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Report to the Rural Services and Wairarapa Committee
from Summer Warr, Water Quality Scientist, Planning and Resources

Rivers State of the Environment Monitoring Review - 2002

1. Purpose

To inform the Committee about the recommendations contained in the review of the Rivers State of the Environment monitoring programme relevant to the monitoring network.

2. Background

A review of the Rivers State of the Environment monitoring programme has been carried out in response to a number of concerns relating to the ability of the sites to represent the different habitats/ecosystems in the Wellington region and quality of information obtained from the existing programme.

To be effective in providing information on which to assess and review WRC policy the Rivers State of the Environment programme needs to be representative of both natural and impacted river ecosystems in the Region.

Using the Rivers Environment Classification (REC) system developed by NIWA the regions rivers and streams were divided by their natural physical characteristics into 29 classes. Of these, around 75% of the Region's river network belonged to 5 main classes (Fig. 1).

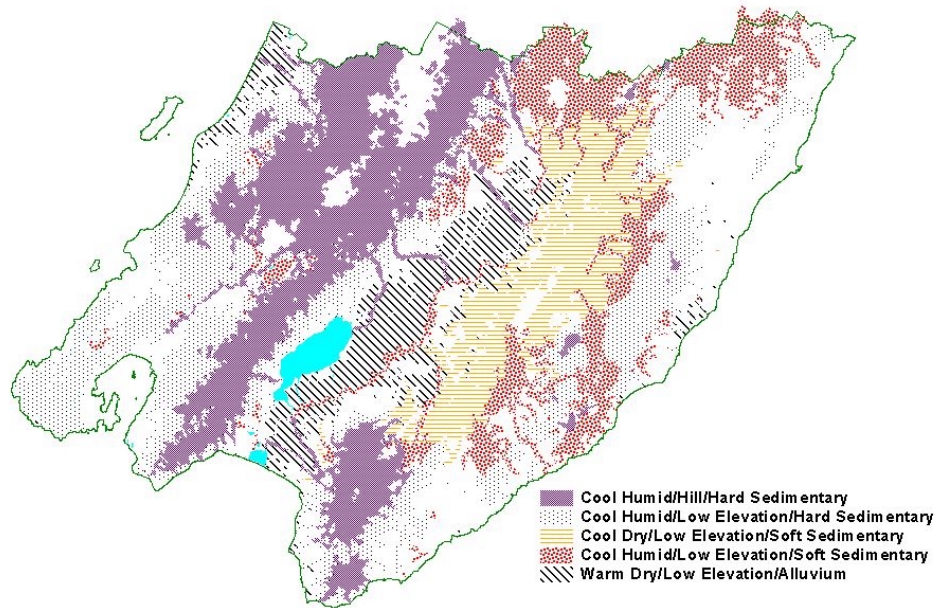


Figure 1. Map of the distribution of the 5 main natural REC classes throughout the Wellington Region

Currently the Rivers State of the Environment monitoring programme consists of 51 sites on 32 rivers and streams throughout the region (Fig. 2) Thirty-five of these sites are located in the western region while 16 are located in the Wairarapa.

