mine developments.

Environmental stocking of elvers and lampreys
The Service harvests and stocks elvers and lampreys on behalf of Hydro Tasmania to replenish stocks in waters unable to receive fish recruitment due to dam infrastructure.

During the year, a total weight of 827 kg of elvers was harvested and restocked into inland waters for environmental purposes. Of these, 300 kg were released into Meadowbank Lake,

330 kg into the South Esk River, 50 kg into the King River system, 97 kg into Lake Pieman and 50 kg into Lake Rowallan. Elvers were harvested at the Meadowbank trap and Trevallyn tailrace (Tamar River).

The Service continued to manage lamprey stocks at the base of the dam at Meadowbank Lake through annual funding made available from Hydro Tasmania to trap and restock spawning adult lampreys as part of its sustainability program. A total of 358 kg of lampreys were collected from the trap below the dam and transferred to the Lake above the dam.

PLANS FOR 2010-11

- Continue provision of technical support to the ACDC.
- Continue provision of technical support to community and industry groups undertaking environmental projects.
- Continue identification of the need for management strategies for the conservation of native species, maintenance of freshwater ecosystems and enhancement of biodiversity.
- Conduct harvesting and stocking of elvers and lampreys for purposes of environmental sustainability in conjunction with Hydro Tasmania.

OUTPUT GROUP 8 BIOLOGICAL CONSULTANCY

FOCUS

The Biological Consultancy covers the external environmental consultancy services offered by the Service, primarily the provision of advice and information in areas of biological and ecological management of freshwater aquatic ecosystems. At present, consultancy work is largely dedicated to providing quality data, advice and investigative work to Hydro Tasmania's Environmental Services section.

OUTPUT 8.1 CONSULTANCY SERVICE

OBJECTIVES

- To provide a high quality, cost effective environmental consultancy service to external clients, chiefly Hydro Tasmania.
- To collect information in relation to aspects of inland freshwater ecosystems to assist in managing the State's freshwater resources.

ACHIEVEMENTS IN 2009-10

Hydro Tasmania consultancy work

Hydro Tasmania has been the principal client of the Consultancy since its inception. This year, the Consultancy provided the Hydro with routine river water quality monitoring, river algae assessments, riverine habitat and macro-invertebrate monitoring and modelling to gauge riverine health for Hydro Tasmania's ongoing Water Health Monitoring Program and related projects. Ongoing routine water quality monitoring was undertaken at Arthurs Lake, Great Lake, Woods Lake, Lake Pedder and Lake Gordon. Biological surveys on the algal beds within Great Lake were also conducted in an effort to assess seasonal variation and temporal changes associated with lake level variation.

A monitoring program for threatened native fish at Great Lake and Arthurs Lake continued. This program is funded by Hydro Tasmania and designed to examine the biology and ecology of the threatened galaxiid fish species of both lakes. The work has already established some important relationships between fish populations, critical habitats and lake hydrology. These findings are expected to assist in the development of future water level management strategies so as to sustainably manage these fish populations, particularly during periods of low water levels.

Fish surveys were conducted on the Gordon River and its tributaries using electro-fishing equipment deployed by helicopter. This aspect of work has been ongoing and is undertaken over four days roughly every six months. This work entails fishing predetermined routine sites to assess the impact of hydro electric power generation on downstream fish communities. This is undertaken as part of the Hydro Tasmania Basslink environmental monitoring obligations.

External work

Over the past year the Consultancy worked with the Glamorgan Spring Bay Council and NRM South to conduct fish surveys above and below a newly constructed fish ladder on the Swan River that traverses an artificial weir. The project was developed and funded by Glamorgan Spring Bay Council and NRM South in an effort to assist upstream migration of native fish past the evident fish barrier. The Consultancy has assisted with advice and

seasonal information obtained from bi-annual electrofishing surveys. To date, these have indicated evidence of active upstream fish migration with the assistance of the fish ladder.

