

OPERATIONAL CAPACITY BUILDING THROUGH EFFECTIVE TRAINEESHIPS



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ABSTRACT

The benefits and key learnings of the Central Highlands Water (CHW) traineeship program is articulated through this paper in the context of better business outcomes and trainee career development. The traineeship model will be explored and related to industry needs.

The CHW Water and Wastewater Operations Division identified a need to build staff capacity and as a result implemented a traineeship program between 2009 and 2011.

A catchment to tap approach was adopted in the creation of the five operational roles that were allocated to the Catchments, Headworks, Maintenance and Water Treatment teams. The NWP30107 Certificate III in Water Operations training package was tailored to meet individual team specific skill sets and core business needs. The completion of core units ensured a common understanding of the water industry, whilst elective units reflected the breadth of the approach.

Trainee selection and appointment was supported by effective induction procedures. The development of competencies and skills was underpinned by matching trainees with experienced leaders. Regular two way feedback tracked the learning and development outcomes achieved and this led to a progressive increase in trainee workplace responsibilities.

At the conclusion of the two year period, partnerships with employment and training services, supervisors and trainees have resulted in a significant increase in the capacity of the operations division to delivery water quality. Traineeships now form a key component of CHW workforce strategy and play a vital role in the inter-generational exchange of corporate knowledge.

1.0 INTRODUCTION

Central Highland Water (CHW) is a non-metropolitan Water Corporation based in Ballarat and provides water and wastewater services to a regional population of approximately 120,000. The Water and Wastewater Operations Division (W&WW Ops) comprises four teams. Sustainability – which includes catchment and land management, Water Resources – which include dam infrastructure and raw water distribution, Water Treatment – which includes, water and wastewater treatment, and Asset Performance which include maintenance teams, mechanical and electrical, and asset management and performance staff. A total of 90 staff are employed within the division.

CHW has an ageing workforce profile with 19% of 55+ staff, and 24% 45+. The organisation recognises the challenges of the aging profile of its workforce and has incorporated strategies to address this into its overall career management program (Pathways).

CHW has a number of older workers in outdoor roles that have begun to demonstrate issues associated with aging physical profiles whilst still continuing to work significant overtime. Many of these workers have over 20 years of experience and their knowledge and skills are vital to the successful functioning of the organisation. In recognition of this risk, and the profile of its workforce, CHW has 12 apprentices or trainees in the organisation.

This includes eight in Water & Wastewater Operations, one in Organisational Development, two in Customer & Business Services and one in Finance (CHW 2011).

CHW wants to ensure that the accumulated knowledge of its maturing workers is captured and transferred to its trainees and apprentices. CHW would also like to be able to change the over-time demands on its cohort of older workers and provide a better transition to a retirement pathway for them.

2.0 DISCUSSION

2.1 Catchment to Tap Resourcing Approach

W&WW Ops routinely applies the Australian Framework & Guidelines for Drinking Water Quality within its daily operations. This is represented in the catchment to tap management of risks to drinking water quality as being the highest priority for operational staff. Of similar importance is the attainment of the wastewater quality parameters outlined in our EPA corporate licence. Since 2006 the continual development and review of the Drinking Water Quality Management Plan has been underpinned by staff skill and capacity building through targeted training. Accordingly, CHW must continually demonstrate its ability to provide safe drinking water through Department of Health audits.

A loss of this knowledge presented a likely risk to the ability of CHW to continue providing quality services to its customers. In response to this need, the Organisational Development team implemented a traineeship program for W&WW Ops. This paper focuses on the 2009 pool of trainees employed.

The initial preparation for the traineeships involved consultation through the General Manager – W&WW Ops to the individual team managers. The specific roles and responsibilities for each trainee were identified in consultation with team leaders. This information was used to develop the individual position descriptions. Trainees were employed through an agency on behalf of CHW.

Table 1: *Trainee roles within the Water and Wastewater Operations Division*

Divisional Team	Operational Team	Traineeship
Sustainability	Catchments & Parks	Catchment Field Officer
Water Resources	Headworks	Water Resources Officer
Water Treatment	Water Treatment	Water Treatment Operator
Asset Performance	Asset Maintenance – Ballarat	Maintenance Officer
	Asset Maintenance – Maryborough	Maintenance Officers (2)

2.2 NWP301107 Training Package Certificate III in Water Operations

This catchment to tap approach was reflected in that each specific competency that was relevant to each role was identified within the training package.

The qualification was designed using the three mandatory core units plus another eight units, given the following rules;

- A maximum of three Level 2 units (NWP2XXB) were allowed (but are not

required) where the NWP2XXB units are not selected, more NWP3XXB units may be selected.

- A maximum of three imported units from another Cert III or Cert IV qualification were allowed.

