CLIMATE CHANGE

A new pattern of more extreme weather including increases in extreme heat, intense rainfall and drought. Storms are likely to become stronger and floods will be more common.

The 6 HOTTEST YEARS
on record for New Zealand have all occurred in the last 20 years

IRRIGATION

Farmer decision-making plays an important role in minimising water take and the amount of water and nutrient losses from the root zone after irrigation.

Between 2002 and 2017 the area of irrigated land
increased by about 70% nationally

GOVERNMENT

Responsible for making regulations that councils and water users follow. Regional councils manage water quality and quantity in their region. City or district councils provide services such as clean drinking water and maintaining wastewater and stormwater systems.

SEDIMENT MOVEMENT

A natural part of a freshwater ecosystem, however human activities such as road construction and farming can greatly increase the amount that enters waterways.

192 million tonnes of soil
are lost every year from erosion – 44% from pasture

URBAN GROWTH

Population growth in our towns and cities will mean more water is being used. Infrastructure may need to be upgraded to cope with more extreme rainfall and periods of drought due to climate change.

INDUSTRY

Takes water either directly from surface water, groundwater or urban reticulated supply. Treated waste waters are discharged to the environment or urban systems.

LAND USE

Agriculture, forestry or urban development decisions have downstream implications for the health of waterways and estuaries.

70,000 hectares
of native vegetation was lost between 1996 and 2012 through conversion to pasture, plantation forestry, and urban areas.

RUNOFF

Occurs from hard surfaces such as roads and is a risk to water bodies because of short-term elevated levels of toxicants in water and the long-term accumulation in sediment.

INSTREAM BARRIERS

Barriers such as dams, culverts and flood/tide gates can disrupt water flow, alter habitats and impede or block fish migration.

76% of native freshwater fish species are currently threatened or at risk

DISCHARGES

Discharges are divided into point sources, for example waste water from a factory pipe, and non-point sources, not from a single identifiable source, such as runoff from farm land and urban stormwater.

ESTUARIES

Where freshwater from land meets and mixes with saltwater from the ocean and sediment from both the land and sea can be deposited. A unique environment to which plants and animals have specially adapted and home to kaimoana such as fish and shellfish.

WETLANDS

Often described as the kidneys of the earth, wetlands are important for filtering nutrients, for flood control and as wildlife habitats.

10% of New Zealand was once covered by wetlands.
90% of these original wetlands
have now been drained

GROUNDWATER

Rainwater that has travelled through the soil, or from river and lake beds, to aquifers. Groundwater from wells or from flow into waterways via seeps and springs makes up a large proportion of New Zealand's freshwater resource.

MĀORI

Māori tribal identity is linked to freshwater. Waterways and the taonga species that live in them are central to the wellbeing of many Māori communities. Iwi and hapū are often involved in managing water in their lakes and rivers.

Pūkeko

Pīwakawaka
Fantail

Kapokapowai
Dragonfly

Kākahi
Freshwater mussel

Kōura
Freshwater crayfish

Caddisfly larvae

Redfin bully

Inanga
Whitebait

Tuna
Eel

Mayfly larvae