

Business Case

Enhanced Fish Stocking and
Environmental Improvements to
ACT Waterways

Submitted by the Capital Region Fishing Alliance

17 October 2010

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1 About the Capital Region Fishing Alliance

The Capital Region Fishing Alliance (CRFA) was formed to address the lack of recognition of recreational angling as an important social and economic activity in the Capital Region and to reverse the decline in the quality of recreational fishing in the Region.

CRFA is structured as an Incorporated Association with the aim of being the recognised voice for recreational anglers in the Region. We aim to collaborate with Government and co-operate with relevant stakeholders to improve recreational fishing for local anglers. Fishing clubs and individual anglers make up the body of the CRFA.

Our Mission:

“To contribute to the management, conservation and enhancement of fish and fish habitat in the Capital Region.”

The CRFA promotes co-operation between Canberra-Queanbeyan regional fishing clubs, other members and interested parties. We are primarily focussed on coordinating fish stocking activities, habitat restoration, educational programs and fishing events.

Our four key focus areas are:

Fish - enhancing stocks of desirable recreational angling species

Habitat - improving, restoring and enhancing fish habitat

Access - to quality fishing opportunities

Participation - promoting and increasing participation in the sport of fishing

2 Executive Summary

Since inception, the design of Canberra has always included the building of significant water ways as central aesthetical elements to the urban landscape. These waterways continue to grow in number as the ACT expands and they stand as a testament to the ACT's continuing allegiance to Walter Burley Griffin's vision.

Today, these waterways play a number of roles beyond the aesthetic: they provide habitat for various aquatic species, often providing refuge in times of drought, mitigate storm water run-off and provide recreational space unique in an Australian city.

While these waterways have many positive values, they also have some negative values that have remained hidden and are of ecological concern:

- Nearly all of these waterways hold abundant numbers of Carp, Redfin and Gambusia, all identified as an introduced pest species,
- Nearly all of these waterways are devoid of aquatic habitat suitable for native species, and
- Over the last 20 years angling (which was once a favoured past time in these waterways) has become less popular, but at the same time approximately 1 in 6 ACT residents hold a NSW angling licence which indicates that angling is a popular activity for ACT residents.

On 12 May 2010 members of the Capital Region Fishing Alliance (CRFA) met with the Chief Minister, Jon Stanhope and Mr Gary Byles, Director, Territory and Municipal Services and outlined a plan for the stocking of recreational fish species in the ACT's waterways and improvements to the aquatic habitat of those waterways. At the conclusion of that meeting the Chief Minister asked that we meet separately with Mr Gary Byles, to develop the concept in more detail.

On 10 June 2010 CRFA members met with Mr Gary Byles and Mr Gary Rake, National Capital Authority and Ms Fay Steward, Parks, Conservation and Lands. At the conclusion of that meeting Mr Byles invited the CRFA to submit a business case to the Chief Minister, detailing the immediate and long term request from Government to support the concept of improved recreational fishing and aquatic habitat in ACT waterways.

This business case has been developed by the CRFA to advise the Chief Minister.

The business case explores a number of options for government funding to support the business case. The preferred option is for the ACT Government to allocate discrete funding of \$200,000.00 per annum to Parks, Conservation and Lands for annual fish stocking and aquatic habitat research and improvement. While this option is at the lower end of the scale it has been identified as the most likely to succeed in the current economic environment. Funding to research and aquatic habitat improvement can increase over time as circumstances allow. The funding allocation for stocking is seen as the best value case and would not need increasing over time except for CPI.

The business case identifies that the funding should be allocated as follows:

- \$50,000.00 per annum for stocking of desirable recreational fish species, and
- \$150,000.00 per annum for aquatic research and aquatic habitat improvements

Enhanced Fish Stocking and Environmental Improvements to ACT Waterways

The business case outlines the justification for and potential return on investment for that funding.

3 Project Scope and Objectives

Project Name: Enhanced Fish Stocking and Environmental Improvements to ACT Waterways.

Overview: This project seeks discrete annual funding for the ACT Department of Territory and Municipal Services (ACT Conservation) for the purpose of stocking ACT waterways with recreational fish species, improving ACT waterway environmental health and providing the department with a research capability for aquatic environmental issues.