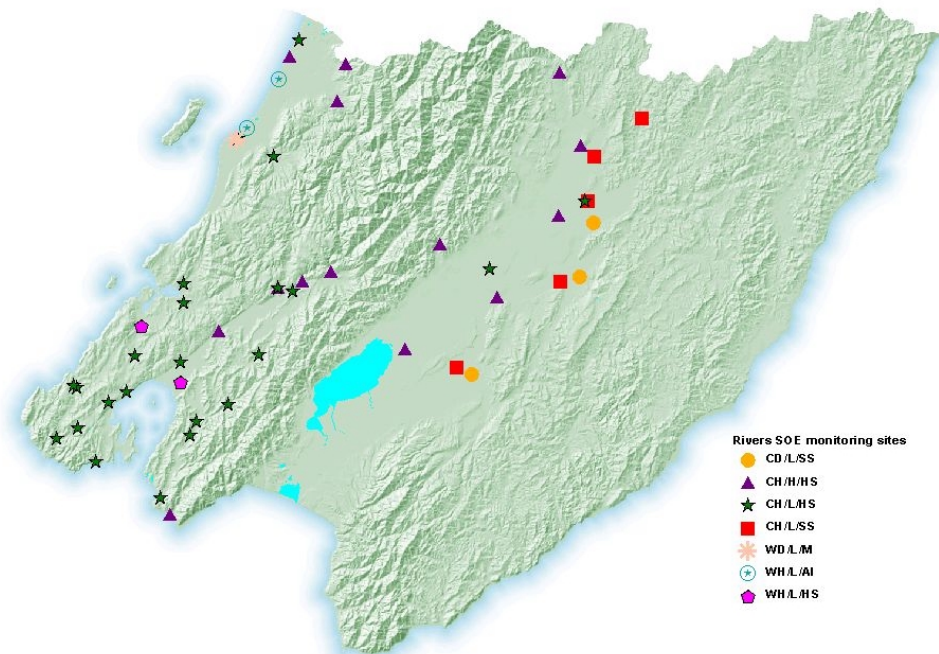


Figure 2. Map showing location and natural REC class of the 51 sites monitored under the Rivers State of the Environment programme.

- **Climate classes:** WH = Warm Humid, WD = Warm Dry, CH = Cool Humid, CD = Cool Dry.
- **Source of Flow classes:** M = Mountain, H = Hill, L = Low Elevation, Lk = Lake.
- **Geology Classes:** Al = Alluvium, HS = Hard Sedimentary, SS = Soft Sedimentary, M = Miscellaneous.

A number of deficiencies have been identified in the current Rivers State of the Environment sites including:

- Lack of reference sites from which to base assessment of land use impacts
- Over representation of rivers with cool humid, low elevation, hard sedimentary catchments in the south-western region in and around Wellington City.
- Lack of sites on the cool humid and cool dry, low elevation, soft sedimentary streams of eastern Wairarapa.
- Complete absence of sites on the warm dry, low elevation, alluvial plain streams of the western Wairarapa plains and Kapiti coast, which are likely to be susceptible to dairy farming impacts.
- No sites representing the impacts of exotic forestry on stream ecosystems
- Lack of a site near the bottom of the Ruamahanga River from which to assess total catchment loading to this river.

3. What does the review propose?

The review proposes a number of changes to improve the Rivers State of the Environment sites, including:

- The removal of approximately 7 sites in the south-western region possibly including Ohariu, Makara 1, Karori 2, Owhiro, Ngauranga, Akatarawa and Wainuiomata 3 sites.
- The addition of approximately 9 sites to the programme including:
 - Reference and impacted sites in the Taueru and Pahaoa catchments.
 - A reference and impacted site on the Parkvale, Stonestead or Papawai Streams.
 - A reference and impacted site in the Whareama catchment.
 - A site representative of the impacts of exotic forestry.
 - A site near the mouth of the Ruamahanga River.
- Movement of the Ruamahanga 1, Waitohu 1, Whangaehu 1 and Waikanae 1 sites upstream to a position out of the influence of pastoral landuse, enabling data from these sites to be used as reference data.

The review also provides recommendations for changes relating to the; parameters monitored, laboratory analysis, data management, and quality assurance procedures of the Rivers State of the Environment programme.

4. What will it cost?

In comparison to the present Rivers State of the Environment programme costs are expected to rise by approximately 20%. This is a reflection of the increased analysis required (to satisfy national indicator, and guideline criteria and provision of a biodiversity component) and minor increase in sites to improve coverage of ecological types.

5. What happens next?

- The Council will use the outcome of this review as the basis for developing proposals, for consideration, when it prepares its Long term Council Community Plan.
- A joint report seeking approval of recommendations will be put to the Environment and Rural Services & Wairarapa Committees

6. Communication

Outcomes of the changes to the RSoE sites will be documented as part of the fresh water quality annual reporting process.

7. Recommendation

That the report be received and its contents noted.

Report prepared by:

Summer Warr
Water Quality Scientist,

Approved for submission by:

Graham Sevicke-Jones
Section Leader, Resource Investigations

Steve Blakemore
Manager, Planning and Resources



John Sherriff
Manager, Resource Investigations