

Careers in the **WATER INDUSTRY**

A collaboration between ACCE, Melbourne Water and VicWater

Teacher Resource

Meet the PEOPLE



Skye Boyd-Gerny
from Melbourne Water
Natural Resource Crew Member



<https://youtu.be/dfoMILFumGE>

Questions:

What is Skye's position title and what is the goal of this role?

A: Natural Resource Management Crew Member – To protect and enhance biodiversity along Melbourne's rivers, waterways, and creeks.

What does Skye feel is the best part of her job?

A: Seeing Melbourne's waterways improve, improving degraded sites until they are teeming with life.

What are the positive environmental impacts of Skye's work?

A: Creating habitat, fighting climate change, creating community spaces.



Meet the PEOPLE



Greta Pullen
from Melbourne Water
Water Supply Operator



<https://youtu.be/X0JUO--tzUk>

Questions:

What does Greta's job involve doing?

A: Providing safe drinking water to about one third of Melbourne. She looks after the water treatment plant. She flies drones, works on computers, tests samples and helps to perform maintenance tasks.

Describe Greta's career progress to her current role

A: A uni assignment sparked her interest in water quality. She started an administration role at South East Water and kept asking about jobs. She landed a field technician role at SEW before moving to work for Melbourne Water.

What are the best and worst things about her job?

A: The people and the spiders.



Meet the PEOPLE



Rodney Sutherland
from Barwon Water
Trainee Asset Officer



[https://www.youtube.com/
watch?v=3pXBHDQzG7E](https://www.youtube.com/watch?v=3pXBHDQzG7E)

Questions:

What traineeship is Rodney undertaking?

A: Trainee Asset Officer and studying Certificate II in Business.

What are some of his day-to-day duties?

A: Risk assessing water mains, uploading data into the geographic information system and managing customer emails.

How is Rodney's family connected to Barwon Water?

A: His grandfather worked at Barwon Water in the 1970s as a sewer inspector.

What awards did Rodney recently win?

A: Indigenous Trainee of the Year and Trainee of the Year.



Meet the PEOPLE



Bradley
from Melbourne Water
Data Analyst



https://youtu.be/u_W00TpyCxs

Questions:

What was Bradley's graduating qualification?

A: Masters in Chemical Engineering

What was the process he had to go through to get a job?

A: Completed online forms, sent in his resume and then went to many interviews including online, one-on-one and group interviews.

What skills is Bradley developing?

A: Learning new coding languages and discovering different forms of data.

Why does Bradley recommend you consider a career as an engineer?

A: It's a career to consider if you love solving problems.



CASE STUDY 1



Donald Hughan

*Business Support Partner
– Goulburn-Murray Water*

Cert III in Business Administration,
Certificate II in Information Technology

Questions

Choose one of Donald's skills and explain how you can demonstrate that skill as well.

A: Student self reflection, answers will vary.

Do you think you will complete VCE or VCAL / Vocational Major? Why?

A: Student self reflection, answers will vary.

What skills do you think Donald's volunteer work helped him to develop?

A: Student self reflection, answers will vary.



CASE STUDY 2



Marzieh Lotfollahi

Planning Engineer
– South East Water

Bachelor of Civil Engineering

Questions

Marzieh found friends through a shared interest in maths and school projects. What do you do outside of school to develop your social skills?

A: Student self reflection, answers will vary.

Where could you enrol to study a Bachelor of Civil Engineering?

Use <https://www.courseseeker.edu.au/> to search for Civil Engineering in your state or town.

A: Student self reflection, answers will vary.

Why does Marzieh find her job interesting?

A: Because she can influence change, support the community, and her role is constantly evolving.



CASE STUDY 3



Suzy McDonald

*Water Treatment Technologist
– GWM Water*

Bachelor of Science (chemistry) with Honours
PhD in limnology
Research Fellow for the Curtin Water Quality
Research Centre

Questions

Approximately how many years would it take to complete Suzy's qualifications?

A: Bachelor of Science – 3 Years; Honors – 1 year; PhD – 2 Years; Research fellow – 1-2 Years – TOTAL: 7-8 Years.

**What did Suzy learn during her work experience in an interior design company?
Why was this a valuable lesson?**

A: That she didn't like interior design. This was valuable as she was able to choose subjects at school better suited to her interests.

What are some of the skills needed to succeed in Suzy's role?

A: Be a team player, have an eye for detail, patience and perseverance, communication, and passion.



My Career Action Plan

My career plan into the Water Industry could be:

STEP 1:

What organisations do you think you could approach to participate in volunteer work (year 7-9) or work experience (year 10-12) that would give some idea of what it would be like to work in the water industry?

