

Deniliquin Lagoons Community Restoration Project

COUNCIL NAME

Deniliquin Council

WEB ADDRESS

deniliquin.nsw.gov.au

SIZE

143 square kilometres

POPULATION

7,376

Overview

The Deniliquin Lagoons Community Restoration Project is a community partnership project that restored and re-invigorated an important local natural resource – Deniliquin Lagoons - in an inclusive and sustainable way. The project restored wetland features and function to the lagoon system that forms an important natural wetland corridor and storm water drainage system through the centre of Deniliquin.

The restoration included re-establishment of native flora and reintroduction of native fauna including a threatened population of southern pygmy perch, protected water rats and turtles and aquatic birdlife. The rehabilitation work has secured the connectivity and habitat for those endangered species and established a natural filter for stormwater run off. The reinvigorated lagoon system is now used to educate students and visitors and showcases the ecological and societal (including indigenous) values of wetlands. It also provides an area where local indigenous groups can harvest wetland plants for cultural and economic purposes.

Background

Deniliquin Council identified that the lagoon system was becoming degraded and fragmented, due to an array of human disturbances, and that this degradation was having a severe negative impact on native flora and fauna along this natural wetland corridor. Deteriorating water quality, reduced numbers of native fauna and aquatic birds, and the absence of native flora were the main indicators that prompted Council to act. The lagoons also play an important role in managing storm water drainage and directing residual flows into the Edward River.

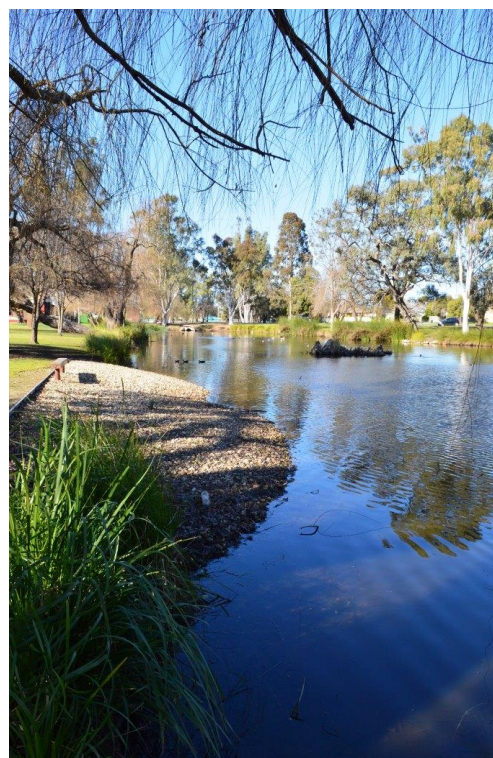
Restoring the lagoon system addresses strategies and goals in Council's Community Strategic Plan. Project outcomes were linked to and met the requirements of the Recovery Strategy for the Southern Pygmy Perch and also embraced the NSW Wetlands Policy which promotes the sustainable conservation, management and wise use of wetlands in NSW.

Implementation

The main objectives of the program were determined following input from all project partners including; Yarkuwa Indigenous Knowledge Centre, Murray Local Land Services (LLS), Murray Catchment Management Authority (CMA), NSW Department of Primary Industry (DPI) and Deniliquin RSL Fishing Club.

The main objectives of the program were;

1. To restore and reinvigorate the degraded wetland habitat within the Deniliquin lagoons-wetlands system.



2. To secure and re-establish, threatened Southern Pygmy Perch and protected water rats and turtles, habitat and connectivity in lagoons and wetland areas.
3. To showcase the lagoons and the ecological and societal (including Indigenous) values of wetlands
4. To provide an area where local Indigenous groups can connect with wetlands, and harvest indigenous wetland plants for cultural and economic purposes.
5. Enable and encourage local schools and community based organisations to become involved in the management of environmental assets within area.

