

Lorne: Water, Your Say

Information on the portfolios

While you look at the portfolios and various water saving and water finding options, you may notice some acronyms that need further explanation. Please see below information on what these mean.

Water security until

Water security until refers to the year we'll have a secure supply of water with this portfolio.

NPC

Shortfall refers to how many years we may be short of having our desired amount of water for Lorne. This means there will be an increased chance of water restrictions during this period.

Shortfall

NPC or Net Present Cost, refers to the total cost to implement and operate the portfolio. This considers when costs will be occurred in the future.

Additional yield

Additional yield is the additional water this portfolio will create each year once fully implemented.

eFlows

eFlows refers to environmental water for the St George River. eFlows would see water being sent down the St George river to ensure it's meeting its environmental needs.

If you are unsure about any of the various water finding or water saving options, or would like further explanations of what terms may mean, please contact one of our friendly staff at projects@barwonwater.vic.gov.au

Portfolio 1a: Connection to Geelong water supply

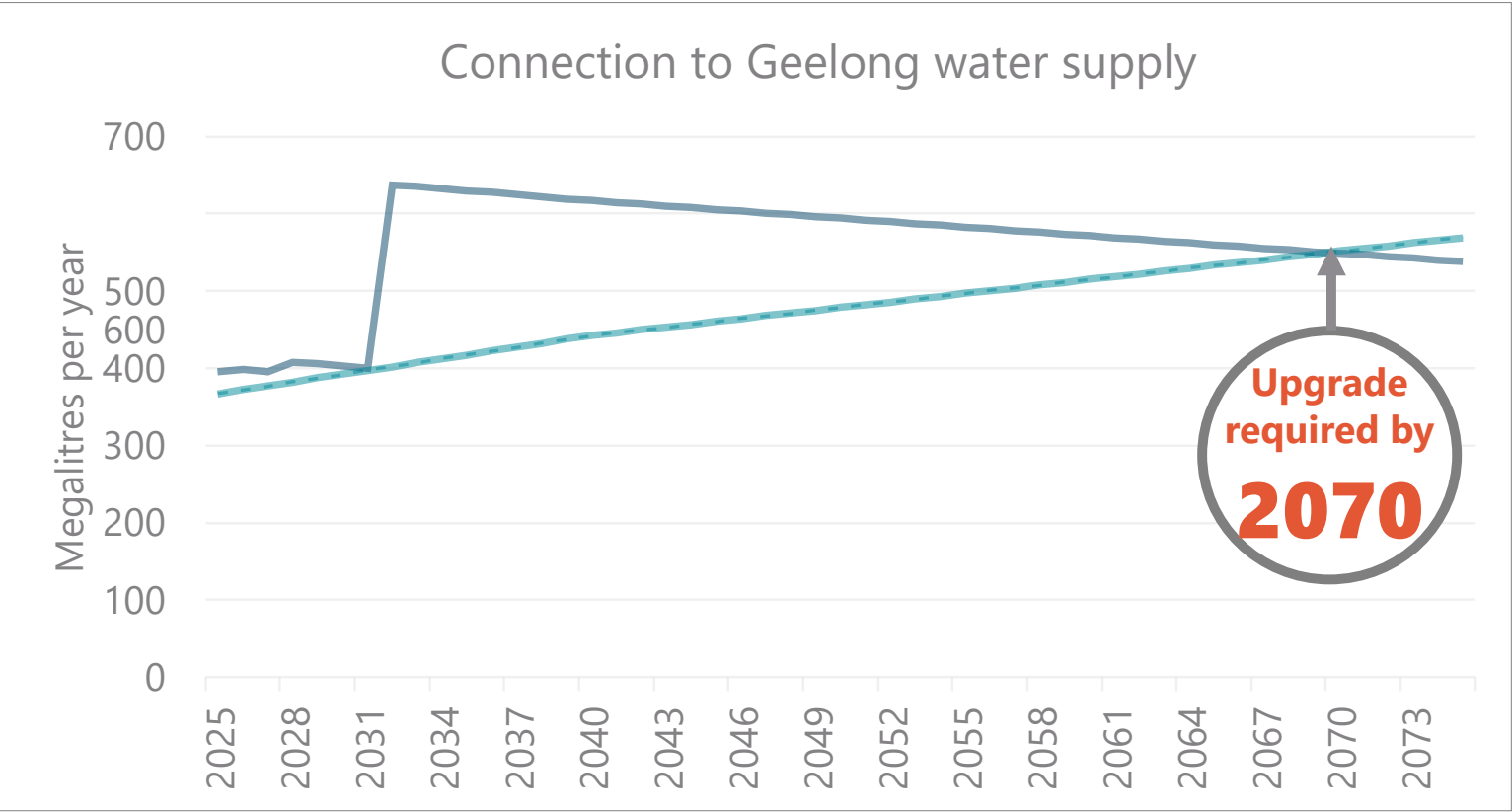
Summary:



Overview:

The *Connection to Geelong water supply* portfolio focuses on improving Lorne’s water security by constructing a **new pipeline connection** to the **Geelong water supply system** via Aireys Inlet. This 2 ML/day pipeline would give Lorne access to a larger, more resilient regional network—helping to safeguard the town’s water supply during dry conditions and peak holiday demand.

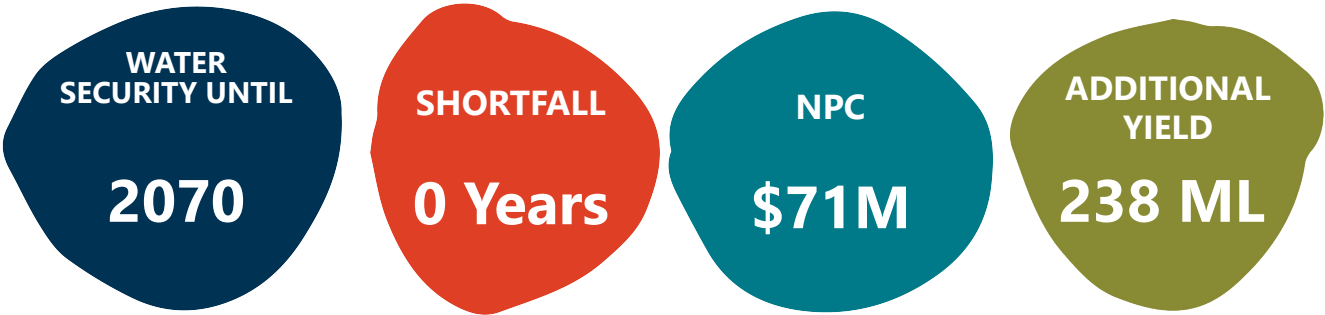
In addition to this major infrastructure option, the portfolio also continues a range of **proven demand reduction programs** already underway in the community. This portfolio brings together **a secure new water supply connection** with **ongoing efforts to use water wisely**, offering a practical and reliable approach to supporting Lorne’s water needs now and into the future.



Augmentation	Description	Yield Increase (ML/year)	Demand Reduction	CAPEX (\$M)	OPEX (\$M/Y)
1	Backwash Recovery	N/A	15	\$2	\$0.1
2	Smart Networks	N/A	5	\$0.6	\$0.2
3	Manganese Removal	N/A	15	\$0.3	\$0.1
4	Community Engagement & Awareness	N/A	1	N/A	\$0.3
5	Household Water Efficiency	N/A	1	N/A	\$0.5
6	Schools Water Efficiency Program	N/A	1	N/A	\$0.2
7	Connection to External Water Sources	240	N/A	\$50-60	\$0.85
Portfolio Net Present Cost				\$61M	

