

CASE STUDY: Integrated Water Cycle Management

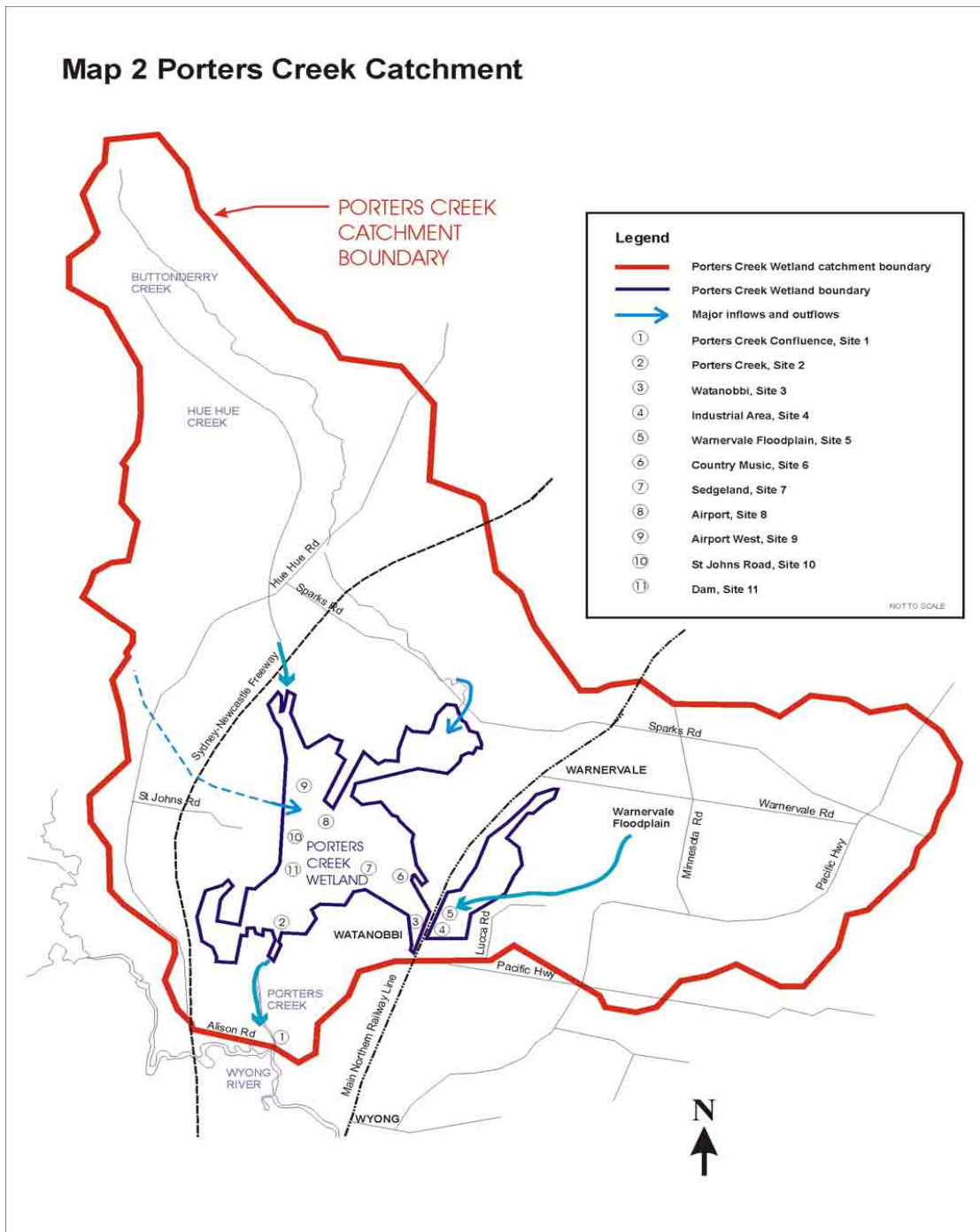
3. The Catchment for the Porters Creek Wetland

What is the Porters Creek Catchment?

Porters Creek Catchment is the area of land that supplies water to Porters Creek Wetland. It stretches from Buttonderry in the northwest to Woongarah and Kanwal in the east and Wyong River in the south. It has three main floodplains that bring water to the wetland from:

- **the east** - the Warnervale catchment (18 km²)
- **the north** - the Buttonderry Creek - Mountain Road catchment (15 km²)
- **the north-west** - the Jilliby, Hue Hue Creek and Warnervale Business Park (10km²)

Map 2 Porters Creek Catchment



(source: Wetland Web CD)







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The Catchment continued ...

ACTIVITY:

Based on the description of the Porters Creek Wetland catchment area on the previous page and the supporting information in **Appendix 2** at the back of this document, answer the following questions:

1. List four values of wetlands.
2. What percentage of the wetlands in Wyong Shire has been lost?
3. What is a catchment?
4. What is the total area of the three main catchment areas that feed into the Porters Creek Wetland?
5. How can human activities in the catchment affect the health of the wetland?

Wetland in Flood	
<ul style="list-style-type: none">• The flooding of Porters Creek Wetland has been a common sight since the days of settlement. Photos 1 and 2, below, taken fifty years apart, show the view across the floodwaters towards Watanobbi Knoll.• Photos 3 and 4 are from the Knoll in the opposite direction, with and without floodwaters.• The cycle of wetting and drying is important for the health of the wetland plant communities each of which is maintained by a specific moisture regime. Droughts are just as important as floods and it is possible for some plant communities to be too wet for too long.• There is concern that urban development in the catchment may increase the amount of flooding into the wetland. This can happen as bush and farmland is replaced by suburbs which have greater stormwater runoff.	
	
1. 1950s flood	2. 2002 flood
	
3. 2006 wet	4. 2006 dry (source: Wetland Web CD)

OPEN-ENDED QUESTION:

1. Do the photos suggest that there was more or less wetland vegetation on the floodplain in 1950, 2002, and 2006?
2. What effect is the replacement of bush and farmland by suburbs in the catchment areas likely to have on the potential amount of stormwater flowing into Porters Creek Wetland? Why? What effect is this likely to have on the various plant communities of the Wetland? What steps do you think could be taken to minimise this impact?

