

Water Quality Fact Sheets

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OVERVIEW

Fact sheets provide clear and concise summaries of key concepts and are an accessible way to understand water quality. This series of fact sheets is designed to support informed decision-making and promote best practices across the production nursery and horticultural industries.

The Nursery and Garden Industry NSW and ACT (NGINA), with Macquarie University, led a government-funded project to investigate water quality concerns related to storm and flood events at production nurseries (**Figure 1**).

A literature review identified important catchment conditions, water quality parameters, and other relevant issues. Catchment and nursery lot mapping, flow path and inundation modelling, and water and sediment monitoring was undertaken. An adaptive framework was developed to understand and help manage water quality and contamination concerns at production nurseries.

Read and download the literature review online:

Gomes, M., Ralph, T., Humphries, M., Graves, B., Kobayashi, T., Gore, D. 2025. Waterborne contaminants in high intensity agriculture and plant production: A review of on-site and downstream impacts. *Science of the Total Environment*, 958. 178084.

<https://doi.org/10.1016/j.scitotenv.2024.178084>

FACT SHEET TOPICS

The fact sheets cover the following topics:

1. Water Quality Overview
2. Catchments and Waterways
3. Storms and Floods
4. Water Sampling
5. pH and Alkalinity
6. Salinity
7. Water Hardness
8. Heavy Metals
9. Nutrients
10. Turbidity
11. Sediment
12. Pathogens
13. Aquatic Biota
14. Weeds
15. Adaptive Management

Read and download the adaptive framework online:

Ralph, T.J., Graves, B.P., Gomes, M., 2025. Framework to identify and mitigate water storage contamination concerns at NSW and ACT production nurseries. Macquarie University. <https://doi.org/10.25949/AS0X-VX91>

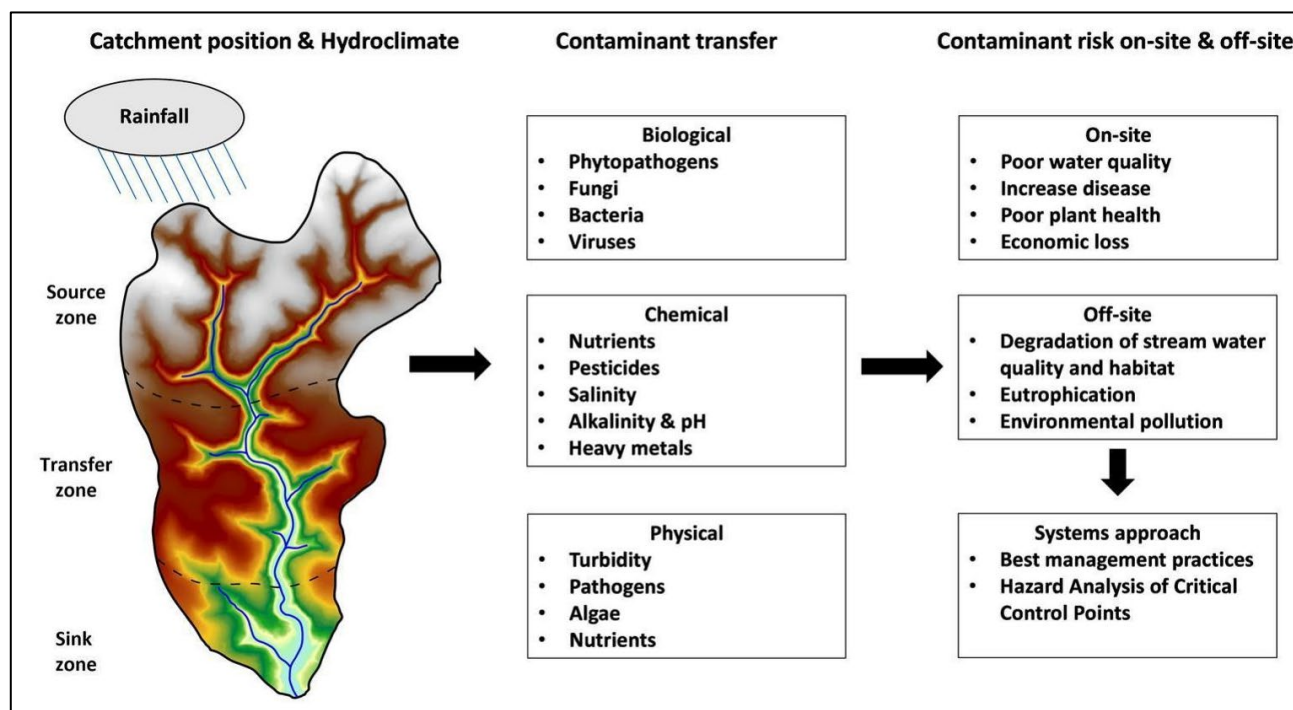


Figure 1. Summary of physical and biogeochemical factors contributing to water-borne contaminant risk at production nurseries.

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The following documents and websites were consulted during the preparation of these fact sheets. For a full list of papers included in the literature review, see the references in Gomes et al. (2025).

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