



## Introduction

The suggested aim of this section is for students to learn about wetlands in general as well as important wetlands from within New Zealand and around the world. Students will have the opportunity to study wetlands and their different functions, sizes and wildlife attributes that make each one of them unique.

This resource provides information about wetlands and includes a list of books and websites suitable for students to further their knowledge of these, and other wetlands.

Activity sheets can be manipulated and adjusted to suit the intended learning outcomes and photographs can be used as teacher aids or included in classroom activities, power points and for other curricular activities.

The following activities are based on 'pre-visit', 'on site' and 'post visit' categories and can be chosen according to ages, levels, interests or needs.



### WETLANDS

**100** Wetlands are permanently or sometimes wet land, shallow water and water margins. Wetlands are characterised by the plants and animals that have adapted to living in wet conditions. Wetlands retain water during heavy water flows and maintain ground water levels during periods of low rainfall.



**Why are wetlands important?**

- Wetlands improve water quality by retaining nutrients and trapping sediment which would otherwise flow into the waterway.
- Wetlands slow down the speed of surface water during a high rainfall event, which can reduce flooding and erosion. They then release them slowly like a sponge.
- Wetlands are ecologically important because they provide unique habitats and breeding grounds, and are important for the survival of many species of native plants and animals.
- They are used for fishing, shooting, botanising, bird watching and for water sports.
- Wetlands can be of great historic and present importance to Māori as both a food and medicinal source and for their spiritual significance.
- They form excellent examples of the functioning of ecosystems for education.

**Only 10% of New Zealand Wetlands remain.**



World Wetlands Day is held on 2nd February every year

HAWKE'S BAY REGIONAL COUNCIL

PEKAPEKA WETLAND

## STUDENT INFORMATION SHEETS

A set of Student Information Sheets have been prepared covering basic information on Wetlands. We encourage additional research through the provided links and information sources listed on the following pages.

- INFO100 Wetlands
- INFO101 International Wetlands
- INFO102 New Zealand Wetlands
- INFO200 Pekapeka Wetland
- INFO700 Water Quality
- INFO701 Water Levels
- INFO702 Fish passage

**200** PEKAPEKA WETLAND

Pekapeka is a palustrine wetland (from the Latin word 'palus' meaning marsh) with features of groundwater, and surface water from shallow streams. The wetland is part of a larger area of approximately 100 hectares, in a 10m track and 80m wide at its widest point.

**101** Wetlands of International Importance Ramsar

Ramsar is an international treaty (first adopted in the Iranian city of Ramsar) that provides the framework for the preservation and use of wetlands. 100 countries that belong to Ramsar and 2,000 wetlands of importance. Some of the most well known:

- Everglades National Park**: Located in Florida, the large World Heritage Site of over 480,000 hectares and is extremely important for nesting, staging and migrating birds. It has many threatened and endangered species of flora and fauna, including over one thousand species of plants.
- Kalahari Wetlands**: Located in the Northern Territory of Australia, this park is about half the size of Switzerland. Within its flood meadows, wet forests, swamps and other habitats can be found. It also attracts millions of migratory birds each year.
- Pantanal**: It is the largest, permanent wetland in the Western Hemisphere. The site includes some of the largest concentrations of wildlife and is probably the most important wetland in South America for birds.

**102** NEW ZEALAND WETLANDS Ramsar Wetlands of International Importance

New Zealand joined the RAMSAR Convention in 1976. We have six wetlands listed of international importance which covers a total of 25,517 hectares of land. The government now follows a National Wetland Policy to protect, enhance, or re-establish wetlands of regional and local importance.

- Awarua Wetland - formerly Waituna Lagoon**: Awarua Wetland is 10 minutes from Havelockville. It provides habitat for numerous native plant species, endemic butterfly and moth species as well as two species of native fish.
- Farwell Spit**: Farwell Spit, at the top of the South Island, is a 10km long sand spit with intertidal areas. It is grown in mud by 10m every year. It is particularly important as a staging area for shorebirds and supports many valuable plant species as well.
- Kaipara Peat Dome**: Close to Paeroia, Kaipara is the largest natural raised bog in New Zealand. It is an important environment for threatened birds, plants and some rare invertebrates. The swaying sands and lagoons are also a vital spawning site for threatened fish.

Only 10% of New Zealand's wetlands remain.

HAWKE'S BAY REGIONAL COUNCIL

PEKAPEKA WETLAND



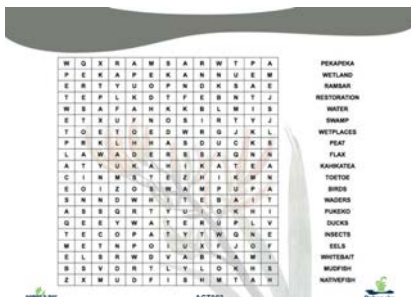
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### PRE-VISIT ACTIVITIES

- Learn about what Ramsar is and mark on a world map wetlands of international importance.
- Interview an older person in your community about wetlands. Ask them what they think about wetlands and their attitude towards them. Does this opinion differ from your own?
- Create a painting, drawing or collage of what you think a wetland looks like and the things you are likely to see there.
- Brainstorm why the class should do a restoration project. What are the benefits for the wetland, wildlife and for humans?
- Invite a person from HBRC, DoC or Fish & Game to talk about wetlands in Hawke's Bay.
- Use Activity Sheets ACT003, ACT004, ACT007, ACT008, ACT010, ACT017.

