

Network Operator Development Program

There's nothing else like it!

Bailey Andersen, Operations & Maintenance Employee – Central, Goulburn Valley Water

Gavin Overy, Coordinator Mitchell Depot – East Gippsland Water

Abstract

The water industry is an ever-changing industry, though the core role of each organisation is relevantly the same, the process for the delivery of these services can vary.

A lot of knowledge through a business's failure and success is usually kept within the organisation due to limited avenues to communicate these learnings across the water sector.

The Network Operator Development Program was established in 2017, with the intent to encourage the collaboration of water authorities across the State and to provide avenues for operators to be able to problem solve and share knowledge on a platform of building a network between other businesses and to identify avenues to development future leaders within the industry.

The 2022 Network Operator Development Program consisted of seven mentor/coaches who were paired with individuals to provide guidance and assistance to those participants via industry knowledge and experience.

The committee ensured that the sessions topics were tailored to expose operators to best industry practice and to new technology and initiatives currently being used and tested in the field.

Ten operators from various water authorities were nominated to represent their business' by attending sessions in the program over a seven-month period.

Each session began on a Wednesday afternoon where operators and mentors met at the hosting authorities' venue where site inspections of key infrastructure was undertaken.

The second day was a classroom orientated learning session that saw subject matter experts presenting on relevant information targeting the programs content.

The knowledge, leadership, development and networking that participants are able to gain from this program in the space of seven months is substantial. This program has proven to better connect organisations, improve operator's skill set and identify areas of development for potential leaders in the industry and build lasting friendships.

1.0 Background

With the movement for organisations to continually improve and refine their systems to meet regulatory compliance and seek best practice processes in the fundamentals for delivery of safe drinking water and the reliability for sewage services in the field.

It was identified that there were opportunities to further develop Operations and Maintenance (O&M) training by targeting the skillsets required in the field, increasing knowledge of organisational management systems and to encourage growth into leadership roles.

With these key components as a motivator, an Advisory Committee was established with the goal of developing a program with subject matter experts, relevant content covering specific topics relating to field practices and to develop a set of principles to guide the development of the participants.

In an effort to deliver improvements within the industry, a group of committed water industry O&M representatives, with the support of the Water Industry Operators Association of Australia (WIOA). Have come together to create the Network Operator Development Program known as NODP.

2.0 Purpose

The primary purpose of the NODP is to identify, mentor and develop future leaders in the network operations field across the Victorian Water Industry.

The concept of the programs structure was to build a platform via networking with colleagues from different organisations and backgrounds of knowledge and practical experience. Exposing the participants to best practices and alternative ideas delivered by workshops, field outings and technical sessions over the course of 7 workshops held monthly over a calendar year.

The desired outcome for participants of the program is to encourage the students to implement learnings from the program to build professional relationships within the water sector. This enables the participants to engage within their own organisations, contributing towards; development of systems, strategic outcomes, compliance and improvements with safer work practices.

3.0 Nomination & Selection

The nomination process is open to all Victorian Water Corporations, with the desired applicant required to address the selection criteria and meet a number of key points that are established by the Advisory Committee in order to participate in the program.

The criteria require (but not limited to) is that the nominated party is to predominately be employed in the field of Network Operations. With the applicant showing a high degree of self-motivation and initiative with the potential to lead work teams or projects and the ability to work within a diverse group.

The nominee shall have an aptitude to problem solve and contribute to innovation and drive for continuous improvements including the ability to communicate, influence and present to a wider audience of peers and experts.

Applicants should have the ability to produce reports as part of the research for the compulsory completion of sessions assignment topics and projects.

It is highly desired that applicants have completed Certificate 3 in Water Industry Operations or in the process of these studies with a minimum completion of 50% of study modules

4.0 The Program

Session 1.

The first session was held at the Best Western Airport Convention Centre in Melbourne. This was the first time all the participants in the program met each other and the mentors. This session went over two days. The first day we had multiple presenters including from DHHS, EPA and WHS. The presentations gave us all a glimpse into the integrate workings of how all these departments coincide with water authorities and rely on one another to achieve the common goal of providing safe drinking water and the treatment of sewerage. After the presenters had left, we made up a trademark as a collective group. This trademark was based around a set of "I" statements we had all agreed upon, that we would follow and achieve in every session to guide us.

The second day we had Mike Rankin take the session. This session was around figuring out what type of leadership style each individual person had, and what it takes to be a leader. Each person before the session had to complete a questionnaire online which was in inside to each individual's personality and leadership qualities. Once the questionnaire was completed you were given an animal either a Dove, Owl, Eagle, or Peacock. On this session Mike went around to every participant and explained their results to them in front of the group. He explained the strengths of their results and areas that they had room to grow into. This also helped the group get a better understanding of each other and made it a faster process to build relationships with each other. The second part was the understanding of what the qualities of leadership looked like. We discussed the integrity, ethics and behaviours one must have to become a leader.

Session 2

The site visit the day before the session, we all met up at the Greater Western Water Depot. Here we were given a tour of their depot including their machinery and fittings sheds. We were also shown there outstanding training facility which they have built themselves which is a great credit to them.

The follow day the session was based around water quality and main repairs. We had presentations on multiple topics including,

- What pathogens where, the dangerous of them and how we control and manage the risk.
- Best practices for completing repairs on water mains.
- Best practice for flushing water mains post repair.
- And different practices for cleaning mains including swabbing, Flushing, air scouring and ice pigging.

After this discussion we drove out to site and two operators from Greater Western Water put everything we had just discussed into action. They had isolated a water main, removed a small section of pipe and completed a demonstration from start to finishing showing us all best practices including flushing procedures and repairs. Both the operators and Greater Western Water did an excellent job with this.

