



# Southern Bell Frog Census 2010-11

This project was undertaken by the MDB NRM Board's Aquatic Biodiversity Program, funded by the State NRM Program

**Common name:** Southern Bell Frog

**Species name:** *Litoria raniformis*

**Size:** It is the largest (up to 10 cm) of the 12 frog species recorded within the River Murray in South Australia.

**Calls:** Loud growling 'crawaark'.

**Habitat:** They can be found calling from vegetation on the edges of wetlands, creeks and rivers.

**Why is the Southern Bell Frog important?**

The species was once one of the most common frogs in many parts of south-eastern Australia. In more recent years there has been a decline in their population, particularly since the early 1990's.

As a result it is now listed as threatened in South Australia and nationally.

**Why has it declined?**

The contributing factors that are thought to have caused the decline in this species are:

- river regulation, prolonged periods of drought and lack of flooding leading to habitat loss,
- introduced predators (eg *Gambusia holbrooki*),
- degradation of aquatic and riparian vegetation and
- environmental pollutants.

**Census 2010-11**

In 2010-11 the improvement of inflows in the Murray-Darling catchment lead to the highest River flow in South Australia in 18 years (93,000ML/day in March 2011). This resulted in inundation of large areas of wetlands and floodplain areas, which has provided critical habitat and breeding opportunities for the Southern Bell Frog.

During spring / summer of 2010-11 The South Australian Murray-Darling Basin Natural Resources Management Board in conjunction with community groups and the Department of Environment and Natural Resources conducted a monitoring census to better understand the Southern Bell Frog distribution and preferred habitats. Frog surveys were conducted at 115 monitoring sites within 52 wetlands from the SA border to Wellington as part of this project.

**Threatened species listings**

Nationally 'vulnerable' under the *Environment Protection and Bio-diversity Conservation Act 1999*.

Listed as 'vulnerable' in South Australia, under the *National Parks and Wildlife Act 1972*.



Australian Government



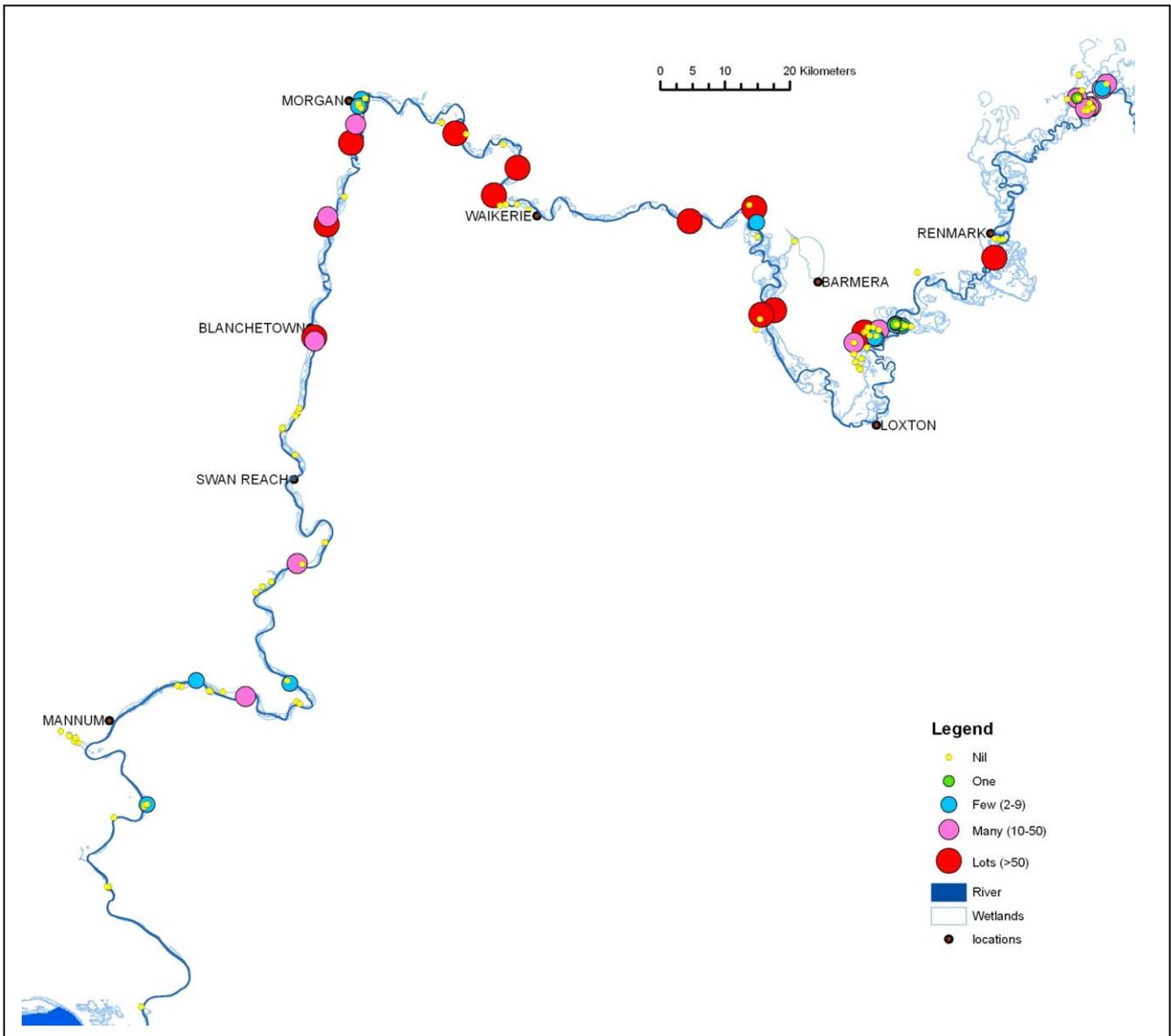
Southern Bell Frog, Overland Corner



Southern Bell Frog Habitat, Pelican Lagoon



# Southern Bell Frog abundance and distribution during 2010-11 census



## Distribution Results

Of the 52 wetlands surveyed, Southern Bell Frogs were recorded as present at 26 wetlands and the majority of these had variable watering regimes (ephemeral or temporary wetlands). Of the 115 sites within the 52 wetlands, Southern Bell Frogs were recorded at 38 sites.

## Wetlands

Wetlands with the highest percentage of Southern Bell Frog records were wetlands that are connected at pool level, but are managed for wetting and drying. The next highest percentage of Southern Bell Frog records was in temporary wetlands that are located above pool level and were inundated by the recent high flows.

## Habitat

Southern Bell Frogs use seasonally and temporarily flooded water bodies, especially for breeding. Vegetation within and along the edges of the water bodies, such as lignum and reeds, are important habitat for Southern Bell Frogs.

The 2010-11 census data indicates that these frogs were less likely to be in wetlands with no vegetation or wetlands with dense vegetation.

Southern Bell Frogs were also more likely to be present and in higher abundances within wetlands that had lower surface water salinity.

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