Volunteer Work or Work Experience at:

A: For example: Melbourne Water, Greater Western Water or any of the other water corporations.

HINT: Who could you talk to regarding getting some more information about work in this industry?
Do you know anyone who works in this industry?

STEP 2:

What Subjects might you need to help you move into the water industry?

Research your senior school subjects and add related subjects here:

Year 7-10 **A:** English, Maths, Science, Design & Technologies, Digital Technologies, Geography, Health and PE

VCE **A:** Chemistry, Biology, Physics, Environmental Science, Industry and Enterprise

VCAL **A:** Industry specific skills and work-related skills

VET **A:** Conservation and Land Management, Community Service, Engineering

SBAT (School Based Apprenticeship or Traineeship)

STEP 3:

What kind of apprenticeships/traineeships are available in the industry?

List these below:

A: Assistant Networks Operator, Bore Field Operator, Water Maintenance Operator, Plumber, Electrician

Hint: Check out Australian Apprenticeships
<https://www.australianapprenticeships.gov.au/>

STEP 4:

Certificates/ Diplomas/ Bachelor Degrees

Can you list a tertiary institution that offers one of each?

Certificate: **A:** MPA Skills, PEER, Master Plumbers and Mechanical Services of Australia

Diploma: **A:** LaTrobe College, Deakin College, Federation University

Bachelor Degree: **A:** Deakin, La Trobe, Victoria University, Monash, Federation University

Careers in the WATER INDUSTRY



www.joboutlook.gov.au is a fantastic resource that provides extensive information on a range of different professions. Look

at this website to learn even more about a career in the Water Industry and answer 5 important questions in the table below.

Definition and tasks: Explain what the job involves and what kind of activities do these professionals do daily?

Weekly pay: How much do these employees earn each week?

Number employed: How many Australians work in this field?

Study options: What and where can you study to work as a professional in this industry?

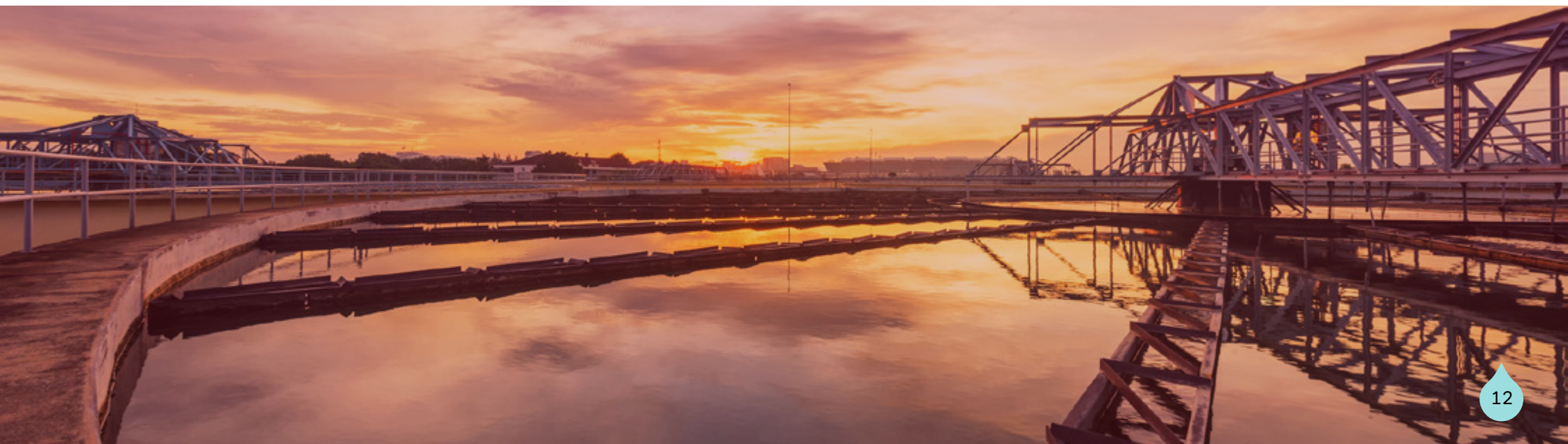
JOB TITLE	DEFINITION	TASKS	WEEKLY PAY	NUMBER EMPLOYED	STUDY OPTIONS
Urban Planner	Urban and Regional Planners develop and implement plans and policies for the controlled use of urban and rural land, and advise on economic, environmental, and social factors affecting land use.	<ul style="list-style-type: none"> • Compiling and analysing data • Conferring with authorities, communities, planning and other specialists • Devising and recommending use and development of land • Advising governments and organisations • Reviewing and evaluating environmental impact reports • Staying up to date with legal issues • May serve as mediators in disputes • May speak at public meetings and appear before government 	\$1,738	18,800	You need a Bachelor Degree in Urban, Regional or Environmental Planning to work as an Urban or Regional Planner. It is also common to complete postgraduate studies.
Water Inspector	Water Inspectors monitor the allocation and use of water from water resources such as streams, rivers, and underground sources.	<ul style="list-style-type: none"> • Receives and assesses applications for licences to use water, investigates the ability of water resources to meet new requirements, and conducts site inspections. 	\$1,424	190	You usually need a formal qualification in water operations, environmental studies, natural and physical science, or another related field to work as a Water Inspector. Vocational Education and Training (VET) and university are both common study pathways.

