

Water Resources Planning and Conservation

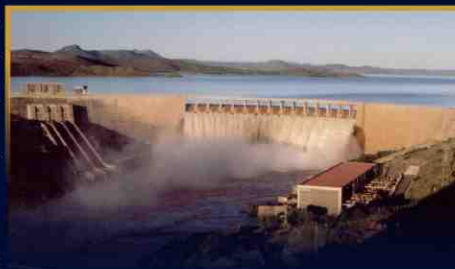
inspiring  
**Engineering**  
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**Technology**



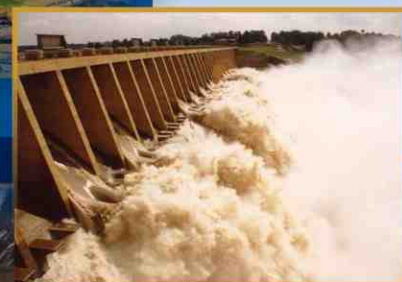
## INTRODUCTION

WRP is a specialist engineering consultancy of international standing in the fields of water resources planning and management, water conservation and environmental management. WRP provides quality professional services to ensure the sustainability of projects and maintain the integrity of the environment. Through the diverse talents of our committed staff, our dedicated leadership and international alliances, WRP focuses on the development of innovative and cost effective solutions to promote efficient management of water related services.

WRP(Pty)Ltd is proud to be a Miya group company. Miya, an Arison Group company, is a global provider of comprehensive water efficiency solutions for municipal distribution systems, with an initial emphasis on Non Revenue Water (NRW) management. Miya's mission is to assist the cities of the world to benefit from the huge opportunity presented by water loss reduction and effective management of urban water. Miya's solutions enable its customers to save water and energy, increase revenues, reduce costs and lower contamination risks. Miya delivers all the tools necessary for the mission: experience, expertise, global presence and local execution capabilities. For more about Miya please visit [www.miya-water.com](http://www.miya-water.com)



# inspiring Engineering innovated Technology



## OUR SERVICES

WRP offers a range of services that are essential for the efficient operation of water companies.

- **Water Resources Planning and Management**
- **Water Infrastructure Planning and Design**
- **Water Conservation**
- **Water Supply Management**
- **Project and Contract Management**
- **Integrated Environmental Management**
- **Strategic Business Planning**
- **Training and Transfer of Technology**
- **Software Development**

### Water Resources Planning and Management

WRP was formed with the specific purpose of providing specialist Water Resources Management services. This is an extensive discipline which covers a variety of fields, and services offered include:

#### Hydrology

- rainfall/runoff modelling;
- flood hydrology;
- hydrological analysis; and
- stochastic streamflow generation.

#### Systems analysis

- water resources yield modelling;
- systems analysis of complex water resource systems; and
- planning analysis and scheduling of future augmentation options.

#### Hydraulic modelling

- hydrodynamic analysis; and
- physical laboratory modelling.

#### Water requirements determination and analysis

- all user sectors; and
- the environmental reserve.

### Water Infrastructure Planning and Design

The development and maintenance of water infrastructure is essential to meet the growing requirements of the population. WRP has considerable experience in the planning and design of water and sewerage related infrastructure, from regional schemes and urban distribution systems to individual components such as dams, river abstraction works, inter-basin transfers, reservoirs, pump stations pipelines and canals. Services provided in this regard are:

#### Feasibility investigations

- evaluation of existing infrastructure;
- determination of service requirements;
- identification of shortcomings and solutions;
- planning of facilities; and
- preparation of infrastructure strategy plans and water services development plans.

#### Infrastructure design

- setting and confirming design standards;
- configuration and sizing of infrastructure;
- quantification and costing of infrastructure;
- economic and tariff studies; and
- optimisation and phasing infrastructure implementation

#### Dams

- design and safety evaluation of small dams;
- support services for dam safety evaluations;
- monitoring of dams;
- dam-break analyses.



## Water Conservation

The provision of infrastructure on its own does not guarantee sustainable water services. Effective and efficient water utilisation is, however, a key to sustainability. Another primary focus area of WRP, therefore, is that of Water Conservation. Services in this regard fall into the two broad categories of Integrated Catchment Management and Water Demand Management. Specific services offered are:

### Integrated Catchment Management Services

- land-use management and monitoring;
- water resources basin water conservation studies and allocation planning;
- development of integrated catchment management plans;
- river engineering;
- flood management planning; and
- groundwater development planning.

### Water Demand Management Services

- pressure management;
- determination of the optimal economic level of leakage;
- night flow analysis;
- water audits and water balances;
- management of unaccounted-for water; and
- development of water conservation plans.



SERVICES



## Water Supply Management

The final cornerstone to sustainable water services is good management of water supply systems. WRP is recognised in this field and provides the following services:

### Water Management

- water supply network analysis;
- operational network modelling;
- surge analysis;
- leakage control management;
- evaluation of systems for instrumentation; and
- data logging and analysis.

### Asset Management

- evaluation of existing infrastructure;
- qualification and costing of infrastructure;
- geographic information systems.



## Project and Contract Management

WRP believes in the application of the principles of project management to all appointments, whether it is for a specific phase or component of a project, or for non-project related work such as soft engineering and institutional investigations. Project and contract management services include:

- project planning and co-ordination;
- resource scheduling;
- cost control and project programming;
- preparation of tender documentation and adjudication;
- construction monitoring;
- infrastructure commissioning; and
- development of operating and maintenance procedures.



## Integrated Environmental Management

The integration of all aspects of environmental management into the process of project planning and implementation is fundamental to successful and sustainable development. WRP offers a full range of Integrated Environmental Management (IEM) services, such as:

### Environmental impact assessments

- bio-physical aspects; and
- socio-economic aspects.

### Environmental impact management

- development of management plans; and
- implementation and co-ordination of management plans.

### Environmental management systems

### Environmental audits

### Public liaison programmes

### Co-ordination and management of IEM processes



SERVICES

## Strategic Business Planning

The many water related institutions tend to have overlapping responsibilities and new institutions are coming into existence on a regular basis. WRP is well positioned to provide both strategic planning and business planning services to such institutions, these services being:

- privatisation of water companies;
- water legislation and regulation development and assessment;
- institutional development and organisation; and
- advice on management and operations.



## Training and Transfer of Technology

Another important issue which can influence the sustainability of water services is the capacity and competence of the service provider. To this end, WRP personnel offers training through CTT (Centre for Technology Transfer) in all aspects of water resources planning and management, water conservation, infrastructure development and environmental management. This is achieved through the secondment of client staff to WRP project teams, in-house training and through the mentorship of project steering committees. WRP also offers customised courses in many of the specialised disciplines for which services are offered.



Lesotho



Thailand



Cape Town

## Software Development

"Off the shelf" software solutions for both management and decision support purposes often do not meet the full requirements of our clients. WRP therefore develop and customise software for specific applications in water resources planning and management, water conservation and environmental management. Furthermore, WRP will ensure that client data can be managed and its integrity and quality maintained through the development of data management systems.

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"Let there be work, bread, water and salt for all"

Nelson Mandela

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