



Farmer's guide to installing a wildlife pond

SPECIAL POINTS OF INTEREST:

- What is a wildlife pond?
- Selecting a site
- Pond design
- Materials and costs
- Planting vegetation

Background

BCG has been investigating the biodiversity values on farms serviced by channels and dams in the Wimmera and southern Mallee region, and on farms in the Northern Mallee Pipeline region.

Currently, a diverse array of wildlife relies on the open water system of channels and dams for their water source. The development of the Wimmera Mallee Pipeline will introduce major changes

to the way water is delivered to farms in the region.

A key finding of the BCG research is that the biodiversity values on a farm can be improved by installing a **wildlife pond**.

What is a wildlife pond?

A wildlife pond is an in-ground water source designed to provide habitat for wildlife.

They provide a valuable source of water which attracts birds, provides a home for frogs and can even support turtles.

An ideal wildlife pond is circular, shallow-sided,

about 1m deep and situated in an area of native vegetation.

The margins of the pond are planted with aquatic vegetation and a few branches and logs placed in the pond to act as perches for birds and hiding places for aquatic animals.

Installing a wildlife pond on your farm can be an efficient and cost-effective way of enhancing wildlife values in the Wimmera and Mallee within a piped water delivery system.



Wildlife pond in a patch of native vegetation near Culgoa, with aquatic plants establishing.

Selecting a site for your wildlife pond



Spotted Marsh Frog at a farm dam near Birchip.

"An ideal site for a wildlife pond has at least one hectare of native vegetation, no stock access and a piped water supply nearby."

Wildlife ponds can be installed in a variety of different settings, but consider the following aspects:

Native vegetation ✓

Biodiversity values are much higher in areas where native vegetation is present. Trees, shrubs and grasses provide foraging and nesting places for birds as well as shade, shelter and protection for native animals.

Adding a wildlife pond to an area of native vegetation will provide the greatest benefit to wildlife.

Dams ✓

Dams not only provide a source of water on farms but are also habitat for wildlife. When dams can no longer be filled, many of the wildlife values supported by the dam can be maintained by installing a wildlife pond at the dam site.

Ponds could be installed in the bottom of old dams, the bed of an old channel or in a spot adjacent to an old dam or channel.

Gardens ✗

Gardens can provide many of the features of native vegetation that wildlife require, but are also areas with relatively high levels of human activity. Installing a wildlife pond in areas with disturbance and where there are cats

around is likely to negate all the benefits to wildlife that a pond provides.

Stock ✗

Wildlife ponds are not designed to be watering points for stock. Stock will eat aquatic vegetation and nearby shrubs, muddy the water and cause high levels of disturbance to the pond and its surrounds.

For these reasons, wildlife ponds should be situated in places where stock do not have access.

Fencing ✓

If the area selected has stock access, the site should be fenced off to exclude stock.

Water supply ✓

The wildlife ponds work best when connected to a piped water supply. Water levels can be maintained in the ponds via a ball and float valve. Installing a wildlife pond near an existing or planned section of pipeline on your farm will reduce the length of poly pipe required to connect a wildlife pond to the pipeline.

An ideal site for a wildlife pond has at least one hectare of native vegetation, no stock access and a piped water supply nearby. Smaller patches could be used and enlarged by planting additional local native species.

Yellow-plumed Honeyeater coming down for a drink.



Pond design

A wildlife pond is simple to construct and cheap to install.

It involves an excavated depression in the ground lined with a heavy duty plastic such as dam-lining plastic.

The shape of the depression is not really important but it should be shallow-sided and about 1m deep in the centre.

An example design is a circular depression 4m in diameter and sloping to 1m deep. This provides approximately 12.5m of shallow edge and will hold around 5000L of water.

The excavated depression is lined with dam-lining plastic to prevent seepage and maximise water efficiency. A layer of soil, 20cm thick is placed over the plastic lining so that aquatic vegetation can be planted.

It is advisable to place a layer of shade cloth over the plastic before the soil is added because this will discourage burrowing creatures, such as yabbies, from digging down too far and puncturing the lining.

It is a good idea to place a few logs and branches in the pond as hiding places

for aquatic fauna and as perches for birds as they come down to drink.