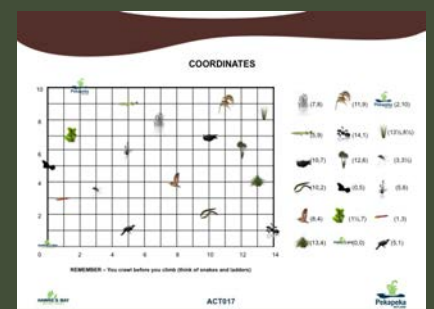
### FIELD DAY ACTIVITIES

- While at Pekapeka, make a list of words to describe the wetland.
- Find different textured wetland items and draw some of the objects or make rubbings (leaves, bark, stones.)
- Find a quiet spot and write a poem about the wetland.
- Take pictures and/or video
- Use Activity Sheets ACT003, ACT004, ACT009.



### POST-VISIT ACTIVITIES

- Visit other wetlands in Hawke's Bay like Ahuriri estuary, Kahikatea swamp track and Lake Tutira. Compare them to Pekapeka wetland, how are they similar? How are they different?
- Create a play about the wetland creatures and spread the word about the world's wetlands.
- Make a poster that explains how important a wetland is and how to protect it.
- Using your observational drawings and rubbings, create a texture collage of the wetland.
- Use Activity Sheets ACT003, ACT004, ACT009, ACT010, ACT017.





## Additional Resources

### BOOKS

#### Threatened Wetlands

From the series Protecting Our Planet

By Catherine Chambers

ISBN: 978-0-7787-5214-1

Clearly set out book giving information about wetlands around the world with Case Studies to observe and questions posed to reflect upon and discuss.

#### A Wetland Home (Australia)

By Mary Small

ISBN: 9-622-91828-X

Considers what is a wetland. Looks at the different types of animals and birds who live there, focusing on different species of water birds and observing how they raise their young.

#### The Stone Swan (picture book)

Written and illustrated by Helen Bell

ISBN: 1-876-61501-X

A pair of black swans returns to their nesting grounds in the wetlands, which are shrinking. Includes factual information on the wetlands.

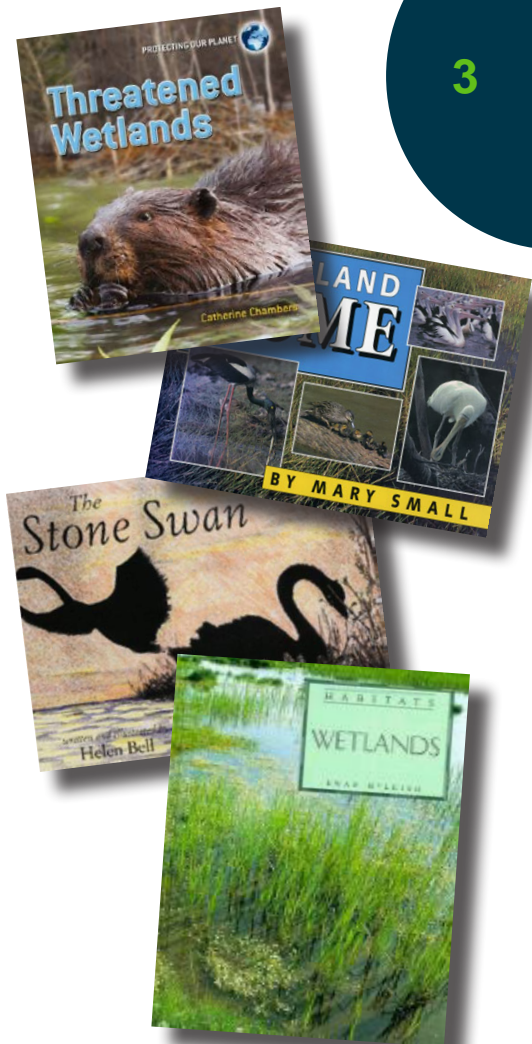
#### Wetlands

From the series, Habitats

By Ewan McLeish

ISBN: 0-7502-1587-9

Covers a broad range of information on wetlands from how they are created to the kinds of flora and fauna typically seen, to food chains/webs, and the impact of people. Suggested level: primary, intermediate.



### WEBSITES

[www.nwf.org](http://www.nwf.org)

[www.landcareresearch.co.nz](http://www.landcareresearch.co.nz)

[www.wetlands.org](http://www.wetlands.org)

[www.wikipedia.org](http://www.wikipedia.org)

[www.wetlands.co.nz](http://www.wetlands.co.nz)

[www.ramsar.org](http://www.ramsar.org)

[www.wetlandtrust.org.nz](http://www.wetlandtrust.org.nz)

[www.kcc.org.nz](http://www.kcc.org.nz)

[www.nzconservationtrust.org.nz](http://www.nzconservationtrust.org.nz)

[www.digitalnz.org.nz](http://www.digitalnz.org.nz)

[www.doc.govt.nz](http://www.doc.govt.nz)

[www.fishandgame.org.nz](http://www.fishandgame.org.nz)

### OTHER INFORMATION SOURCES

Searching via Epic, your school should have a password:

- i) Britannica Online
- ii) Global Issues in Context (secondary level)
- iii) Gale Science (secondary level)

[www.youtube.com/watch?v=TifeEbpQZKM&feature=related](http://www.youtube.com/watch?v=TifeEbpQZKM&feature=related)  
(a teenager presents a rap to encourage the protection of wetlands/ environment)

[www.youtube.com/watch?v=ft\\_2nj96jLM&feature=related](http://www.youtube.com/watch?v=ft_2nj96jLM&feature=related)  
(Explains the purpose of wetlands and types of plants)

[www.youtube.com/watch?v=KACOOUn-y4](http://www.youtube.com/watch?v=KACOOUn-y4)  
(Waituna Wetlands restoration, NZ)



IMG100



IMG101



IMG102



IMG103



IMG104



IMG105



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