Portfolio 1b: Connection to Geelong Water Supply + eFlows

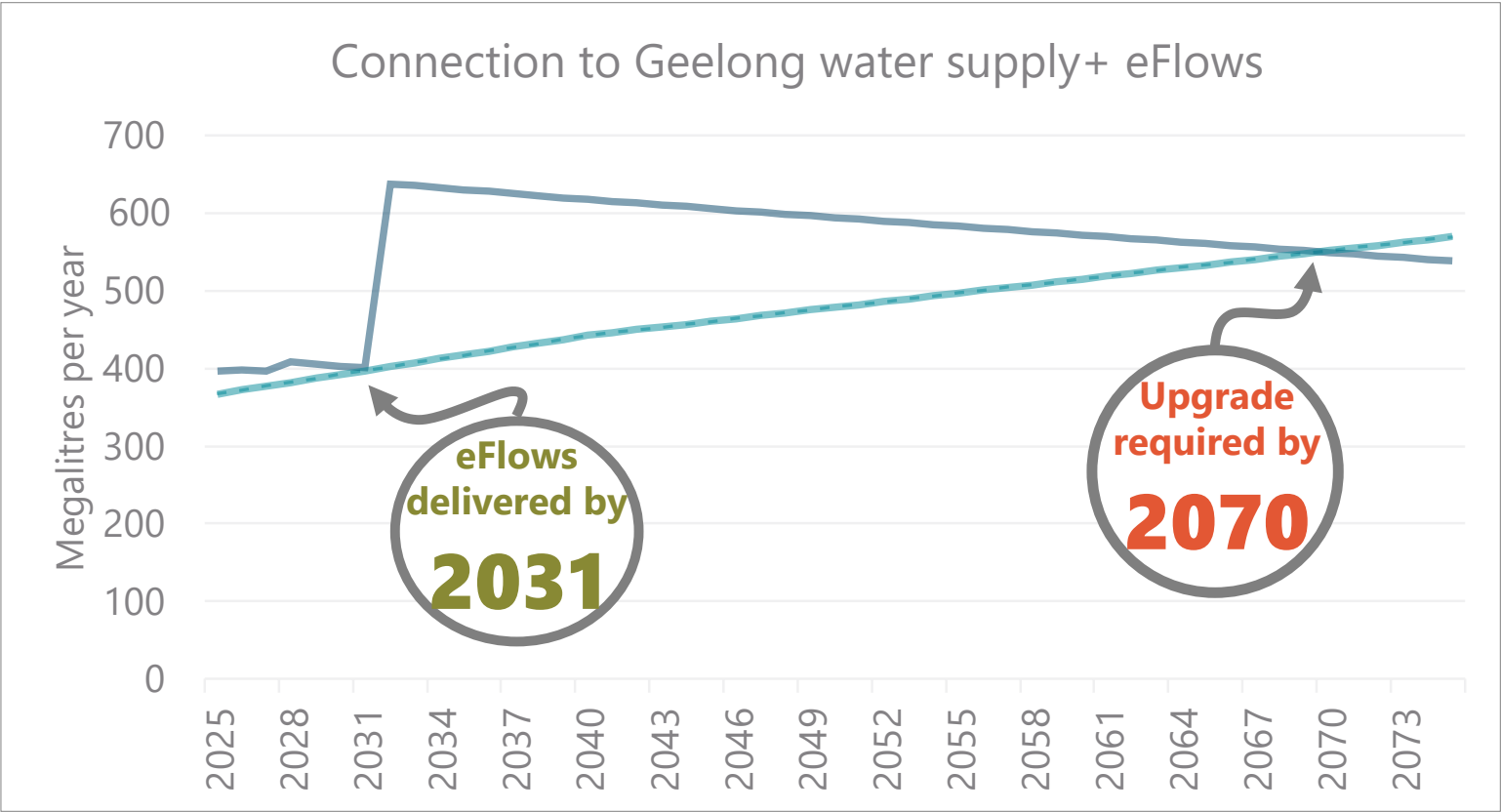
Summary:



Overview:

The *Connection to Geelong Water supply + eFlows* portfolio is centred on enhancing Lorne’s water security through the construction of a **new pipeline connection** to the **Geelong water supply system** via Aireys Inlet. This upgraded 3.5 ML/day pipeline not only provides Lorne with access to a larger, more resilient regional network—ensuring the town’s water supply is protected during dry periods and peak holiday demand—but also enables the delivery of **summer/autumn passing flows** in the St George River.

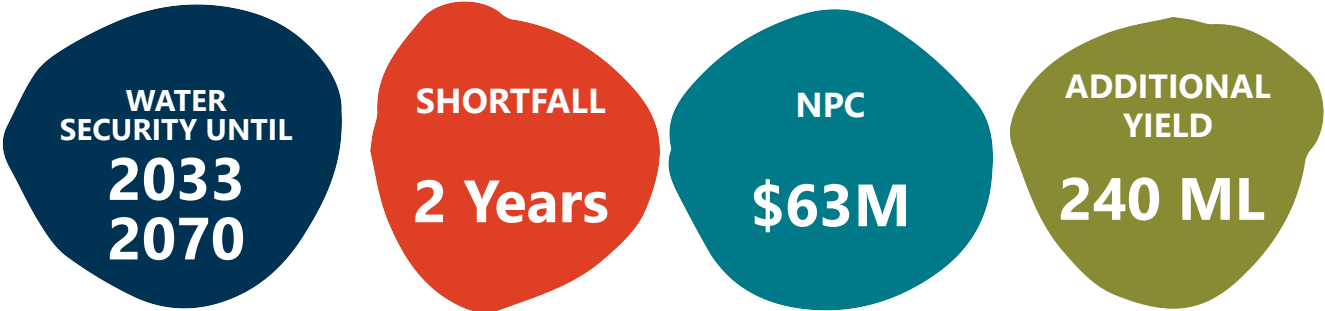
Alongside this significant infrastructure improvement, the portfolio continues to support a range of **proven demand reduction programs** already active within the community. By combining a **secure new water supply connection** with **ongoing water conservation efforts**, this portfolio offers a practical and dependable strategy to meet Lorne’s water requirements now and into the future.



Augmentation	Description	Yield Increase (ML/year)	Demand Reduction	CAPEX (\$M)	OPEX (\$M/Y)
1	Backwash Recovery	N/A	15	\$2	\$0.1
2	Smart Networks	N/A	5	\$0.6	\$0.2
3	Manganese Removal	N/A	15	\$0.3	\$0.1
4	Community Engagement & Awareness	N/A	1	N/A	\$0.3
5	Household Water Efficiency	N/A	1	N/A	\$0.5
6	Schools Water Efficiency Program	N/A	1	N/A	\$0.2
7	Connection to External Water Sources	450	N/A	\$60-70	\$0.95
8	Summer/Autumn Passing Flows	-212	N/A	\$1	\$0
Portfolio Net Present Cost				\$71M	

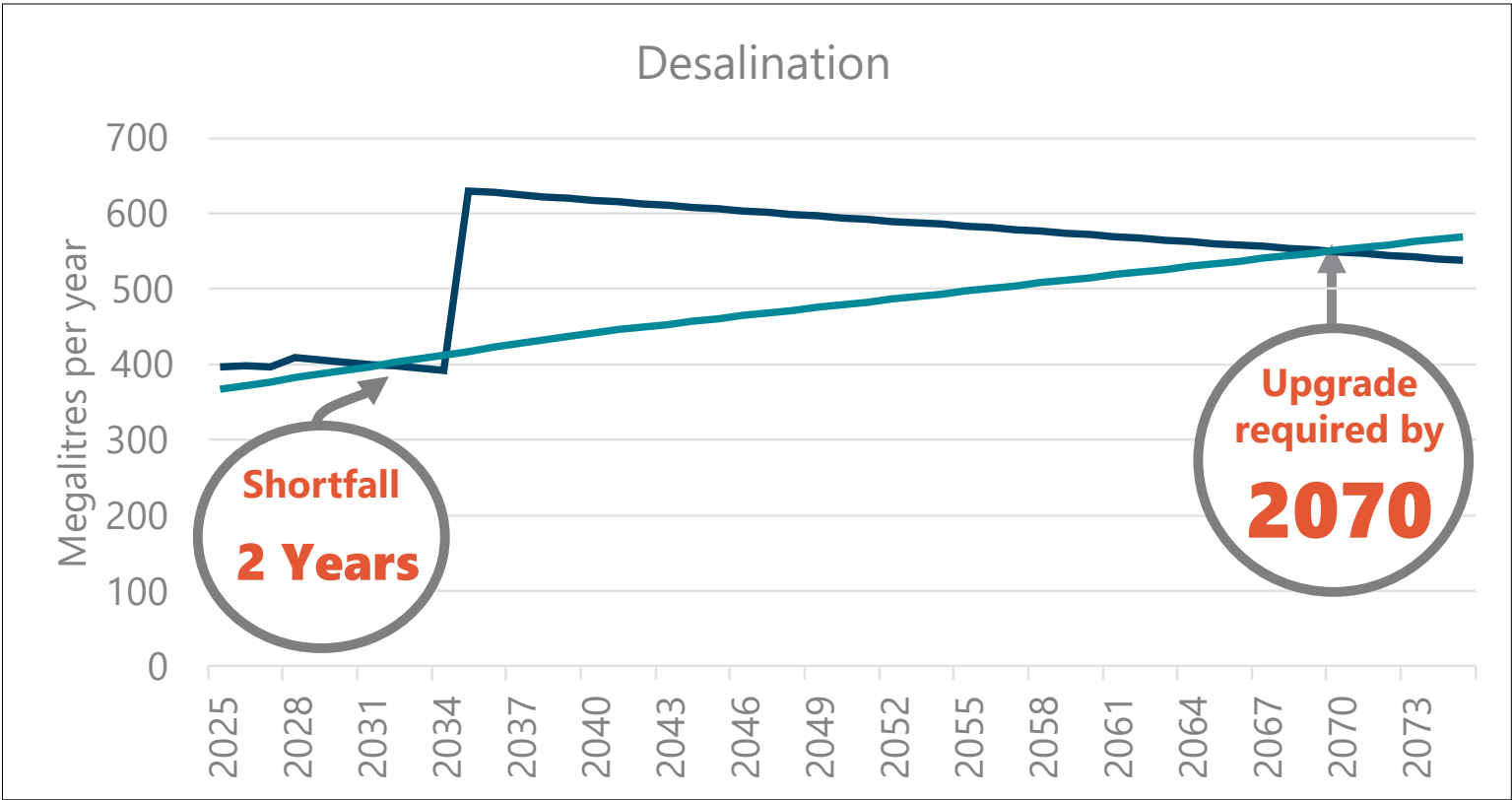
Portfolio 2a: Desalination

Summary:



Overview:

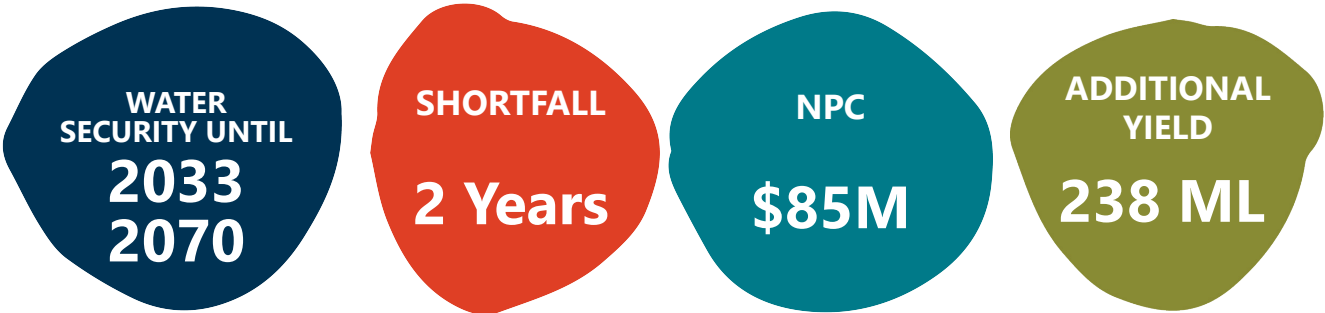
The *Desalination* portfolio centres on the delivery of a **2ML/d desalination plant**—either permanent or mobile—to provide a climate-independent, reliable water supply for Lorne, as soon as possible. This proactive infrastructure investment is designed to ensure long-term water security and resilience to drought and seasonal variability. Alongside desalination, the portfolio incorporates a suite of **business-as-usual demand reduction measures**, which continue to play a critical role in managing water use efficiently. Together, this portfolio delivers a balanced approach, combining supply augmentation with ongoing demand reduction and community partnership.



Augmentation	Description	Yield Increase (ML/year)	Demand Reduction	CAPEX (\$M)	OPEX (\$M/Y)
1	Backwash Recovery	N/A	15	\$2	\$0.1
2	Smart Networks	N/A	5	\$0.6	\$0.2
3	Manganese Removal	N/A	15	\$0.3	\$0.1
4	Community Engagement & Awareness	N/A	1	N/A	\$0.3
5	Household Water Efficiency	N/A	1	N/A	\$0.5
6	Schools Water Efficiency Program	N/A	1	N/A	\$0.2
7	Desalination (Permanent or Mobile)	240	N/A	\$40-50	\$1.5
Portfolio Net Present Cost				\$63M	

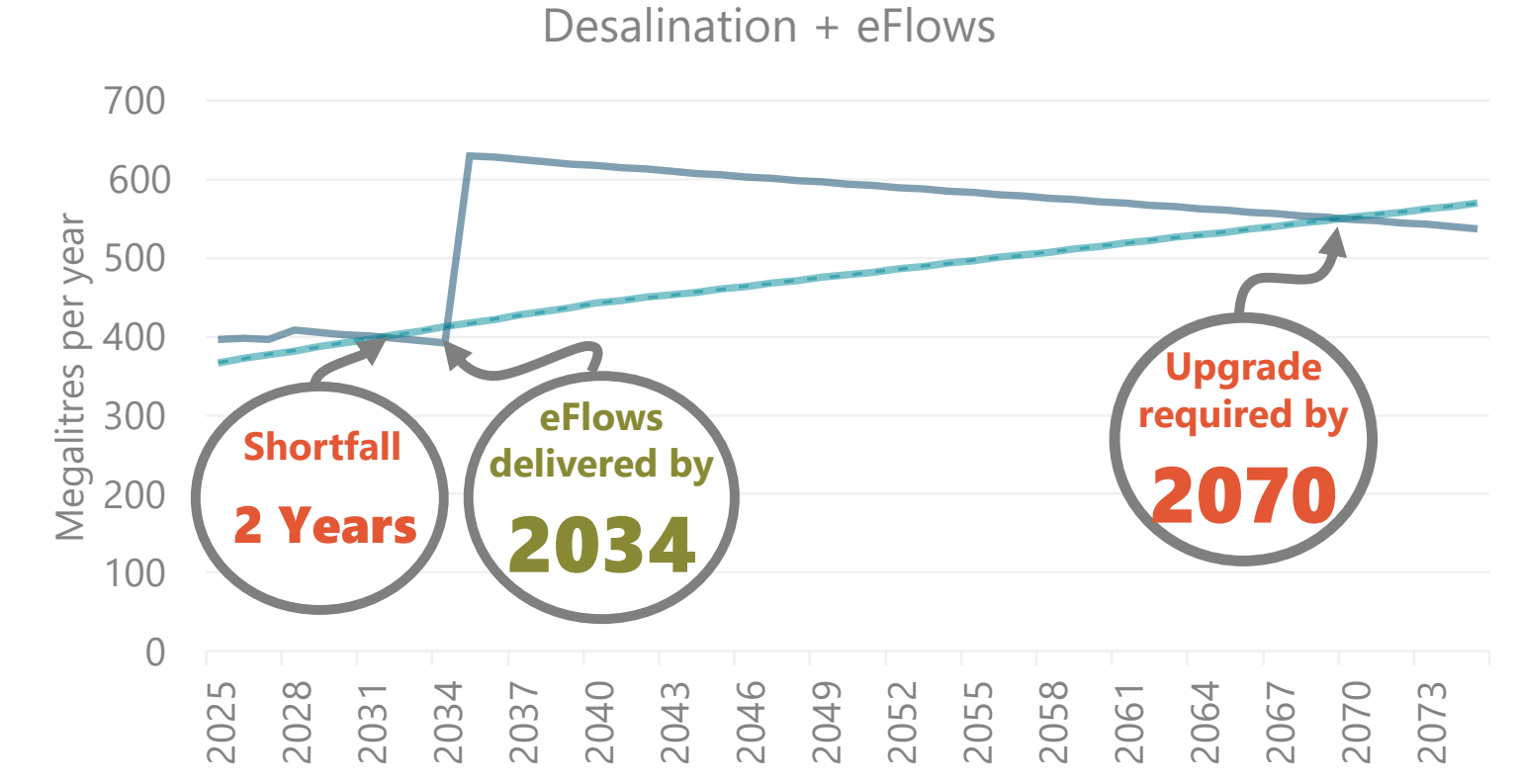
Portfolio 2b: Desalination + eFlows

Summary:



Overview:

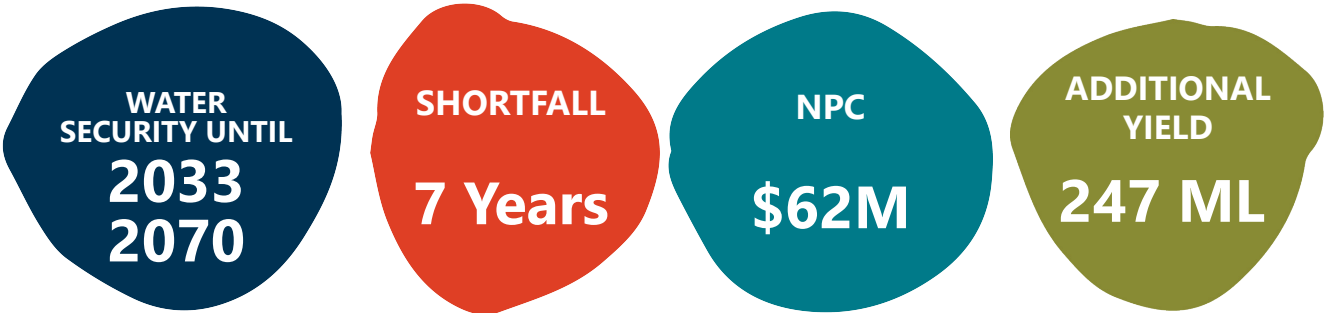
The *Desalination + eFlows* portfolio focuses on the implementation of a **3.5ML/d desalination plant**—either permanent or mobile—to provide a climate-independent, reliable water supply for Lorne, anticipated around 2035. The increased capacity of this plant will enable the delivery of **summer/autumn baseflow** to the St George River, enhancing environmental flow management. This forward-looking infrastructure investment aims to secure long-term water availability and resilience against drought and seasonal fluctuations. In addition to desalination, the portfolio includes a range of **business-as-usual demand reduction measures**, which remain essential for efficient water use management. Together, this portfolio offers a comprehensive strategy that combines supply enhancement with continued demand reduction.