Stakeholders: ACT Government
ACT Territory and Municipal Services
Capital Region Fishing Alliance
ACT Public

Project Justification: As the ACT has increased in size, new housing developments have often included ornamental or recreation ponds as part of the landscape. These waterways provide an excellent opportunity for the community to engage in recreational fishing at the local level; however many of these waterways are not stocked or are stocked infrequently.

Most of the ponds are often devoid of any underwater environment, most consist of an excavated basin that provides little in the way of refuge for desirable recreational fish and other aquatic organisms. These open basins do provide an ideal habitat for undesirable species such as carp and redfin.

This project aims to improve the aquatic health of ACT waterways via a variety of mechanisms such as fish stocking, habitat improvement, research and public involvement through angling.

Project Objectives: All waterways in the ACT are stocked on an annual basis with recreational fish species,

Environmental works that will improve the aquatic habitat of ACT waterways are identified and implemented.

Research work advises, monitors and confirms the effectiveness of stocking and environmental works carried out in ACT waterways.

Members of the public engage more with ACT waterways through angling.

The ACT Fish Stocking Plan is amended to reflect this investment by the ACT Government.

Cost Estimate: Cost estimate for the project has no defined boundary due to the nature of the project. The CRFA is of the opinion that a minimal annual expenditure on the project of \$200,000 per annum would provide a modest, but valuable contribution to the aquatic health of the ACT. Any funding above this level would improve significantly the capacity to improve environmental outcomes and research outcomes.

The structure of the funding is divided as follows: \$50,000 per annum for the stocking of recreational fish species and \$150,000 per annum divided between aquatic environmental improvement and research as determined appropriate by the Department.

3.1 Introduction

The ACT has a good track record in ensuring the environmental values of the Territory are protected and enhanced through strong Government plans and involvement. However, to date, this has been primarily limited to terrestrial environments. This business case encourages the ACT Government to invest in the aquatic environment to the same degree that it has invested in the terrestrial environment. This objective is in line with Government policies and priorities for the environment and links to the concept of the ACT as the "Bush Capital".

The ACT has a high number of residents who participate in recreational angling. According to figures obtained from NSW Fisheries approximately 58,000 Capital Region residents (residents within the ACT, Queanbeyan and Yass postcodes) hold NSW Fishing licences. The figure for the ACT makes up the majority of this number. It is noted that persons under the age of 18 and those on various pension cards are exempt from requiring a NSW Fishing Licence to fish, so the total number of recreational anglers in the region is likely to be significantly higher than the licence holder figure.

The ACT has within its border approximately 16 artificial lakes and ponds and a number of rivers and creeks that provide benefit to the community in terms of aesthetics and recreation. Pressure on native and recreational fish species in these waterways has increased over the years from increased angling and importantly, competition from non-desirable species such as carp and redfin. Only 5 of these waterways are stocked under the ACT Fish Stocking Plan (Lake Burley Griffin, Ginninderra, Tuggeranong, Yerrabi Pond and Gungahlin Pond). Therefore many ACT waterways, especially urban ponds, provide no recreational benefit to anglers in the ACT. The unstocked waterways all hold either carp or redfin (both described as pest species in the ACT and NSW). The Upper Murrumbidgee Demonstration Reach Project has identified that the ponds and waterways of the ACT provide a significant recruitment repository for carp and redfin to the Murrumbidgee River catchment.

3.2 Policy Context

This Business Case links to a number of Policies, Programs and Initiatives of the ACT Government and other ACT Stakeholders.

- ACT State of the Environment 2011 Report August 2010 with reference to Fauna, Flora, Urban Quality and Community Engagement Indicator Clusters.
- Department of Territory and Municipal Services, Parks Conservation and Lands, Canberra Urban Lakes and Ponds Plan of Management.
- Environmental Protection Authority ACT, water Quality Environmental Protection Policy.
- Department of Territory and Municipal Services, Parks Conservation and Lands, Fish Stocking Plan for the ACT 2009 – 2014
- Department of Territory and Municipal Services, Parks Conservation and Lands, Pest Fish.
- Department of the Environment, Climate Change and Water, Understanding Canberra’s Wetlands: a school curriculum program for the study of constructed urban wetlands.
- Department of the Environment, Climate Change and Water, ACT Greenhouse Gas Reduction Targets.
- Department of the Environment, Climate Change and Water, Blue-Green Algae Monitoring.
- Department of Territory and Municipal Services, Parks Conservation and Lands, Volunteering.
- Department of Territory and Municipal Services, Parks Conservation and Lands, Threatened Species and Ecological Communities Action Plans.
- National Capital Authority, Lake Burley Griffin Water Quality.
- ACT Waterwatch, Non Government.