Careers in the WATER INDUSTRY

JOB TITLE	DEFINITION	TASKS	WEEKLY PAY	NUMBER EMPLOYED	STUDY OPTIONS
Environmental Research Scientist	Environmental Research Scientists study and develop policies and plans for the control of factors which may produce pollution, imbalance in or degradation of the environment.	<ul style="list-style-type: none"> • Studies effects of factors, such as climatic and environmental change and impacts of humans on animal and plant life. • Studies and analyses pollution, atmospheric conditions, demographic characteristics, ecology, mineral, soil, and water samples. • Develops conservation and management policies 	\$1,779	4,200	You need a Bachelor Degree in Science majoring in Environmental Science or a related field to work as an Environmental Research Scientist. It is also common to complete postgraduate studies.
Project Administrator (Project Manager)	Program or Project Administrators plan and undertake administration of organisational programs, special projects, and support services.	<ul style="list-style-type: none"> • Advises senior management on matters requiring attention and implements their decisions. • Oversees work by contractors and reports on variations to work orders. • Prepares and reviews submissions and reports concerning the organisation's activities. • Collects and analyses data associated with projects undertaken, and reports on project outcomes. • Reviews and arranges new office accommodation. 	\$1,660	88,500	You usually need a formal qualification in Business and Management, Project Management, Engineering, ICT or Accounting and relevant industry experience to work as a Program or Project Administrator. University and Vocational Education and Training (VET) are both common study pathways.
Construction Project Manager	Construction Project Managers manage civil engineering and building projects.	<ul style="list-style-type: none"> • Interprets architectural drawings and specifications. • Coordinates labour resources, and the procurement and delivery of materials, plant, and equipment. • Consults with Architects, Engineering professionals and other professionals, and technical and trades workers. • Negotiates with building owners, property developers and subcontractors involved in the construction process to ensure projects are completed on time and within budget. • Prepares tenders and contract bids. • Implements coordinated work programs for sites. • Ensures adherence to building legislation and standards of performance, quality, cost, and safety. • Arranges the submission of plans to local authorities. • Builds under contract or subcontracting specialised building services. • Oversees the standard and progress of subcontractors' work. • Arranging building inspections by local authorities. 	\$3,450	42,100	You usually need a formal qualification in Building or Construction Management or have 5 years of relevant trade experience to work as a Construction Project Manager. Vocational Education and Training (VET) and university are both common study pathways.

Careers in the WATER INDUSTRY

JOB TITLE	DEFINITION	TASKS	WEEKLY PAY	NUMBER EMPLOYED	STUDY OPTIONS
Public Relations Professional (Communications)	Public Relations Professionals plan, develop, implement, and evaluate information and communication strategies that create an understanding and a favourable view of organisations, their goods and services, and their role in the community.	<ul style="list-style-type: none"> • Planning and organising publicity campaigns and communication strategies • Advising executives on the public relations implications of their policies, programs, and practices • Preparing and controlling the issue of news and press releases • Undertaking and commissioning public opinion research, analysing the findings, and planning public relations and promotional campaigns • Organising special events, seminars, entertainment, competitions, and social functions to promote goodwill and favourable publicity • Representing organisations and arranging executive interviews with publicity media • Attending business, social, and other functions to promote the organisation • Commissioning and obtaining photographs and other illustrative material • Selecting, appraising, and revising material submitted by Publicity Writers, Photographers, Illustrators, and others to create favourable publicity. 	\$1,865	20,500	You usually need a Bachelor Degree in Public Relations, Communication, Arts, Marketing, Business, Media or another related field to work as a Public Relations Professional. Some workers have a Vocational Education and Training (VET) qualification.