Table 2: *Illustrative training plans NWP30107 Certificate III in Water Operations*

Core units must all be completed; there are no choices	Units of Competence	Core or elective unit Hours	Catchment	Headworks	Maintenance	Water treatment
		NWP301B Implement, monitor and co-ordinate environmental procedures	C 40	✓	✓	✓
	BSBCMN302A Organise personal work priorities and development	C 30	✓	✓	✓	✓
	BSBOHS303A Contribute to hazard identification and risk assessment	C 30	✓	✓	✓	✓
A maximum of three (3) NWP2XXB are allowed (but are not required)	NWP209B Use maps, plans, drawing and specifications	E 30			✓	
	NWP210B Perform basic water quality tests	E 20	✓	✓	✓	✓
	NWP218B Perform and record sampling	E 20	✓	✓	✓	✓
	NWP247B Maintain catchment and surrounding areas	E 40	✓			
	NWP260B Monitor and report water treatment processes (+ NWP261B)	E 30				✓
Where NWP2XXB units are not selected, more NWP3XXB units may be selected	NWP300B Provide and promote customer service	E 20	✓	✓	✓	✓
	NWP310B Monitor and operate water distribution systems	E 40			✓	
	NWP317B Control water quality in distribution systems	E 30			✓	
	NWP319B Monitor and control dam operations	E 50		✓		
	NWP322B Inspect and operate surface water systems	E 40		✓		
	NWP323B Monitor and co-ordinate catchment operations	E 30	✓			
	NWP330B Establish positions of underground utilities using locating devices	E 30			✓	
	NWP334B Monitor and control maintenance of water distribution assets	E 40		✓	✓	
	NWP347B Mon, op and control coagulation and flocculation processes	E 50				✓
	NWP348B Mon, op and control sedimentation and clarification processes	E 40				✓
	NWP352B Mon, op and control dissolved air flotation processes	E 40				✓
	NWP364B Perform laboratory testing	E 40				✓
	NWP365B Identify and confirm blue green algae outbreaks	E 20		✓		
	NWP417B Co-ord and monitor groundwater system operations	E 60		✓?		
(a)	RTC3218A Undertake a site assessment	E tba	✓			
	RTC3401A Control weeds	E 70	✓			
	RTC3501A Assist in implementation of legislation	E tba	✓			
	Total		3+8	3+8	3+8	3+8

(a) - A maximum of three 'imported' units from Certificate III or IV level allowed

2.3 Tailored training

As demonstrated, career specialisation is very relevant to the water industry. CHW confirmed with Registered Training Organisation's (RTOs) their authority to develop and use additional specialisations which comply with the packaging rules. For example; a team supervisor identified that the trainee role required three units from the Conservation and Land Management qualification Outside of the Cert III in Water Operations. This is reflected in the team's management of catchment and land assets.

Additional OH&S training was provided for job specific skills, tools and equipment in order to ensure that the trainees were continually developing working competencies in a safe environment.

2.4 Training Providers

Due to the selection of tailored units, three separate training providers were engaged for individual components. The selection of providers was based on their recognised educational strengths. Water Training Australia provided the core units and the majority of the electives. The Water Industry Training Centre provided the specialised drinking water and wastewater treatment process training. The University of Ballarat provided three units from the Conservation and Land Management qualification.

As a consequence of the number of training providers, there was a large variation in training sessions. Depending on the unit, some utilised the CHW training facility thereby reducing travel and lost work time. Conversely, off-site sessions had the benefit of site visits and a larger student group discussion.

In most cases the training provider provided a learning session that required the trainee to complete a workbook or work place investigative project for submission at the subsequent session.