PLANS FOR 2010-11

- Continued biological, physical and chemical monitoring of Woods Lake.
- Sustained involvement in Hydro Tasmania's statewide Water Health Monitoring Program.
- On-going fish surveys as part of the Basslink monitoring program.
- Undertake work promoting the involvement of the Consultancy with Hydro Tasmania.
- Develop the Biological Consultancy's profile both in Tasmania and within mainland Australia.
- Developing the consultancy to expand its client base.

OUTPUT GROUP 9 FISHERIES COMPLIANCE

FOCUS

Fisheries compliance services are delivered by Inland Fisheries Inspectors and other Authorised Officers under the *Inland Fisheries Act 1995*. These services include enforcement activities, investigations and prosecutions, as well as educational and public relations activities. Inspectors are also involved across all areas of the Service, and routinely undertake fisheries management tasks.

OUTPUT 9.1 ENFORCEMENT ACTIVITIES

OBJECTIVES

- To maximise compliance with Tasmanian inland fisheries legislation.
- To help achieve the objectives of inland fisheries management plans.
- To promote inland fishing to the public and educate anglers regarding responsible fishing.

ACHIEVEMENTS IN 2009-10

Reports from Inland Fisheries Inspectors indicated that most anglers exhibited positive behaviour and attitudes throughout the season, and there was a general atmosphere of celebration regarding the rain-induced improvements to the fishery. However it was also noted that there was a slight increase in the number of infringements, mostly relating to anglers fishing without a licence or possessing an assembled rod when unlicenced.

Inland Fisheries Inspectors worked in league with Tasmania Police, and Parks and Wildlife Service to patrol remote areas and make arrests regarding illegal fishing activities. The strategy of combining forces at an operational level within the Department of Primary Industries, Parks, Water and Environment has also been progressed this year through the formation of an agency enforcement committee. Several important reports were received from members of the public and this timely information enabled offenders to be apprehended, charges to be laid and successful prosecutions to be achieved.

Of particular note for compliance this year were the successful prosecutions for illegal whitebait fishing in the North West. These included the sentencing of a repeat offender who was fined $3,500 for taking whitebait from a closed water, namely Deep Creek, and two other whitebait poachers in the Forth River who were fined a total of $2,040 for possessing more than the legal amount of whitebait and fishing without a licence.

Also, as a result of the swift reporting by a member of the public detailing the suspicious behavior of a person at an inland water in the North West, two giant freshwater crayfish were saved and released. The alleged offender, who was found in possession of the live crayfish, was interviewed for the purpose of prosecution.

Lastly, timely information was received by Inland Fisheries inspectors that a group of fishermen were in possession of yabbies and mussels at Great Lake in August. This tip-off enabled the inspectors to immediately investigate the case and interview the alleged offenders. They were also able to ensure that the area was de-contaminated to prevent an introduction of the pest species at Great Lake. As a result of the investigation, the offender, a visiting angler from NSW pleaded guilty to charges of importing fish without authority, conveying controlled fish and to possessing fish near inland waters without authority, under the *Inland Fisheries Act 1995,* and he was subsequently fined $6,000.

The Service's compliance strategies are based on the Compliance Operational Plan. This planning has helped Fisheries Compliance staff to target compliance activities across the State. Inspectors enforce a wide range of regulations under the *Inland Fisheries Act 1995* as well as conduct angler creel surveys to assist with fisheries assessment.

Offences prosecuted in the Magistrates Court this year are detailed in Table 13, below. It shows that eight defendants were successfully prosecuted in the Magistrates Court for 15 offences. Fines and special penalties amounted to $12,640.