Implementation of the project involved the following:

- A project team was formed, roles defined and a vision and objectives agreed on. A project management plan including a timeline and community engagement strategy was developed.
- Capacity building and community ownership of projects was fostered. Publicity undertaken to inform, engage and involve the wider community, including schools. Council worked with relevant agencies to ensure that the management plan and associated works met/were within legislative requirements and plans.
- Baseline assessments were undertaken to establish current condition and set targets for condition improvement.
- The local indigenous group was consulted to identify plant types and suitability for weaving. A wetland consultant was employed to grow the plants and consult on restoration work.
- The lagoons were drained and non native flora and fauna removed. Earthworks were undertaken to prepare beds for planting and habitat instalment.
- Southern Pygmy perch recovery plan for the lagoons system was developed and a population of Southern Pygmy perch was secured.
- The lagoons were allowed to refill, and the site maintained during the grow out of plants eg weeding, watering.
- Installation of story boards, seating and bird hide as part of the eco-experience.

The project commenced in 2013 and was completed in April 2015 due to requirements to grow native plants from seed. The project cost a total of \$185,000 and was funded by Deniliquin Council \$60,000, Deniliquin RSL Fishing Club \$25,000, Yarkuwa Indigenous Knowledge Centre \$25,000, Murray Local Land Services \$75,000.

Outcomes

The project achieved its objectives as outlined below:

1. The lagoons have been cleaned and cleared of any non native aquatic species and non native flora and have had suitable habitat features incorporated below water level to encourage breeding of native fish including the Southern Pygmy Perch and above water level to encourage native bird life such as the reed warbler to return to the wetlands. In just a few months the wetlands have visibly come back to life. Council monitors water quality and the effectiveness of the wetlands in passing storm water through the system to the Edward River.
2. Murray Local Land Services have established a monitoring program since the release of seeding numbers of Southern Pygmy Perch, Purple Spotted Gudgeons and Olive Perchlets, to identify any variation in fish numbers and to determine the suitability of protected habitats such as the Deniliquin Lagoons for breeding of endangered native species.
3. The lagoons have been incorporated into a tourist trail and a publication will be released in early 2016 highlighting the restoration work and the value of the habitat for increasing numbers of native fauna and re-establishment of important native flora.
4. Yarkuwa Indigenous Learning Centre utilize the, now prolific, reed stocks using traditional weaving methods to produce sale-able products which assist in funding indigenous programs.
5. Deniliquin High School have been involved in two projects related to the monitoring of small bodied fish, as well as connections to the Island Sanctuary and Edward River. In addition,

presentations and visits have been given to community groups including Intereach, Lions, Rotary, and Probis. Wetland walks have also been conducted with school and community groups, as World Wetlands Day activities, and for community members during the monthly Lions Club markets.

Plans have been approved to establish a recreational fishing education centre at Brown Park Lagoon. The project team are hopeful of receiving funding to employ an indigenous ranger to provide escorted tours of the wetlands to inform people of the importance of protecting and maintaining natural habitat, flora and fauna and informing about vital but sensitive ecosystems that exist even in the centre of our towns.

Key Learnings

The Deniliquin Lagoons Community Restoration Project achieved its objectives within budget. A large part of its success can be attributed to engaging all project partners in the planning stage and gaining agreement on the project objectives and desired outcomes. All partners contributed to the physical restoration work as well as the science and theory of the project.

Deniliquin has a number of other lagoons within the wetland system and over time all will be restored using the same methods in partnership with the project partners. The next stage has just begun to drain, clean and rid Brown Lagoon of any non native flora or fauna before reconstructing habitat for the introduction of adult Murray Cod and Yellow Belly and planting additional reed stocks.

The lagoon will incorporate casting pods and an educational pergola highlighting the importance of catch and release to sustain our native fish stocks. Educational sessions will be provided by volunteers giving instructions to school groups on how to handle native fish from the time of catching to the time of release and the importance of maintaining viable stocks of native fish and protecting local habitats.

Those involved in the project gained significant knowledge about natural resource management and were better able to understand the value of this asset and how to improve management of local natural habitats to protect them for future generations. This has been a successful local natural resource management and restoration project that encouraged community participation and engagement.

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This project was the 2015 winner of the Natural Environment Protection and Enhancement Award at the LGNSW Excellence in the Environment Awards.