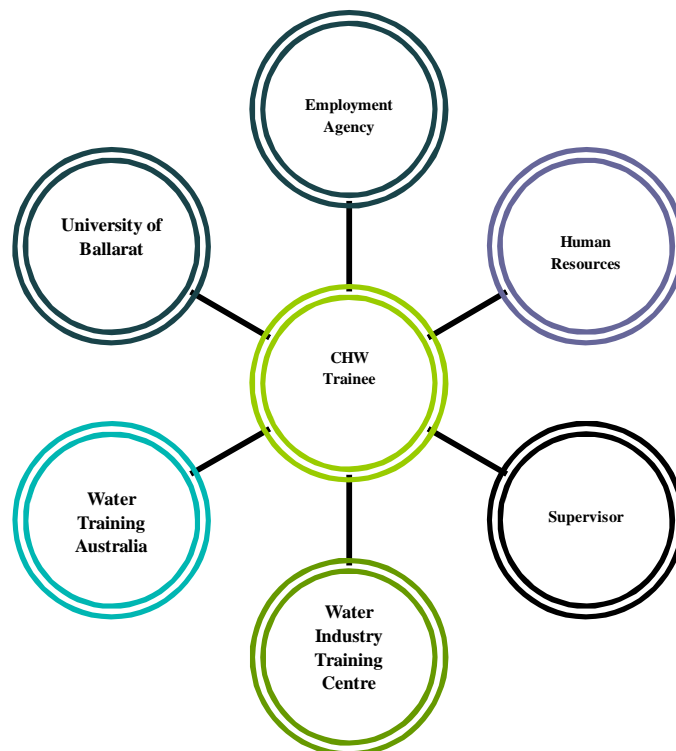


Figure 1: *Trainee relationship model*

2.5 Mentoring & Supervision

Trainee supervisors were selected prior to the promotion of traineeships. Each supervisor participated in the trainee selection process. A corporate induction was followed by an individual team based induction. This enabled the trainee, the supervisor and team to develop working relationships and knowledge.

The supervisor/trainee relationship was critical to the program's success. Effective supervision greatly enhanced learning outcomes as it was the responsibility of the trainee and mentors to ensure that learning was achieved and utilised in the workplace. To assist, a number of supervisors themselves completed the Certificate IV in Work Place Training and Assessment.

2.6 Competency Assessments

Traineeships have included a range of practical work place projects that have provided benefits to the trainee, the supervisor and the organisation. This was due to the project requiring both the trainee and the supervisor to interact in a common educative problem. This drew on supervisor experience and knowledge and ensured that this is imparted onto the trainee.

The completion of observed and written competency assessments allowed the supervisor to gain confidence in the trainee and led to the progressive increase in delegated work responsibilities.

2.7 Traineeship Benefits to Teams

CHW found that traineeships either maintained and/or increased team capacity. In many cases the traineeships have allowed minimum staffing levels for either daily duties or specific tasks that required two people. This has helped with staff levels during RDO's and leave. The program also kept overtime at a sustainable frequency.

The capacity of the new generation of staff to adopt technology has dramatically increased the use of a wide range of work related software systems. In many cases the trainees became the teacher by entering a learning cycle with their peers. This reduced the frustration that field staff had when coping with the remote access to communications and newly deployed information technology.

Trainees also enjoyed a shared learning experience through the common coordinated training sessions. Equally, experiencing training along side students from other organisations provided an industry wide context to their role and underpinned the future career opportunities that the traineeship offers.

Catchments Team - The addition of a trainee within the Catchments and Parks team has enabled the redeployment of an experienced team member to a new role that provides land maintenance contract management across the W&WW Ops. The trainee has ensured that the minimum number of field staff was retained within the team. The trainee has satisfactorily attained the required skill sets and is a valued member of the team

Water Resources Team - The Water Resources trainee joined a team of three and was intensively mentored. Unfortunately he failed to sustain effective work practices and the trainee concluded his time with CHW under a mutual agreement in April 2011.

The Water Resources team has since renewed and readvertised the role.

Water Treatment Team - The Water Treatment trainee joined a team of five and has successfully developed the required skills and work practices and is now able to operate under limited supervision. He is regularly deployed to regional water treatment plants. This includes commuting to remote sites and operating as a lone worker.

Maintenance Team - The development of the three maintenance trainees is well progressed, where they are now able to work independently of their supervisor after twelve months experience. Their current competency attainment allows them to be deployed into the field for regular maintenance duties with regular supervision and inspection.

3.0 CONCLUSION

At the conclusion of the traineeships, CHW will have provided the opportunity for each trainee to have gained a full range of employability skills and in turn increased the capacity of the four teams. The outcomes of which include:

- Application of specialised technical knowledge that is continuously improved through practical field based operations.
- Opportunities for team members to refresh their own skill sets through trainee development, competency assessment, peer review and practice.
- Allowed team members to operate independently through the development of problem solving skills and initiative whereby the trainee can apply known solutions to a variety of predictable problems by having previously accompanied experienced staff members on routine duties.
- Shared responsibility for the output of peers by cooperating and conducting team based operations.
- Increased awareness of problem solving using discretion and judgement through observation and analysis with supervisory support.
- Improved team resilience to cope with a challenging and changing work environment by building initiative within the peer group

The most important consideration for water industry professionals to make when introducing traineeships within their workforce is to match the needs of the team and the organisation with an appropriate trainee. This coupled with making a positive ongoing commitment to the trainee and the team will allow the business to realise the true value of the business investment in time, money and relationships. Through this it is anticipated that this investment will grow over the working life of the trainee and in turn see them become professionals within the business and industry more broadly.

4.0 ACKNOWLEDGEMENTS

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5.0 REFERENCES

NTIS website (2011) *NWP301107 Training Package Certificate III in Water Operations*
CHW (2011) *Organisational Development Strategy*.