

### Expertise

- Water supply, sewerage and drainage
- > Strategic planning and workshop facilitation
- Capital and financial assessment
- Risk management
- Project management and contract administration
- Organisational systems

#### **Qualifications and Memberships**

BEng (Hons), Monash University, 1985 Post Graduate Diploma of Business OD, Swinburne, 1999 Member Institution of Engineers, Australia Member Australian Water Association

# **Key Project Experience**

### PBJ & Associates Pty Ltd, (2003 to present) Managing Director

- Negotiation of "Superpipe" operations and maintenance contract renewal with Veolia for Central Highlands Water and Coliban Water
- Technical Advisor for Coliban Water operation and maintenance services contract renewal
- Overview of strategy development for Coliban water submission for Water Plan 3
- Development of key performance indicators for external operational services contract for Coliban Water
- Assistance with the development of water supply demand strategies for Coliban Water
- Development of non-revenue water determination methodology for Coliban Water
- Development of sewerage management plans for Westernport Water
- Development of infiltrated inflow management plans for Coliban Water
- Specialist, technical and contract advisor for operations and maintenance contract of Coliban Water/Central Highlands Water "Superpipe" project
- Contract review for operations outsourced services Coliban Water
- Risk Assessment Asset Management for bushfire protection
- Assistance with Water Plan 3 strategies plan development for Central Highlands Water, Coliban Water and North East Water
- Management of Water Resource Upgrade, including off-stream storage at Bright for North East Water
- Specialist Technical advisor for Melbourne Metropolitan Sewerage Strategy for Melbourne Water
- Project Management for Bendigo Water Treatment Plant Upgrade Submission for Veolia Water
- Management of Water Supply Master Plan for Corryong/Cudgewa for North East Water
- Development of tender and execution of operations contract for Goldfield Superpipe
- HAZOPS review of Goldfields Superpipe
- Management of Sewerage Pumping Station review for Central Highlands Water
- Development and integration of strategic framework for the Water Service Division of Central Highlands Water. This provided a rigorous basis for the identification of long term planning, capital investment and operational directions for the business and became the basis for corporate business plans. The strategic plans assisted the preparation of Central Highlands Water's ESC pricing submission

- Facilitation of integrated Capex / Opex forecasts for the Water Services Division of Central Highland Water's business plan and 2005 pricing submission to the Essential Services Commission
- Development of water quality strategic plans for Central Highlands Water
- Water resource planning and assistance with the development of Water Supply-Demand Strategies for 25 North East Water water supply systems
- Water resource planning for Coliban Water, including climate change effects on water supplies
- Development of a long term wastewater strategy for Westernport Water. It included the development of long term flow projections for Cowes, San Remo, Corinella and Coronet Bay; the development of upgrading options; risk management workshops; and the final implementation program
- Development of water supply strategic plan for Melbourne Airport including review of regulatory requirements
- Management of water supply upgrade for Melbourne Airport including new supply main, fire and domestic pump boosting
- Review of water quality and system governance management for Melbourne Airport
- Review of water supply requirements for fire management at the University of Melbourne
- Key technical advisor to the Energy and Water Ombudsman
- Facilitation of strategic planning workshops for company Boards and industry groups

## Connell Wagner Pty Ltd, (1999 to 2002) Manager, Water & Environment Group

- Management of Craigieburn sewerage treatment plant decommissioning strategy for Yarra Valley Water
- Development of water network model (*WaterCAD*) for Lae, Papua New Guinea (ep 100 000), including training and development of indigenous system assessment skills
- Management of sewerage component (MOUSE) and expert advice for the integrated catchment study for Metrowater, Auckland, New Zealand
- Management of design and construction of wastewater treatment plant upgrade for Kraft, Strathmerton
- Management of Emerald/Cockatoo Sewerage Scheme including functional design for pressure and gravity sewerage systems, detailed design of 17 km transfer main and 5 pump stations
- Management of design requirements for Bundoora and Janefield sewage flow control facilities planning approvals for Yarra Valley Water
- Performance Audit of Non-Metropolitan Urban Water Authorities for the Victorian Auditor General
- Development of water reticulation strategies and management guidelines including *Infoworks* WS reticulation models for Melbourne Airport, University of Melbourne and Shire of Tumut
- Management of sewage pumping station overflow review for Yarra Valley Water
- Design review of sewage pumping station and 13km rising main for Yarra Valley Water
- Contract specialist advice for Arden Street and Hoyt Street drainage contracts (Melbourne Water)
- Specialist Flooding Advice for Mile Creek Insurance Claim
- Hydrology/Hydraulic review of flood management for Geelong Road reconstruction;
- Management of water supply for new Visy Paper Mill in Tumut (100L/sec, 20km rising main)
- Management of sewerage catchment strategy and functional design for Yarra Valley Water

# Melbourne Water (1993 to 1999)

### Manager, Planning West, Sewerage Group

- Management of planning team for western sewerage system and Western Treatment Plant
- Implementation of \$120M upgrade program for the Western Treatment Plant
- Strategic plans and investigation for optimisation and growth in the sewerage system
- Instigation of inter-company (Melbourne Water and City West Water) strategic planning team for development of a joint strategy for the Docklands development

