

Background Information

Wetlands are vital for human survival. They are among the world's most productive environments; cradles of biological diversity that provide the water and productivity upon which countless species of plants and animals depend for survival.

Wetlands are indispensable for the countless benefits or “ecosystem services” that they provide humanity, ranging from freshwater supply, food and building materials, and biodiversity, to flood control, groundwater recharge, and climate change mitigation.

Yet study after study demonstrates that wetland area and quality continue to decline in most regions of the world. As a result, the ecosystem services that wetlands provide to people are compromised.

Western Australia's unique and diverse wetlands are rich in ecological and cultural values and form an integral part of the natural environment of the state.

Task

You are tasked with completing a research assignment on a significant wetland from Western Australia. The assignment involves:

- a set of research notes (see below for specifics)
- A 5 min presentation (powerpoint, video, poster, other) that outlines the key information from your research.

You need to choose one of the following wetlands (no more than 2 students can do each wetland).

- Becher Point Wetland
- Forrestdale and Thomson lakes
- Lake Gore
- Muir-Byenup System
- Ord River floodplain
- Roebuck Bay
- Lake Toolibin
- Vasse-Wonnerup System
- Peel-Yalgorup System
- Lake Warden
- Lake Argyle and Kununurra

Key Dates

Research Notes: Mon 10th – Thurs 13th Feb (3 lessons)

In-class presentation: Thurs 20th Feb 2020

Task Weighting

15% of the year mark.

Total marks available

60 marks

Part Notes	1:	Research [39 marks]
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You are required to research the answers for the following questions.

Your notes need to be:

- Written in your own words. ANY SECTIONS THAT ARE PLAGIARISED WILL NOT BE MARKED.
- Concise, using dot points where applicable.
- Correctly referenced (in-text and bibliography).

Your research notes **WILL** need to be submitted to your teacher at the beginning of the lesson of the final presentation.

Useful resources

<https://www.dpaw.wa.gov.au/management/wetlands>

<https://www.environment.gov.au/water/wetlands/ramsar/criteria-identifying-wetlands>

<https://www.environment.gov.au/water/wetlands/australian-wetlands-database/australian-ramsar-wetlands>

Part 2: Presentation

[21 marks]

With the information you have collected through your research, produce a 5-minute presentation that will engage the viewer (your fellow peers). Your presentation must include all key information from your research. You can choose any presentation type you think applicable to present this information.

Description	3 marks	2 marks	1 mark
Presentation of content	8-10 slides/sections included with key ideas linked to images and sources of information referenced.	8-10 slides/sections included that shows organisation of ideas in each of the researched content areas.	7 slides/sections included that is mainly text.
• PowerPoint			
• Video			
• Online website			
• Poster			
Content	Shows a full understanding of the topic	Shows a good understanding of the topic	Shows some understanding of the topic
Use of headings and sub-headings	All headings and subheadings used.	Some headings and subheadings used.	Some headings used
Delivery	Speaks with fluctuation in volume and inflection to	Speaks with satisfactory variation of volume and	Speaks in uneven volume with little or no inflection.

Creativity	emphasize key points. Creative use of fonts, transitions or animation function that includes a short-embedded clip/s that have been produced by the student	inflection. Some attempt to use transitions or animation functions on PowerPoint.	Some relevant images used and an attempt made to use colour, smart art or different fonts.
Audience interest	Engaging and interesting all the way through.	Captured interest reasonably well.	Relevant information is included.
Engagement	High level of effort.	Satisfactory level of effort.	Little effort shown.
Total	/21		

Marking Guide

Item Description	Marks
Re 1. <i>Wetland description</i> sea Clearly define what constitutes a wetland rch Outline the different types of wetlands and what makes them important.	/2
No tes	
2. <i>Ramsar Convention</i> Correctly define what the Ramsar Convention is and clarify why is it important?	/2
3. <i>Justification</i> Identify which Ramsar Criteria your WA wetland qualifies for. Clearly explain using multiple points how your WA wetlands meets this Ramsar Criteria.	/4
4. <i>Map</i> Provide a map of your WA wetland site (include geographical coordinates and location of nearest town or major town/city). Ensure that you clearly delineate the various types of wetlands within your site.	/4
5. <i>Key Features</i> Analyse and describe the key features of your WA wetland site (biogeography, physical conditions, hydrological values, wetland type).	/8
6. <i>Fishbone</i> Use the Fishbone Template to classify noteworthy biotic factors (flora and fauna) that inhabit your WA wetland. For each, describe what makes each one noteworthy.	/6
7. <i>Social/Cultural Values</i> Describe if the site has any social and/ or cultural values and detail what makes them important.	/4

8. Ecological Condition of your WA wetland

Analyse how current land and water use activities within the Ramsar site and surrounding catchment are affecting the ecological character of your WA wetland.

/6

9. Referencing

Include in-text referencing and provide a bibliography.