Session 3

The site visit the day before the workshop was again at the Greater Western Water Depot. This time we were shown their impressive process of how they are turning Hydro vac slurry into quality topsoil that had been approved to be used again in backfilling jobs. The process is not something they have done overnight; they have put countless time and effort in getting this operation running and are now reaping the rewards of their hard work.

The Workshop for this session was around Water Reticulation System Management

We began with a presentation from two representatives of the IWN Elisa and Kristina. They firstly gave us a rundown of what the Intelligent Water Networks is and why it was created. They then showed us some of the ideas the IWN are working on with different water authorities to help improve the ways all water authorities operate. This was a great presentation and the IWN are doing great things in this space.

We had a presentation around the use of Aquadiag and they substantial benefit it has around water quality which led into a well-informed presentation by Mark Putman from Goulburn Valley Water around the importance of disinfection, sampling, and safe water main repair procedures.

We finished of this session with a presentation from Michael Wink on the dangerous of electrocution or injury when working on water service stop taps or meter assemblies or any copper pipe. This was a great presentation given majority of his background is in the Electrical/powerlines area and now working in the water industry.

Session 4

The site visit the day prior to the workshop was at the Gippsland water Factory. We were given a tour of this enormous factory by two of the operators who ensure the day-to-day functions of this Factory. This Facility was very impressive to view and would be something I would recommend people to see if they have the opportunity.

The workshop for this session was around Wastewater Collection System Management Issues.

We began the day with a walk through of a high-pressure water jetting truck used for sewer blockages and preventative sewer works. We then discussed issues around the dangerous of the trucks, the best practice for clearing blockages and other relevant sewer equipment including sewer cameras, sewer rats and bats and also tree root foaming.

Afterwards we had a presentation from IWN on new technology they are testing to help in the sewer systems. This then led into a small, simulated demonstration on the difference between the sewer batt and sewer rat technology.

To end the day off we had a fantastic presentation around sewer odours. We discussed the different type of odours, how they are formed, how they can be treated and some technology that is out there to help prevent and contain them. Thank you to Jenith from Greater Western Water for that presentation it was very well presented.

Session 5

The site visit the day prior to the workshop began at the Albury city council pumps depot. We were shown around their inhouse pump maintenance shed, large wet well pump station and the backup generators. We then travelled to their main pump station in the middle of town which is historically listed. They explained the challenges that comes with having a sight on the historical list and the ways they work around it to keep the station working efficiently.

The workshop for this session was on Pump System Management Issues. The majority of this session was presented by Adrian from Xylem speaking about FLYGT pumps and Graeme from Hydro Innovations speaking about self-priming pumps. Both men spoke about the types of pumps they offer, what pumps are suited best to, pump curves and general pump issues.

After these great presentations we headed back to the Pump station depot where we were given a fantastic hands-on demonstration from Clint Crocker who is the Supervisor for Mechanical Services at this depot. He gave a well detailed demonstration how to pull a pump apart, inspect the pump for issues, the checking of clearances and safe lifting methods.

Session 6

The site visit the day prior to the workshop began at the Wannon Water main office. We were given a presentation of the area Wannon water look after. We then visited a few key assets they look after and maintain.

The Workshop for this session was on Asset management issues. The session began with a presentation on the Definition of assets & asset management. We discussed the importance of data that field staff obtain completing works and how it all interlinks. We were then shown how the Wannon Water asset management team have been collecting the date from their network and using it to prevent major asset issues and keep on top of asset maintenance. To finish off the day we had presentations on different types of sewer pump station maintenance programs, water main maintenance programs and the use of the SCADA program.

Session 7

The site visit the day prior to the workshop we travelled out to the Goulburn Valley Water Waste Water Management Facility to look at the High Rate Covered lagoons. After this inspection we ventured over to the major pump station in Shepparton, toured around the site and looked around the large dry well inside the building.

The workshop for this session was Solid Waste Issues & evaluate how the program had gone and how we had grown from the start to present.

The first part of this session was a presentation on how Goulburn Valley Water manage hydro vac spoil, handling of asbestos, and hard waste like concrete and bitumen. The second part of the session was around what we found was good about the program, what could be improved and what could be added in the future. We discussed if it at met our expectations, and we went around to each participant and openly told each other how we had all grown and developed from this program. Lastly, we did a final check in on the trademark we had set back in Session 1 and all agreed we had hit the trademark and gone over.

5.0 Conclusion

The evidence seen in the development and growth of all the participants over the journey of the program within themselves and the opportunities that have been brought back to their corporations.

Some of these opportunities gained for the corporations and individuals maybe come from others failure or success, but a key item of the program is to share this knowledge and ideas.

To build a bond between participants, presenters, committee members and coaches of the group that allows the network to aid in problem solving when dealing with possible issues in the civil maintenance area.

The program encourages participants to engage other areas of their respective corporations to seek understanding of current practices. This is prompted by requesting participants to undertake the assignments on the current policies and procedures within their corporation. To ask questions for clarity of understanding and to seek momentum to implementing change through new ideas, initiatives or new technologies.

It cannot be emphasised enough what benefits the program brings to both employer and participants. Largely is the journey of what was seen as single individuals at the beginning grow to a strong group of team members at the end. A group that has forged a foundation of lifetime friendships both professional and social through this program.

If there are any corporations in the water sector that can identify a field operations team member with the potential to grow within their organisation.

A corporation that is looking for avenues for leadership training specific to the role.

The Network Operator Development Program is highly recommended.