Augmentation	Description	Yield Increase (ML/year)	Demand Reduction	CAPEX (\$M)	OPEX (\$M/Y)
1	Backwash Recovery	N/A	15	\$2	\$0.1
2	Smart Networks	N/A	5	\$0.6	\$0.2
3	Manganese Removal	N/A	15	\$0.3	\$0.1
4	Community Engagement & Awareness	N/A	1	N/A	\$0.3
5	Household Water Efficiency	N/A	1	N/A	\$0.5
6	Schools Water Efficiency Program	N/A	1	N/A	\$0.2
7	Desalination (Permanent or Mobile)	450	N/A	\$60-80	\$1.8
8	Summer/Autumn Passing Flows	-212	N/A	\$1	\$0
Portfolio Net Present Cost				\$85M	

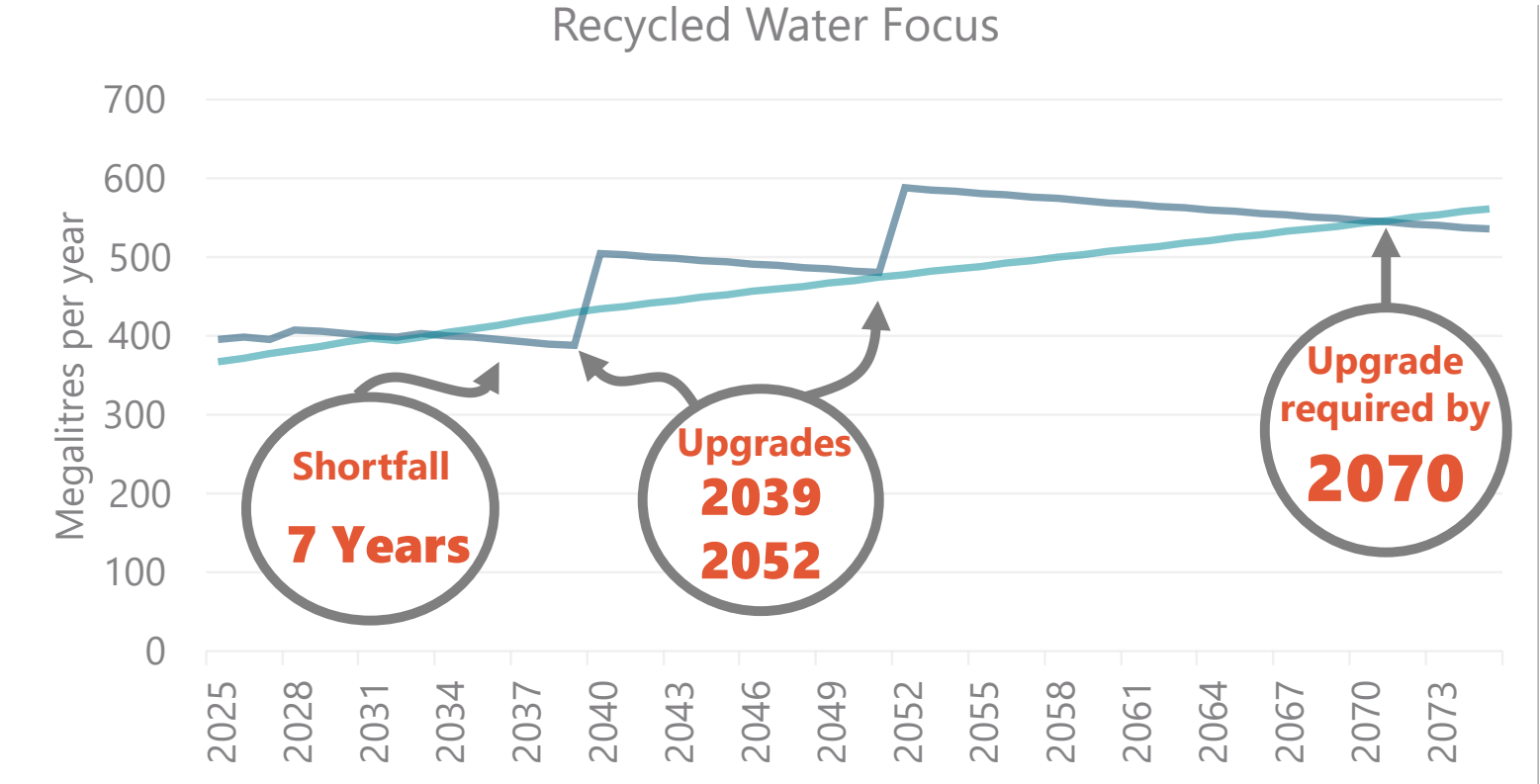
Portfolio 3a: Recycled Water Focus, *including for drinking*

Summary:



Overview:

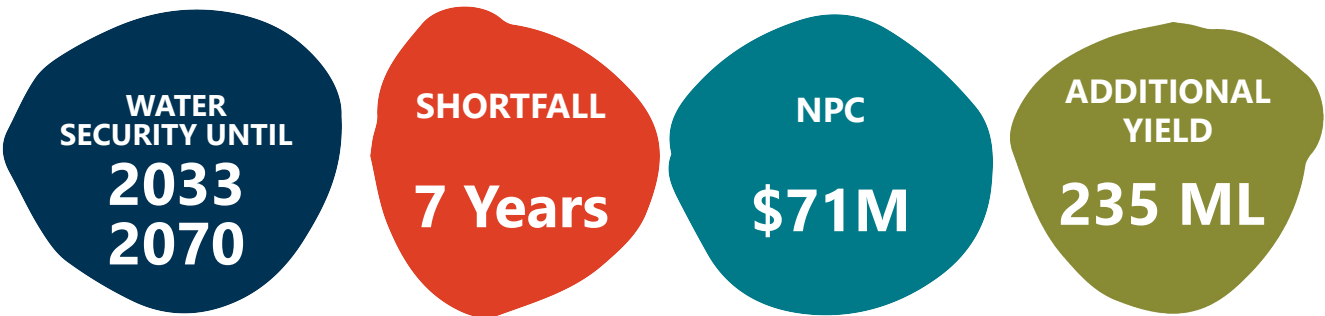
The *Recycled Water Focus, including for drinking*, portfolio takes a forward-thinking approach to water security in Lorne—**starting with demand reduction**, then moving to a **high-quality recycled water and manufactured water supply** to support the town’s future needs. In the first stage, the portfolio focuses on reducing water use through a range of practical and community-driven initiatives. Subsequently, the portfolio proposes upgrading the recycled water scheme to **Class A+ standard**, making it safe for use in the **drinking water supply** through **Indirect or Direct Potable Reuse**, delivering **around 120 ML/yea of purified recycled water**. Subsequently, this portfolio proposes to construct a **1 ML/d desalination plant**—either permanent or mobile—to provide further climate-independent, reliable water supply for Lorne. Together, this portfolio offers a **sustainable, staged solution** that reduces demand first, then delivers a safe, local, climate-independent water source for Lorne’s long-term future.



