



Network Operator

Development Program ●



INFORMATION

Organisations participating on the Program Advisory Committee



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Part 1 - Introduction

The field of Network Operations and Maintenance (O&M) is often viewed as the 'little brother' to the water and wastewater treatment functions. This notion possibly emerges as a result of less recent investment in network improvements; perceptions of lower complexity than operating treatment processes; and less direct interest from regulators. The current interest in certification for treatment operators, but not necessarily for networks operators, is a good example. As a result, there is a lower emphasis placed on professional development opportunities for network operators.

However, the overall value of the network assets is significantly larger than the treatment assets; opportunities for improved network operations are significant; and through the field work undertaken, there is a direct link to the experience of customers. The importance of network O&M through the efficient delivery of safe drinking water and the provision of sewerage services, are critical and fundamental aspects of the water industry.

In an effort to deliver improvement in the industry, a group of committed water industry O&M representatives, with the full support of the Water Industry Operators Association of Australia (WIOA), have come together to create the Networks Operator Development Program.

PURPOSE

The purpose of the Network Operator Development Program is to identify, mentor and develop future leaders in the Network Operations field across the Victorian Water Industry.

AIM

The program aim is to expand the knowledge, skillset, network of colleagues and practical experience of Network Operators by exposing them to strategic thinking and best practice initiatives across the technology, business management and leadership fields.

By being fully engaged during the program, graduates will be provided tools enabling them to learn how to identify and implement best practice approaches, increase productivity and enhance a professional culture within their respective organisations, in order to deliver an improved customer focus in their O&M related activities.

ABOUT THE NETWORK OPERATOR DEVELOPMENT PROGRAM

The Networks Operator Development Program will seek to develop the skills of the participants by exposing them to a range of training delivery techniques including structured workshops, field days, technical sessions, comparative analysis of practices within the industry, conference attendance and projects over the course of the eight month program period.

Suitable participants can enrol in the program through a nomination process open to all Victorian Water Corporations. Nominations are open to any water industry employee who meets the selection criteria and is predominantly involved in Network Operations/ Service Delivery (see definition below).

Participating Water Corporations are encouraged to nominate:

- participants who have the potential to develop as industry leaders,
- can contribute to innovation,
- can promote and implement best practice,
- can drive and demonstrate business values.

The preferred number of program participants annually is 12 – 20, preferably one per Water Corporation with an even spread across the water industry. If there are insufficient nominations received, additional participants may be selected from a single Corporation.

All participant costs will be covered by the employing Water Corporation [e.g. travel, meals, accommodation if required, and any fees associated with specialist workshops or sessions]. The anticipated costs of specialist workshops will be provided where known, prior to the nomination process commencing.

Participating in the program will involve one formal day each month over an eight month period, with sessions held at rotating venues depending on the content of the particular day. Successful completion of the program will require participants to undertake some workplace projects and assignments in the time between the monthly sessions. Each participant will be required to research, develop and deliver a presentation to the group on one of the focus areas. The best presentations will be included into a Networks stream to be run as part of the WIOA Conference program annually.

The Program Advisory Committee will select one participant each year to be awarded the WIOA Network Operator of the Year. The winner will be announced at the WIOA Conference Awards Dinner. The winner will receive sponsorship to the value of \$3,000 provided by Water Training Australia, which must be used on an appropriate development opportunity for the winner. Participants will be encouraged to, and given the opportunity to, attend the annual WIOA conference and be involved in a technical or poster presentation at that conference.

A certificate of participation shall be awarded to all participants who successfully complete the Program by meeting all the required expectations. These expectations are outlined on Page 13 of this document.

NETWORK DEFINITION

For the purpose of clarity, the applicants for this program must primarily work within the potable water reticulation network and/or wastewater collection systems.

Network reticulation is defined as the pipelines and associated infrastructure from the Water Corporation's water treatment plant to the point where the customer's responsibilities begin. Works normally undertaken can include isolation, repairs, maintenance and cleaning of potable water systems.

Wastewater collection is defined as the pipelines and associated infrastructure from the point where customer's responsibilities cease to the point where the wastewater treatment plant responsibilities begin. Works normally undertaken can include sewer system repairs, clearing blockages, CCTV review of assets and odour control.

Network and wastewater infrastructure can include pipelines of varying size, pump stations, access pits, valves etc.

Part 2 – The Program

SUMMARY

The program summary provides the key dates for activities and a brief description of the content of each of the workshop days. A more general overview of the proposed content of each of the workshop days appears in the Program Overview. Due to the evolving nature of the program, the full details of each of the Workshop days including the dates, locations, times, presenter details and specific content will be located on the WIOA website at www.wioa.org.au/

The program will be updated periodically and is subject to change depending on industry and Advisory Committee feedback. It is recommended that nominating Corporations and nominated individuals check the website regularly.

