

# Vegetation and Habitat Health

## PURPOSE:

1. Understand how creek bank vegetation impacts on water quality.
2. Learn the role that creek bank vegetation plays as essential habitat for macro-invertebrates.

## RIPARIAN HABITATS

The area of land adjacent to creeks and rivers is called the **riparian** zone. The assessment of plants and animals that live in the riparian zone enables us to gain an insight into the health of the waterway and its catchment in addition to water quality monitoring. The assessment of Riparian Habitats is divided into three main areas.



**Riparian and Stream Vegetation:** This includes the plants that grow alongside and in our waterways. The identification of **native** and **exotic** plants allows us to determine the extent of human impact on the riparian vegetation. Large numbers of exotic plant species indicates a high level of disturbance by human activities, and affects the types and abundance of fauna that live within the riparian zone.

**Bank Stability and Erosion:** The extent of bank stability and **erosion** is often affected by the amount of physical changes, such as roads and housing, that have occurred within the catchment. Other factors include; clearing of native vegetation (particularly riparian vegetation); trampling by livestock; and altering of the streams natural water course (**channelisation**). Increase in erosion and movement of soils into the waterways affects the **flow regime** of the creek through **sedimentation** and increases turbidity (the dirty appearance of the water). These often have negative impacts on the **aquatic** plants and animals.

**Benthic Macro-invertebrates:** These are the small animals (able to be seen with the unaided eye) without a backbone (vertebrae) that live on or in the bottom sediments (benthic area) of waterways. Many of these invertebrates act as **biological indicators** of pollution and water quality. That is, water quality can be rated as poor, fair, good or excellent, depending on the type and number of macro-invertebrates that are present at your site.

Overall 'Ratings' for each of the above will be recorded on the **HABITAT ASSESSMENT SHEET**. There are a number of steps required to complete this activity. It is recommended that you read through each section thoroughly to familiarise yourself with the instructions for each Assessment Sheet before commencing.

**REMINDER!!!** Did you find your **key words** for this activity?

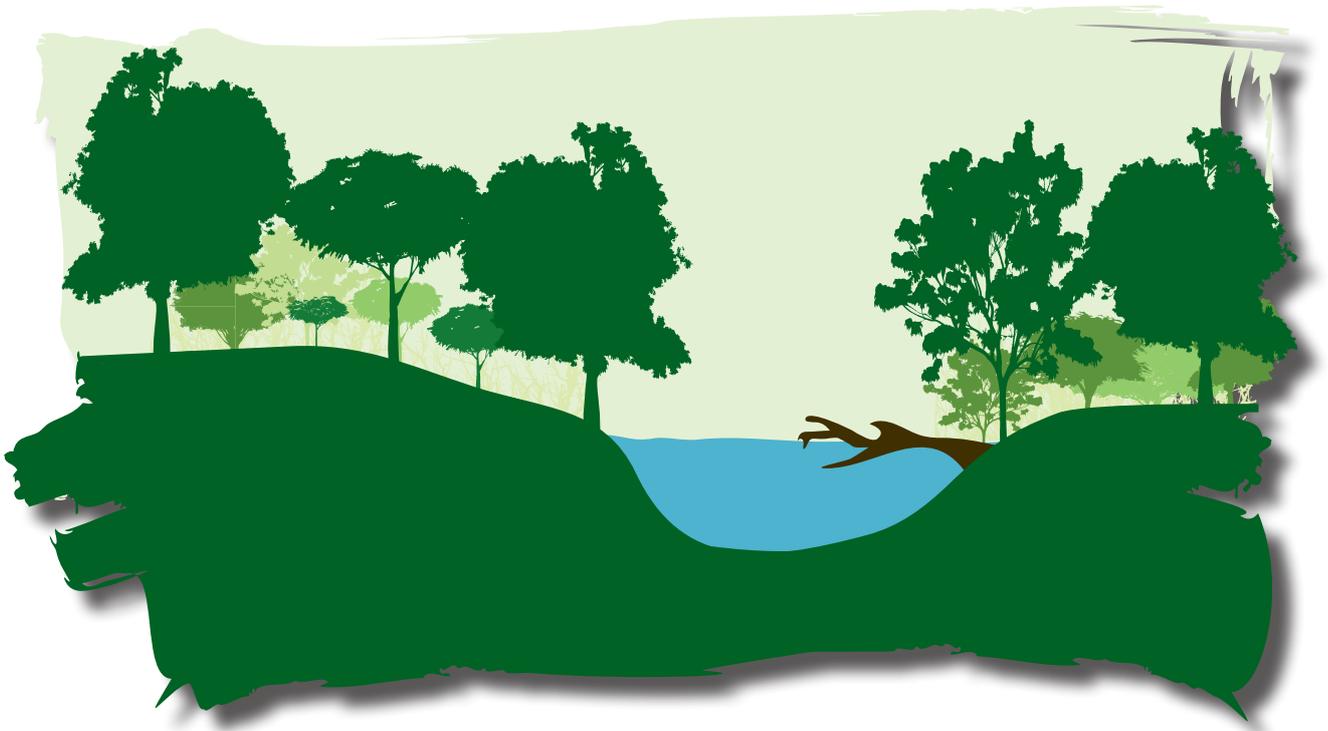
PAGE 1

# Vegetation and Habitat Health

## ACTIVITY

### Riparian Habitat Assessment

- Step 1 -** Read through the Habitat Assessment Sheet. This will be where you record your overall 'Ratings' for each habitat parameter.
- Step 2 -** The Habitat Assessment Sheet can be completed in parts or as a whole depending on time and which areas you wish to focus on. The Habitat Assessment Sheet has been broken down as follows:
- (3A) Vegetation and Habitat Health - Vegetation
  - (3B) Vegetation and Habitat Health - Erosion
  - (3C) Vegetation and Habitat Health - Macro-invertebrates
- You may wish to interpret your results on completion of the Habitat Assessment Sheet. Instructions for this have been given on Activity Sheet 3D.
- Step 3 -** Return to your chosen monitoring site.
- Step 4 -** Take time to observe the physical surroundings along the way, including buildings, roads, houses, plants and animals.
- Step 5 -** Follow the assessment sheets and identification keys carefully and record your findings on the assessment sheets provided.



# Vegetation and Habitat Health

## HABITAT ASSESSMENT SHEET

This sheet is used as a record of the riparian fauna and flora identified at each site. Keep a copy of these results so you can identify any changes that may occur over time.

Name(s): \_\_\_\_\_

Site Description: \_\_\_\_\_

Date: \_\_\_\_\_

### Comparison to Previous Assessments:

PARAMETER	RATING	REFER TO
Bank vegetation		(3A) Riparian and Stream Vegetation Sheet and Riparian Assessment Key
Stream vegetation		
Bank stability and erosion		(3B) Bank Stability and Erosion Sheet
Macro-invertebrate diversity		(3C) Macro-invertebrate Diversity Sheet
Macro-invertebrate rating		(3C) Macro-invertebrate Tolerance Sheet

RATING SCALE	
Excellent (very low disturbance)	<b>4</b>
Good (low disturbance)	<b>3</b>
Fair (high disturbance)	<b>2</b>
Poor (very high disturbance)	<b>1</b>