Prosecution Offences (Magistrates Court)	**No**
Fish without an angling licence	1
Possess assembled rod, reel and line without an angling licence	1
Possess or use other than permitted net	1
Take or possess whitebait without a whitebait licence	2
Fail to comply with a Ministerial Order. (Fish in closed waters)	2
Fail to comply with a Ministerial Order. (Take whitebait from closed water)	2
Take more than 1kg of whitebait in any one day	1
Possess more than 10 kg of whitebait at any one time	1
Import fish without authority	1
Convey controlled fish	1
Possess fish near inland waters without authority (*Cherax destructor*)	1
Possess fish near inland waters without authority (*Velesunio ambiguous*)	1
Total	**15**

Table 13. List of offences prosecuted in the Magistrates Court in 2009-10

The number of specific infringement notices issued by offences is detailed in Table 14. It shows 87 infringement notices were issued, comprising 90 offences and amounting to fines of $12,420. One infringement notice was issued and endorsed as a conditional caution and 88 verbal cautions were issued for minor fisheries and MAST offences.

Total fines from all sources totalled $25,060.

Infringement Notice Offences	**No**
Fish without an angling licence	10
Possess assembled rod, reel and line without an angling licence	14
Use more rods and lines than endorsed	3
Fish with unattended set rod	11
Fail to produce licence to officer within 14 days	1
Fail to comply with a Ministerial Order. (Fish in closed water)	4
Use bottle, can or similar object to warn of movement in the rod and line	6
Take more than 1kg of whitebait in any one day	3
Use whitebait net without attached tag bearing whitebait licence number	1
Taking fish by means other than a rod and line	1
Use fish as bait to take fish in inland waters not subject to tidal movement	1
Possess assembled rod, reel and line when taking fish prohibited	3
Fail to wear PFD in motor boat less than 6 meters in length	31
Fail to carry minimum safety equipment	1
Total	**90**

Table 14. List of infringement notice offences issued in 2009-10

PLANS FOR 2010-11

- Continue operational work to ensure compliance with angling regulations in inland waters.
- Continue implementation of statistical reporting and angler creel survey.
- Continue education and assistance to stakeholders.
- Continue stakeholder communication to better promote awareness and understanding of inland fisheries legislation.