November:	Applications received from Water Corporations
December:	Networks Operator Development Program Advisory Committee meets and confirms program participants. Nominating Corporations and nominees advised.
January:	Nil
February:	Workshop 1 – Leadership & Industry Focus via Water Corporation MD's
March:	Workshop 2 – Water Quality
April:	Workshop 3 – Water Reticulation Systems
May:	Workshop 4 – Wastewater Collection Systems
June:	Workshop 5 – Pumps and Pumping Systems
July:	Workshop 6 – Asset Management
August:	Workshop 7 – Program Wrap up, Conference Presenter Support, Field Trip and Program Evaluation by Participants
September:	WIOA Victorian Conference
October:	Program evaluation and review of participant feedback by Advisory Committee. Planning of content for the next year to be undertaken.

PROGRAM OVERVIEW

November

Applications received from Water Corporations

- Application criteria – see page 12
- Application form – on the WIOA website

December

Confirm program participants

January

February Workshop 1 – Leadership & Industry Focus

- **Morning session**
Leadership - Presenter Mike Rankin.
 - Start with profiling of each participant, this will involve the participants completing an on line assessment prior to attending. Cost \$60 per person to be paid by the Water Corporation prior to attending.
 - Profiles to be discussed and explained why they are important for this group.
 - Discussion on leadership to include influence, creditability and integrity.
- **Afternoon session**
MD's Panel session
 - Getting to understand the water business, three MD's will answer questions from participants on the following issues:
 - Legal
 - Political
 - Consumer drivers
 - Water plan
 - Budgets
 - Participants will be asked to think through how their field work feeds into the information supplied by the MD's, and deliver this information at the next session.
- **Debrief and summary of the day**
Includes expectations of participants, description of project work to be undertaken before the next workshop and assignment of topics to participants for presentation at the next workshop

March – Workshop 2 – Water Quality

- **Morning Session - Water Quality Theory**

Presenter: Peter Mosse

- Overview of the importance of maintaining water quality in distribution systems
- Discussion on risks including managing pathogens and risk assessment processes
- Review of incidents from around the world where illness has occurred
- Discussion on best practice for water main repairs to guarantee safe water is delivered to customers

- **Afternoon Session - Water Quality in the Field**

Presenter: Peter Mosse

- Translating Theory into Practice – Undertake a repair in the field on a selected site. Cost \$200 per person to be paid by the Water Corporation prior to attending.
- Participants to deliver their presentations based on topics provided at previous Workshop.
- **Debrief and summary of the day**
Includes expectations of participants, description of project work to be undertaken before the next workshop and assignment of topics to participants for presentation at the next workshop

April – Workshop 3 – Water Reticulation Systems

- Participants to deliver their presentations based on topics provided at previous Workshop.
- **Water distribution systems**
 - Presentation from Industry experts on:
 - Backflow prevention devices and the importance of testing
 - Unaccounted water including leak detection system and case studies
 - Pressure and flow testing
 - Types of tools and plant and equipment
 - All the above topics have the required plant and equipment on site as part of the presentation.
 - Other relevant topics including:
 - Best practise in handling hard waste (i.e. AC in soil after burst main repair)
 - Handling of hydro waste soils and storage
 - Air scouring
 - Ice pigging
 - Swabbing of large mains
 - Types of water main replacement
 - Innovations
 - PRV's
 - New technology and practices such as ice pigging ground penetrating radar

- **Debrief and summary of the day**

Includes expectations of participants, description of project work to be undertaken before the next workshop and assignment of topics to participants for presentation at the next workshop.

May - Workshop 4 – Wastewater Collection Systems

- Participants to deliver their presentations based on topics provided at previous Workshop.

- **Wastewater collection systems**

- Presentation from Industry experts on:
 - Cleaning systems for clearing sewer blockages
 - Sewer preventative program of gravity sewers
 - Sewer CCTV program
 - Sewer rehabilitation program
 - Smoke testing program
 - Sewer screening (e.g. Sewerbatt, SL-RAT)
 - Root foaming program
 - Odour management program
 - Ice pigging SRM
 - Infiltration management
 - Low pressure sewer systems
 - Innovation

- **Debrief and summary of the day**

Includes expectations of participants, description of project work to be undertaken before the next workshop and assignment of topics to participants for presentation at the next workshop.

June - Workshop 5 – Pumps & Pumping Systems

- Participants to deliver their presentations based on topics provided at previous Workshop.