3.3 Project Objectives and Critical Success Factors

The following objectives and critical success factors have been identified for the project.

The Project Objectives	To be achieved by	Critical Success Factors
All waterways in the ACT are stocked on an annual basis with recreational fish species,	End of financial year 2010 – 11 and ongoing	All urban ponds in the ACT fall under an annual stocking regime supported by the ACT Government.
Environmental works that will improve the aquatic habitat of ACT waterways are identified and implemented.	Ongoing	Environmental works for ACT urban ponds are identified and works implemented within the budget scope for the particular year.
Research work advises, monitors and confirms the effectiveness of stocking and environmental works carried	Ongoing	Research work will be undertaken by the Department of Parks, Conservation and Lands within the budget scope for the particular

out in ACT waterways.		year and any research work will be communicated to stakeholders.
Members of the public engage more with ACT waterways through angling.	End of financial year 2015-16	Number of ACT residents and visitors using the lakes for recreational angling increases.
The ACT Fish Stocking Plan is amended to reflect this investment by the ACT Government.	End of financial year 2010 - 11	The plan is amended.
Recreational facilities are improved.	Ongoing	Recreational facilities such as launching ramps for small craft, appropriate interpretive signage, adequate parking facilities are established.

3.4 Alignment with Strategic Objectives

Proposal alignment with these objectives is demonstrated by:

Strategic Objective	Alignment	Evidence
Improving the ecological value of the ACT urban environment	This project will improve the biodiversity of ACT urban ponds	Increase in native species and more habitats conducive to native species wellbeing.
Water quality	Improvement or stabilisation of water quality in urban ponds.	Improved or stable water quality.

4 Description of Service Need

This business case seeks to obtain annual discrete funding for the Department of Territory and Municipal Services, Parks, Conservation and Lands of \$200,000 for the improvement in the aquatic health of the ACT urban ponds and waterways.

This funding is to be quarantined as follows:

\$50,000 annually for the stocking of urban waterways with recreational fish species, and \$150,000 to be used by the Department to conduct research on those waterways and to implement environmental works supported by that research.

It is noted that this is the minimum funding requirement to enable this project to have any real impact on the ACT aquatic environment. The allocation of greater funding to the research and environmental works will result in better outcomes for the environment.

Demographic trends in the ACT are seeing an urban expanse into previously undeveloped lands. The planning of this expansion has seen and will continue to see the creation of urban ponds and lakes for the purpose of flood mitigation, water harvesting, water quality control, aesthetic value and recreational activity.

A missed driver in the development of these ponds is the aquatic environment that is subsequently developed. Many of these ponds are devoid of or have a limited amount of suitable habitat conducive to native species requirements. Often these new ponds become a haven for undesirable fish species. This business case seeks to re-dress this imbalance by providing stocking of desirable species to out-compete the undesirable ones and to increase habitat for those desirable species.

ACT Parks, Conservation and Lands has overall responsibility for fish in the ACT, but in past years this Department has not had an allocation of funds to deal with this issue. Past stocking events have been subject to funds availability so stocking has been less than optimal. Aquatic research has generally suffered from a lack of funding.

It is envisaged that the level of funds sought will be able to be utilised effectively by the Department and, this in turn, will provide a small but needed addition to the environmental knowledge base in the ACT.

5 Stakeholder Identification

Capital Region Fishing Alliance

ACT Public

National Capital Authority – has jurisdiction over Lake Burley Griffin.

Burley Griffin Lake User Group – Convened by the NCA. Gathers and communicates with users of Lake Burley Griffin.

Department of Territory and Municipal Services

Invasive Animals CRC

ACT Waterwatch

ACT Fishing businesses and fishing media personalities

Environmental Protection Authority

Department of the Environment, Climate Change and Water

Australian Federal Police, ACT Policing

6. Communications Strategy

Success of the business case to be communicated to ACT and national fishing and environmental media.