Augmentation	Description	Yield Increase (ML/year)	Demand Reduction	CAPEX (\$M)	OPEX (\$M/Y)
1 -6	Existing Lorne Programs	N/A	38	\$2.9	\$1.4
7	General Water Literacy	N/A	1	N/A	\$0.08
8	Gamification of Water Use	N/A	1	\$0.6	\$0.06
9	Tighten PWSR	N/A	1	N/A	\$0.05
10	Water Assist Program	N/A	3	N/A	\$0.03
11	Improved Plumbing & Efficiency	N/A	1	N/A	\$0.06
12	Indirect/Direct Potable Reuse	120	N/A	\$45	\$0.95
13	Desalination (Permanent or Mobile)	120	N/A	\$30-40	\$1.2
Portfolio Net Present Cost				\$62M	

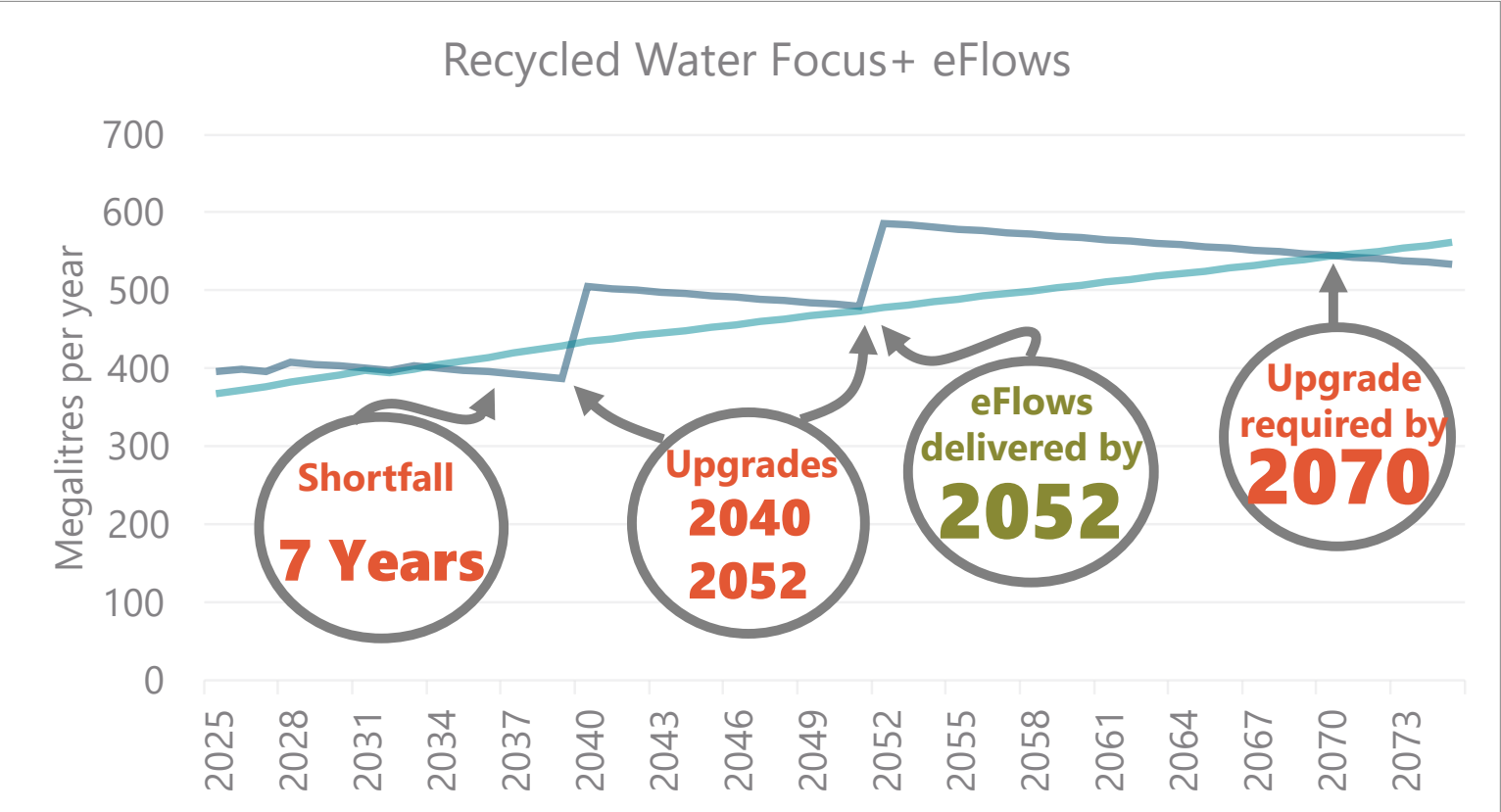
Portfolio 3b: Recycled Water Focus, including for drinking + eFlows

Summary:



Overview:

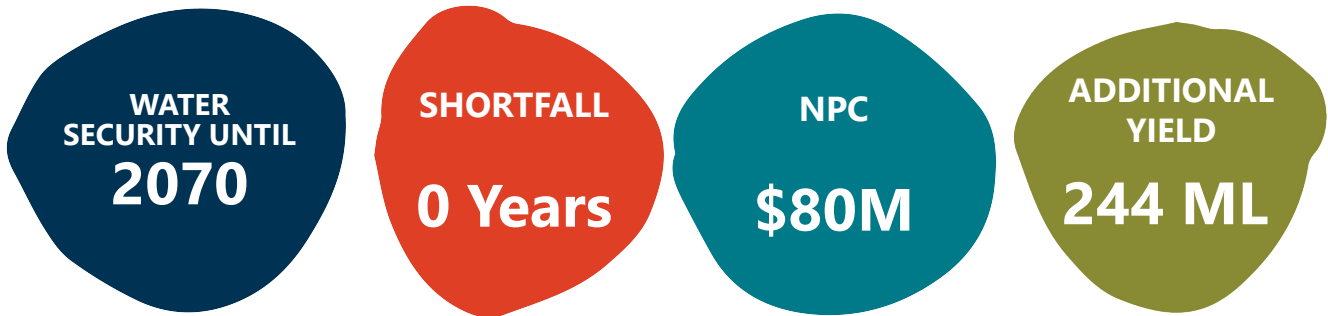
The *Recycled Water Focus, including for drinking + eFlows* portfolio adopts a forward-looking strategy to ensure water security in Lorne—**beginning with demand reduction**, followed by a **high-quality recycled water and manufactured water supply** to meet the town’s future requirements. In the initial phase, the portfolio prioritises reducing water consumption through a variety of practical and community-led initiatives. Next, it proposes upgrading the recycled water scheme to **Class A+ standard**, making it safe for use in the **drinking water supply** via **Indirect or Direct Potable Reuse**, providing **around 120 ML/year of purified recycled water**. The portfolio then recommends increasing the capacity of the desalination plant to **2.5 ML/d**—either permanent or mobile—allowing the delivery of **summer/autumn passing flows** without compromising water security, thus providing a more reliable, climate-independent water supply for Lorne. Altogether, this portfolio presents a **sustainable, phased solution** that first reduces demand and then delivers a safe, local, climate-resilient water source to support Lorne’s long-term future.



Augmentation	Description	Yield Increase (ML/year)	Demand Reduction	CAPEX (\$M)	OPEX (\$M/Y)
1 - 6	Existing Lorne Programs	N/A	38	\$2.9	\$1.4
7	General Water Literacy	N/A	1	N/A	\$0.08
8	Gamification of Water Use	N/A	1	\$0.6	\$0.06
9	Tighten PWSR	N/A	1	N/A	\$0.05
10	Water Assist Program	N/A	3	N/A	\$0.03
11	Improved Plumbing & Efficiency	N/A	1	N/A	\$0.06
12	Indirect/Direct Potable Reuse	120	N/A	45	\$0.95
13	Desalination (Permanent or Mobile)	320	N/A	\$55-65	\$1.65
14	Summer/Autumn Passing Flows	-212	N/A	\$1	\$0
Portfolio Net Present Cost				\$71M	

