

Technical Management Focus

Whilst many projects can be run with pure project management, the water industry is technically specialised and often needs technical focus. NWM has industry expertise as it combines 3 services in 1:

- ◆ Technical management skills and experience
- ◆ Program and project management skills and experience
- ◆ Water industry skills and experience

NWM generally operates on the “Owner-side” of the market, but where opportunities arise and no conflicts of interest are apparent, it is available to engage in “Contractor-side” services including arrangements where operational services are contracted.

Project Management

NWM embraces the PMBOK methodology. We are highly skilled in integrating all elements of project management together to achieve project outcomes. We can assist in strategic decision making including:

- ◆ Sequencing and staging methodologies
- ◆ constructability assessments
- ◆ preparation of project schedules
- ◆ delivery programmes including risk adjusted schedules.



Program Management

NWM wants its clients to operate efficiently and effectively. We can assist in providing single point documentation for tracking purposes, strategic reviews and reporting to management of all capital and non-capital projects from conception to disposal.

Cost Estimates

Accurate costing forms the basis of cost plans and enable a detailed comparison and evaluation of project options. NWM has industry experience in conducting comparative reviews of preliminary and detailed cost estimates.

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Design Phase Management & Constructability

Our project development knowledge and experience enables greater certainty and leads to more robust outcomes throughout the project development and pre-construction phases. Our pre-construction services include:

- ◆ Design services
- ◆ Planning and design technical management
- ◆ Options analysis through multi-criteria analysis
- ◆ Constructability analysis
- ◆ Value engineering/management facilitation
- ◆ Cost benefit analysis
- ◆ Tendering management

Our expertise can strengthen the development of the preliminary design leading to increased certainty of costs.

Our design management includes three major elements to ensure a successful project:

- ◆ Complete information gathering prior to design commencement
- ◆ All project briefs have operational signoff
- ◆ The design and documentation produce useful long term asset management information

Our Specific Capabilities

- ◆ Design and project management of rehabilitation projects
- ◆ Modelling for reconfiguration and where increase usage occurs within existing zones
- ◆ Management of service relocations due to Main Roads or other activities
- ◆ Design and documentation of new and replacement bulk and reticulation water supply off-takes and pipelines
- ◆ Design and documentation of new and replacement sewerage collection and pressure mains,
- ◆ Management of development applications for water and sewerage
- ◆ Development Management programs for water and sewerage upgrades
- ◆ New and upgrades to, high Level booster pump stations
- ◆ New sewerage pump stations and upgrades
- ◆ Sewerage overflow investigations including assessment of potential inter-area overflows
- ◆ Sewerage pressure main replacements and redirections
- ◆ Dam infrastructure replacement programs
- ◆ Water and wastewater treatment plant asset replacement programs
- ◆ Reservoir repair investigations
- ◆ Chlorination facility upgrades
- ◆ Irrigation systems including river water pump stations
- ◆ Riverine engineering management
- ◆ Stormwater & ESC design
- ◆ Subdivisional design
- ◆ Water balance calculations



Our Experience

NWM has extensive on-site construction experience enabling clear and decisive inputs to fundamental construction processes.

We have extensive experience in support of both the owner and contractor project management teams. Our construction services can assist you with the development and preparation of cost plans, integrated project management systems and across the board reporting. Our commercial advice includes cost analysis and reporting, earned value analysis and reporting as well as contract variations and claims management. Our service delivery can be undertaken as on-site supervision or as management services.

NWM can assist project owners or constructors with services including:

- ◆ Design management and constructability advice
- ◆ Erosion & Sediment Control Design
- ◆ Project management support services
- ◆ Superintendency services
- ◆ Project controls, systems development and implementation
- ◆ Risk management and reporting
- ◆ Quality assurance and quality control
- ◆ Contract documentation and administration including Superintendency services
- ◆ Dispute resolution

Risk Management

These services lead to fewer surprises and enable greater control for the owner and constructor on all project outcomes. This supports a better understanding and allocation of risk and enhanced project reporting to assist decision making.



Commissioning

NWM has the industry experience and understanding that commissioning is a quality assurance process that verifies that the works, all relevant systems, equipment and assemblies have been installed, tested, operated and maintained in accordance with the requirements of the relevant contract.

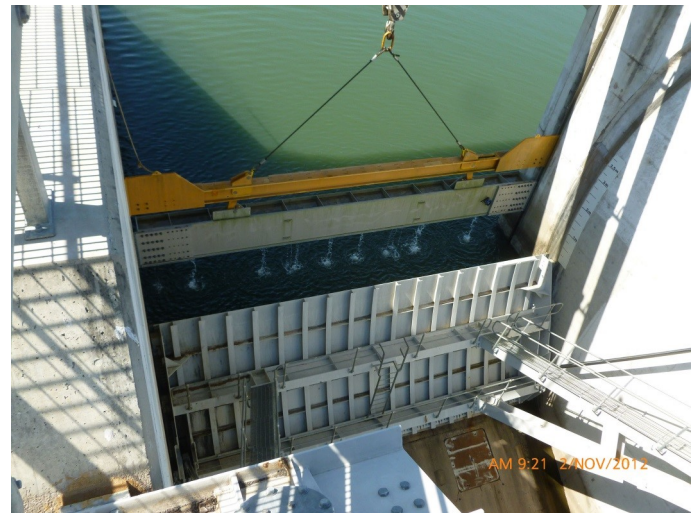
Commissioning also assures that the works are built as designed, are certified by a suitably qualified party and are fit for the intended purpose.

The optimal commissioning process is underpinned by a risk based approach that is fully integrated within the construction program.



Natural Resource Management

- ◆ IROL/ROL applications, negotiations, and ongoing management
- ◆ Supply Contracts
- ◆ Dam Safety Management - Licence management including ongoing technical support including ongoing reviews
- ◆ Technical management of operational upgrades
- ◆ River water pump station feasibility and design



Operations Management

- ◆ Operations and maintenance contracts
- ◆ Major shutdown management
- ◆ Problem solving of operational supply logistics
- ◆ Environmental licence management
- ◆ Critical infrastructure (security) management
- ◆ Emergency management planning including participation and creation in/of event planning and mock events and attendance at workshops
- ◆ Emergency repair project management

Project Handover Risk Management and Reporting

The services enable an assurance that the intended project outcomes are obtained in the most effective manner and project learnings are documented for continuous improvement.

- ◆ Operational controls analysis
- ◆ Earned value management reporting
- ◆ Quality management
- ◆ Post implementation review

Water Quality Management

NWM has extensive experience in the creation and implementation of management plans for large, medium and small water service providers. Through our technical project management capabilities, we can turn these complex requirements into clear operational tasks. We are also certified drinking and recycled water auditors and are experienced in WaterVal assessments.

Wastewater Catchments

Our staff have undertaken numerous wastewater investigations in NSW and QLD including inflow/ infiltration studies, overflow risk management, water balance modelling, and full system design.