Appendix 1. Stocking of inland waters for public fishing in 2009-10

Lake	Date	Brown	Rainbow	Brook	Salmon	Size	Origin
Beaconsfield Dams, Brandy	Dec-09	300				Fingerling	IFS, New Norfolk
Beaconsfield Dams, Bruins	Dec-09	300				Fingerling	IFS, New Norfolk
Beaconsfield Water Supply	Dec-09	300				Fingerling	IFS, New Norfolk
Big Lagoon	Nov-09	1,000				Fingerling	IFS, New Norfolk
Big Waterhouse Lake	Sep-09		700			Fingerling	Springfield Hatcheries
Big Waterhouse Lake	Mar-10		5,000			Fingerling	IFS, New Norfolk
Big Waterhouse Lake	Mar-10	1,000				Fingerling	IFS, New Norfolk
Blackmans Lagoon	Sep-09		1,100			Yearling	Springfield Hatcheries
Blackmans Lagoon	Mar-10		5,000			Fingerling	IFS, New Norfolk
Blackmans Lagoon	Mar-10	5,000				Fingerling	IFS, New Norfolk
Bradys Lake	Oct-09				300	Adult	Petuna, Cressy
Bradys Lake	Oct-09		50			Adult	Petuna, Cressy
Bradys Lake	Dec-09				550	Adult	Saltas, Wayatinah
Bradys Lake	Feb-10	30,000				Fingerling	IFS, New Norfolk
Bradys Lake	Mar-10				288	Adult	Tassal, Russell Falls
Bradys Lake	Apr-10	2,100				Adult	Liawenee, Great Lake
Bradys Lake	May-10	900				Adult	Liawenee, Great Lake
Break O'Day River	May-10	5,000				Fingerling	IFS, New Norfolk
Break O'Day River	Jun-10	5,000				Fingerling	IFS, New Norfolk
Bronte Lagoon	Nov-09			6,000		Fry	Snowy Range
Bronte Lagoon	Jan-10		10,000			Fry	IFS, New Norfolk
Brumbys Creek	Jul-09	150				Adult	Liawenee Canal, Great L
Brumbys Creek	Jul-09	200				Adult	Hydro Creek, Arthurs L
Brushy Lagoon	Jul-09				200	Adult	Springfield
Brushy Lagoon	Oct-09				250	Adult	Petuna, Cressy
Brushy Lagoon	Oct-09		50			Adult	Petuna, Cressy
Brushy Lagoon	Feb-10		150			Adult	Petuna, Cressy
Brushy Lagoon	Feb-10				50	Adult	Petuna, Cressy
Camerons Lagoon	Jun-10	50				Adult	Liawenee, Great Lake
Carters Lake	Oct-09	1,000				Fry	IFS, New Norfolk
Carters Lake	May-10	350				Adult	Liawenee, Great Lake
Clarence Lagoon	Sep-09			8,000		Fry	IFS, New Norfolk
Craigbourne Dam	Jul-09	900				Fingerling	IFS, New Norfolk
Craigbourne Dam	Jul-09	320				Adult	Hydro Creek, Arthurs L
Craigbourne Dam	Jul-09	200				Adult	Hydro Creek, Arthurs L
Craigbourne Dam	Jul-09				300	Adult	Springfield Hatcheries
Craigbourne Dam	Jul-09				820	Adult	Springfield Hatcheries
Craigbourne Dam	Oct-09				500	Adult	Petuna, Cressy
Craigbourne Dam	Oct-09		100			Adult	Petuna, Cressy
Craigbourne Dam	Oct-09			20		Adult	Petuna, Cressy
Craigbourne Dam	Dec-09	63				Adult	IFS, Salmon Ponds
Craigbourne Dam	Dec-09				275	Adult	Saltas, Wayatinah
Craigbourne Dam	Dec-09				1,000	Adult	Tassal, Russell Falls
Craigbourne Dam	Jan-10	44				Adult	IFS, Salmon Ponds
Craigbourne Dam	Feb-10		3,000			Fingerling	IFS, Salmon Ponds
Craigbourne Dam	Mar-10	508				Adult	Liawenee, Great Lake
Craigbourne Dam	Jun-10		2,600			Yearling	Petuna, Cressy
Craigbourne Dam	Jun-10		3,500			Yearling	Petuna, Cressy
Curries River Reservoir	Sep-09		3,800			Fingerling	Springfield Hatcheries