Significant signage installed on waterway foreshores to advise the public of species, habitat and regulations relating to the environment.

6 Summary of Options

6.1 Process of Option Development

The fish stocking option was developed through consultation with NSW Fisheries to ascertain the optimal stocking density for fresh water ponds in NSW. The CRFA undertook an audit of all ACT urban ponds and evaluated approximate size, volume, average depth, water temperature variation, aesthetics, aquatic environment and water quality. This information was used to develop an annual stocking figure across three main species, i.e. Golden Perch, Murray Cod and Trout. The conclusion reached is that annual stocking to the value of \$50,000 across the three species will provide the best return on investment.

The research and environmental works option was developed through conversations with employees of the ACT Parks, Conservation and Lands (TAMS). It was noted in these conversations that research funding has a strong relationship with staffing levels or the capacity to manage outsourcing. If funding is too high work might not be able to be carried out and therefore funds not utilised, this would be seen as wasteful. On the other hand too little funding and the effort is likely to be superficial and of little real value. Based on these discussions the figures listed in the options are the upper and lower range considered.

6.2 Options Considered

Option 1

Do nothing

It is feasible for the status quo to remain and do nothing more than is currently done. While this is a valid option it refuses to acknowledge the contribution ACT urban ponds make to the Murrumbidgee River system as a recruiting ground for undesirable species. It also refuses to acknowledge the value an enhanced recreational fishery could bring to the ACT as a whole. Expanded recreational fishing opportunities in the ACT can provide social benefits to youth, especially youth at risk, increased usage of ACT park lands and increased public awareness of the aquatic environment.

Option 2

ACT Government to provide annual discrete funding to Parks, Conservation and Lands at the rate of \$200,000 per annum (indexed) to be utilised as follows:

- \$50,000 for stocking of recreational fishing species
- \$150,000 for research and environmental works associated with the ACT aquatic environment
- Allocation where feasible for recreational capital works on waterways, especially launching facilities, parking and signage.

This option is at the lower level of research and environment works funding considered feasible. Implementation of this option is within ACT budget capacity, will make a worthwhile contribution to the ACT aquatic environment and will substantially address social benefit issues. This option will see an increase in recreational fishing in the ACT which is likely to have a positive effect on ACT businesses associated with fishing and

tourism. This level of funding would also see a need to engage with the broader TAMS budget to source additional funds for recreational and other environmental works within the Capital Works Budget for the ACT.

Option 3

ACT Government to provide annual discrete funding to Parks, Conservation and Lands at the rate of \$400,000 per annum (indexed) to be utilised as follows:

- \$50,000 for stocking of recreational fishing species
- \$350,000 for research and environmental and recreational works associated with the ACT aquatic environment.

This option is at the upper end of research and capital works funding considered feasible without increasing staff within Parks, Conservation and Lands or outsourcing works. It will allow for quicker resolution of environmental issues and provide a wider palette of options. This option would see less reliance on the TAMS Capital Works budget.

6.3 Option Recommendation

It is recommended that the ACT Government allocate ongoing discrete funding of \$200,000.00 per annum in the 2010 – 11 budget for the purpose of fish stocking, research and aquatic habitat improvement for ACT waterways. This funding is to be

- \$50,000 for stocking of recreational fishing species
- \$150,000 for research and environmental works associated with the ACT aquatic environment.
- Allocation where feasible for recreational capital works on waterways, especially launching facilities, parking and signage.

7 Social and Environmental Analysis

The ACT community is very environmentally aware and has engaged in many environmental projects within the terrestrial environment; however the aquatic environment has not advanced to the same degree.

The ACT community is made up of a high percentage of people who enjoy recreational fishing as a past time but most enjoy this activity outside of the ACT. This is due to the ACT being seen as generally devoid of good recreational angling opportunities.

Many ACT residents and a high percentage of visitors to the region are unaware that some of the ACT lakes do represent fair to good recreational angling opportunities. This initiative will do a lot to redress that perception.

Development of this proposal can be cited by the ACT as a model of best practice when it comes to managing the aquatic recreational environment within a large regional centre.