/3

Research Notes Sub Total

/39

Pr Presentation of content

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n

/3

Content in presentation

/3

Use of headings

/3

Delivery

/3

Creativity

/3

Audience interest

/3

Engagement

/3

Presentation Sub Total

/21

TOTAL

/60

Part 1: Research Notes

1. Wetland description (Define what constitutes a wetland and describe the different types of wetlands and what makes them important). (2 marks)

A wetland is defined as an area of land that is saturated in water rather seasonally or permanently. There are four different types of wetland, marsh, swamp, bog and fen. Wetlands are important because they:

- Protect our shores from waves*
- Reduce flood impacts*
- Absorb types of pollutions*
- Improve water quality*

- home different types of animals and plants + wide diversity of life

2. Describe what the Ramsar Convention is and clarify why it is important. (2 marks)

Ramsar convention is a intergovernmental environmental treaty, it is important to ensure the conservation and sustainable use of the wetlands. It is split to two groups, Group A and Group B, group A - 1 and group B contains conventions 2-9.

3. Identify which Ramsar Criteria your WA wetland qualifies for. (1 mark)

Lake Gore Qualities for Criteria 4,5,6

Clearly explain using multiple points how your WA wetlands meets this Ramsar Criteria. (3 marks)

4.

- Used as a drought refuge by waterbirds
- One of the most important moulting sites for thousands of Australian Shelducks

5.

- over 29,000 waterbirds were recorded at the wetland while the depth conditions are suitable for the use of 20,000 waterbirds

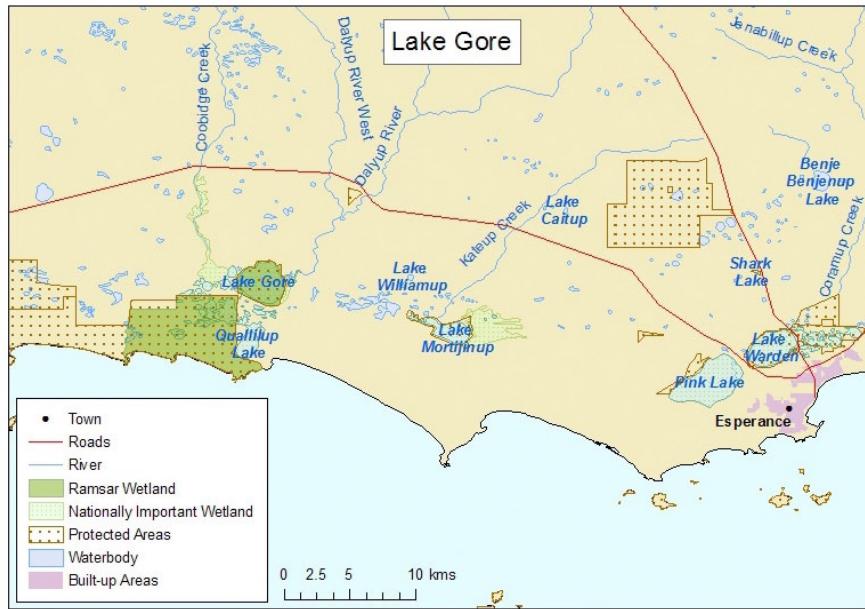
6.

- Supports almost one third of the population (1600) Hooded Plovers which makes Lake Gore the most important wetland for the species.

4. Provide a map of your WA wetland site (include geographical coordinates and location of nearest town or major town/city). Ensure that you clearly delineate the various types of wetlands within your site.

(4
marks)

NEXT PAGE →



5. Analyse and describe the key features of your WA wetland site, include the following: biogeography, physical conditions (including climate data), hydrological values, wetland type. (8 marks)

- Site contains open-woodland (saltwater Paperbank), sedge understory, raw shrubland (samphire + grasses) other surrounding areas consist of clear land or support open-scrub or open-heathland
- Most important wetland for hooded plovers
- Important moulting site for Shelducks
- There has been 48 different water bird species recorded there
- Supports threatened species, the Fairy Tern and Freckled Duck
- Regarded as significant area for fishing and gathering food
- Now used mostly for nature conservation + low-level passive recreational use.

6. Use the Fishbone Template to classify noteworthy biotic factors (flora and fauna) that inhabit your WA wetland. For each, describe what makes each one noteworthy. (6 marks)

(hooded plovers)

(Australian shelduck)

(Fairy tern)

Thinornis rubricollis

Taberna tabernoides

Sternula nereis

Lake Gore is the
most important wetland
for this species with

Lake gore has been
found to be one of
the most important
species that lives
around 3 thousand living here
and populated moulting spots
at lake Gore.

Melaleuca cuticularis

Gahnia trifida

Schoenus brevifolius

thrives in the lakes
water

7. Describe if the site has any social and/ or cultural values and detail what makes them important.

(4
marks)

Lake Gore has been identified as an important Bird Area (IBA) by Birdlife International. It was identified because it is home to over 1% of the whole population of Hooded Plovers and over 1% of the whole population of Australian Shelducks & banded stilts. Lake Gore's Indigenous significance is that they are a important source of resources such as water and food like waterfowl, tortoises, fish, rhizomes, bulbs and roots, also they were significant trade routes to Aboriginal people

8. Analyse how current land and water use activities within your site and the surrounding catchment are affecting the ecological character of your WA wetland.

(6 marks)

Because of human activity is affecting changes in the water physico-chemical of lake Gore that impacts waterbirds and may affect the categorising of the Reserve criteria

9. Bibliography (Referencing)

(3 marks)