Lake	Date	Brown	Rainbow	Brook	Salmon	Size	Origin
Curries River Reservoir	Nov-09	14,000				Fingerling	IFS, New Norfolk
Curries River Reservoir	Mar-10	6,000				Fingerling	IFS, New Norfolk
Derwent River	Nov-09		1,000			Adult	Springfield Hatcheries
East Rocky Lagoon	May-10	100				Fingerling	IFS, New Norfolk
Four Springs Lake	Jul-09		8,845			Fingerling	IFS, New Norfolk
Four Springs Lake	Oct-09	10,000				Fry	IFS, New Norfolk
Four Springs Lake	Jan-10	4,850				Fingerling	IFS, New Norfolk
Four Springs Lake	Jun-10		10,000			Fingerling	IFS, New Norfolk
Four Springs Lake	Jun-10	1,000				Adult	Liawenee, Great Lake
Great Lake	Apr-10		50,000			Fingerling	IFS, New Norfolk
Great Lake	Apr-10		10,150			Fingerling	IFS, New Norfolk
Great Lake	May-10		10,000			Fingerling	IFS, New Norfolk
Great Lake	May-10		20,000			Fingerling	IFS, New Norfolk
Great Lake	Jun-10		10,000			Fingerling	IFS, New Norfolk
Huntsman Lake	Jul-09	300				Adult	Liawenee, Great Lake
Lake Barrington	Jul-09				700	Adult	Springfield Hatcheries
Lake Barrington	Oct-09				250	Adult	Petuna, Cressy
Lake Barrington	Oct-09		50			Adult	Petuna, Cressy
Lake Barrington	Nov-09		300			Adult	Springfield Hatcheries
Lake Barrington	Dec-09		5,500			Adult	Springfield Hatcheries
Lake Barrington	Jun-10				550	Adult	Saltas, Wayatinah
Lake Botsford	Oct-09	1,000				Fry	IFS, New Norfolk
Lake Botsford	May-10	300				Adult	Liawenee, Great Lake
Lake Chipman	Oct-09	1,000				Fry	IFS, New Norfolk
Lake Dulverton	Oct-09		6,000			Yearling	Springfield Hatcheries
Lake Dulverton	Oct-09		39			Yearling	Uni of Tas
Lake Dulverton	Oct-09			259		Yearling	Uni of Tas
Lake Dulverton	Jun-10	370				Adult	Mountain Creek, L Sorell
Lake Duncan	May-10	50				Adult	Liawenee, Great Lake
Lake Echo	Jun-10		10,000			Fingerling	IFS, New Norfolk
Lake Echo	Jun-10		10,000			Fingerling	IFS, New Norfolk
Lake Echo	Jun-10		10,000			Fingerling	IFS, New Norfolk
Lake Echo	Jun-10		10,000			Fingerling	IFS, New Norfolk
Lake Kara	Jul-09	300				Adult	Liawenee, Great Lake
Lake Lauriston	Mar-10		3,000			Fingerling	IFS, New Norfolk
Lake Leake	Nov-09		4,000			Yearling	Springfield Hatcheries
Lake Leake	Nov-09		6,000			Yearling	Springfield Hatcheries
Lake Leake	Jan-10		15,000			Fingerling	Petuna, Cressy
Lake Lynch	May-10	50				Adult	Liawenee, Great Lake
Lake Paget	May-10	50				Adult	Liawenee, Great Lake
Lake Rowallan	Mar-10		20,000			Fingerling	IFS, New Norfolk
Lake Waverley	Oct-09		200			Adult	Springfield Hatcheries
Leven River	Apr-10		5,000			Fingerling	IFS, New Norfolk
Little Waterhouse Lake	Sep-09		500			Yearling	Springfield Hatcheries
Little Waterhouse Lake	Mar-10		3,000			Fingerling	IFS, New Norfolk
Little Waterhouse Lake	Mar-10	1,000				Fingerling	IFS, New Norfolk
Meadowbank Lake	Dec-09				275	Adult	Saltas, Wayatinah
Meadowbank Lake	Mar-10				410	Adult	Tassal, Russell Falls
North Motton Rearing Unit	Oct-09	20,000				Fry	IFS, New Norfolk
North Motton Rearing Unit	Feb-10		20,000			Fry	IFS, New Norfolk
North Stockman Dam	Mar-10	2,000				Fingerling	IFS, New Norfolk