WORD SEARCH

Find the answers to the questions in the word search below. Remember, words can go in any direction and words can share letters as they cross over each other.

Q: What is the name of the peak water association for water businesses in Victoria?

A: VicWater

Q: How many water corporations are there in Victoria?

A: Eighteen

Q: Who relies on water to irrigate their crops?

A: Farmers

Q: This is a skill required to work in the water industry.

A: Teamwork

Q: 52% of water corporations are in a _____ location.

A: Regional

Q: This is a sub-sector of the water industry.

A: Regional

Q: This is a role within the water industry.

A: Engineer

Q: Which humanities subject is recommended to study in VCE?

A: Geography



Lesson Plan Years 7-9

Unit/Topic: Careers in the Water Industry

Date:

Key Learning Area: Career Exploration – Know Your World

Year Level: 7-9

LESSON OUTCOME:

(Key Knowledge and Skills students should achieve in the lesson taken from relevant curriculum documents.)

Year 7 - Research different people's career paths.

Year 8 - Review case studies of professionals.

Year 9 - Research the job market and develop a list of preferred occupations and work out steps that need to be taken for further training or match them with skills already obtained.

LESSON STRUCTURE:

Student Guide Page No. 

Time	Introduction (Set):	
5 mins	<p>Introduction to Melbourne Water</p> <p>Engagement questions: How important is water? Where does our water come from? How does our water get to us?</p> <p>Working in water: What jobs can you imagine within the water industry?</p>	
Time	Main Content:	
30mins TOTAL 10mins Per Focus	<p>Focus 1: Discuss the skills they have developed in school (academic subjects, sport, music, art) and how they can be used at work.</p> <ol style="list-style-type: none"> As a class, choose one case study or job description within the water industry. Students work in pairs or small groups to list the skills they have that could lead towards this role. Offer examples to the class throughout. Discuss and list responses. <p>Focus 2: Explore questions that would encourage students to think about how much our standard of living depends on people being at work.</p> <ol style="list-style-type: none"> Read through the case studies Consider the implications if these jobs did not exist How did people get water prior to it being industrialised? <p>Focus 3: Investigate a variety of occupations to be made aware of academic backgrounds needed for specific jobs.</p> <ol style="list-style-type: none"> In pairs, choose one case study to focus on. What qualifications are required for this persons role? Where could you go for this study or training? EG: Swinburn University, Melbourne Polytechnic (TAFE) etc 	
Time	Conclusion	
5mins	<p>Would you work in Water?</p> <p>Complete a written summary or survey/poll about students' likelihood to choose various study options and career paths leading to the water industry.</p>	

Lesson Plan Years 10 - 12

Unit/Topic: Careers in the Water Industry

Date:

Key Learning Area: Career Exploration – Know Your World

Year Level: 10-12

LESSON OUTCOME:

(Key Knowledge and Skills students should achieve in the lesson taken from relevant curriculum documents.)

Year 10 - Explore the education and training requirements of various work roles in your preferred future occupation or work sectors.

Year 11 - Engage in career planning and development that considers changing economic, social and employment trends.

Year 12 - Locate and use education and training information, occupational and industry information, and labour market information in the career building process.

LESSON STRUCTURE:

Student Guide Page No. 

Time	Introduction (Set):	
5 mins	<p>Introduction to Melbourne Water</p> <p>Engagement questions: How important is water? Where does our water come from? How does our water get to us?</p> <p>Working in water: What jobs can you imagine within the water industry?</p>	
Time	Main Content:	
<p>Focus 1 110mins</p> <p>Focus 2 20mins</p>	<p>Focus 1: Where is our water?</p> <ol style="list-style-type: none"> Using the interactive Map of Victoria, as a class explore where the water corporations are located. Are any of these areas familiar to you (holidays, relatives etc)? In pairs, choose one water corporation to explore. Click through to explore the careers in that area. What employment opportunities currently exist? Share results with the class. <p>Focus 2: Water Industry Careers Flow</p> <ol style="list-style-type: none"> As a class, explore the Careers in Water Bullseye Individually find a career that sounds interesting to you Using https://joboutlook.gov.au/ research the weekly pay, future growth and skill level required for this role What sort of tasks does this role undertake? What pathway do you need to take to be employed in this role? Report findings back to the class. 	
Time	Conclusion	
5mins	<p>Would you work in Water?</p> <p>Complete a written summary or survey/poll about students' likelihood to choose various study options and career paths leading to the water industry.</p>	



**Australian Centre
for Career Education**

Australian Centre for Career Education
T/As Career Education Association of Victoria

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