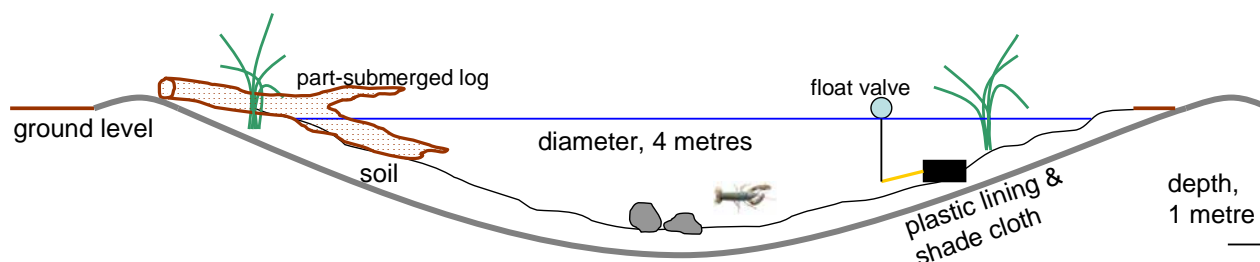
A few rocks could be placed on the bottom of the pond as additional hiding places.

The figure below illustrates the design.

Water levels should be set about 10cm below the top (ground level) of the pond.

A concrete block containing a support for the float valve could be made and either submerged with the float attached by nylon rope, or placed at the edge above the surface with the float on the end of the arm.

“A wildlife pond is simple to construct and cheap to install.”



Cross section of trough showing dimensions and features.

Materials and costs

The cost of materials for constructing a wildlife pond is minimal.

Dam-lining plastic for a 4m depression costs approximately \$80.

Shade cloth, which is optional to place over the plastic, costs approximately \$60.

The cost of a float valve and poly pipe fittings should not exceed \$60.

Therefore, the total cost of these materials is approximately \$200.

Poly pipe to connect the pond to a piped water supply will be an additional cost, and will depend on how much pipe is needed.

The ponds require approximately 5000L of water to fill them. On average, the ponds will use around 18,000L per year. At the current cost of water, this equates to about \$11 per year.

“The cost of materials for constructing a wildlife pond is minimal.”

Planting vegetation

Wildlife ponds will provide their maximum biodiversity benefit when planted with aquatic vegetation such as rushes, nardoo, water ribbons and other native species.

Exotic species (eg. aquarium plants) must be avoided as they have the

potential to become serious weeds and a threat to natural waterways if they spread.

The woodland area where the wildlife pond is installed can be enhanced by planting additional native trees, shrubs and grasses.

Understorey shrubs such as wattles, paperbarks and eremophilas planted around the wildlife pond will provide foraging, nesting and roosting habitat for many small birds, and cover for reptiles. Your local Landcare Officer can advise you on which local species are suitable for your wildlife pond site.

However, it is important to leave a relatively bare area, 2-3m wide around the edge of the pond so that there are no hiding places for feral animals, such as cats and foxes, which might prey upon fauna attracted to the pond.

“Wildlife ponds will provide their maximum biodiversity benefit when planted with aquatic vegetation...”



Logs, branches and aquatic vegetation in a wildlife pond providing habitat for fauna.

BCG Agricultural Community Innovators

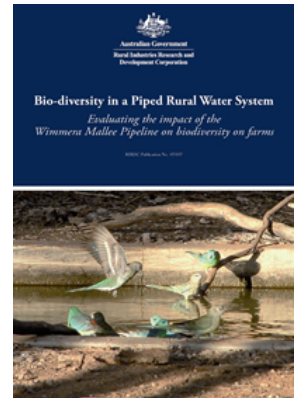
BCG aims to improve the profitability and long-term viability of Mallee and Wimmera communities through research, demonstration and exchange of ideas amongst farmers and industry groups.

This guide was prepared in 2007 as a component of the BCG Diversity in a

Piped System project, which forms part of our Making Conservation Pay initiative.

If you would like more information about wildlife ponds or assistance in selecting a site and managing a pond, please contact BCG on 03 5492 2787 or info@bcg.org.au

The full project report, 'Bio-diversity in a Piped Rural Water System', RIRDC pub. no. 07/037 is available from RIRDC on 02 6272 4218 or can be downloaded from www.rirdc.gov.au or www.bcg.org.au



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