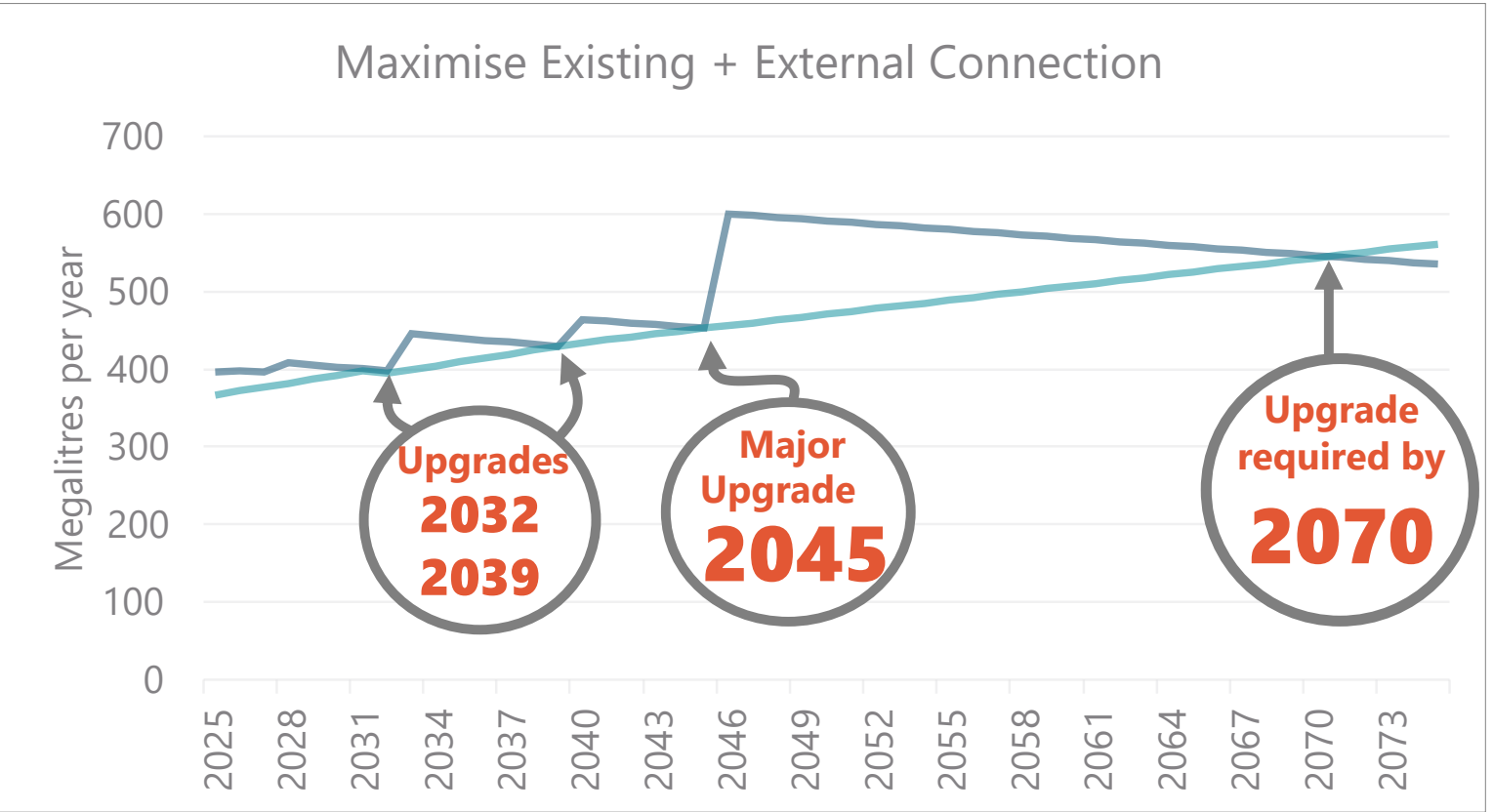
Portfolio 4a: Maximise Existing + External Connection

Summary:



Overview:

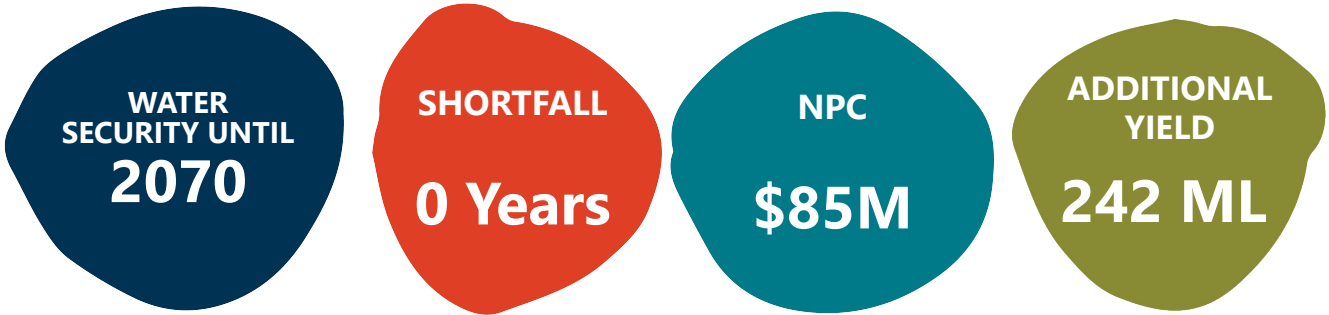
The *Maximise Existing + External Connection* portfolio aims to maximise the efficiency and increase the storage capacity for current water resources, while continuing to rely on climate-driven inflows. It emphasises **smarter water management** and **lowering demand** through reduction initiatives, complemented by minor infrastructure improvements. Key measures include raising **Allen Reservoir by 0.5m** to **increase yield by 37ML**, creating a **new 50ML storage basin** at the Rough & Tumble site. Finally, this portfolio will also deliver a **connection to the Geelong water supply system** via a **1.25ML/day pipeline** from Lorne to Aireys Inlet. This portfolio brings together options to increase storage, **secure new water supply connection** and **ongoing efforts to use water wisely**, offering a practical and reliable approach to supporting Lorne’s water needs now and into the future.



Augmentation	Description	Yield Increase (ML/year)	Demand Reduction	CAPEX (\$M)	OPEX (\$M/Y)
1 -6	Existing Lorne Programs	N/A	38	\$2.9	\$1.4
7	General Water Literacy	N/A	1	N/A	\$0.08
8	Gamification of Water Use	N/A	1	\$0.6	\$0.06
9	Tighten PWSR	N/A	1	N/A	\$0.05
10	Water Assist Program	N/A	3	N/A	\$0.03
11	Improved Plumbing & Efficiency	N/A	1	N/A	\$0.06
12	New Rough & Tumble Basin	50	N/A	\$30	\$0.43
13	Increase Allen Reservoir	37	N/A	\$15	\$0.12
14	Connection to External Water Sources	150	N/A	\$50- \$60	\$0.85
Portfolio Net Present Cost				\$80M	

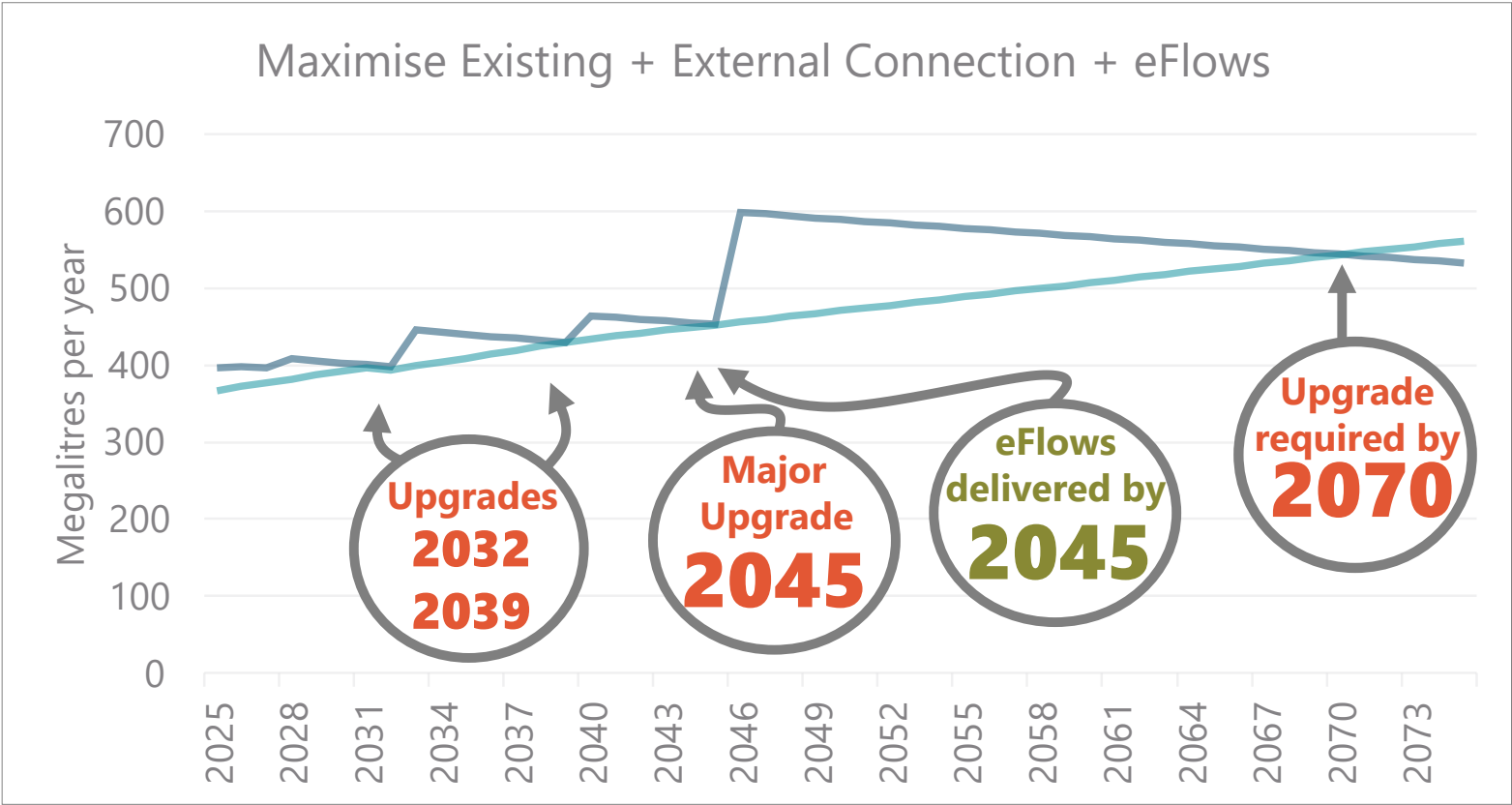
Portfolio 4b: Maximise Existing + External Connection + eFlows

