

MANAGING OUR RESOURCES FOR FRESH WATER QUALITY

Scion provides the science to support the sustainable use of New Zealand's fresh water resources.

FRESH WATER ENHANCEMENT

Scion offers a unique combination of research expertise in New Zealand forestry, wood manufacturing, biotechnologies and aquatic systems.

Our specialists can assist forest growers, manufacturers of wood and wood fibre products, land owners, government agencies and communities to manage their resources for the protection and enhancement of fresh water and natural ecosystems.

We offer the following capabilities and services:

ECOSYSTEM VALUATIONS

Decisions around sustainable land use can be better informed by assessing the benefits and costs of an ecosystem, such as economic, environmental, social and cultural values.

Scion's economics team offers capabilities in economic valuation of ecosystem services, spatial economic modelling, ecological economics, cost-benefit analyses, profitability analyses, risk simulation, regional economics, ecosystem assessment and trade-offs, land-use decision making, scenario analysis, and environmental policy and communications.

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FRESHWATER ECOSYSTEMS

Streams and rivers that run through plantation forests often contain high water quality and biodiversity. Potential environmental impacts on freshwater resources from management activities, such as harvesting, can be reduced or eliminated through effective management practices.

Scion has capability in water quality and freshwater ecosystem monitoring and assessment, and provides research, advisory and consultancy services to land owners and land managers concerned with the protection and enhancement of freshwater ecosystems.

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Scion provides the freshwater expertise to support the management of forested catchments.

RIPARIAN MANAGEMENT

Managing the vegetation along riparian margins can substantially enhance waterways and mitigate the impacts of harvesting. Scion provides practical expertise in the establishment and management of riparian margins on both forested and pastoral land. We can also assist with decisions around appropriate riparian widths using a range of vegetation types, including native species.

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INDUSTRIAL AND MUNICIPAL WASTEWATER TREATMENT

Wastewater treatment strategies need to be assessed and refined in tandem with manufacturing processes. At Scion, researchers have a long history in pulp and paper wastewater treatment as well as a more recent history in treating high strength waste waters from thermochemical processes. The aim of the research is to reduce impact on the receiving water as well as extracting as much value from the waste water as possible.

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SUSTAINABLE REUSE OF WASTES AND ECO-TOXICOLOGY

Assessing the sustainable reuse of wastes to land is important to maintain the quality of our fresh water resources. Our scientists have long term experience and strong capabilities around investigating the fate of nutrients and emerging organic contaminants associated with the land application of waste, and their environmental and eco-toxicological effects. Key eco-toxicology capabilities include tolerance and immune response assays.

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www.scionresearch.com/services

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We help industry clients develop long-term solutions for improving wastewater treatment systems.

SPATIAL MODELLING

Water foot printing, identification of potential riparian areas, nutrient and sediment modelling and other hydrological spatial modelling is another area that Scion has expertise in.

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WATER TESTING SERVICES

Scion undertakes water, nutrient and contamination analysis for a wide range of industries including forest owners, forest managers, farmers, district councils and utility companies. Monitoring your water quality through regular testing is key to maintaining a safe and reliable water source that is both protected from potential contamination, and operating properly.

We provide routine and customised water testing services to meet specific needs.

Contact: testing@veritec.co.nz

ABOUT SCION

Scion is a Crown Research Institute that specialises in research, science and technology development for the forestry, wood product and wood-derived materials and other biomaterial sectors. Scion's purpose is to create economic value and contribute to beneficial environmental and social outcomes for New Zealand.

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