- **Pumps and pumping systems**

- Presentation from Industry experts on:
 - Types of pumps and applications (e.g. centrifugal, peristaltic, vacuum, dosing, diaphragm, screw etc)
 - Systems curves and pump curves
 - Maintenance program (i.e. pump inspections)
 - Frequency
 - Details of inspection items
 - How is it managed?
 - Fats & grease control program in wet wells
 - Wet wipes in sewer wet wells and pumps

- Draw down tests and how and why they are required.
 - Well washers and types.
 - Types of pumps used and why
 - Types of well – wet well dry well pump installation
 - How are pumps lifted
 - Using SCADA trends to assist with maintenance and improvements/
 - Energy management strategies
 - Innovations
- **Debrief and summary of the day**
Includes expectations of participants, description of project work to be undertaken before the next workshop and assignment of topics to participants for presentation at the next workshop.

Assessment to include an onsite draw down test complete with a video or photos of the test results.

July - Workshop 6 – Asset Management

- Participants to deliver their presentations based on topics provided at previous Workshop.
- Network operators deal with the organisation’s assets on a daily basis through operations, maintenance and construction activities. The aim of this topic is to make direct links between the operators day to day work and the long term management of assets.
- **Asset Management**
 - Presentation from Industry experts on:
 - Definition of Asset Management
 - Principles of asset management including business cases
 - Depreciation
 - The influence asset management has over the organisations long term finance and accounting
 - Whole of life asset management
 - When does an asset reach the end of its economic life
 - What are the triggers that indicate an asset requires replacement
 - Asset Management data bases and how they work
 - Asset Management record and the importance of accurate record keeping
 - Other relevant asset management topics including:
 - Corrosion and coatings
 - Thermal imaging and Infrared systems
 - Energy management systems
 - Pump monitoring systems including heat and vibration monitoring
 - Switchboard maintenance systems

- **Debrief and summary of the day 30 minutes**
Includes expectations of participants, description of project work to be undertaken before the next workshop and assignment of topics to participants for presentation at the next workshop.

August – Workshop 7 – Site Inspections & Field Trip

- Participants to deliver their presentations based on topics provided at previous Workshop.
 - Confirmation of the best three presentations chosen for the WIOA conference session. Assistance with the writing the paper and suggestions on improvements to content.
 - Program evaluation by participants including suggestions for improvement in Workshops or content for future programs
 - Field Trip to appropriate site
-

September 2017

All participants to attend the Networks session at the WIOA Victorian Water Industry Operations Conference and Exhibition including three presenters.

October 2017

Advisory Committee to review Program and start planning for next year.

Part 3 – Application and Program Completion

KEY SELECTION CRITERIA FOR PARTICIPANTS

The Networks Operator Development Program Advisory Committee has established a number of key selection criteria for each program participant. It is anticipated that Corporations will ensure that their applicant meets the majority of the criteria prior to submitting an application.

- The recommended selection criteria for program participants includes but is not limited to;
 - More than 50% progress towards or completion of a Certificate III in Water Industry Operations.
 - Shows a high degree of self-motivation and initiative.
 - The potential to lead work teams or projects.
 - The ability to work within a diverse group.
 - The ability to be able to produce reports.
 - The ability to problem solve and contribute to innovation and continuous improvement.
 - The ability to communicate, influence and present to a wider audience of peers and experts.
- It is also a requirement that Corporations commit to allocating an appropriate amount of time during normal working hours to allow the applicant to complete their assigned tasks between each Workshop day. Corporations must also provide each nominee with a suitable workplace supervisor or experienced operator who can undertake the role of a coach and provide guidance and support for the duration of the program.

In recognition that more than one participant from a particular water Corporation may wish to participate in the program, the Advisory Committee has developed a weighting matrix which may be used to assist Corporations to select the most suitable applicant. The weighting matrix can be downloaded from the WIOA website at www.wioa.org.au

APPLICATION PROCESS

Applications will be accepted up until COB on 20 November annually. Applications forms are available from the WIOA website at www.wioa.org.au

For an individual to be considered for acceptance into the Program, the application must meet the following conditions:

- Water Corporations will use their own internal process to determine who and how many should apply.
- Applicants must use the prescribed forms ensuring that all information fields are completed fully.
- The form is to be signed off by the direct line supervisor and manager of the applicant.
- Successful nominees and their employing Corporation will be advised by WIOA of the participant's inclusion in the program and provided with all relevant program details.