• Development of 'alliance' performance based contracts for upgrading the Western Treatment Plant (\$120M)

### Manager, Process Improvement Strategy, Western Treatment Plant

- Development of \$120M strategy for Western Treatment Plant that provides greater operational flexibility, more certainty of meeting license requirements and life cycle cost savings of \$20M compared to the existing strategy
- Development of a risk based financial analysis system
- Successful management of capital works program (\$10M)

### Capital Works Manager - Sewerage Group

- Management of the Sewerage Group Capital Works Program (approx. \$40M annual) which includes Melbourne's two major treatment plants and the major transfer system
- Management of Mechanical and Electrical services contract (approx. \$2M annual), including negotiations towards a performance based agreement
- Implementation of payment for performance against KPI for Mechanical and Electrical services contract
- Implementation and management of analytical laboratory services contract
- Rewriting and consolidation of Melbourne Water's contract administration and tender manual
- Development and negotiation of service contracts for the sale of Melbourne Water's construction arm (streamline)
- Development and implementation of performance based contract for project management services.
  Project management costs have decreased by more than 20%. Capital project costs were decreased by up to 10%
- Restructuring of management and teams for the Sewerage Group to best utilise existing resources and determination of skill gaps

### Planning & Development Manager – Eastern Treatment Plant

- Coordination and development of a Planning & Development Group, consisting of Chemical, Civil, Mechanical and Environmental Engineers/Scientists
- Management of the Capital Works Program (\$9.6M 1995/96)
- Development of a working agreement for internal project management services, including development of reporting procedures
- Development of strategy for cleanup of heavily contaminated treatment plant site
- Development of 20 year Capital Works Planning Model for the Eastern Treatment Plant
- Activity review of operations group which resulted in 20% labour savings and identifying capital projects to improve performance
- Activity review of maintenance group to determine extent of out-sourcing

#### Sewerage Strategist – Sewerage Planning

- Coordination and development of a sewerage strategy team for Melbourne Water
- Development of a 10 year plus sewerage strategy for Melbourne's eastern sewerage system
- Development of a rainfall prediction model, hydrological infiltration model and hydraulic sewerage models
- Development of a hydraulic process model which realised \$20M+ capital saving
- Development of contracts for consultants and contractors including design consultants for Melbourne Water. This allowed better control of project costs and time
- Development of process for merging MW database, census and land release information in a MapInfo database
- Development of a strategy for Brushy Creek and Lilydale Treatment Plants

- Hydrologic and hydraulic analysis of the Moonee Ponds sewerage catchment, which realised \$10M+ saving in proposed capital works
- Determination of sewage dilution ratios in Moonee Ponds Creek from sewerage overflows

#### GHD Pty. Ltd. (1986 to 1992)

## Civil Design Engineer

Melbourne Cricket Ground:

- Investigation of services location, liaison with public service authorities for relocation works and detailed design of hydraulic services and drainage for the MCG Great Southern Stand
- Hydraulic conformance engineer in the project management team for the MCG Great Southern Stand
- Detailed design and documentation for the resurfacing of Melbourne Cricket Ground arena including tender evaluation and initial contract administration

#### Hydrologic and Hydraulic Investigations:

- Stormwater/Sewage infiltration investigations for Geelong Water Board, Sydney Water Board, Launceston, Comalco (Bell Bay), Victorian Regional Water Boards
- Testing of Kananook Creek Pump Station, Patterson Lakes or the Dandenong Valley Authority
- Water supply outlet channel hydraulics at Mt Perisher Ski Tube for Transfield

#### Water and Wastewater Treatment Plants:

- Detailed hydraulic quality assurance for hydraulic design of Horsham Water Treatment Plant
- Detailed civil and hydraulic design for upgrades at Mornington, Ballarat South Wastewater Treatment Plants
- Detailed design and documentation of industrial effluent treatment augmentation works at Australian Newsprint Mills (Albury) and preliminary civil and hydraulic design for Australian Newsprint Mills (Boyer)

#### **Pumping Stations:**

- Construction and analysis of 1:10 scale hydraulic model at the University of Melbourne for a 10 000 L/sec sewerage/stormwater pumping station for Launceston
- Detailed computer analysis of controls, design of external civil works and commissioning of a 10 000 L/sec sewerage/stormwater pumping station for Launceston
- Detailed hydraulic design including layout, computer analysis and documentation of 1600 L/sec sewage gravity/booster pump station at Breakwater for the Geelong and District Water Board

#### **Industrial:**

- Computer analysis of water quality in the Murray River for disposal of effluent wastewater from proposed de-inking plant at the Australian Newsprint Mills in Albury
- Development of procedures for venting requirements, bulk chemical storage tank inspections, maintenance and record keeping for Powell Duffryn Terminals Pty Ltd

#### Sewerage, Water Supply and Drainage Systems:

- Detailed analysis of combined stormwater/sewerage system, including extensive computer modelling and development of a 20 year capital works program for the City of Launceston
- Investigation of options and computer modelling for upgrading rural town water supply and sewerage systems
- Design, documentation, project management, contract preparation, tendering and tender analysis, contract supervision and certification of payment for various water, sewerage and drainage projects for non-metropolitan and rural water authorities