Lake	Date	Brown	Rainbow	Brook	Salmon	Size	Origin
Oatlands Water Supply Dam	Jan-10	2,000				Fingerling	IFS, New Norfolk
Pawleena Lagoon	Jul-09	120				Adult	Liawenee, Great Lake
Pawleena Lagoon	Jul-09	100				Adult	Hydro Creek, Arthurs L
Penstock Lagoon	Oct-09	5,000				Fry	IFS, New Norfolk
Penstock Lagoon	Nov-09	5,000				Fingerling	IFS, New Norfolk
Penstock Lagoon	Dec-09	5,000				Fingerling	IFS, New Norfolk
Penstock Lagoon	Jan-10		10,000			Fry	IFS, New Norfolk
Pioneer Mine Hole	Oct-09		200			Adult	Springfield Hatcheries
Rocky Lagoon	May-10	100				Adult	Liawenee, Great Lake
Rosebery Reservoir	Sep-09		8,000			Fingerling	Springfield Hatcheries
Rosebery Reservoir	May-10	7,000				Fingerling	IFS, New Norfolk
Rosebery Reservoir	Dec-09	2,000				Fingerling	IFS, New Norfolk
Second Lagoon	May-10	50				Adult	Liawenee, Great Lake
Tooms Lake	Oct-09		5,500			Fingerling	Springfield Hatcheries
Tooms Lake	Nov-09		3,000			Yearling	Springfield Hatcheries
Tooms Lake	May-10	2,500				Fingerling	IFS, New Norfolk
Tooms Lake	Jun-10		10,000			Fingerling	IFS, New Norfolk
Tooms Lake	May-10	320				Adult	Hydro Creek, Arthurs L
Tooms Lake	Jun-10	300				Adult	Liawenee, Great Lake
Bischoff Reservoir	May-10	3,000				Fingerling	IFS, New Norfolk

Fish Size: Fry (1-5 g) Fingerling (5-50 g) Yearling (50-200 g) Adult (>200 g)

