

# PROTECTION AND RESTORATION OF OXLEYAN PYGMY PERCH HABITAT

## overview of the project

Urban drainage and stormwater are threatening processes affecting Oxleyan Pygmy Perch (*Nannoperca oxleyana*), an endangered fish that is found in freshwater swamps, creeks and lakes in north-east New South Wales. The perch prefers slow-moving or still water with dense aquatic vegetation for shelter but they are also known to live in shallow grassy drains. This project by Richmond Valley Council has rehabilitated 730 metres of drainage lines, installed four stormwater treatment devices and put in 14,000 riparian plants to improve Oxleyan Pygmy Perch habitat.

The presence of the perch in drains in the Evans Head area was impeding Council maintenance of the drains. This project aimed to identify solutions to combining habitat and drainage functions. Working in partnership with state government agencies, Richmond Valley Council identified major council drains that were providing habitat for Oxleyan Pygmy Perch and rehabilitated these drains to improve water quality and habitat value. The project aimed to address elements of the Threatened Species Recovery Plan for the Oxleyan Pygmy Perch.



Oxleyan Pygmy Perch

## how the project was carried out

The project involved collaboration with a number of agencies including the Department of Primary Industries, Department of Environment and Climate Change, Department of Water and Energy, and the Northern Rivers Catchment Management Authority. Basic data on water quality and drain transects were collected and photographic points established for monitoring restoration changes.



Rehabilitated stormwater drain

The specific rehabilitation requirements of each site were determined by a consultant who then developed designs for the drains using water-sensitive urban design principles. Implementation of the works required Council to obtain development approvals and undertake comprehensive environmental assessments prior to any construction work or dredging of the drains.

Community education about the aims of the project occurred through formal exhibition of the Development Application, media releases and advertisements in local and regional newspapers and radio. Educational signs were also installed at project sites to raise awareness of the Oxleyan Pygmy Perch and the impacts of water quality on its habitat.

## outcomes now and in the future

The project resulted in the modification of 730 metres of drainage lines and the installation of four stormwater treatment devices (detention basins) to improve habitat and water quality for the Oxleyan Pygmy Perch. The detention basins help to control the effects of pollution and help to lessen the impact of high flow events on perch habitat. A Drain Management Plan has been prepared to ensure the perch have the best chance of recovery within Council-owned drains.

The local community have become more aware of Oxleyan Pygmy Perch and its habitat in the Evans Head area due to the education and consultation that has occurred during the project.

Although Oxleyan Pygmy Perch were the target species for improved drain habitat, other endangered aquatic species such as frogs will also benefit from the improved habitat within the drains.

## benefits, challenges & lessons learned

Due to the nature of the works and that the drains were known habitat for a threatened species, a significant amount of consultation and approvals were required before any of the work could proceed. Richmond Valley Council recommends that any project involving referral to State Government Departments should incorporate consultation as early as possible in the project to ensure proper approvals are in place as part of good project management.

Issues addressed included acid-sulfate soils, potential land contamination due to past use, and the presence of heritage artefacts uncovered at the aerodrome site. These environmental and heritage issues meant significant additional costs were incurred employing consultants to undertake these studies. Delays to the schedule also occurred as Council were not permitted to undertake modification to the drains during the breeding season of the Oxleyan Pygmy Perch (September to May).

The outcomes of the project will be monitored in the long term in accordance with the Drain Management Plan and the Oxleyan Pygmy Perch Recovery Plan. It will take some time for riparian vegetation to become established and for the habitat within the drains to develop in quality, but it is hoped that future surveys of Oxleyan Pygmy Perch in the local area will provide an indication of the project's success.