Summary:



Overview:

The *Maximise Existing + External Connection + eFlows* portfolio aims to maximise the efficiency and increase storage capacity for current water resources, while continuing to rely on climate-driven inflows. It emphasises **smarter water management** and **lowering demand** through reduction initiatives, complemented by minor infrastructure improvements. Key measures include raising **Allen Reservoir by 0.5m** to **increase yield by 37ML**, creating a **new 50ML storage basin** at the Rough & Tumble site. Finally, this portfolio will also deliver a **connection to the Geelong water supply system** via a pipeline from Lorne to Aireys Inlet. This portfolio brings together options to increase storage, **secure new water supply connection** and **ongoing efforts to use water wisely**, offering a practical and reliable approach to supporting Lorne’s water needs now and into the future.



Augmentation	Description	Yield Increase (ML/year)	Demand Reduction	CAPEX (\$M)	OPEX (\$M/Y)
1 - 6	Existing Lorne Programs	N/A	38	\$2.9	\$1.4
7	General Water Literacy	N/A	1	N/A	\$0.08
8	Gamification of Water Use	N/A	1	\$0.6	\$0.06
9	Tighten PWSR	N/A	1	N/A	\$0.05
10	Water Assist Program	N/A	3	N/A	\$0.03
11	Improved Plumbing & Efficiency	N/A	1	N/A	\$0.06
12	New Rough & Tumble Basin	50	N/A	\$30	\$0.43
13	Increase Allen Reservoir	37	N/A	\$15	\$0.12
14	Connection to External Water Sources	360	N/A	\$60-70	\$0.95
15	Summer/Autumn Baseflow	-212	N/A	\$1	N/A
Portfolio Net Present Cost				\$85M	

Portfolio 5a: Ambitious Demand Reduction + Major Augmentation

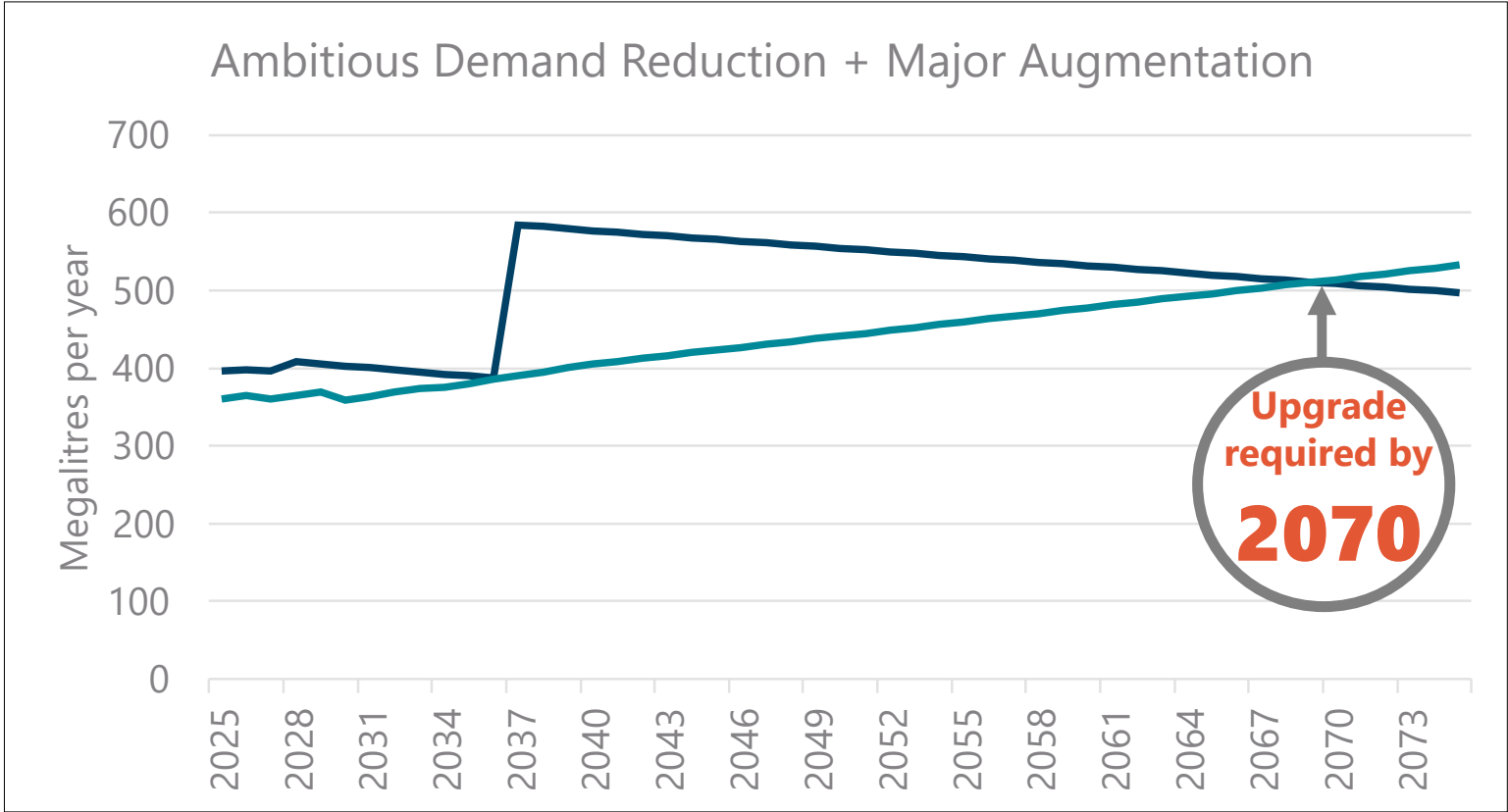
Summary:



Overview:

The **Ambitious Demand Reduction + Major Augmentation** portfolio seeks to substantially reduce water demand across all customer segments through a coordinated mix of behavioural, regulatory, and incentive-based measures. Key initiatives include a **Water Literacy Campaign** to build community awareness, an **Inclining Block Tariff*** to encourage lower consumption, and tighter **Permanent Water Saving Rules** to reinforce responsible use. Supporting programs such as **Water Assist**, **showerhead replacements**, **Waterwise Gardens**, and **rainwater tank subsidies** offer practical help to households and businesses. The **Major Water Users Grants Program** promotes large-scale efficiency improvements in high-consumption sectors. To complement these demand-side efforts, a **major system augmentation delivering ~2ML/day** is planned for **2036**, providing a critical boost to supply capacity and strengthening long-term water security.

*Subject to policy and legislative changes



Augmentation	Description	Yield Increase (ML/year)	Demand Reduction	CAPEX (\$M)	OPEX (\$M/Y)
1 -6	Existing Lorne Programs	N/A	38	\$2.9	\$1.4
7	Targeted Water Literacy	N/A	3	N/A	\$0.3
8	Inclining Block Tariff *	N/A	1	N/A	\$0.03
9	Further Tightening of PWSR	N/A	3	N/A	\$0.09
10	Water Assist Program	N/A	10	N/A	\$0.25
11	Showerheads program	N/A	2	0.06	\$0.1
12	Water wise gardens program	N/A	2	0.20	\$0.2
13	Rainwater tanks subsidies	N/A	6	0.50	\$0.2
14	Major water users grant program	N/A	10	0.50	\$0.2
15	Major Augmentation	200	N/A	\$40-50	\$1.5
Portfolio Net Present Cost				\$99M	

Portfolio 5b: Ambitious Demand Reduction + Major Augmentation + eFlows

Summary:



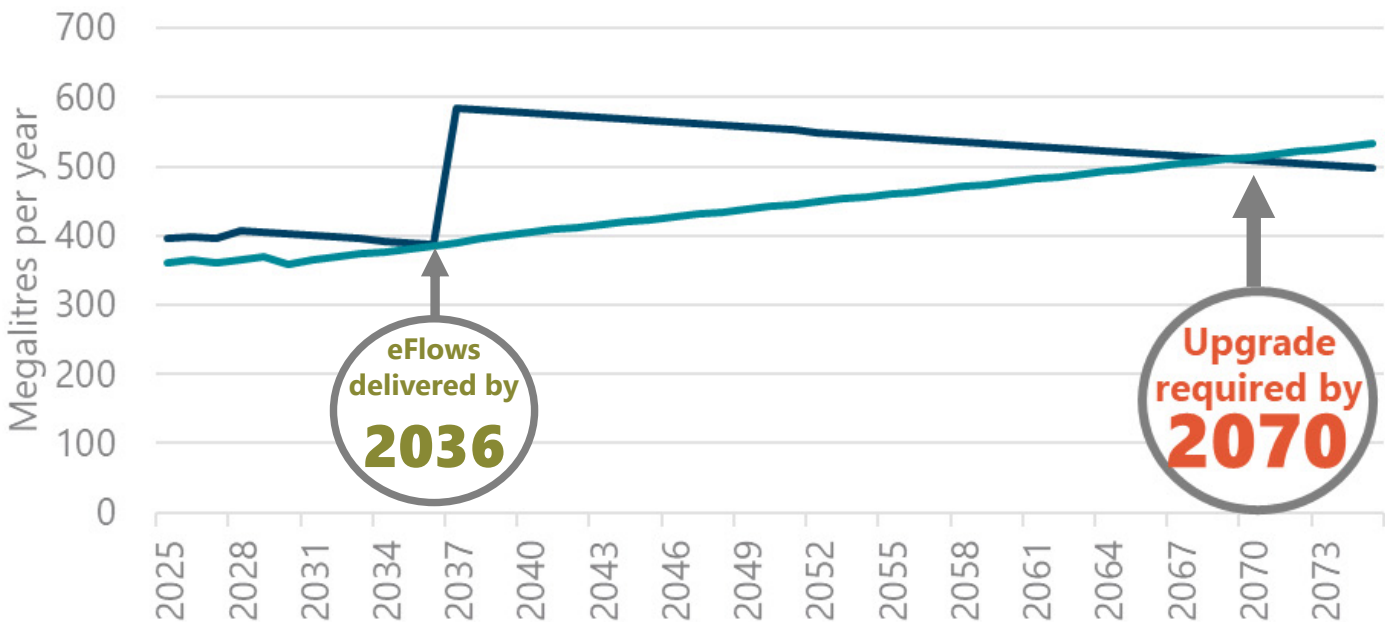
Overview:

The **Ambitious Demand Reduction + Major Augmentation + eFlows** portfolio aims to significantly reduce water demand across all customer segments through a coordinated mix of behavioural, regulatory, and incentive-based measures. Key initiatives include a **Water Literacy Campaign**, an **Inclining Block Tariff***, and tighter **Permanent Water Saving Rules** to promote efficient use. Supporting programs such as **Water Assist**, **showerhead replacements**, **Waterwise Gardens**, and **rainwater tank subsidies** provide practical help to households and businesses, while the **Major Water Users Grants Program** supports efficiency in high-consumption sectors.

To complement these demand-side efforts, a **major system augmentation delivering ~3ML/day** is planned for **2036**, including the provision of **summer/autumn baseflow** to enhance environmental outcomes and bolster long-term supply resilience.

*Subject to policy and legislative changes

Ambitious Demand Reduction + Major Augmentation + eFlows



Augmentation	Description	Yield Increase (ML/year)	Demand Reduction	CAPEX (\$M)	OPEX (\$M/Y)
1 -6	Existing Lorne Programs	N/A	38	\$2.9	\$1.4
7	Targeted Water Literacy	N/A	3	N/A	\$0.3
8	Inclining Block Tariff*	N/A	1	N/A	\$0.03
9	Further Tightening of PWSR	N/A	3	N/A	\$0.09
10	Water Assist Program	N/A	10	N/A	\$0.25
11	Showerheads program	N/A	2	\$0.06	\$0.1
12	Water wise gardens program	N/A	2	\$0.20	\$0.2
13	Rainwater tanks subsidies	N/A	6	\$0.50	\$0.2
14	Major water users grant program	N/A	10	\$0.50	\$0.2
15	Major Augmentation	412	N/A	\$60-70	\$1.8
16	Summer/Autumn Base flow	-212	N/A	\$1	N/A
Portfolio Net Present Cost				\$112M	

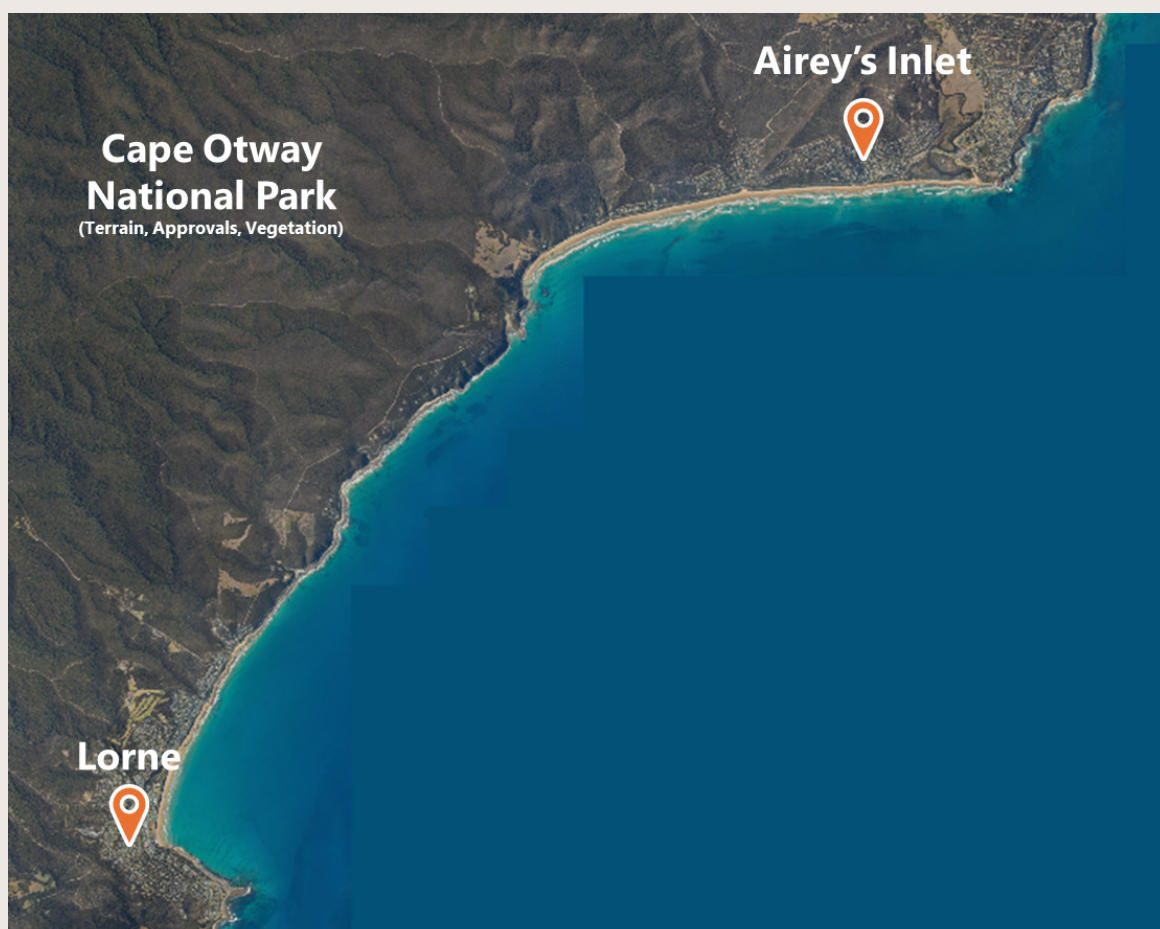


Further information on Connection to Geelong water supply

Lorne: Water, Your Say

Connection to Geelong water supply

If connection to the Geelong water supply was to occur, the pipeline would most likely follow an inland route, subject to planning, environmental, and other approvals.



If you are unsure about any of the various water finding or water saving options, or would like further explanations of what terms may mean, please contact one of our friendly staff at projects@barwonwater.vic.gov.au

Example Desalination

Further information on Desalination

Desalination

A 2–4 ML/day desalination plant would have a relatively small footprint. These images are of the Kangaroo Island Desalination Plant (2ML/day).



A Lorne desalination plant of this capacity would have a similar footprint to the plant shown in these images.



If you are unsure about any of the various water finding or water saving options, or would like further explanations of what terms may mean, please contact one of our friendly staff at projects@barwonwater.vic.gov.au

Example
purified
recycled water

Further information on Purified recycled water

Purified Recycled water

Many countries, including areas in Australia, are already using recycled water for drinking. Below is a diagram from the Water Services Association of Australia of the various areas where recycled water is part of the local water mix.

Global purified recycled water locations

2020s (to 2024)

241202