Appendix 2. Stocking of private dams for public fishing in 2009-10

Name	Area	Date	Brown	Size	Date	Rainbow	Size	Origin
ME & RJ Lambert	Barrington	Jul-09	797	Fingerling				New Norfolk
Max Skirving	East Sassafras	Jul-09	300	Fingerling				New Norfolk
Darryl Taylor	Latrobe	Jul-09	800	Fingerling				New Norfolk
Elphin -Pastoral	Thirlstane	Jul-09	300	Fingerling				New Norfolk
Tom Radcliff	Cuprona	Oct-09	150	Fry	Dec-10	150	fry	North Motton RU
DG & MF Iruine	Sheffield	Oct-09	500	Fry	Dec-10	500	fry	North Motton RU
Andrew Langmaid	Latobe	Oct-09	900	Fry	Dec-10	200	fry	North Motton RU
Harding & Baldock	Kindred	Oct-09	25	Fry	Dec-10	25	fry	North Motton RU
Harding & Baldock	Kindred	Oct-09	125	fry	Dec-10	100	fry	North Motton RU
Harding & Baldock	Kindred	Oct-09	120	fry	Dec-10	120	fry	North Motton RU
Harding & Baldock	Kindred	Oct-09	75	fry	Dec-10	75	fry	North Motton RU
Peter Gillard	Gawler	Oct-09	200	fry	Dec-10	200	fry	North Motton RU
Ben Radcliff	Penguin	Oct-09	500	fry	Dec-10	300	fry	North Motton RU
Dale Anderson	Abbotsham	Oct-09	500	fry	Dec-10	300	fry	North Motton RU
Darren Wigg	Riana	Oct-09	300	fry	Dec-10	400	fry	North Motton RU
TJ & JJ Hine	Riana	Oct-09	500	fry	Dec-10	400	fry	North Motton RU
Darren Wigg	Riana	Oct-09	300	fry	Dec-10	200	fry	North Motton RU
Darren Wigg	Riana	Oct-09	600	fry	Dec-10	400	fry	North Motton RU
Dale Anderson	Abbotsham	Oct-09	500	fry	Dec-10	200	fry	North Motton RU
Dale Anderson	Abbotsham	Oct-09	600	fry	Dec-10	400	fry	North Motton RU
I Wright	West Pine	Oct-09	350	fry	Dec-10	300	fry	North Motton RU
Mr G McKenna	Ulverstone	Oct-09	1,000	fry	Dec-10	500	fry	North Motton RU
Mr T Whearley	Riana	Oct-09	1,000	fry	Dec-10	300	fry	North Motton RU
Mr T Coldicutt	Riana	Oct-09	500	fry	Dec-10	300	fry	North Motton RU
Mr T Coldicutt	Riana	Oct-09	500	fry	Dec-10	300	fry	North Motton RU
G Carpenter	Riana	Oct-09	500	fry	Dec-10	300	fry	North Motton RU
G Carpenter	Riana	Oct-09	300	fry	Dec-10	200	fry	North Motton RU
G Carpenter	Riana	Oct-09	300	fry	Dec-10	200	fry	North Motton RU
G Carpenter	Riana	Oct-09	500	fry	Dec-10	300	fry	North Motton RU
B Fielding	Riana	Oct-09	500	fry				North Motton RU
B Fielding	Riana	Oct-09	500	fry	Dec-10	300	fry	North Motton RU
W Ling	Riana	Oct-09	400	fry	Dec-10	200	fry	North Motton RU
Sam Ling	Riana	Oct-09	500	fry	Dec-10	300	fry	North Motton RU
Mr M Radford	Riana	Oct-09	500	fry	Dec-10	300	fry	North Motton RU
Mr M Radford	Riana	Oct-09	500	fry	Dec-10	300	fry	North Motton RU
Mr M Radford	Riana	Oct-09	450	fry	Dec-10	250	fry	North Motton RU
Mr D Stuart	Riana	Oct-09	450	fry	Dec-10	250	fry	North Motton RU
Mr D Stuart	Riana	Oct-09	375	fry	Dec-10	300	fry	North Motton RU
B Bott	West Pine	Oct-09	500	fry				North Motton RU
B Bott	West Pine	Oct-09	225	fry				North Motton RU
B Bott	West Pine	Oct-09	500	fry				North Motton RU
J Gofton	Sulphur Creek	Oct-09	250	fry	Dec-10	250	fry	North Motton RU
Mr D Dennis	Sulphur Creek	Oct-09	225	fry	Dec-10	150	fry	North Motton RU
B Fielding	Riana	Oct-09	150	fry				North Motton RU
Mr D Stuart	Riana	Oct-09	250	fry	Dec-10	150	fry	North Motton RU
Mr D Dennis	Sulphur Creek	Oct-09	250	fry	Dec-10	200	fry	North Motton RU
G Carpenter	Riana	Oct-09	330	fry	Dec-10	150	fry	North Motton RU
Skelbrook Trust	Sassafras	Oct-09	500	fry	Dec-10	700	fry	North Motton RU
Mr T Wright	Riana	Oct-09	500	fry	Dec-10	300	fry	North Motton RU
S Rowe	North Motton	Oct-09	200	fry				North Motton RU
J Burton	Wilmot	Oct-09			Dec-10	150	fry	North Motton RU
PL & AE Richards	Wilmot	Oct-09	150	fry				North Motton RU
B Bond	North Motton	Oct-09			Dec-10	100	fry	North Motton RU

Name	Area	Date	Brown (wild)	Size	Date	Rainbow (wild)	Size	Origin
D Ivory	Wilmot	Oct-09			Dec-10	100	fry	North Motton RU
K D Simms	Sprent	Oct-09			Dec-10	100	fry	North Motton RU
B Goss	Bishopsbourne	Dec-09	300	Fingerling				New Norfolk
G Spencer	Bracknell	Dec-09	300	Fingerling				New Norfolk
A Badcock	Bishopsbourne	Dec-09	300	Fingerling				New Norfolk

Fish Size: Fry (1-5 g) Fingerling (5-50 g) Yearling (50-200 g) Adult (>200 g)

