

## Drinking Water

### WHO WE ARE

GWE Consulting Engineers is highly experienced in water infrastructure - drinking water, wastewater and stormwater - supported by geotechnical, environmental and civil infrastructure engineering expertise. We work closely with architects, project managers, planners, surveyors, owners and developers to provide the technical capability required to design and deliver successful projects.

Our team has the skills and experience to deliver drinking water projects across the full lifecycle, from water source investigations and feasibility studies, consenting, through to concept, preliminary and detailed design of treatment, storage and reticulated distribution systems, procurement support, asset management planning and construction management. We also support drinking water compliance through water safety plans, source water risk management plans, compliance monitoring support and practical operational recommendations.

Our delivery is grounded in our LIFT values: we Listen to understand stakeholders, context and constraints; Innovate to identify practical, cost-effective solutions; Follow Through with rigorous documentation and verification; and Team Up with clients and partners to keep projects moving and outcomes defensible.

Our brand promise is clear: when others stall, we solve, bringing calm, clarity and rigour to complex projects and challenging consenting pathways. We do the hard work, so your project doesn't get harder.

### WHAT WE DO

GWE Consulting Engineers offers advisory, design and implementation services for the provision of drinking water. We support clients to identify the best compliance pathway under the Water Services Act 2021 and the associated Drinking Water Quality Assurance Rules, Standards and Aesthetic Values 2022, and to plan, design and deliver fit-for-purpose water supply solutions. Our team provides end-to-end support from water source selection and source water risk management plans through to treatment plant design and supply and water safety plans. Solutions are based on a range of processes and technologies, sized to meet community needs.



We undertake the following drinking water related work:

- Best compliance pathway advice under the Water Services Act 2021 and associated Drinking Water Quality Assurance Rules, Standards and Aesthetic Values 2022
- Water source selection
- Source water risk management plans
- Treatment plant design
- Water supply design and implementation support
- Water safety plans

### TE MANA O TE WAI

GWE recognises the importance of protecting and preserving the health and wellbeing of freshwater, which in turn protects the health of the wider environment and its people.

We assist with requirements under the Water Services Act 2021, as a Drinking Water Supplier, in giving effect to Te Mana o te Wai and in providing careful consideration to the way whanau, iwi, hapū and Māori wish to govern the use of water and land.



# Drinking Water

## OUR SERVICES

### Community Water Supply Schemes

GWE has the experience to design and develop community water supply schemes to meet the suppliers' needs, all regulatory standards and address environmental and cultural concerns. We can also provide our clients with advice on small supply schemes that are required to provide safe drinking water but subject to less rigorous compliance standards.

### Sanitary Surveys

GWE can undertake sanitary surveys of the water supply scheme including the catchment, abstraction point, treatment plant, and distribution system on behalf of the water supplier as part of any programme of risk management. The surveys should be conducted with sufficient frequency to be useful in interpreting trends or sudden or significant changes in water quality as revealed by routine monitoring.

### Source Water Risk Management Plans

As part of Taumata Arowai's requirements, all suppliers adopting the drinking water quality assurance rules require a source water risk management plan. GWE has the expertise and experience in gathering all the information to produce these plans so they are relevant and useful to your water supply scheme.

### Water Safety Plans

A key mandatory requirement of the Drinking Water Quality Assurance Rules 2022 is that all suppliers, regardless of their size, must develop and implement a Water Safety Plan (WSP) for their supply. A WSP is a written document that covers every aspect of providing safe drinking water from catchment to treatment and distribution. The WSP aims to assess and manage risks, to identify if any barrier to contamination is missing and to establish a comprehensive plan to manage the drinking water supply. Our engineers have the experience to prepare a WSP for your community water supply scheme, in line with your goals and appropriate to your size and requirement.



### Water Source Selection

A major consideration when designing a water supply scheme is the nature of the source water that is to be used which may be a stream or river, groundwater or rainwater collection. GWE will investigate potential sources and match treatment technologies to the source water to produce an abundant and economic supply.

### Resource Consents

GWE will provide advice on the consenting requirements and produce technical and planning reports, including an assessment of environmental effects (AEE) to support applications for new or the renewal of water take consent applications. We tailor our services to your organisation's environmental and social purpose.

### Water Treatment Plants

GWE engineers have the experience to design a water treatment process to match the characteristics of the source water. The treatment process could range from a full-scale plant to a simple disinfection system.