CRITERIA FOR SUCCESSFUL COMPLETION OF THE PROGRAM

In order to successfully complete the Program, participants are expected to meet the following criteria:

- Program participants must attend all of the Workshop days as well the WIOA conference as a delegate. The Advisory Committee may approve an absence from a Workshop day, but only in exceptional circumstances.
- Completion of the projects and activities as assigned after each Workshop session.
- Completion of at least one presentation during the program. This can be a report back to the Advisory Committee on the previous month's topics or in another agreed format.
- Participants are expected to proactively participate in all aspects of the Program and contribute to the discussions during the Workshops
- Participants are expected to build a network so that they can engage with one another, the presenters and their coach. A diary or log recording all such engagement is to be maintained by the participants and made available to the Advisory Committee if requested.
- Participants are expected to produce evidence that they have conducted at least two presentations to their workplace team about the Program and their progress in it.
- Assessment and review by the Advisory Committee of feedback from employers outlining the progress of their participants whilst they undertake the Program.

NETWORK OPERATOR DEVELOPMENT PROGRAM ADVISORY COMMITTEE

The role of Network Operator Development Program Advisory Committee is, in the first instance, to develop the principles and oversee the introduction of the Program to the Victorian Water Industry. To facilitate this, the advisory committee will:

- Establish the selection and nomination criteria for participants in the program.
- Develop the course content and assessment criteria used to determine successful completion of the program by participants.
- Determine any fees payable by participants or Corporations for participation in specific aspects of the program

On an ongoing basis, the Advisory Committee is responsible for:

- The smooth running of the program
- Facilitating the monthly development sessions for participants.
- Annual assessment of participants
- Overview of the program, accepting feedback from participants and Water Corporations
- Annually reviewing the content of the program and ensuring the activities and topics remain relevant to the intent of the program.

The Program Advisory Committee shall ideally be comprised of eight individual WIOA members, including at least one WIOA nominated representative. The Advisory Committee members should be either directly employed in the O&M field, be responsible for the management of O&M activities, or be recognised as having intimate knowledge of the O&M activities.

The inaugural Program Advisory Committee comprised the following people and organisations:

Mick Mahoney	Wannon Water
Neville Whittaker	Goulburn Valley Water
Dean Barnett	Western Water
Russell Bates	East Gippsland Water
Neil Morrison	GWM Water
Mike Rankin	Water Training Australia
George Wall	WIOA.

To ensure that the Advisory Committee and the Program content is regularly refreshed with new people and new ideas, the ideal term for any Advisory Committee member is no more than four consecutive years. To provide continuity and stability, ideally no more than three Committee members should be replaced in any one year.

WATER INDUSTRY OPERATORS ASSOCIATION OF AUSTRALIA (WIOA)

WIOA's role as the facilitating organisation is to be responsible for updating and maintaining the Program's website pages; creating and maintaining all the necessary documentation; and distributing all information relating to the program. WIOA will facilitate the course registration, progression and completion requirements for individual participants as well as maintaining those records into the future. WIOA will also manage any financial aspects of the program including any levy and collection of fees, payment of training programs etc.

EMPLOYING WATER CORPORATIONS

It is expected that Water Corporations will take a proactive role in supporting the participation of their nominated and selected employees in the Program. Corporations will provide reasonable time for participants to attend the monthly Workshop sessions as well as time to undertake any assessment or presentation activities in the period between the Workshop days.

Employing Corporations will meet any travel, accommodation, session fees and reasonable out of pocket expenses that participants may incur through their involvement in the program. It is expected that the employing Corporations will also proactively support their nominated program participants in attending the annual WIOA conference.

PROGRAM PARTICIPANTS

The role of the Program participants is to proactively participate in all aspects of the Program, contribute to the Workshops by being open to new suggestions and ideas, by questioning the presenters in a positive manner and by constructively sharing any thoughts, issues or concerns. Participants will be respectful of the views of all other participants and will be attentive to the contributions of others in the program. All participants will be expected to contribute some of their own time and resources to participate in the program. This could include travel time or completing assigned tasks away from the work centre. Program participants will strive to successfully complete the program and meet all of the assessment criteria as listed.

WORKPLACE SUPERVISORS/TEAM LEADERS OF PROJECT PARTICIPANTS

The role of the Workplace Supervisor/Team Leader is to identify and encourage the nomination of suitable O&M employees to the Program. The Supervisor should then assist suitable nominees in submitting their applications and facilitating that application through the correct channels in the employing Corporation.

The Supervisor shall also support the participant through the Program by providing reasonable time and resources for their nominated participant to complete assessment and others Program activities. The Supervisor will also be required to complete and submit a brief but regular employer reference form to the Advisory Committee on the progress of their participants whilst they undertake the Program.