Appendix 3. Results of Angler Postal Survey 2005/06-2009/10

Ranking	Season 2009/10	Total catch rate (fish per day)	Total anglers	Season 2008/09	Total catch rate (fish per day)	Total anglers	Season 2007/08	Total catch rate (fish per day)	Total anglers	Season 2006/07	Total catch rate (fish per day)	Total anglers	Season 2005/06	Total catch rate (fish per day)	Total anglers
Lakes															
1	Arthurs	2.02	9586	Great	1.84	6964	Arthurs	2.98	8449	Arthurs	2.26	10666	Arthurs	1.73	9769
2	Great	1.68	8871	Arthurs	2.21	6756	Great	1.40	5393	Great	1.58	6114	Great	1.53	6512
3	Woods	2.90	5902	Woods	2.82	4460	Penstock	1.06	3658	Bronte	1.05	2921	Bradys	0.97	2479
4	Little Pine	1.28	3970	Penstock	1.03	3365	Little Pine	1.16	3470	Woods	2.34	2853	Bronte	1.32	2405
5	Penstock	0.90	3219	Little Pine	1.52	2895	Woods	2.96	2829	Penstock	1.84	2819	Four Springs	1.26	2294
6	Bronte	1.80	2968	Bronte	1.99	2738	Four Springs	1.05	2753	Bradys	0.84	2513	Craigbourne	1.46	2220
7	Bradys	1.38	2503	Four Springs	1.36	2712	Bronte	1.58	2602	Four Springs	1.49	2479	Tooms	1.65	1850
8	Four Springs	0.95	2360	Bradys	0.83	2191	Bradys	0.95	2527	Little Pine	1.39	2038	Little Pine	1.44	1813
9	Craigbourne	0.68	2146	Brushy	0.96	2060	Brushy	0.56	1357	Burbury	2.42	1732	Brushy	1.48	1554
10	Echo	2.77	2146	Burbury	2.01	1747	Meadowbank	0.96	1357	Brushy	1.35	1664	Barrington	1.08	1406
11	Barrington	0.99	1752	Huntsman	1.89	1486	Burbury	1.91	1282	Barrington	1.39	1426	Binney	1.11	1369
12	Brushy	0.86	1752	Barrington	0.98	1434	Barrington	0.36	1207	Craigbourne	1.00	1358	Burbury	2.23	1369
13	Huntsman	1.83	1752	Meadowbank	0.68	1252	Dee	0.48	1207	Binney	1.07	1324	Penstock	1.64	1369
14	Augusta	3.25	1609	Echo	2.38	1226	Binney	1.00	1093	Dee	0.76	1222	Dee	2.19	1110
15	Burbury	3.69	1359	Binney	1.17	1147	Ada	0.37	905	Meadowbank	0.74	1188	Tungatinah	0.87	1073
Rivers															
1	Derwent	0.5	3433	Derwent	0.7	2869	Brumbys	1.34	3017	Derwent	1.29	3091	Derwent	0.91	2424
2	Mersey	1.39	3040	Brumbys	0.93	2478	Derwent	0.73	2640	Brumbys	0.93	2649	Brumbys	0.82	2280
3	Brumbys	0.68	3004	South Esk	1.47	2191	South Esk	1.20	2376	South Esk	1.57	2309	South Esk	0.99	2207
4	South Esk	2.02	2146	Mersey	1.04	2060	Macquarie	1.20	1735	Mersey	0.83	1698	Mersey	0.72	1954
5	Macquarie	1.21	1967	Macquarie	1.41	1591	Mersey	0.80	1621	Macquarie	1.6	1596	Macquarie	1.14	1592
6	Huon	0.79	1824	Meander	1.39	1512	Huon	0.83	1471	Meander	1.61	1222	Huon	0.84	1339
7	Tyenna	2.94	1716	Huon	0.55	1226	Tyenna	2.60	1471	St Pats	5.27	1053	Meander	1.06	1158
8	Meander	2.59	1573	Tyenna	2.74	1226	Meander	1.87	1282	Huon	0.94	985	Leven	2.57	1122
9	Leven	1.38	1359	St Pats	2.78	1043	St Pats	3.54	1093	Tyenna	3.04	985	Tyenna	2.97	1049
10	North Esk	3.53	1287	North Esk	1.16	808	Leven	0.77	980	North Esk	4.00	951	St Pats	1.86	760