

## Wise Waterways Workshop 2016

### Assignment for CSU students

Due: Monday 14 November 2016

Length: 1500 – 2000 words

Task: Using the project/stream site that you worked on with your group, you need to write a short report which shows your understanding of the scientific and practical management concepts which underpin waterway management and restoration. You will need to refer to some of the key literature relating to river management (see reference list provided for the Wise Waterways Workshop), speaker notes from the workshop, as well as the two key articles referenced below. Use photos, maps and any diagrams collected and prepared as part of the Group assignment. Present this as a proper report including a cover/title page, table of contents, bibliography and provide credits for all photographs as well as captions for all figures, diagrams or tables.

Outline:

- Provide an overall description of the site (location, condition, threats, values)
- Choose one aspect of the site (i.e. geomorphology, vegetation, aquatic ecology, etc) and consider it in terms of restoration and management:
  - Describe the issue and its relevance/importance to the values of the site
  - Explain the management actions you recommend to improve the ecological condition (and other values) of the site
  - Based on the Palmer, et. al. (2005), consider your proposed management actions against three (of the five) criteria for measuring success in a restoration project, for example: i) having a guiding image; ii) showing improvement in ecological condition and iii) having pre- and post- assessments to measure success. Describe what you might do differently and the challenges around applying these criteria to your site and your issue.
  - Using Lake, Bond & Reich (2007), choose one of the ecological theories presented in the article and apply it to the issue and your proposed management, explaining why you think it is a relevant concept, using some of the ideas presented in the workshop.
- Provide a conclusion, summarising what you have learned from the exercise of applying scientific concepts and theory to practical management issues as well as how the Wise Waterways Workshop has contributed to your learning at CSU.

Key resources:

Palmer, M. A., Bernhardt, E. S., Allan, J. D., Lake, P. S., Alexander, G., Brooks, S., Carr, J., Clayton, S., Dahm, C. N., Follstad Shah, J., Galat, D. L., Loss, S. G., Goodwin, P., Hart, D. D., Hassett, B., Jenkinson, R., Kondolf, G. M., Lave, R., Meyer, J. L., O'Donnell, T. K., Pagano, L., & Sudduth, E. (2005). Standards for ecologically successful river restoration. *Journal of Applied Ecology*, 42, 208-217. <http://ezproxy.csu.edu.au/login?url=http://dx.doi.org/10.1111/j.1365-2664.2005.01004.x>

Lake, P. S., Bond, N., & Reich, P. (2007). Linking ecological theory with stream restoration. *Freshwater Biology*, 52, 597-615 <http://ezproxy.csu.edu.au/login?url=http://dx.doi.org/10.1111/j.1365-2427.2006.01709.x>