

Flood Futures

Vegetation on the Floodplain

Revised Flood Modelling & Vegetation

- The WAGGA WAGGA DETAILED FLOOD MODEL REVISION identifies that changes in floodplain usage/vegetation and variation in debris load are likely to have had an impact on the flood event (Section 3.6).
- The model uses a factor called “roughness” to determine the amount of resistance an object exerts on the flow of water. An increase in roughness may be caused by an increase in the density of vegetation situated in the river channel/bank or floodplain and/or the construction of man-made structures on the floodplain. Debris lodged in vegetation could also significantly increase channel roughness (Section 3.1).
- The report indicates that during a 1% AEP event 0.18m of the peak flood level at the levee can be contributed to vegetation roughness (Section 6.8).
- Increasing the roughness value by 10% resulted in an average increase in peak flood level was less than 0.15 m. A decrease in roughness was found to reduce peak flood levels by a similar magnitude with an average decrease of 0.15 m experienced. (Section 6.8).
- A reduction in vegetation roughness will result in an increased velocity of the flood event, and may have impacts on areas outside of the study area
- Maintaining or protecting riparian vegetation is widely promoted by State Agencies and Land Management Authorities as it prevents stream bank erosion, retains fertile soils and nutrients on the property. These attributes are essential to maintain viable and productive farming enterprises.
- Native flood plain vegetation provides essential wildlife habitat. Clearing of native vegetation is identified as a Key Threatening Process for many threatened or endangered species

As identified above there are a number of factors that need to be considered when developing actions or a Plan of Management for vegetation on the stream bank and flood plain. During the development of any actions or recommendation the implications of any proposals must be considered to ensure that there is a balanced outcome for social, economical, environmental and legislative requirements.

Actions Council have undertaken to manage vegetation roughness and debris load

- Partnership with the CMA to coordinate projects at Kyeamba, Umbango & Tarcutta Creeks to remove in stream debris which contributes to the debris load in the Murrumbidgee River.
- Removal of flood debris at Wilks Park, reducing future flow impediments.
- Removal of exotic tree species from stream banks on Council managed land.
- Council has submitted a grant application which incorporates the development of a Vegetation Management Plan in consultation with State Agencies and key stakeholders. The Plan will look at the balance between vegetation management on the flood plain, biodiversity needs and legislative requirements.
- Staff are reviewing the new Native Vegetation Regulation 2013, draft Self-Assessable Codes of Practice for Thinning Native Vegetation and Invasive Native Species. Council will investigate how these codes of practice can be implemented to reduce the impacts upon a flood event, once they have been gazetted. The NSW Government is seeking community feedback on the codes of practice until 26 May 2014. To find out how you can share your views on native vegetation management in NSW visit

www.wagga.nsw.gov.au/floodfutures