Improvements associated with this initiative will have significant benefits for the aquatic environment, the social amenity of the ACT and will likely contribute to better water quality outcomes.

Opportunities may be created for new businesses within the ACT and established businesses will benefit from greater recreational activity on urban waterways.

The ACT community will become more aware of the aquatic environment and will play a greater role in its care and management.

The initiative provides an avenue for youth to engage with the environment and to develop a relationship with the environment based on knowledge of its component parts.

8 Economic and Financial Analysis

The preferred option is the most likely to meet the objectives of the business case. The \$50,000.00 component for fish stocking should be indexed to CPI. Fish for stocking will need to be purchased through private hatcheries. Indexing this component will ensure that the numbers of stocked fish will not be eroded by the increase in cost of living over time.

\$50,000.00 in stocking will allow for approximately 160,000 fish fingerlings (based on an average cost for a variety of species) to be stocked annually. Allowing for natural mortality at stocking time and predation it is expected that in the initial years only 20% to 30% of these fish will survive to grow to a size that is appropriate for recreational fishing. This low rate of return will be due to the predation by redfin (and to a lesser degree carp and gambusia) on these fingerlings. Continued high density stocking will be

required to ensure that some stocked fish grow large enough where they become the predators of redfin and carp.

Over time native species will gain a stronger foothold in the waterways so a decrease in the stocking rate may be justified, however the ACT will continue to develop new waterways as it expands, so high stocking densities in new waterways is preferred to limit the ability of undesirable species to take hold.

Research will develop over time to identify best stocking rates for individual waterways, This research will also lead to the development of new and innovative ways of providing fish habitat in man-made waterways. This research could place the ACT at the forefront of aquatic habitat development.

9 Risk Analysis and Management

A number of risks have been identified.

Increased use of waterways.

An increase in the use of waterways, especially use via water craft may lead to an increase in water activity accidents. Appropriate facilities such as adequate warning signs and facilities will decrease the risk. Review of related legislation may identify opportunities to ensure greater safety for water users.

Likelihood: medium

Consequences: high

Illegal fishing activities increase

Advice from NSW Fisheries indicates that compliance with NSW fishing rules is high. A high proportion of ACT residents hold a NSW angling licence so this would indicate that compliance is likely. Review of related legislation may identify opportunities to ensure greater compliance opportunities.

Likelihood: low

Consequences: Low

10 Procurement Strategy

Purchase of fish for stocking is to be controlled through Parks, Conservation and Lands.

Research is to be coordinated through Parks, Conservation and Lands

Environmental works is to be initiated through Parks, Conservation and Lands in consultation with TAMS.

11 Implementation Strategy

While the overall thrust of the business case is to improve recreational angling in the ACT, improvement in the aquatic environment will be a positive consequence should the initiative be adopted. To ensure continuity with the project Scope and Objectives it is proposed that a committee of angler representatives and Department officials be established to guide the implementation and monitoring of the project. A similar concept is in operation in NSW, where anglers meet, on an annual basis, with Fishery officials to allocate fish for stocking, establish rules and regulations and consider environmental issues. It is proposed that a similar process be adopted as part of this project.

It is anticipated that such a committee would meet annually with a view to:

- Establish, monitor and review the stocking process
- Advise on recreational capital works required

- Review and recommend projects for research
- Advise and comment on legislative and policy issues relating to the ACT Fishery.

12 Recommendation

The Capital Region Fishing Alliance recommends that the:

ACT Government provides annual discrete funding to Parks, Conservation and Lands at the rate of \$200,000 per annum to be utilised as follows:

- \$50,000 for stocking of recreational fishing species (indexed to CPI)
- \$150,000 for research and environmental works associated with the ACT aquatic environment.
- Allocation where feasible for recreational capital works on waterways, especially launching facilities, parking and signage.
- Establishes a committee comprised of ACT angler representatives and Department officials to ensure the project meets its Scope and Objectives

It is also recommended that:

This funding be provided in the 2011 -12 ACT budget.

13 Endorsement

This business case was developed by Steven Samuels on behalf of the Capital Region Fishing Alliance.

Endorsed:

Shane Jasprizza

Steven Samuels

Date: / / 2010

Date: / / 2010