

Canterbury Water Management Strategy (CWMS):
Achieving Ecosystem Health and Biodiversity expectations for
water infrastructure concepts

Experience indicates that when developing water infrastructure concepts, ecosystem health and biodiversity attributes that align with CWMS principles and targets are best provided for at an early stage. Early attention minimizes risks related to financing, design (reducing the need for design re-work), and regulation (such as consenting).

Engagement with CWMS Committees and support personnel is the recommended first step. The following items summarized from Zone Implementation Programmes (ZIPs) show attributes consistent with CWMS expectations:

Information expectations

- The allocation and environmental flow statuses of waterways in a catchment, as measured by against Land and Water Regional Plan (LWRP) requirements.
- The water quality of waterways in a catchment, including wetlands.
- Identification of water use efficiency options in the catchment area.
- Identification and quantification of potentially affected significant surface water and ground water dependent ecosystems, habitats and species.
- Sufficient spatial, temporal and attribute data to enable comprehensive assessment of environmental effects. This includes but is not limited to data on flow variability, sediment loading, hapua health needs, river mouth openings, fish reproduction and migration needs, bird feeding and breeding needs, pest-plant removal, water quality, periphyton avoidance and the natural character of the rivers.
- Assessment of the sustainable carrying capacity of the land likely to receive water, as informed by the Land Use Water Quality (LUWQ) process.

Outcome expectations

- Reallocation of water that has been freed up through improved water-use efficiency for other uses, including restoration of in-stream flows.
- Positive actions to restore in-stream flow in waterways identified as over-allocated and/or degraded.
- Positive actions to improve or restore water quality in waterways identified as over-allocated and/or degraded.
- Provision of fish passage both up and down a river or stream when the in-river/in-stream infrastructure is considered.
- Positive actions to maintain and restore riparian streams, ponds and wetlands.
- Identification of opportunities to create habitat and food sources.
- Inclusion of climate change and natural capital considerations in financial analyses.